Power Quality Management System

This global standard define the architecture, formats and data exchange for the new set of power quality central systems within Enel.

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Revision	Data	List of modifications
00	02.11.2016	First version
01	20.12.2016	Approved first version

INDEX

TABLES

ACRONYMS

- **PQ** Power Quality
- **PQI** Power Quality Instrument according to IEC 62586-1
- **AVR** Automatic Voltage Regulator
- **GPS** Global Positioning System
- **PQMS** Power Quality Management System
- **REST** Representational State Transfer
- **COMTRADE** Common format for Transient Data Exchange for power systems
- **DNS** Domain Name System
- **DHCP** Dynamic Host Configuration Protocol
- **DHCPv6** Dynamic Host Configuration Protocol (IPv6)
- **JSON** JavaScript Object Notation
- **CSV** Comma-separated values
- **TCP** Transmission Control Protocol
- **HTTP** Hypertext Transfer Protocol
- **HTTPS** Hypertext Transfer Protocol Secure
- **SCADA** Supervisory Control And Data Acquisition
- **HMI** Human Machine Interface
- **PEM** Privacy-enhanced Electronic Mail
- **RADIUS** Remote Authentication Dial-In User Service
- **CA** Certificate Authority

1 NORMATIVE REFERENCES AND BIBLIOGRAPHY

All the references are intended in the last revision or amendement.

1.1 For all countries

IEC 61000-4-30	Electromagnetic compatibility (EMC) – Part 4-30: Testing and measurement techniques – Power quality measurement methods.
IEEE C37.111	IEEE Standard Common Format for Transient Data Exchange (COMTRADE) for Power Systems
IEEE 519	IEEE Recommended Practice and Requirements for Harmonic Control in Electric Power Systems
ISO 8601:2004	Data elements and interchange formats – Information interchange – Representation of dates and times
ECMA-404	The JSON Data Interchange Format
RFC 4180	Common Format and MIME Type for Comma-Separated Values (CSV) Files
RFC 2138	Remote Authentication Dial In User Service (RADIUS)
RFC 2139	RADIUS Accounting
RFC 5280	Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile
RFC 791	Internet Protocol, Version 4 (IPv4)
RFC 2460	Internet Protocol, Version 6 (IPv6)
Appnote,1 APPNOTE.TXT	ZIP File Format Specification, PKWARE® Inc., September 2012
NMEA 0183	National Marine Electronics Association electrical signal requirements, data transmission protocol and time, and specific sentence formats for a 4800-baud serial data bus
ISO/IEC 7810	Identification cards - Physical characteristics
GSTQ001	Fixed installed indoor Power Quality Instrument
GSTQ002	Extended Power Quality Data Interchange Formats
GSTQ004	Power Quality Management System – Human Machine Interface
GSTQ005	Power Quality Management System – Batch Data Processing

1.2 For EU countries

EN 50160	Voltage characteristics of electricity supplied by public distribution systems.

1.3 For Spain

R.D. 1955/2000	Real Decreto 1955/2000, de 1 de diciembre, por el que se regulan las actividades de transporte, distribución, comercialización, suministro y procedimientos de autorización de instalaciones de energía eléctrica.

1.4 For Italy

RSE 12004159	Specifiche tecnico-funzionali delle apparecchiature di monitoraggio della qualità della tensione per le reti MT.
[1]	R. Chiumeo, M. de Nigris, L. Garbero, C. Gandolfi, L. Tenti, E. Carpaneto, “Implementation of a New Method for an Improved Voltage Dips Evaluation by the Italian Power Quality Monitoring System in Presence of VT Saturation Effects”, International Conference on Renewable Energies and Power Quality (ICREPQ’10), Granada (Spain), 23rd to 25th March, 2010.
ARG/elt 198/11	Testo integrato della qualità dei servizi di distribuzione e misura dell’energia elettrica per il periodo di regolazione 2012-2015

1.5 For Colombia

CREG 065/2012	RESOLUCIÓN Nº 065 DE 2012 por el cual se ordena hacer público un proyecto de resolución de carácter general, que pretende establecer las normas de calidad de la potencia eléctrica aplicables en el Sistema Interconectado Nacional.

1.6 For Argentina

ENRE 184/2000 ANEXO	Base Metodológica para el Control de la Calidad del Producto Técnico Etapa 2.

1.7 For Brazil

ANEEL PRODIST Módulo 8	Agência Nacional de Energia Elétrica – ANEEL Procedimentos de Distribuição de Energia Elétrica no Sistema Elétrico Nacional – PRODIST Módulo 8 – Qualidade da Energia Elétrica

1.8 For Peru

NTCSE D.S. 020-97-EM	Norma Técnica de Calidad de los Servicios Eléctricos
Resolución 616-2008-OS/CD	Base Metodológica para la aplicación de la Norma Técnica de Calidad de los Servicios Eléctricos – Urbana
Resolución 016-2008-EM/DGE	Norma Técnica de Calidad de los Servicios Eléctricos Rurales (NTCSER)
Resolución 046-2009-OS/CD	Base Metodológica para la aplicación de la Norma Técnica de Calidad de los Servicios Eléctricos Rurales – Resolución de Consejo Directivo OSINERGMIN

1.9 For Romania

Ord 11/2016	Standardului de performanţă pentru serviciul de distribuţie a energiei electrice.

1.10 For Chile

D.S. 327/1997	Reglamento de la ley general de servicios eléctricos.

2 APPLICATION FIELDS

The PQ monitoring architecture can be made by a central system and distributed power quality instruments (PQIs).

The PQI (according to GSTQ001 and GSTQ002) will be installed in any distribution grid for measuring any relevant PQ parameter. The relevant PQ parameters are defined in IEC 61000-4-30, IEC 62749 and EN 50160.

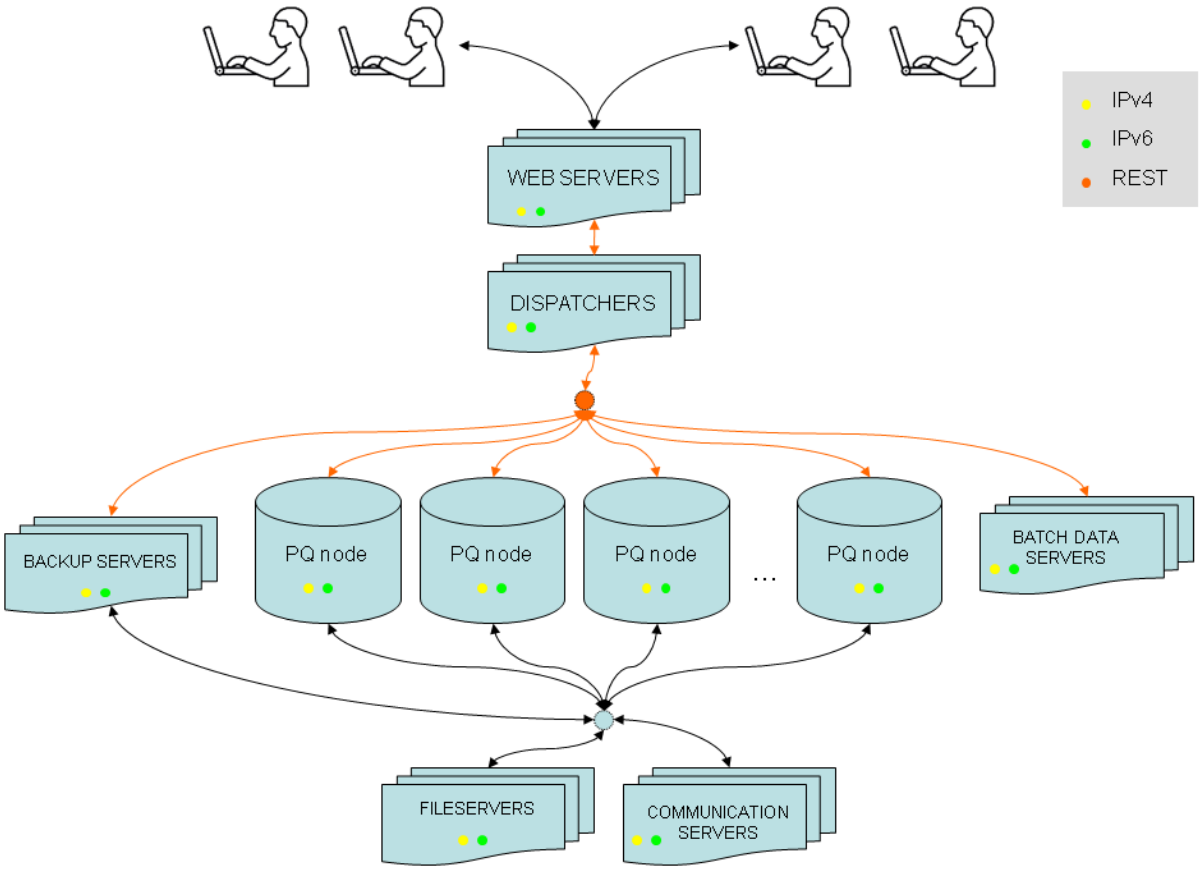
The installation will be a substation or another indoor premise in a country where one or more utilities are under Enel control.

The PQMS is the Power Quality Management System, including data acquisition from PQI, SCADA, weather stations and other relevant systems.

A modular PQMS architecture based on a predefined REST API is defined in this global standard (GS). The inbuilt technology for every module is not fixed in this document, just the common REST layer on top of each one. Generally, further GSs will complement this document.

3 ARCHITECTURE

Based on a modular architecture with predefined interface methods. The main block are depicted in the following picture:



- **WEB SERVER**, to store, process and deliver web pages to end-users.
- **PQ NODES**, consisting of any of the following elements:
  - **PQI**s in remote substation. These PQIs are connected by means of proper and reliable IP networks or any other communication way as in GSTQ002.
  - **PQ DATABASES**, comprising data from several PQIs, that may not have a strong, permanent and reliable IP connection. Aggregated and calculated indices (such as percentile values) could also be inserted in these databases.
  - **WEATHER DATABASES**, collecting data from external weather information services.
  - **GRID EVENTS DATABASES**: these units collect basic information about tripping of feeders, protections and other events or measures from SCADA. The aim is to be fast and standard regardless the SCADA database already used within the DSO.
  - **META DATABASES**: they keep information about the location of any set of data and important attributes (e.g. IP address, latitude, voltage ratio, alias, etc.).
- **COMMUNICATION SERVERS**: they behave as repositories where PQIs upload data or may initiate a connection to them and download specific sets of data.
- **FILE SERVERS**: they just provide shared file services to any server.
- **BATCH DATA SERVERS**: the perform specific calculations on raw data in order to get aggregated indices, such as percentiles or HV/MV origin of events. The results are stored in PQ databases.
- **DISPATCHERS**: they forward any request from the web server to the specific node.

- **BACKUP SERVERS**: they connect to remote PQIs and download specific sets of measurements. Typically they will consist of few 10-minute recordings and events list. Data is stored in a PQ DATABASE.

All these elements exchange information by means of a REST API and few other standard protocols.

3.1 How it works

An end user makes a request through a web page. The WEB SERVER exchanges data with a DISPATCHER by using a REST API. The DISPATCHER asks a META DATABASE in order to match the location and associated attributes of such request. Then it forwards the REST request to several PQIs and/or PQ/WEATHER/SWITCHES databases. The results are returned to the DISPATCHER and then to the WEB SERVER.

When the communication link with a PQI is not good enough, each PQI initiates a connection to a COMMUNICATION SERVER and stores PQDIF files by FTP or SFTP. This server may also initiate a connection to these PQIs by FTP or SFTP and download PQdif files. The PQDIF files will be decrypted by this server and their information stored in PQ DATABASES. It is also possible to use the REST API instead of PQDIF and query for specific data, although the results will be also stored in these databases for offline processing.

The PQMS may be used also with PQI not compliant with GSTQ001 and GSTQ002, further GSs will complemented this document to manage this situations.

Offline data processing (such as calculation of percentiles and most-likely source of voltage dips) is performed by BATCH DATA SERVERS. The results are stored in PQ DATABASES.

BACKUP SERVERS check within the META DATABASE which PQI nodes need to be backed up and which variables have to be downloaded. The suffix ".backup" is added to each PQI's id and stored in a PQ DATABASE.

Separate or common COMMUNICATION SERVERS run middle-ware software between the existing IT systems and the PQ NODES. For instance specific software is in charge of the connection to corporate SCADA systems, external weather services and so on. These units download data from existing systems and upload them to corresponding PQ NODES by REST (either SWITCHES, WEATHER or META DATABASES). It is out of the scope of this standard the definition of this middleware software since it will vary among countries and subsidiaries.

3.2 Common features

Any server will be listening by default at TCP port 80 for HTTP and 443 for HTTPS, both at IPv4 and IPv6 addresses. For security reasons unencrypted connections could be disabled. At least basic access authentication shall be used both for HTTP and HTTPS.

Together with the REST server, any server shall publish basic web interfaces for simple data administration. Next follows the basic features to be included in this administration interface:

- Listening TCP ports (add, remove, change).
- Network configuration:
  - IPv4 and IPv6 addresses.
  - Time sync.
  - DNS.
  - Routes.
  - Firewall rules.
- User administration:
  - Add, remove, modify.
  - For speed purposes, allow removal of any user authentication for specific REST requests.
  - RADIUS server configuration.
- SSL/TLS administration:
  - Non-standard CA root certificates.

  - HTTPS server certificate (better in X.509 PEM format).
  - HTTPS server private key (better in PEM format).
- Data management functions:
  - Volume management.
  - Database administration.
  - Storage capacity for every inbuilt function.
- Download/upload configuration.

This administration server will be listening by default at TCP port 20443 and use HTTPS. The default user will be *admin* and the default password the result of a MD5 hash over the main MAC-address in lowercase letters.

An SSH server will be listening at TCP port 20022. The default user and password will be the same as stated before. It is up to the manufacturer the functionality of this SSH server. It should be possible to access this server through public keys. This functionality should be managed either by command line (right after a SSH access with username and password) or by the HTTPS administration web interface.

3.3 Minimum performance requirements

In order to run a system with adequate performance and thus useful for the end user, minimum requirements have to be addressed on any system component. This performance will be evaluated by measuring two basic variables:

- Latency: the elapsed time between a REST request reaches a server and the response starts to flow (this network latency is not included).
- Throughput: the output rate in kB/s (decoded output, not encrypted). Network bandwidth is assumed to be infinite for this test.
- Parallel requests: the above latency and throughput rates are valid for at least a number of simultaneous clients.

Typically the aforementioned variables need to be evaluated on a LAN with of at least 100Mbps.

The minimum performance requirements are fixed in the following table:

Table 1 – REST servers – minimum performance requirements

Server	Latency [ms]	Througput [kB/s]	Parallel [n]
PQI	500	100	2
PQDB	500	500	15
WDB	500	500	15
SWDB	500	500	15
METADB	100	200	75
DISPATCHER	150	100	100

3.4 Minimum reliability requirements

Permanent storage does not have to be fully installed from scratch, it can be added to any server when needed. Adding and removal of any hard disk has to be managed by the web administration tool.

A single hard disk failure shall not cause the lost of the server. This requirement may be accomplished by any redundant strategy, e.g. RAID1, RAID10, RAID5 or RAID6.

The storage may be local (via hard disks) or remote (via network). In any case, regardless the storage strategy, redundancy and reliability has to be ensured.

4 META DATABASE

It is responsible for all the static and semi-static data of the PQIs and any other modules. The underlying database engine must be a relational database with SQL-language capabilities.

4.1 URLs

Table 2 – META DB: REST server URLS functionalities

META database				
URL	**method**	**description**	**input**	**output**
meta/sql	POST	executes an SQL query	$input_data_metadb	$data_metadb_json $data_metadb_csv
meta/info	GET/POST	general information about the server		$output_metainfo_json

4.2 $input_data_metadb

It consists of a JSON dictionary with the SQL string as an input parameter and the requested output format (either CSV or JSON).

Next table shows two examples:

Table 3 – META DB: REST server $input_data_metadb

name	values	type	example
sql	sql query to be executed	text	"select * from table;"
format	csv or json	text	"csv" "json"

```
{
        "sql":          "select * from table;"      ,
        "format":       "csv"
}
```

```
{
        "sql":          "select * from table;"      ,
        "format":       "json"
}
```

4.3 $data_metadb_json

The results of the SQL query are returned as a JSON dictionary. Each colum corresponds to a pair key-vector.

Table 4 – META DB: REST server $data_metadb_json

name	values	type	example
col1	[values]		["S1114", "S1117", …]
col2	[values]		[35.1, 36.2, …]
…	…	…	…

```
{
                "id":              [ "S1114", "S1117", … ]      ,
                "latitude_deg":    [ 35.1, 36.2, … ]            ,
                "voltage":         [ 15000, 20000, … ]
                …                 … ,
}
```

4.4 $data_metadb_csv

The results of the SQL query are returnedin CSV format.

Table 5 – META DB: REST server $data_metadb_csv

id	latitude_deg	voltage
S1114	35.1	15000
S1117	36.2	20000
…	…	…

4.5 $output_metainfo_json

It returns general information abou the server, such as software version, location, etc. Next table shows the minimal set of keys to be included (example values are added):

Table 6 – META DB: REST server $output_metainfo_json

name	values	type	description	example
software	value	alphanumeric	firmware version	"3.11"
api	value	alphanumeric	REST API version	"2.5"
id	value	alphanumeric	pqdb's unique id	"X01"
latitude_deg	value	value	location's latitude (degrees)	37.377638
longitude_deg	value	value	location's longitude (degrees)	-5.9862947
sql_engine	value	alphanumeric	SQL engine version	"SQLITE-3.10.0"
memo	value	alphanumeric	any aditional information	"DATA CENTER 1"

```
{
                "software":        "3.11" ,
                "api":             "2.5" ,
                "id":              "X01" ,
                "latitude_deg":    37.377638 ,
                "longitude_deg":   -5.9862947 ,
                "sql_engine":      "SQLITE-3.10.0"
                "memo":            "DATA CENTER 1"
}
```

4.6 Tables

The minimum set of tables to be used are depicted below (administrator may be able to configure further set).

Table 7 – META DB: set of tables

Information about any PQI and where its data is stored.

Table name	Column name	Type	Description	Enum values	Example
PQI	id	varchar	PQI's unique id		
PQI	serial_number	varchar	PQI's serial number		
PQI	brand	varchar	brand		
PQI	model	varchar	model		
PQI	firmware	varchar	firmware version		
PQI	comm_type	varchar	communication method	mobile, ip	
PQI	sim	varchar	SIM card (if existent)		34564985700102
PQI	provider	varchar	data subscriber (SIM)		vodafone
PQI	telephone	varchar	telephone number (SIM)		645 890 123
PQI	apn	varchar	APN (SIM)		ac.vodafone.es/internet/internet
PQI	ipv4	varchar			10.0.0.10
PQI	ipv6	varchar			2001:470:1f12:119b:20d:b9ff:fe33:99f0
PQI	method	varchar	access method	http, https, http/80, https/443, ...	
PQI	id_pqdbnode	varchar	Data access	Null or any pqdb's unique id	
PQI	comm_server	varchar	communication server	Number or ftp/sftp/scp server (with password)	ftp://pqdif:123456@10.23.45.6/
PQI	id_pqdbnode_backup	varchar	in which PQDB store the backup	null or link	1578321
PQI	vars_backup	varchar	variables to be backed up	null or list of periodic variables to be backed up	v_AN_avg,v_AB_avg,pst
PQI	backup_interval	integer	interval in seconds between backups	0 or an >0 integer	86400
PQI	calibration	timestamp or varchar(ISO 8601 format)			2016-11-02
PQI	memo	varchar	any useful information to be reminded		deinstalled for calibration 2016-10-20

Information about real network sites.

Table name	Column name	Type	Description	Enum values	Example
DSOSITE	id	varchar	installation site's unique id		S1114\TR1\20kV
DSOSITE	alias	varchar			
DSOSITE	description	varchar			
DSOSITE	latitude_deg	float	latitude in degrees		
DSOSITE	longitude_deg	float	longitude in degrees		
DSOSITE	area0	varchar	country or subsidiary id	ENDESA, ITALY, COELCE, ROMANIA, ...	ENDESA
DSOSITE	area1	varchar	area id	SUR, NORTE, SICILIA, etc.	SUR
DSOSITE	area2	varchar	subarea id	SEVILLA, BARCELONA, MILANO, etc.	SEVILLA
DSOSITE	extra	[varchar]	any extra attributes for applying filters	"compensated neutral", "overhead network", etc.	["compensated neutral", "overhead"]

Information about all the measurement sites and link to the PQI doing the measurements.

Table name	Column name	Type	Description	Enum values	Example
PQSITE	id	varchar	installation site's unique id		
PQSITE	dsosite_id	varchar	unique id whithin DSO's database		
PQSITE	pqi_id		link to the PQI doing the measurement		
PQSITE	description	varchar	full name or description		
PQSITE	wiring	varchar	3-wire, 4-wire, etc.	3w, 4w	
PQSITE	voltage	float	rated voltage [volts]		
PQSITE	voltage_ratio	float	voltage ratio to be applied		
PQSITE	current_ratio	float	current ratio to be applied		
PQSITE	valid_since	timestamp or varchar(ISO 8601 format)	measurements are valid since this time		
PQSITE	valid_until	timestamp or varchar(ISO 8601 format)	measurements are valid until this time		
PQSITE	visible	boolean	whether it should be listed or not		
PQSITE	removed	boolean	whether the measurement has been removed		

Table 8 – META DB: set of tables (cont.)

Information about any switch in the network

Table name	Column name	Type	Description	Enum values	Example
GRID	id	varchar	installation site's unique id		
GRID	vertex_left	varchar	unique id of left vertex in DSO's database		S1114\TR1\20kV
GRID	vertex_right	varchar	unique id of left vertex in DSO's database		82763762
GRID	voltage	float	rated voltage [volts]		
GRID	type	varchar	one-phase or three-phase	1p, 3p	3p
GRID	latitude_deg	float	latitude in degrees		
GRID	longitude_deg	float	longitude in degrees		
GRID	timezone_offset	integer	offset (in hours) to be added		-4, +2, …
GRID	area0	varchar	country or subsidiary id	ENDESA, ITALY, COELCE, ROMANIA, …	ENDESA
GRID	area1	varchar	area id	SUR, NORTE, SICILIA, etc.	SUR
GRID	area2	varchar	subarea id	SEVILLA, BARCELONA, MILANO, etc.	SEVILLA
GRID	id_node	varchar	SWITCHES db's unique id		

Information about physical weather stations

Table name	Column name	Type	Description	Enum values	Example
WEATHER	id	varchar	weather station's unique id		X1786
WEATHER	alias	varchar			
WEATHER	description	varchar			
WEATHER	latitude_deg	float	latitude in degrees		
WEATHER	longitude_deg	float	longitude in degrees		
WEATHER	timezone_offset	integer	offset (in hours) to be added		-4, +2, …
WEATHER	network	varchar	weather network	AEMET, METEOAM, BLITZORTUNG, …	
WEATHER	id_node	varchar	WEATHER db's unique id		

Information about PQ nodes (except for PQIs) and servers.

Table name	Column name	Type	Description	Enum values	Example
NODES	id	varchar	DB node's unique id		
NODES	alias	varchar			
NODES	description	varchar			
NODES	type	varchar	type of node	WDB, PQDB, SWDB, METADB, DISPATCHER, WEB	PQDB
NODES	latitude_deg	float	latitude in degrees		
NODES	longitude_deg	float	longitude in degrees		
NODES	ipv4	varchar	ip address of weatherdb		
NODES	ipv6	varchar	ip address of weatherdb		
NODES	method	[varchar]	access methods	http, https, http/80, https/443, …	["http/80", "https/443"]
NODES	area0	varchar	country or subsidiary id	ENDESA, ITALY, COELCE, ROMANIA, …	ENDESA
NODES	area1	varchar	area id	SUR, NORTE, SICILIA, etc.	SUR
NODES	area2	varchar	subarea id	SEVILLA, BARCELONA, MILANO, etc.	SEVILLA

Information about users' roles

Table name	Column name	Type	Description	Enum values	Example
ROLES	id	varchar			ENDESA_WRITE
ROLES	description	varchar			
ROLES	type	varchar	type of role	READ, WRITE	WRITE
ROLES	area0	varchar	country or subsidiary id	ENDESA, ITALY, COELCE, ROMANIA, …	ENDESA
ROLES	area1	varchar	area id	SUR, NORTE, SICILIA, etc.	SUR
ROLES	area2	varchar	subarea id	SEVILLA, BARCELONA, MILANO, etc.	SEVILLA

Information about users' roles

Table name	Column name	Type	Description	Enum values	Example
USERS	id	varchar			
USERS	alias	varchar			
USERS	email	varchar	type of role	READ, WRITE	WRITE
USERS	password	varchar			
USERS	validity	timestamp or varchar(ISO 8601 format)	valid until		2016-10-30
USERS	roles	[varchar]	set of roles		["ENDESA_WRITE", "ENEL_DISTRIBUZIONE_READ"]

Same colors correspond to linked keys.

Additional columns and tables could be requested on a country-basis during commissioning.

4.7 Minimum dimension requirements

The server shall be dimensioned for at least the following number of elements:

Table 9 – META DB: minimum dimension requirements

Table	Rows (x1000)
PQI	100
DSOSITES	100
PQSITE	100
SWITCHES	100
WEATHER	100
NODES	10

4.8 Simple web-based GUI

The server shall publish a web interface with the following features:

- List/show/modify tables.
- Execute SQL queries either by web forms or uploaded sql scripts.

5 WEATHER DATABASE

It is responsible for compiling weather information.

5.1 URLs

Table 10 – WEATHER DB: REST server URLS functionalities

WEATHER database				
URL	**method**	**description**	**input**	**output**
weather/data/periodic	POST	download recorded periodic values in JSON or CSV format	$input_weather_periodic_wdb	$weather_periodic_wdb_json $weather_periodic_wdb_csv
weather/events/list	POST	download events list with associated data in JSON format	$weather_data_events	$weather_events_json $weather_events_csv
weather/events/upload	POST/PUT	upload events list with associated data in JSON format	$weather_events_json $weather_events_csv	$output_simple
weather/periodic/upload	POST/PUT	upload recorded periodic values in JSON or CSV format	$weather_periodic_wdb_json $weather_periodic_wdb_csv	$output_simple
weather/info	GET/POST	get WEATHER database information in JSON format		$output_dbinfo_json
weather/sites	GET/POST	download the list of measurement sites in JSON or CSV format		$output_sites_json $output_sites_csv

5.2 $input_weather_periodic_wdb

It consists of a JSON dictionary with the requested weather stations (vector of unique ids), variables, time interval and output format (either CSV or JSON):

Table 11 – WEATHER DB: REST server $input_weather_periodic_wdb

name	values	type	example
id	[unique id]	[text]	["eysbf25dp7vg", "2514256"]
start	timestamp	timestamp (ISO 8601 format)	"2015-11-16T22:20:00Z"
end	timestamp	timestamp (ISO 8601 format)	"2015-11-19T10:20:00Z"
vars	[name]	[text]	[temp_c_min", "wind_speed_avg", …, "dew_point_c_avg"]
			["*"]
format	csv or json	text	"csv"
			"json"

```
{
        "id":       [ "eysbf25dp7vg", "2514256" ]                          ,
        "start":    "2015-11-16T22:20:00Z"                                 ,
        "end":      "2015-11-19T10:20:00Z"                                 ,
        "vars":     [ temp_c_min", "wind_speed_avg", …, "dew_point_c_avg" ] ,
        "format":   "csv"
}

{
        "id":       [ "eysbf25dp7vg", "2514256" ]                          ,
        "start":    "2015-11-16T22:20:00Z"                                 ,
        "end":      "2015-11-19T10:20:00Z"                                 ,
        "vars":     [ temp_c_min", "wind_speed_avg", …, "dew_point_c_avg" ] ,
        "format":   "json"
}

{
        "id":       [ "eysbf25dp7vg", "2514256" ]                          ,
        "start":    "2015-11-16T22:20:00Z"                                 ,
        "end":      "2015-11-19T10:20:00Z"                                 ,
        "vars":     [ "*" ]                                                ,
        "format":   "json"
}
```

5.3 $weather_periodic_wdb_json

It consists of a JSON dictionary having a single key for each weather stations. Each value corresponds to a dictionary with timestamp and measurement vectors. Variables codes are enumerated in *ANNEX 1: WEATHER measurement CODES.*

Table 12 – WEATHER DB: REST server $weather_periodic_wdb_json

name	values	type	example
periodic_json	{ { } }	extended json	

```
{
        "eysbf25dp7vg":   {
                                "timestamps1":      [ "2015-11-16T22:20:00Z", "2015-11-16T22:30:00Z", …, "2015-11-16T23:50:00Z" ] ,
                                "timestamps2":      [ "2015-11-16T22:30:00Z", "2015-11-16T22:40:00Z", …, "2015-11-17T00:00:00Z" ] ,
                                "temp_c_min":       [ 12.5, 13.0, …, 11.5 ] ,
                                …                  … ,
                                "dew_point_c_avg":  [ 5.0, 4.9, …, 5.1 ]
                          } ,
        "2514256":        {
                                "timestamps1":      [ "2015-11-16T22:20:00Z", "2015-11-16T22:30:00Z", …, "2015-11-16T23:50:00Z" ] ,
                                "timestamps2":      [ "2015-11-16T22:30:00Z", "2015-11-16T22:40:00Z", …, "2015-11-17T00:00:00Z" ] ,
                                "temp_c_min":       [ 14.0, 15.2, 14.7 ] ,
                                …                  … ,
                                "dew_point_c_avg":  [ 4.10, 4.80, …, 3.10 ]
                          }
}
```

5.4 $weather_periodic_wdb_csv

The same output as above but as plain text columns:

Table 13 – WEATHER DB: REST server $weather_periodic_wdb_csv

id	t1	t2	temp_c_min	…	dew_point_c_avg
eysbf25dp7vg	2015-11-16T22:20:00Z	2015-11-16T22:30:00Z	12.5	…	14.0
eysbf25dp7vg	2015-11-16T22:30:00Z	2015-11-16T22:40:00Z	13.0	…	15.2
…	…		…	…	…
eysbf25dp7vg	2015-11-16T23:50:00Z	2015-11-17T00:00:00Z	11.5	…	14.7
2514256	2015-11-16T22:20:00Z	2015-11-16T22:30:00Z	23.2	…	4.10
2514256	2015-11-16T22:30:00Z	2015-11-16T22:40:00Z	22.8	…	4.80
…	…		…	…	…
2514256	2015-11-16T23:50:00Z	2015-11-17T00:00:00Z	21.5	…	3.10

If a single variable does not exist for an specific device, its contents shall be ***"NONE"***

5.5 $weather_data_events

It outputs the list of events inside a given geographic polygon, between a given time interval and constrained by the type of event. Input parameters are encoded in a JSON dictionary. The polygon is defined as a vector of latitude-longitude pairs or geohashes[1]. Event types are enumerated in *ANNEX 2: WEATHER events CODES*. A slash and the source weather agency may be added to the weather code (e.g. *AEMET* for Spain, *METEOAM* for Italy, etc.). Code 211 means *thunderstorm* (with or without rain –*dry thunderstorm*-).

Table 14 – WEATHER DB: REST server $weather_data_events

[1] See either https://en.wikipedia.org/wiki/Geohash or http://geohash.org/ for a full description of the encryption method.

name	values	type	example
polygon	[vertices]	a vector of (lat-long) pairs or geohashes	[(40, -6), (40, -5), (41.5, -5), (41.5, -6)]
start	timestamp	timestamp (ISO 8601 format)	"2015-11-16T22:20:00Z"
end	timestamp	timestamp (ISO 8601 format)	"2015-11-19T10:20:00Z"
filter	[type/source]	vector	["211/AEMET"]

```
{
        "polygon":      [ (40, -6), (40, -5), (41.5, -5), (41.5, -6) ]      ,
        "start":        "2015-11-16T22:20:00Z"                              ,
        "end":          "2015-11-19T10:20:00Z"                              ,
        "filter":       [ "211/AEMET", "211/METEOAM" ]
}

{
        "polygon":      [ "ez5e", "ezh7", "ezkkn", "ez7sp" ]                ,
        "start":        "2015-11-16T22:20:00Z"                              ,
        "end":          "2015-11-19T10:20:00Z"                              ,
        "filter":       [ "*" ]
}

{
        "polygon":      [ "ez5e", "ezh7", "ezkkn", "ez7sp" ]                ,
        "start":        "2015-11-16T22:20:00Z"                              ,
        "end":          "2015-11-19T10:20:00Z"                              ,
        "filter":       [ "211/*" ]
}
```

5.6 $weather_events_json

It consists of a JSON dictionary whose keys are the type of event and source (optional). Each key's value consists of a dictionary with associated vectors. These vectors contain timestamps, coordinates and any values that correctly define the sequence of events.

Table 15 – WEATHER DB: REST server $weather_events_json

name	values	type	example
periodic_json	{ { } }	extended json	Each key corresponds to the type of event plus the source

```
{
        "211/AEMET":    {
                                "timestamps1":          [ "2015-11-16T22:21:00.123754Z", "2015-11-16T22:21:01.234897Z", ..., "2015-11-16T22:22:05.135789Z" ] ,
                                "timestamps2":          [ ] ,
                                "latitude_deg":         [ 35.7856, 35.92461, ..., 34.8967 ] ,
                                "longitude_deg":        [ -1.2346, -1.11323, ..., -0.78954 ] ,
                                "current_ka":           [ -1.23, -15.8, ..., 25.4 ] ,
                                ...                     ... ,
                                "nbdf":                 [ 2, 3, ..., 1 ]
                        } ,
        "211/METEOAM":  {
                                "timestamps1":          [ "2015-11-16T22:21:00.123754Z", "2015-11-16T22:21:01.234897Z", ..., "2015-11-16T22:22:05.135789Z" ] ,
                                "timestamps2":          [ ] ,
                                "latitude_deg":         [ 35.7856, 35.92461, ..., 34.8967 ] ,
                                "longitude_deg":        [ -1.2346, -1.11323, ..., -0.78954 ] ,
                                "current_ka":           [ -1.23, -15.8, ..., 25.4 ] ,
                                ...                     ... ,
                                "nbdf":                 [ 2, 3, ..., 1 ]
                        }
}
```

5.7 $weather_events_csv

The same output as above but as plain text columns:

Table 16 – WEATHER DB: REST server $weather_events_csv

id	t1	t2	latitude_deg	longitude_deg	current_ka	…	nbdf
211/AEMET	2015-11-16T22:21:00.123754Z		35.7856	-1.2346	-1.23		2
211/AEMET	2015-11-16T22:21:01.234897Z		35.92461	-1.11323	-15.8		3
211/METEOAM	2015-11-16T22:22:05.135789Z		34.8967	-0.78954	25.4		1

If a single variable does not exist for an specific device, its contents shall be ***"NONE"***

5.8 $output_simple

It gives basic success or error information just after a POST, GET or PUT request. Next table shows parameters and example values:

Table 17 – REST server $output_simple

name	values	type	example
ok	true, false	boolean	false
error		text	not found

```
{
        "ok":           "false"     ,
        "error":        "not found"
}
```

5.9 $output_dbinfo_json

It returns general information about the server, such as software version, location, etc. Next table shows the minimal set of keys to be included (example values are added):

Table 18 – WEATHER DB: REST server $output_dbinfo_json

name	values	type	description	example
software	value	alphanumeric	firmware version	"3.11"
api	value	alphanumeric	REST API version	"2.5"
id	value	alphanumeric	pqdb's unique id	"X01"
latitude_deg	value	value	location's latitude (degrees)	37.377638
longitude_deg	value	value	location's longitude (degrees)	-5.9862947
memo	value	alphanumeric	any aditional information	"DATA CENTER 1"

```
{
        "software:      "3.11" ,
        "api:           "2.5" ,
        "id:            "X01" ,
        "latitude_deg:  37.377638 ,
        "longitude_deg: -5.9862947 ,
        "memo:          "DATA CENTER 1"
}
```

5.10 $output_sites_json

It returns the list of sites within this WEATHER database.

Table 19 – WEATHER DB: REST server $output_sites_json

name	values	type	description	example
ids	value	[text]	vector of sites' ids	["86732876", "S1114", …]

```
{
        "id":        [ "86732876", "S1114", … ]
}
```

5.11 $output_sites_csv

The same output as above but as plain text columns:

Table 20 – WEATHER DB: REST server $output_sites_csv

id
86732876
S1114
…

5.12 Minimum dimension requirements

The server shall be dimensioned for at least 10 years for events and 5 years for periodic recordings (at a rough rate of 100 single measurements every 10 minutes). It will be dependent on the total amount of monitored weather sites (specified during procurement phase).

6 GRID-EVENTS DATABASE

It compiles tripping of circuit breakers and/oir protections (or in general boolean states). Some event types are enumerated in *ANNEX 3: GRID-EVENTS STATE CODES.*

6.1 URLs

Table 21 – GRID-EVENTS DB: REST server URLS functionalities

GRID-EVENTS database				
URL	**method**	**description**	**input**	**output**
gevents/list	POST	downloads events list with associated data in JSON format	$switches_data_events	$data_events_swdb_json
				$data_events_swdb_csv
gevents/upload	POST/PUT	uploads recorded periodic values in JSON or CSV format	$data_events_swdb_json	$output_simple
			$data_events_swdb_csv	
gevents/info	GET/POST	GRID-EVENTS database information in JSON format		$output_dbinfo_json
gevents/ids	GET/POST	get the list of grid events in JSON or CSV		$output_sites_json
				$output_sites_csv

6.2 $switches_data_events

Given a vector of substations or electrical installations, their corresponding list of grid events is requested. The information is encoded in a JSON dictionary.

Table 22 – GRID-EVENTS DB: REST server $switches_data_events

name	values	type	example
id	[ids]	vector of unique ids	["S1114", "S1117"]
start	timestamp	timestamp (ISO 8601 format)	"2015-11-16T22:20:00Z"
end	timestamp	timestamp (ISO 8601 format)	"2015-11-19T10:20:00Z"
format	text	text	"json"

```
{
        "id":       [ "S1114", "S1117" ]    ,
        "start":    "2015-11-16T22:20:00Z"  ,
        "end":      "2015-11-19T10:20:00Z"  ,
        "format":   "json"
}
```

```
{
        "id":       [ "S1114", "S1117" ]    ,
        "start":    "2015-11-16T22:20:00Z"  ,
        "end":      "2015-11-19T10:20:00Z"  ,
        "format":   "csv"
}
```

6.3 $data_events_swdb_json

Given a vector of substations or electrical installations, their corresponding list of grid events is requested. The information is encoded in a JSON dictionary.

Table 23 – GRID-EVENTS DB: REST server $data_events_swdb_json

name	values	type	example
timestamps	[timestamps]	[timestamp (ISO 8601 format)]	["2015-11-16T22:20:00Z", "2015-11-16T22:30:00Z","2015-11-16T22:31:01.6768Z"]
ids	[unique ids]	[text]	["a56d4ba899b92d296371bce82f546683" ,"a94ef2233a4720dea1cb8c06e0ba35b9" ,"8a50c62f1fac3d7a7ee69a4ad736da3d"]
state	[values]	[varchar]	["0", "00", "01"]
memo	[values]	[varchar]	["", "10.1 A fault current", "51N trip"]


```
{
        "timestamps":   [ "2015-11-16T22:20:00Z", "2015-11-16T22:30:00Z","2015-11-16T22:31:01.6768Z" ] ,
        "ids":          [ "a56d4ba899b92d296371bce82f546683" ,"a94ef2233a4720dea1cb8c06e0ba35b9" ,"8a50c62f1fac3d7a7ee69a4ad736da3d" ] ,
        "state":        [ "0", "00", "01" ] ,
        "memo":         [ "", "10.1 A fault current", "51N trip" ]
}
```


Each grid element has an unique identifier

6.4 $data_events_swdb_csv

The same output as above but as plain text columns:

Table 24 – GRID-EVENTS DB: REST server $data_events_swdb_csv

timestamp	ids	state	memo
2015-11-16T22:20:00Z	a56d4ba899b92d296371bce82f546683	0	
2015-11-16T22:30:00Z	a94ef2233a4720dea1cb8c06e0ba35b9	00	10.1 A fault current
2015-11-16T22:31:01.6768Z	8a50c62f1fac3d7a7ee69a4ad736da3d	01	51N trip
…	…	…	…

If a single variable does not exist for an specific device, its contents shall be ***"NONE"***

6.5 Minimum dimension requirements

The server shall be dimensioned for at least 10 years of events recordings and 100k elements (at a rate of 10 boolean states per day).

7 PQ DATABASE

It is responsible for compiling power quality data from several devices.

7.1 URLs

Table 25 – PQ DB: REST server URLS functionalities

PQ database				
URL	**method**	**description**	**input**	**output**
data/periodic	POST	recorded periodic values in JSON or CSV format	$input_data_periodic_pqdb	$data_periodic_pqdb_json
				$data_periodic_pqdb_csv
data/events/list	POST	events list with associated data in JSON format	$input_data_events_pqdb	$data_events_pqdb
data/waveform	POST	waveform datapoints in CSV format	$input_data_waveform	$data_waveform_csv
		waveform datapoints in JSON format		$data_waveform_json
		waveform datapoints in ZIP+COMTRADE format		$data_waveform_zipcomtrade
data/periodic/upload	POST/PUT	recorded periodic values in JSON or CSV format	$data_periodic_pqdb_json	$output_simple
			$data_periodic_pqdb_csv	
data/events/upload	POST/PUT	events list with associated data in JSON format	$data_events_pqdb	$output_simple
data/waveform/upload	POST/PUT	waveform datapoints in JSON format	$data_waveform_pqdb_json	$output_simple
data/info	GET/POST	PQ database information in JSON format		$output_dbinfo_json
data/sites	GET/POST	get the list of measurement sites in JSON or CSV		$output_sites_json
				$output_sites_csv

7.2 $input_data_periodic_pqdb

It consists of a JSON dictionary with the requested monitored sites (vector of unique ids –according to table PQSITE in METADB-), variables (according to ANNEX 4: , time interval and output format (either CSV or JSON):

Table 26 – PQ DB: REST server $input_data_periodic_pqdb

name	values	type	example
id	[unique id or installation code]	[text]	["DR0013801492RO", "S1114|1"]
start	timestamp	timestamp (ISO 8601 format)	"2015-11-16T22:20:00Z"
end	timestamp	timestamp (ISO 8601 format)	"2015-11-19T10:20:00Z"
vars	[name]	[text]	["v_AN_min", "v_BN_avg", …, "q_AN_min"] ["*"]
format	csv or json	text	"csv" "json"

```
{
        "id":       [ "DR0013801492RO", "S1114|1" ]                 ,
        "start":    "2015-11-16T22:20:00Z"                          ,
        "end":      "2015-11-19T10:20:00Z"                          ,
        "vars":     [ "v_AN_min", "v_BN_avg", …, "q_AN_min" ]       ,
        "format":   "csv"
}
```

```
{
        "id":       [ "DR0013801492RO", "S1114|1" ]                 ,
        "start":    "2015-11-16T22:20:00Z"                          ,
        "end":      "2015-11-19T10:20:00Z"                          ,
        "vars":     [ "v_AN_min", "v_BN_avg", …, "q_AN_min" ]       ,
        "format":   "json"
}
```

```
{
        "id":       [ "DR0013801492RO", "S1114|1" ]                 ,
        "start":    "2015-11-16T22:20:00Z"                          ,
        "end":      "2015-11-19T10:20:00Z"                          ,
        "vars":     [ "*" ]                                         ,
        "format":   "json"
}
```

7.3 $data_periodic_pqdb_json

It consists of a JSON dictionary having a single key for each PQ site. Each value corresponds to a dictionary with timestamp and measurement vectors. This format can also be used for uploading data to the server.

Table 27 – PQ DB: REST server $data_periodic_pqdb_json

name	values	type	example
periodic_json	{ { } }	extended json	Each value corresponds to the same response a single PQI shall deliver. Each key is the PQI's id.

```
{
        "DR0013801492RO": {
                                "timestamps1":      [ "2015-11-16T22:20:00Z", "2015-11-16T22:30:00Z", …, "2015-11-16T23:50:00Z" ] ,
                                "timestamps2":      [ "2015-11-16T22:30:00Z", "2015-11-16T22:40:00Z", …, "2015-11-17T00:00:00Z" ] ,
                                "v_AN_avg":         [ 231.5, 232.7, …, 235.3 ] ,
                                …                   … ,
                                "v_CN_THD_avg":     [ 5.12, 5.20, …, 5.68 ]
                        } ,
        "S1114|1":       {
                                "timestamps1":      [ "2015-11-16T22:20:00Z", "2015-11-16T22:30:00Z", …, "2015-11-16T23:50:00Z" ] ,
                                "timestamps2":      [ "2015-11-16T22:30:00Z", "2015-11-16T22:40:00Z", …, "2015-11-17T00:00:00Z" ] ,
                                "v_AN_avg":         [ 110.5, 111.2, …, 117.3 ] ,
                                …                   … ,
                                "v_CN_THD_avg":     [ 3.10, 2.95, …, 3.75 ]
                        }
}
```

7.4 $data_periodic_pqdb_csv

The same output as above but as plain text columns. This format can also be used for uploading data to the server.

Table 28 – PQ DB: REST server $data_periodic_pqdb_csv

id	t1	t2	v_AN_avg	…	v_CN_THD_avg
DR0013801492RO	2015-11-16T22:20:00Z	2015-11-16T22:30:00Z	231.5	…	5.12
DR0013801492RO	2015-11-16T22:30:00Z	2015-11-16T22:40:00Z	232.7	…	5.20
…	…		…	…	…
DR0013801492RO	2015-11-16T23:50:00Z	2015-11-17T00:00:00Z	235.3	…	5.68
S1114|1	2015-11-16T22:20:00Z	2015-11-16T22:30:00Z	110.5	…	1.15
S1114|1	2015-11-16T22:30:00Z	2015-11-16T22:40:00Z	111.1	…	1.20
…	…		…	…	…
S1114|1	2015-11-16T23:50:00Z	2015-11-17T00:00:00Z	110.7	…	1.05

If a single variable does not exist for an specific device, its contents shall be ***"NONE"***

7.5 $input_data_events_pqdb

The input is a JSON dictionary with the scope of PQI sites and time intervals.

Table 29 – PQ DB: REST server $input_data_events_pqdb

name	values	type	example
id	[unique id or installation code]	[text]	["DR0013801492RO", "S1114|1"]
start	timestamp	timestamp (ISO 8601 format)	"2015-11-16T22:20:00Z"
end	timestamp	timestamp (ISO 8601 format)	"2015-11-19T10:20:00Z"

```
{
        "id":       [ "DR0013801492RO", "S1114|1" ]   ,
        "start":    "2015-11-16T22:20:00Z"            ,
        "end":      "2015-11-19T10:20:00Z"
}
```

7.6 $data_events_pqdb

It consists of a JSON dictionary with a single key for every PQ site. Each key has an associated vector of events. Each event is encoded as a dictionary according to ANNEX 4:). Next table shows a typical example:

Table 30 – PQ DB: REST server $data_events_pqdb

name	values	type	example
periodic_json	{ { } }	extended json	Each value corresponds to the same response a single PQI should deliver. The key is the PQI's id.


```
{
        "DR0013801492RO":   [
                                {
                                    "event_id":      "93815260fcfa1d677847b4026cbc36c0" ,
                                    "start":         "2015-11-15T10:23:45.015010Z" ,
                                    "end":           "2015-11-15T10:23:45.126730Z" ,
                                    "waveform_id":"34e6431b6430362f8ff277c0c5b3456d" ,
                                    "type":          "dip" ,
                                    "magnitude":   75.1 ,
                                    "phases":       [ "AN", "BN", "AB" ] ,
                                    "info":          [ "RSE_good", "HV" ]
                                } ,
                                {
                                    "event_id":      "1287687680fcfa1d677847b4026cbc36c0" ,
                                    "start":         "2015-09-11T12:33:45.015010Z" ,
                                    "end":           "2015-09-11T12:33:45.126730Z" ,
                                    "waveform_id":"98734298736430362f8ff277c0c5b3456d" ,
                                    "type":          "dip" ,
                                    "magnitude":   87.1 ,
                                    "phases":       [ "AB" ] ,
                                    "info":          ""
                                }
                            ] ,
        "S1114|1":          [
                                {
                                    "event_id":      "5a413cbd4bedfca97045d7814202fafd" ,
                                    "start":         "2015-11-16T09:11:35.023020Z" ,
                                    "end":           "2015-11-16T09:11:35.030100Z" ,
                                    "waveform_id":"" ,
                                    "type":          "swell" ,
                                    "magnitude":   [ "max": 107.1, "avg": 105.2, "t": "2015-11-16T09:11:35.026010Z" ],
                                    "phases":       [ "CA" ] ,
                                    "info":          [ ]
                                }

                            ]
}
```


7.7 $input_data_waveform

It consists of a very simple JSON dictionary with a unique waveform id and the requested output format. Next table shows the parameters.

Table 31 – PQ DB: REST server $input_data_waveform

name	values	type	example
waveform_id	unique id	text	"93815260fcfa1d677847b4026cbc36c0"
format	csv, json or zipcomtrade	text	"csv"

```
{
                "waveform_id":      "93815260fcfa1d677847b4026cbc36c0" ,
                "format":           "csv"
}
```

```
{
                "waveform_id":      "93815260fcfa1d677847b4026cbc36c0" ,
                "format":           "json"
}
```

```
{
                "waveform_id":      "93815260fcfa1d677847b4026cbc36c0" ,
                "format":           "zipcomtrade"
}
```

7.8 $data_waveform_json

Similar to the *$data_periodic_pqdb_json* format but with a single time vector.

Next table shows the parameters.

Table 32 – PQ DB: REST server $data_waveform_json

name	values	type	example
timestamps	[timestamps]	[timestamp (ISO 8601 format)]	["2015-11-16T22:20:00.01Z", "2015-11-16T22:20:00.02Z", …, "2015-11-16T22:20:00.88Z"]
"var1"	[values]	[numeric]	[231.5, 232.7, …, 235.3]
"var2"	[values]	[numeric]	[230.5, 233.1, …, 234.1]
…	…	…	…

```
{
        "timestamps":   [ "2015-11-16T22:20:00.01Z", "2015-11-16T22:20:00.02Z", …, "2015-11-16T22:20:00.88Z" ] ,
        "v_AN":         [ 231.5, 232.7, …, 235.3 ] ,
        "v_CA":         [ 230.5, 233.1, …, 234.1 ],
        …               …
}
```

7.9 $data_waveform_csv

Similar to the *$data_periodic_pqdb_csv* format but with a single time vector.

Next table shows the parameters.

Table 33 – PQ DB: REST server $data_waveform_csv

timestamps	v_AN	v_CA	…
2015-11-16T22:20:00.01Z	231.5	230.5	…
2015-11-16T22:20:00.02Z	232.7	233.1	…
…	…	…	…
2015-11-16T22:20:00.88Z	235.3	234.1	…

7.10 $data_waveform_zipcomtrade

It consists of a zip-file containing standard COMTRADE files (CFG, DAT and optional HDR). COMTRADE DAT file may be encoded in binary or plain text format.

7.11 $data_waveform_pqdb_json

Similar to *$data_waveform_json* but adding a key for the waveform id.

Table 34 – PQ DB: REST server $data_waveform_pqdb_json

name	values	type	example
waveform_id	unique id	text	"93815260fcfa1d677847b4026cbc36c0"
timestamps	[timestamps]	[timestamp (ISO 8601 format)]	["2015-11-16T22:20:00.01Z", "2015-11-16T22:20:00.02Z", …, "2015-11-16T22:20:00.88Z"]
"var1"	[values]	[numeric]	[231.5, 232.7, …, 235.3]
"var2"	[values]	[numeric]	[230.5, 233.1, …, 234.1]
…	…	…	…

```
{
        "waveform_id":    "93815260fcfa1d677847b4026cbc36c0" ,
        "timestamps":     [ "2015-11-16T22:20:00.01Z", "2015-11-16T22:20:00.02Z", …, "2015-11-16T22:20:00.88Z" ] ,
        "v_AN":           [ 231.5, 232.7, …, 235.3 ] ,
        "v_CA":           [ 230.5, 233.1, …, 234.1 ],
        …                …
}
```

7.12 $output_simple

See *5.8 $output_simple.*

7.13 $output_dbinfo_json

See *5.9 $output_dbinfo_json*.

7.14 $output_sites_json

See *5.10 $output_sites_json*.

7.15 $output_sites_csv

See *5.11 $output_sites_csv*.

7.16 Minimum dimension requirements

The server shall be dimensioned for at least 10 years for events (at a rough rate of 100 events per device and day), 5 years for periodic recordings (at a rough rate of 1000 measurements per device every 10 minutes) and 1 year for waveforms (at a rate of 10 waveforms per device and day).

8 COMMUNICATION SERVER

It wil behave as a network server and/or active downloader from PQIs. A configuration parameters will be its associated META DB. Any parameter shall be configured by its web interface.

8.1 Network server role

It will supply a FTP, SFTP and SCP server listening at the standard service ports. Data and user management will be provided by the web interface.

Uploaded PQDIF files will be decoded and then uploaded to every PQI's PQDB (by inspection of the PQI.id_dbnode value).

8.2 Active downloader role

It will query its META DB and look for integer values in the PQI.comm_server column. Those PQIs having an integer instead of an URL will be queried every that integer number of seconds by REST. The results will be uploaded to every PQI's PQDB (by inspection of the PQI.id_dbnode value).

If specifically requested, data from specific PQIs could also be downloaded by GSM/PSTN data connections. Protocols and formats shall be fixed during commissioning.

9 FILE SERVER

It can be used for supplying shared file network services to any node. Provided protocols and services should be chosen among:

- SMB/CIFS.
- RSYNC.
- NFS.
- FTP.
- TFTP.
- SFTP.
- SCP.
- iSCSI.

This server may also acquire storage from external providers relying on proprietary solutions (such as Amazon S3[2]) as long as the interface with any system node is based on the aforementioned protocols or services.

Services and user management shall be configured by its web interface.

[2] https://en.wikipedia.org/wiki/Amazon_S3

10 BACKUP SERVER

This server is in charge of querying periodic and event data to PQIs and store the results in a PQDB. It will query its associated META DB and look for non-nulled values of the *PQI.id_pqdbnode_backup* column. When found it will query the device by REST every *PQI.backup_interval* seconds and store the results in the PQDB given by the *PQI.id_pqdbnode_backup*.

The scope of the backup will depend on the type of data:

- Waveforms: nothing to be backed up.
- Events: all of them.
- Periodic variables: given in the *PQI.vars_backup column*.

Every PQI's id is prefixed by the term "backup/" before insertion in the PQ DB (e.g. if the PQI's id is "DR0013801492RO", then the id within the PQ DB will be "backup/DR0013801492RO").

Another possible backup procedure is to save the entire PQDIF.

11 BATCH SERVERS

Batch server collects data from specific nodes, make calculations and store the results in PQ DBs.

The batch processes are described in GSTQ005.

12 DISPATCHER

It is able to forward any REST request to a PQ node in the system. It can be done behaving as a real HTTP proxy or as a HTTP forwarder. In the first case the client just opens a connection to the DISPATCHER. In the second one the URL redirection method is used so the client is able to open a connection to any PQ node. The first method can be faster, but places stronger requirements on the DISPATCHER. The second one adds a intrinsic delay, but does not push the TCP connections on the DISPATCHER. Moreover the requests can be cached by the client, so the DISPATCHER can be by-passed most of the times. It is up to the supplier what method to implement.

The DISPATCHER needs a connection to a META DB. Any parameter shall be configured by its web administration interface.

13 WEB SERVER

The primary function of a web server is to store, process and deliver web pages to clients. The communication between client and server takes place using the Hypertext Transfer Protocol (HTTP). Pages delivered are most frequently HTML documents, which may include images, style sheets and scripts in addition to text content.

This is the layer between the system and the end user. Its functionalities will vary among countries and user profiles.

Most common commercial and non-commercial browsers shall be fully compliant with the web interface[3].

It is out of the scope of this standard to define the appearance of the web interface. The web interface are described in GSTQ004.

However basic performance and compatibility shall be ensured:

- For maps the OpenStreetMap[4] API shall the used.
- For displaying numeric data, output formats shall be PDF, JPG or PNG for charts and CSV or XLS for tables.
- Interactive maps, charts and tables within the browser are recommended for a better user experience.

During the tender phase all or few of the enumerated functions in GSTQ004 shall be chosen.

[3] MS Internet Explorer version ≥7, Google Chrome version ≥41 (or more), Mozilla Firefox version ≥47.

[4] https://www.openstreetmap.org

14 MISCELLANEOUS

This chapter include further requirements, recommendations and additional information.

14.1 Required documentation

The following documents (in pdf format) must be provided:

a. User's manual;
b. Maintenance manual;
c. Quick installation and set-up guide;
d. Administrator's manual, for proper integration of PQMS into communication and IT networks (this document should describe any network service the PQMS is supplying);
e. Installation guidelines;
f. PQMS hardware minimal requirements;
g. All software need to PQMS operation.

This documents must be made according to IEC 61010-1 and they must be approved by Enel.

A copy of these documentation must be accessible by the PQMS HMI.

14.2 Clarification during procurement process

During the procurement phase the exact shape of the system shall be defined. Next follows the items to be specified:

a. All the issues that in this GS was not specified (that means that what is not specified in this GS, and in other GSs, must be specified by the supplier in the technical offer and will be examined and accepted by Enel);
b. Zones to be managed (one or several countries);
c. List and number of PQ nodes;
d. Interface layers between existing SCADA and WEATHER systems;
e. Servers capabilities and location (either physical or cloud based solution);
f. Interface appearance and functionalities;
g. Reports to be generated and exact shape of them.

Items a - e will be defined according to technical, performance and reliability target levels. Items f and g will need separate detailed documents (additionally to the GSTQ004) and will be customized for every target country.

14.3 Amendment

Because of the earlier stage of some international standards used in this GS, Enel may derogate some prescriptions.

Possible derogations must be requested by the provider just during the procurement process.

14.4 Testing

Compliance to other GSs must be demonstrated in the Enel test centers.

For the tests not expressly covered by the GSs, the provider must propose a test plan to Enel.

All the tests must be specified and made according to the international best practice and normatives, the provider must enfasize this compliance in the test plan.

14.5 Certifications and self-certifications

About the compliance of all the requirements/standards recalled in this GS, a certificate or selfcertificate must be provided, by according to the international best practice and normatives, the provider must enfasize this compliance in the documentation.

15 ANNEX 1: WEATHER MEASUREMENT CODES

Detailed list of any weather variable, both periodic or associated to an lightning event:

Table 35 – WEATHER measurement codes

code	description	typical aggregation [s]	example
temp_c	Temperature in Celsius	0	
temp_c_avg	Temperature in Celsius (average over a period)	3600	
temp_c_min	Temperature in Celsius (minimum over a period)	3600	
temp_c_max	Temperature in Celsius (maximum over a period)	3600	
temp_k	Temperature in Kelvin	0	
temp_k_avg	Temperature in Kelvin (average over a period)	3600	
temp_k_min	Temperature in Kelvin (minimum over a period)	3600	
temp_k_max	Temperature in Kelvin (maximum over a period)	3600	
temp_f	Temperature in Farenheit	0	
temp_f_avg	Temperature in Farenheit (average over a period)	3600	
temp_f_min	Temperature in Farenheit (minimum over a period)	3600	
temp_f_max	Temperature in Farenheit (maximum over a period)	3600	
humidity	Humidity in %	0	
humidity_avg	Humidity in % (average over a period)	86400	
humidity_min	Humidity in % (minimum over a period)	86400	
humidity_max	Humidity in % (maximum over a period)	86400	
main.pressure	Atmospheric pressure in hPa	0	
wind_speed	Wind speed in m/s	0	
wind_deg	Wind direction in degrees (meteorological)	0	
wind_speed_avg	Wind speed in m/s (average over a period)	86400	
wind_deg_avg	Wind direction in degrees (meteorological, average over a period)	86400	
wind_speed_min	Wind speed in m/s (minimum over a period)	86400	
wind_speed_max	Wind speed in m/s (maximum over a period)	86400	
clouds_all	Cloudiness in %	0	
weather	Weather conditions codes (see below)	0	
rain_3h	Precipitation volume mm per 3 hours	10800	
snow_3h	Precipitation volume mm per 3 hours	10800	
rain_1h	Precipitation volume mm per 1 hour	3600	
snow_1h	Precipitation volume mm per 1 hour	3600	
rain_1d	Precipitation volume mm per 1 day	86400	
snow_1d	Precipitation volume mm per 1 day	86400	
visibility_m	Visibility in meters	0	
dew_point_c	Dew point in Celsius	86400	
dew_point_k	Dew point in Kelvin	86400	
dew_point_f	Dew point in Farenheit	86400	
solar_wm2	Solar irradiation in W/m2	0	
solar_wm2_avg	Solar irradiation in W/m2 (average over a period)	86400	
solar_wm2_min	Solar irradiation in W/m2 (minimum over a period)	86400	
solar_wm2_max	Solar irradiation in W/m2 (maximum over a period)	86400	
latitude_degrees	latitude in degrees (WSG 84 system)	0	35.12561
longitude_degrees	longitude in degrees (WSG 84 system)	0	-1.23478
nbstrokes	amount of simultaneous lightning strokes	0	2
current_ka	lightning strike's current in kA	0	-29.0
khi	the chi-square value of a given lightning approximation	0	1.8
max_axis	largest axis in meters	0	9300

min_axis	shortest axis in meters	0	400
inclination	inclination in degrees	0	17.7
nbdf	number of weather stations used in the calculation	0	3

16 ANNEX 2: WEATHER EVENTS CODES

Detailed list of any weather event (based on the Open Weather API[5]):

[5] http://bugs.openweathermap.org/projects/api/wiki/Weather_Condition_Codes

Table 36 – WEATHER events codes		
ID	**Meaning**	**Group**
200	thunderstorm with light rain	Thunderstorm
201	thunderstorm with rain	Thunderstorm
202	thunderstorm with heavy rain	Thunderstorm
210	light thunderstorm	Thunderstorm
211	thunderstorm	Thunderstorm
212	heavy thunderstorm	Thunderstorm
221	ragged thunderstorm	Thunderstorm
230	thunderstorm with light drizzle	Thunderstorm
231	thunderstorm with drizzle	Thunderstorm
232	thunderstorm with heavy drizzle	Thunderstorm
300	light intensity drizzle	Drizzle
301	drizzle	Drizzle
302	heavy intensity drizzle	Drizzle
310	light intensity drizzle rain	Drizzle
311	drizzle rain	Drizzle
312	heavy intensity drizzle rain	Drizzle
313	shower rain and drizzle	Drizzle
314	heavy shower rain and drizzle	Drizzle
321	shower drizzle	Drizzle
500	light rain	Rain
501	moderate rain	Rain
502	heavy intensity rain	Rain
503	very heavy rain	Rain
504	extreme rain	Rain
511	freezing rain	Rain
520	light intensity shower rain	Rain
521	shower rain	Rain
522	heavy intensity shower rain	Rain
531	ragged shower rain	Rain
600	light snow	Snow
601	snow	Snow
602	heavy snow	Snow
611	sleet	Snow
612	shower sleet	Snow
615	light rain and snow	Snow
616	rain and snow	Snow
620	light shower snow	Snow
621	shower snow	Snow
622	heavy shower snow	Snow
701	mist	Atmosphere
711	smoke	Atmosphere
721	haze	Atmosphere
731	Sand/Dust Whirls	Atmosphere
741	Fog	Atmosphere
751	sand	Atmosphere
761	dust	Atmosphere
762	VOLCANIC ASH	Atmosphere

771	SQUALLS	Atmosphere
781	TORNADO	Atmosphere
800	sky is clear	Clouds
801	few clouds	Clouds
802	scattered clouds	Clouds
803	broken clouds	Clouds
804	overcast clouds	Clouds
900	tornado	Extreme
901	tropical storm	Extreme
902	hurricane	Extreme
903	cold	Extreme
904	hot	Extreme
905	windy	Extreme
906	hail	Extreme
950	Setting	Additional
951	Calm	Additional
952	Light breeze	Additional
953	Gentle Breeze	Additional
954	Moderate breeze	Additional
955	Fresh Breeze	Additional
956	Strong breeze	Additional
957	High wind, near gale	Additional
958	Gale	Additional
959	Severe Gale	Additional
960	Storm	Additional
961	Violent Storm	Additional
962	Hurricane	Additional

17 ANNEX 3: GRID-EVENTS STATE CODES

Detailed list of any state associated to a circuit breaker, switch or electrical protection or other events.

Table 37 – GRID-EVENTS state codes

code	description
0	open / boolean false
1	closed / boolean true
2	undefined
00	previous state 0, next state 0
01	previous state 0, next state 1
10	previous state 1, next state 0
11	previous state 1, next state 1
XY	available for possible configuration

18 ANNEX 4: POWER QUALITY CODES

Detailed list of any periodic power quality variable (measurement methods according to IEC 61000-4-30). Right-most columns show whether they can be aggregated by using percentiles or counting the total time above or below specific thresholds.

By according to IEC 61000-4-30, the 10/12 cycle values are aggregated over 3 additional intervals:

- 150/180 cycle interval (150 cycles for 50 Hz nominal or 180 cycles for 60 Hz nominal);
- 10 min interval;
- 2 hour interval for P_{lt} flicker.

A 2 hour aggregation interval is optional for all parameters, with the exception of flicker measurements which require a 2 hour aggregation interval for P_{lt}.

A different aggregation interval may possibly be necessary for measuring compliance with some national or international standards.

So, the following table is providing the typical aggregation, but the PQMS should manage an additional aggregation (XX min) for each variable.

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AN_min	RMS voltage, between phase A and NEUTRAL, minimum of 10/12-cycle intervals	V	600		
v_BN_min	RMS voltage, between phase B and NEUTRAL, minimum of 10/12-cycle intervals	V	600		
v_CN_min	RMS voltage, between phase C and NEUTRAL, minimum of 10/12-cycle intervals	V	600		
v_AB_min	RMS voltage, between phase A and B, minimum of 10/12-cycle intervals	V	600		
v_BC_min	RMS voltage, between phase B and C, minimum of 10/12-cycle intervals	V	600		
v_CA_min	RMS voltage, between phase C and A, minimum of 10/12-cycle intervals	V	600		
a_AN_min	RMS current, phase A, minimum of 10/12-cycle intervals	A	600		
a_BN_min	RMS current, phase B, minimum of 10/12-cycle intervals	A	600		
a_CN_min	RMS current, phase C, minimum of 10/12-cycle intervals	A	600		
p_AN_min	Active power, phase A, minimum of 10/12-cycle intervals	W	600 or 900		
p_BN_min	Active power, phase B, minimum of 10/12-cycle intervals	W	600 or 900		
p_CN_min	Active power, phase C, minimum of 10/12-cycle intervals	W	600 or 900		
p_TOTAL_min	Active power, total, minimum of 10/12-cycle intervals	W	600 or 900		
q_AN_min	Reactive power, phase A, minimum of 10/12-cycle intervals	VAr	600 or 900		
q_BN_min	Reactive power, phase B, minimum of 10/12-cycle intervals	VAr	600 or 900		
q_CN_min	Reactive power, phase C, minimum of 10/12-cycle intervals	VAr	600 or 900		
q_TOTAL_min	Reactive power, total, minimum of 10/12-cycle intervals	VAr	600 or 900		
v_AN_harm_0_min	RMS voltage, between phase A and N, harmonic component DC, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_1_min	RMS voltage, between phase A and N, harmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_2_min	RMS voltage, between phase A and N, harmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_3_min	RMS voltage, between phase A and N, harmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_4_min	RMS voltage, between phase A and N, harmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_5_min	RMS voltage, between phase A and N, harmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_6_min	RMS voltage, between phase A and N, harmonic component #6, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AN_harm_7_min	RMS voltage, between phase A and N, harmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_8_min	RMS voltage, between phase A and N, harmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_9_min	RMS voltage, between phase A and N, harmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_10_min	RMS voltage, between phase A and N, harmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_11_min	RMS voltage, between phase A and N, harmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_12_min	RMS voltage, between phase A and N, harmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_13_min	RMS voltage, between phase A and N, harmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_14_min	RMS voltage, between phase A and N, harmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_15_min	RMS voltage, between phase A and N, harmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_16_min	RMS voltage, between phase A and N, harmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_17_min	RMS voltage, between phase A and N, harmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_18_min	RMS voltage, between phase A and N, harmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_19_min	RMS voltage, between phase A and N, harmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_20_min	RMS voltage, between phase A and N, harmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_21_min	RMS voltage, between phase A and N, harmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_22_min	RMS voltage, between phase A and N, harmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_23_min	RMS voltage, between phase A and N, harmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_24_min	RMS voltage, between phase A and N, harmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_25_min	RMS voltage, between phase A and N, harmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_26_min	RMS voltage, between phase A and N, harmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_27_min	RMS voltage, between phase A and N, harmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_28_min	RMS voltage, between phase A and N, harmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_29_min	RMS voltage, between phase A and N, harmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_30_min	RMS voltage, between phase A and N, harmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_31_min	RMS voltage, between phase A and N, harmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_32_min	RMS voltage, between phase A and N, harmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_33_min	RMS voltage, between phase A and N, harmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_34_min	RMS voltage, between phase A and N, harmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_35_min	RMS voltage, between phase A and N, harmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_36_min	RMS voltage, between phase A and N, harmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_37_min	RMS voltage, between phase A and N, harmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_38_min	RMS voltage, between phase A and N, harmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_39_min	RMS voltage, between phase A and N, harmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_40_min	RMS voltage, between phase A and N, harmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_41_min	RMS voltage, between phase A and N, harmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_42_min	RMS voltage, between phase A and N, harmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_43_min	RMS voltage, between phase A and N, harmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_44_min	RMS voltage, between phase A and N, harmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_45_min	RMS voltage, between phase A and N, harmonic component #45, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AN_harm_46_min	RMS voltage, between phase A and N, harmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_47_min	RMS voltage, between phase A and N, harmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_48_min	RMS voltage, between phase A and N, harmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_49_min	RMS voltage, between phase A and N, harmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_AN_harm_50_min	RMS voltage, between phase A and N, harmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_0_min	RMS voltage, between phase B and N, harmonic component DC, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_1_min	RMS voltage, between phase B and N, harmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_2_min	RMS voltage, between phase B and N, harmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_3_min	RMS voltage, between phase B and N, harmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_4_min	RMS voltage, between phase B and N, harmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_5_min	RMS voltage, between phase B and N, harmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_6_min	RMS voltage, between phase B and N, harmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_7_min	RMS voltage, between phase B and N, harmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_8_min	RMS voltage, between phase B and N, harmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_9_min	RMS voltage, between phase B and N, harmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_10_min	RMS voltage, between phase B and N, harmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_11_min	RMS voltage, between phase B and N, harmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_12_min	RMS voltage, between phase B and N, harmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_13_min	RMS voltage, between phase B and N, harmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_14_min	RMS voltage, between phase B and N, harmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_15_min	RMS voltage, between phase B and N, harmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_16_min	RMS voltage, between phase B and N, harmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_17_min	RMS voltage, between phase B and N, harmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_18_min	RMS voltage, between phase B and N, harmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_19_min	RMS voltage, between phase B and N, harmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_20_min	RMS voltage, between phase B and N, harmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_21_min	RMS voltage, between phase B and N, harmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_22_min	RMS voltage, between phase B and N, harmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_23_min	RMS voltage, between phase B and N, harmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_24_min	RMS voltage, between phase B and N, harmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_25_min	RMS voltage, between phase B and N, harmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_26_min	RMS voltage, between phase B and N, harmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_27_min	RMS voltage, between phase B and N, harmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_28_min	RMS voltage, between phase B and N, harmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_29_min	RMS voltage, between phase B and N, harmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_30_min	RMS voltage, between phase B and N, harmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_31_min	RMS voltage, between phase B and N, harmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_32_min	RMS voltage, between phase B and N, harmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_33_min	RMS voltage, between phase B and N, harmonic component #33, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_harm_34_min	RMS voltage, between phase B and N, harmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_35_min	RMS voltage, between phase B and N, harmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_36_min	RMS voltage, between phase B and N, harmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_37_min	RMS voltage, between phase B and N, harmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_38_min	RMS voltage, between phase B and N, harmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_39_min	RMS voltage, between phase B and N, harmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_40_min	RMS voltage, between phase B and N, harmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_41_min	RMS voltage, between phase B and N, harmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_42_min	RMS voltage, between phase B and N, harmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_43_min	RMS voltage, between phase B and N, harmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_44_min	RMS voltage, between phase B and N, harmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_45_min	RMS voltage, between phase B and N, harmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_46_min	RMS voltage, between phase B and N, harmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_47_min	RMS voltage, between phase B and N, harmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_48_min	RMS voltage, between phase B and N, harmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_49_min	RMS voltage, between phase B and N, harmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_BN_harm_50_min	RMS voltage, between phase B and N, harmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_0_min	RMS voltage, between phase C and N, harmonic component DC, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_1_min	RMS voltage, between phase C and N, harmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_2_min	RMS voltage, between phase C and N, harmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_3_min	RMS voltage, between phase C and N, harmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_4_min	RMS voltage, between phase C and N, harmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_5_min	RMS voltage, between phase C and N, harmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_6_min	RMS voltage, between phase C and N, harmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_7_min	RMS voltage, between phase C and N, harmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_8_min	RMS voltage, between phase C and N, harmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_9_min	RMS voltage, between phase C and N, harmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_10_min	RMS voltage, between phase C and N, harmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_11_min	RMS voltage, between phase C and N, harmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_12_min	RMS voltage, between phase C and N, harmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_13_min	RMS voltage, between phase C and N, harmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_14_min	RMS voltage, between phase C and N, harmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_15_min	RMS voltage, between phase C and N, harmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_16_min	RMS voltage, between phase C and N, harmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_17_min	RMS voltage, between phase C and N, harmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_18_min	RMS voltage, between phase C and N, harmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_19_min	RMS voltage, between phase C and N, harmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_20_min	RMS voltage, between phase C and N, harmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_21_min	RMS voltage, between phase C and N, harmonic component #21, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CN_harm_22_min	RMS voltage, between phase C and N, harmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_23_min	RMS voltage, between phase C and N, harmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_24_min	RMS voltage, between phase C and N, harmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_25_min	RMS voltage, between phase C and N, harmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_26_min	RMS voltage, between phase C and N, harmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_27_min	RMS voltage, between phase C and N, harmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_28_min	RMS voltage, between phase C and N, harmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_29_min	RMS voltage, between phase C and N, harmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_30_min	RMS voltage, between phase C and N, harmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_31_min	RMS voltage, between phase C and N, harmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_32_min	RMS voltage, between phase C and N, harmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_33_min	RMS voltage, between phase C and N, harmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_34_min	RMS voltage, between phase C and N, harmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_35_min	RMS voltage, between phase C and N, harmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_36_min	RMS voltage, between phase C and N, harmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_37_min	RMS voltage, between phase C and N, harmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_38_min	RMS voltage, between phase C and N, harmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_39_min	RMS voltage, between phase C and N, harmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_40_min	RMS voltage, between phase C and N, harmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_41_min	RMS voltage, between phase C and N, harmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_42_min	RMS voltage, between phase C and N, harmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_43_min	RMS voltage, between phase C and N, harmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_44_min	RMS voltage, between phase C and N, harmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_45_min	RMS voltage, between phase C and N, harmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_46_min	RMS voltage, between phase C and N, harmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_47_min	RMS voltage, between phase C and N, harmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_48_min	RMS voltage, between phase C and N, harmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_49_min	RMS voltage, between phase C and N, harmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_CN_harm_50_min	RMS voltage, between phase C and N, harmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_0_min	RMS voltage, between phase A and B, harmonic component DC, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_1_min	RMS voltage, between phase A and B, harmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_2_min	RMS voltage, between phase A and B, harmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_3_min	RMS voltage, between phase A and B, harmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_4_min	RMS voltage, between phase A and B, harmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_5_min	RMS voltage, between phase A and B, harmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_6_min	RMS voltage, between phase A and B, harmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_7_min	RMS voltage, between phase A and B, harmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_8_min	RMS voltage, between phase A and B, harmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_9_min	RMS voltage, between phase A and B, harmonic component #9, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AB_harm_10_min	RMS voltage, between phase A and B, harmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_11_min	RMS voltage, between phase A and B, harmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_12_min	RMS voltage, between phase A and B, harmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_13_min	RMS voltage, between phase A and B, harmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_14_min	RMS voltage, between phase A and B, harmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_15_min	RMS voltage, between phase A and B, harmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_16_min	RMS voltage, between phase A and B, harmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_17_min	RMS voltage, between phase A and B, harmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_18_min	RMS voltage, between phase A and B, harmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_19_min	RMS voltage, between phase A and B, harmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_20_min	RMS voltage, between phase A and B, harmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_21_min	RMS voltage, between phase A and B, harmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_22_min	RMS voltage, between phase A and B, harmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_23_min	RMS voltage, between phase A and B, harmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_24_min	RMS voltage, between phase A and B, harmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_25_min	RMS voltage, between phase A and B, harmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_26_min	RMS voltage, between phase A and B, harmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_27_min	RMS voltage, between phase A and B, harmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_28_min	RMS voltage, between phase A and B, harmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_29_min	RMS voltage, between phase A and B, harmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_30_min	RMS voltage, between phase A and B, harmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_31_min	RMS voltage, between phase A and B, harmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_32_min	RMS voltage, between phase A and B, harmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_33_min	RMS voltage, between phase A and B, harmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_34_min	RMS voltage, between phase A and B, harmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_35_min	RMS voltage, between phase A and B, harmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_36_min	RMS voltage, between phase A and B, harmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_37_min	RMS voltage, between phase A and B, harmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_38_min	RMS voltage, between phase A and B, harmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_39_min	RMS voltage, between phase A and B, harmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_40_min	RMS voltage, between phase A and B, harmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_41_min	RMS voltage, between phase A and B, harmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_42_min	RMS voltage, between phase A and B, harmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_43_min	RMS voltage, between phase A and B, harmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_44_min	RMS voltage, between phase A and B, harmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_45_min	RMS voltage, between phase A and B, harmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_46_min	RMS voltage, between phase A and B, harmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_47_min	RMS voltage, between phase A and B, harmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_48_min	RMS voltage, between phase A and B, harmonic component #48, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AB_harm_49_min	RMS voltage, between phase A and B, harmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_AB_harm_50_min	RMS voltage, between phase A and B, harmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_0_min	RMS voltage, between phase B and C, harmonic component DC, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_1_min	RMS voltage, between phase B and C, harmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_2_min	RMS voltage, between phase B and C, harmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_3_min	RMS voltage, between phase B and C, harmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_4_min	RMS voltage, between phase B and C, harmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_5_min	RMS voltage, between phase B and C, harmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_6_min	RMS voltage, between phase B and C, harmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_7_min	RMS voltage, between phase B and C, harmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_8_min	RMS voltage, between phase B and C, harmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_9_min	RMS voltage, between phase B and C, harmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_10_min	RMS voltage, between phase B and C, harmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_11_min	RMS voltage, between phase B and C, harmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_12_min	RMS voltage, between phase B and C, harmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_13_min	RMS voltage, between phase B and C, harmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_14_min	RMS voltage, between phase B and C, harmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_15_min	RMS voltage, between phase B and C, harmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_16_min	RMS voltage, between phase B and C, harmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_17_min	RMS voltage, between phase B and C, harmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_18_min	RMS voltage, between phase B and C, harmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_19_min	RMS voltage, between phase B and C, harmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_20_min	RMS voltage, between phase B and C, harmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_21_min	RMS voltage, between phase B and C, harmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_22_min	RMS voltage, between phase B and C, harmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_23_min	RMS voltage, between phase B and C, harmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_24_min	RMS voltage, between phase B and C, harmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_25_min	RMS voltage, between phase B and C, harmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_26_min	RMS voltage, between phase B and C, harmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_27_min	RMS voltage, between phase B and C, harmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_28_min	RMS voltage, between phase B and C, harmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_29_min	RMS voltage, between phase B and C, harmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_30_min	RMS voltage, between phase B and C, harmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_31_min	RMS voltage, between phase B and C, harmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_32_min	RMS voltage, between phase B and C, harmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_33_min	RMS voltage, between phase B and C, harmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_34_min	RMS voltage, between phase B and C, harmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_35_min	RMS voltage, between phase B and C, harmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_36_min	RMS voltage, between phase B and C, harmonic component #36, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BC_harm_37_min	RMS voltage, between phase B and C, harmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_38_min	RMS voltage, between phase B and C, harmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_39_min	RMS voltage, between phase B and C, harmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_40_min	RMS voltage, between phase B and C, harmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_41_min	RMS voltage, between phase B and C, harmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_42_min	RMS voltage, between phase B and C, harmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_43_min	RMS voltage, between phase B and C, harmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_44_min	RMS voltage, between phase B and C, harmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_45_min	RMS voltage, between phase B and C, harmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_46_min	RMS voltage, between phase B and C, harmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_47_min	RMS voltage, between phase B and C, harmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_48_min	RMS voltage, between phase B and C, harmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_49_min	RMS voltage, between phase B and C, harmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_BC_harm_50_min	RMS voltage, between phase B and C, harmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_0_min	RMS voltage, between phase C and A, harmonic component DC, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_1_min	RMS voltage, between phase C and A, harmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_2_min	RMS voltage, between phase C and A, harmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_3_min	RMS voltage, between phase C and A, harmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_4_min	RMS voltage, between phase C and A, harmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_5_min	RMS voltage, between phase C and A, harmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_6_min	RMS voltage, between phase C and A, harmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_7_min	RMS voltage, between phase C and A, harmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_8_min	RMS voltage, between phase C and A, harmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_9_min	RMS voltage, between phase C and A, harmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_10_min	RMS voltage, between phase C and A, harmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_11_min	RMS voltage, between phase C and A, harmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_12_min	RMS voltage, between phase C and A, harmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_13_min	RMS voltage, between phase C and A, harmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_14_min	RMS voltage, between phase C and A, harmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_15_min	RMS voltage, between phase C and A, harmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_16_min	RMS voltage, between phase C and A, harmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_17_min	RMS voltage, between phase C and A, harmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_18_min	RMS voltage, between phase C and A, harmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_19_min	RMS voltage, between phase C and A, harmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_20_min	RMS voltage, between phase C and A, harmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_21_min	RMS voltage, between phase C and A, harmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_22_min	RMS voltage, between phase C and A, harmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_23_min	RMS voltage, between phase C and A, harmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_24_min	RMS voltage, between phase C and A, harmonic component #24, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CA_harm_25_min	RMS voltage, between phase C and A, harmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_26_min	RMS voltage, between phase C and A, harmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_27_min	RMS voltage, between phase C and A, harmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_28_min	RMS voltage, between phase C and A, harmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_29_min	RMS voltage, between phase C and A, harmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_30_min	RMS voltage, between phase C and A, harmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_31_min	RMS voltage, between phase C and A, harmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_32_min	RMS voltage, between phase C and A, harmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_33_min	RMS voltage, between phase C and A, harmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_34_min	RMS voltage, between phase C and A, harmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_35_min	RMS voltage, between phase C and A, harmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_36_min	RMS voltage, between phase C and A, harmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_37_min	RMS voltage, between phase C and A, harmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_38_min	RMS voltage, between phase C and A, harmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_39_min	RMS voltage, between phase C and A, harmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_40_min	RMS voltage, between phase C and A, harmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_41_min	RMS voltage, between phase C and A, harmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_42_min	RMS voltage, between phase C and A, harmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_43_min	RMS voltage, between phase C and A, harmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_44_min	RMS voltage, between phase C and A, harmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_45_min	RMS voltage, between phase C and A, harmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_46_min	RMS voltage, between phase C and A, harmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_47_min	RMS voltage, between phase C and A, harmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_48_min	RMS voltage, between phase C and A, harmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_49_min	RMS voltage, between phase C and A, harmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_CA_harm_50_min	RMS voltage, between phase C and A, harmonic component #50, minimum of 10/12-cycle intervals	V	600		
a_AN_harm_0_min	RMS current, between phase A and N, harmonic component DC, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_1_min	RMS current, between phase A and N, harmonic component #1, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_2_min	RMS current, between phase A and N, harmonic component #2, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_3_min	RMS current, between phase A and N, harmonic component #3, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_4_min	RMS current, between phase A and N, harmonic component #4, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_5_min	RMS current, between phase A and N, harmonic component #5, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_6_min	RMS current, between phase A and N, harmonic component #6, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_7_min	RMS current, between phase A and N, harmonic component #7, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_8_min	RMS current, between phase A and N, harmonic component #8, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_9_min	RMS current, between phase A and N, harmonic component #9, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_10_min	RMS current, between phase A and N, harmonic component #10, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_11_min	RMS current, between phase A and N, harmonic component #11, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_12_min	RMS current, between phase A and N, harmonic component #12, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_AN_harm_13_min	RMS current, between phase A and N, harmonic component #13, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_14_min	RMS current, between phase A and N, harmonic component #14, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_15_min	RMS current, between phase A and N, harmonic component #15, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_16_min	RMS current, between phase A and N, harmonic component #16, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_17_min	RMS current, between phase A and N, harmonic component #17, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_18_min	RMS current, between phase A and N, harmonic component #18, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_19_min	RMS current, between phase A and N, harmonic component #19, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_20_min	RMS current, between phase A and N, harmonic component #20, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_21_min	RMS current, between phase A and N, harmonic component #21, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_22_min	RMS current, between phase A and N, harmonic component #22, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_23_min	RMS current, between phase A and N, harmonic component #23, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_24_min	RMS current, between phase A and N, harmonic component #24, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_25_min	RMS current, between phase A and N, harmonic component #25, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_26_min	RMS current, between phase A and N, harmonic component #26, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_27_min	RMS current, between phase A and N, harmonic component #27, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_28_min	RMS current, between phase A and N, harmonic component #28, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_29_min	RMS current, between phase A and N, harmonic component #29, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_30_min	RMS current, between phase A and N, harmonic component #30, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_31_min	RMS current, between phase A and N, harmonic component #31, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_32_min	RMS current, between phase A and N, harmonic component #32, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_33_min	RMS current, between phase A and N, harmonic component #33, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_34_min	RMS current, between phase A and N, harmonic component #34, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_35_min	RMS current, between phase A and N, harmonic component #35, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_36_min	RMS current, between phase A and N, harmonic component #36, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_37_min	RMS current, between phase A and N, harmonic component #37, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_38_min	RMS current, between phase A and N, harmonic component #38, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_39_min	RMS current, between phase A and N, harmonic component #39, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_40_min	RMS current, between phase A and N, harmonic component #40, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_41_min	RMS current, between phase A and N, harmonic component #41, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_42_min	RMS current, between phase A and N, harmonic component #42, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_43_min	RMS current, between phase A and N, harmonic component #43, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_44_min	RMS current, between phase A and N, harmonic component #44, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_45_min	RMS current, between phase A and N, harmonic component #45, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_46_min	RMS current, between phase A and N, harmonic component #46, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_47_min	RMS current, between phase A and N, harmonic component #47, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_48_min	RMS current, between phase A and N, harmonic component #48, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_49_min	RMS current, between phase A and N, harmonic component #49, minimum of 10/12-cycle intervals	A	600		
a_AN_harm_50_min	RMS current, between phase A and N, harmonic component #50, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_0_min	RMS current, between phase B and N, harmonic component DC, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_BN_harm_1_min	RMS current, between phase B and N, harmonic component #1, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_2_min	RMS current, between phase B and N, harmonic component #2, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_3_min	RMS current, between phase B and N, harmonic component #3, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_4_min	RMS current, between phase B and N, harmonic component #4, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_5_min	RMS current, between phase B and N, harmonic component #5, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_6_min	RMS current, between phase B and N, harmonic component #6, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_7_min	RMS current, between phase B and N, harmonic component #7, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_8_min	RMS current, between phase B and N, harmonic component #8, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_9_min	RMS current, between phase B and N, harmonic component #9, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_10_min	RMS current, between phase B and N, harmonic component #10, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_11_min	RMS current, between phase B and N, harmonic component #11, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_12_min	RMS current, between phase B and N, harmonic component #12, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_13_min	RMS current, between phase B and N, harmonic component #13, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_14_min	RMS current, between phase B and N, harmonic component #14, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_15_min	RMS current, between phase B and N, harmonic component #15, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_16_min	RMS current, between phase B and N, harmonic component #16, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_17_min	RMS current, between phase B and N, harmonic component #17, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_18_min	RMS current, between phase B and N, harmonic component #18, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_19_min	RMS current, between phase B and N, harmonic component #19, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_20_min	RMS current, between phase B and N, harmonic component #20, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_21_min	RMS current, between phase B and N, harmonic component #21, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_22_min	RMS current, between phase B and N, harmonic component #22, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_23_min	RMS current, between phase B and N, harmonic component #23, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_24_min	RMS current, between phase B and N, harmonic component #24, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_25_min	RMS current, between phase B and N, harmonic component #25, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_26_min	RMS current, between phase B and N, harmonic component #26, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_27_min	RMS current, between phase B and N, harmonic component #27, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_28_min	RMS current, between phase B and N, harmonic component #28, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_29_min	RMS current, between phase B and N, harmonic component #29, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_30_min	RMS current, between phase B and N, harmonic component #30, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_31_min	RMS current, between phase B and N, harmonic component #31, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_32_min	RMS current, between phase B and N, harmonic component #32, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_33_min	RMS current, between phase B and N, harmonic component #33, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_34_min	RMS current, between phase B and N, harmonic component #34, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_35_min	RMS current, between phase B and N, harmonic component #35, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_36_min	RMS current, between phase B and N, harmonic component #36, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_37_min	RMS current, between phase B and N, harmonic component #37, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_38_min	RMS current, between phase B and N, harmonic component #38, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_39_min	RMS current, between phase B and N, harmonic component #39, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_BN_harm_40_min	RMS current, between phase B and N, harmonic component #40, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_41_min	RMS current, between phase B and N, harmonic component #41, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_42_min	RMS current, between phase B and N, harmonic component #42, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_43_min	RMS current, between phase B and N, harmonic component #43, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_44_min	RMS current, between phase B and N, harmonic component #44, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_45_min	RMS current, between phase B and N, harmonic component #45, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_46_min	RMS current, between phase B and N, harmonic component #46, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_47_min	RMS current, between phase B and N, harmonic component #47, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_48_min	RMS current, between phase B and N, harmonic component #48, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_49_min	RMS current, between phase B and N, harmonic component #49, minimum of 10/12-cycle intervals	A	600		
a_BN_harm_50_min	RMS current, between phase B and N, harmonic component #50, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_0_min	RMS current, between phase C and N, harmonic component DC, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_1_min	RMS current, between phase C and N, harmonic component #1, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_2_min	RMS current, between phase C and N, harmonic component #2, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_3_min	RMS current, between phase C and N, harmonic component #3, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_4_min	RMS current, between phase C and N, harmonic component #4, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_5_min	RMS current, between phase C and N, harmonic component #5, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_6_min	RMS current, between phase C and N, harmonic component #6, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_7_min	RMS current, between phase C and N, harmonic component #7, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_8_min	RMS current, between phase C and N, harmonic component #8, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_9_min	RMS current, between phase C and N, harmonic component #9, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_10_min	RMS current, between phase C and N, harmonic component #10, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_11_min	RMS current, between phase C and N, harmonic component #11, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_12_min	RMS current, between phase C and N, harmonic component #12, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_13_min	RMS current, between phase C and N, harmonic component #13, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_14_min	RMS current, between phase C and N, harmonic component #14, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_15_min	RMS current, between phase C and N, harmonic component #15, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_16_min	RMS current, between phase C and N, harmonic component #16, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_17_min	RMS current, between phase C and N, harmonic component #17, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_18_min	RMS current, between phase C and N, harmonic component #18, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_19_min	RMS current, between phase C and N, harmonic component #19, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_20_min	RMS current, between phase C and N, harmonic component #20, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_21_min	RMS current, between phase C and N, harmonic component #21, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_22_min	RMS current, between phase C and N, harmonic component #22, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_23_min	RMS current, between phase C and N, harmonic component #23, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_24_min	RMS current, between phase C and N, harmonic component #24, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_25_min	RMS current, between phase C and N, harmonic component #25, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_26_min	RMS current, between phase C and N, harmonic component #26, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_27_min	RMS current, between phase C and N, harmonic component #27, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_CN_harm_28_min	RMS current, between phase C and N, harmonic component #28, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_29_min	RMS current, between phase C and N, harmonic component #29, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_30_min	RMS current, between phase C and N, harmonic component #30, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_31_min	RMS current, between phase C and N, harmonic component #31, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_32_min	RMS current, between phase C and N, harmonic component #32, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_33_min	RMS current, between phase C and N, harmonic component #33, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_34_min	RMS current, between phase C and N, harmonic component #34, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_35_min	RMS current, between phase C and N, harmonic component #35, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_36_min	RMS current, between phase C and N, harmonic component #36, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_37_min	RMS current, between phase C and N, harmonic component #37, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_38_min	RMS current, between phase C and N, harmonic component #38, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_39_min	RMS current, between phase C and N, harmonic component #39, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_40_min	RMS current, between phase C and N, harmonic component #40, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_41_min	RMS current, between phase C and N, harmonic component #41, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_42_min	RMS current, between phase C and N, harmonic component #42, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_43_min	RMS current, between phase C and N, harmonic component #43, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_44_min	RMS current, between phase C and N, harmonic component #44, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_45_min	RMS current, between phase C and N, harmonic component #45, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_46_min	RMS current, between phase C and N, harmonic component #46, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_47_min	RMS current, between phase C and N, harmonic component #47, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_48_min	RMS current, between phase C and N, harmonic component #48, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_49_min	RMS current, between phase C and N, harmonic component #49, minimum of 10/12-cycle intervals	A	600		
a_CN_harm_50_min	RMS current, between phase C and N, harmonic component #50, minimum of 10/12-cycle intervals	A	600		
v_AN_THD_min	RMS voltage, between phase A and N, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
v_BN_THD_min	RMS voltage, between phase B and N, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
v_CN_THD_min	RMS voltage, between phase C and N, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
v_AB_THD_min	RMS voltage, between phase A and B, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
v_BC_THD_min	RMS voltage, between phase B and C, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
v_CA_THD_min	RMS voltage, between phase C and A, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
a_AN_THD_min	RMS current, between phase A and N, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
a_BN_THD_min	RMS current, between phase B and N, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
a_CN_THD_min	RMS current, between phase C and N, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
a_AN_TDD_min	RMS current, between phase A and N, total demand distortion, minimum of 10/12-cycle intervals	%	600		
a_BN_TDD_min	RMS current, between phase B and N, total demand distortion, minimum of 10/12-cycle intervals	%	600		
a_CN_TDD_min	RMS current, between phase C and N, total demand distortion, minimum of 10/12-cycle intervals	%	600		
v_p2p_pos_min	RMS phase-to-phase voltage, positive sequence component, minimum of 10/12-cycle intervals	V	600		
v_p2p_neg_min	RMS phase-to-phase voltage, negative sequence component, minimum of 10/12-cycle intervals	V	600		
unbal_p2p_min	Phase-to-phase negative sequence voltage unbalance, minimum of 10/12-cycle intervals	%	600		
v_p2n_pos_min	RMS line voltage, positive sequence component, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_p2n_neg_min	RMS line voltage, negative sequence component, minimum of 10/12-cycle intervals	V	600		
v_p2n_zero_min	RMS line voltage, zero sequence component, minimum of 10/12-cycle intervals	V	600		
unbal_p2n_min	Phase-to-neutral negative sequence voltage unbalance, minimum of 10/12-cycle intervals	%	600		
freq_min	frequency, minimum of 10/12-cycle intervals	Hz	600		
v_AN_avg	RMS voltage, between phase A and NEUTRAL, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_avg	RMS voltage, between phase B and NEUTRAL, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_avg	RMS voltage, between phase C and NEUTRAL, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_avg	RMS voltage, between phase A and B, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_avg	RMS voltage, between phase B and C, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_avg	RMS voltage, between phase C and A, average of 10/12-cycle intervals	V	600	YES	YES
a_AN_avg	RMS current, phase A, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_avg	RMS current, phase B, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_avg	RMS current, phase C, average of 10/12-cycle intervals	A	600	YES	YES
p_AN_avg	Active power, phase A, average of 10/12-cycle intervals	W	600 or 900	YES	YES
p_BN_avg	Active power, phase B, average of 10/12-cycle intervals	W	600 or 900	YES	YES
p_CN_avg	Active power, phase C, average of 10/12-cycle intervals	W	600 or 900	YES	YES
p_TOTAL_avg	Active power, total, average of 10/12-cycle intervals	W	600 or 900	YES	YES
q_AN_avg	Reactive power, phase A, average of 10/12-cycle intervals	VAr	600 or 900	YES	YES
q_BN_avg	Reactive power, phase B, average of 10/12-cycle intervals	VAr	600 or 900	YES	YES
q_CN_avg	Reactive power, phase C, average of 10/12-cycle intervals	VAr	600 or 900	YES	YES
q_TOTAL_avg	Reactive power, total, average of 10/12-cycle intervals	VAr	600 or 900	YES	YES
v_AN_harm_0_avg	RMS voltage, between phase A and N, harmonic component DC, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_1_avg	RMS voltage, between phase A and N, harmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_2_avg	RMS voltage, between phase A and N, harmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_3_avg	RMS voltage, between phase A and N, harmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_4_avg	RMS voltage, between phase A and N, harmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_5_avg	RMS voltage, between phase A and N, harmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_6_avg	RMS voltage, between phase A and N, harmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_7_avg	RMS voltage, between phase A and N, harmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_8_avg	RMS voltage, between phase A and N, harmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_9_avg	RMS voltage, between phase A and N, harmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_10_avg	RMS voltage, between phase A and N, harmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_11_avg	RMS voltage, between phase A and N, harmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_12_avg	RMS voltage, between phase A and N, harmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_13_avg	RMS voltage, between phase A and N, harmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_14_avg	RMS voltage, between phase A and N, harmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_15_avg	RMS voltage, between phase A and N, harmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_16_avg	RMS voltage, between phase A and N, harmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_17_avg	RMS voltage, between phase A and N, harmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AN_harm_18_avg	RMS voltage, between phase A and N, harmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_19_avg	RMS voltage, between phase A and N, harmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_20_avg	RMS voltage, between phase A and N, harmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_21_avg	RMS voltage, between phase A and N, harmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_22_avg	RMS voltage, between phase A and N, harmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_23_avg	RMS voltage, between phase A and N, harmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_24_avg	RMS voltage, between phase A and N, harmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_25_avg	RMS voltage, between phase A and N, harmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_26_avg	RMS voltage, between phase A and N, harmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_27_avg	RMS voltage, between phase A and N, harmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_28_avg	RMS voltage, between phase A and N, harmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_29_avg	RMS voltage, between phase A and N, harmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_30_avg	RMS voltage, between phase A and N, harmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_31_avg	RMS voltage, between phase A and N, harmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_32_avg	RMS voltage, between phase A and N, harmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_33_avg	RMS voltage, between phase A and N, harmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_34_avg	RMS voltage, between phase A and N, harmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_35_avg	RMS voltage, between phase A and N, harmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_36_avg	RMS voltage, between phase A and N, harmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_37_avg	RMS voltage, between phase A and N, harmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_38_avg	RMS voltage, between phase A and N, harmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_39_avg	RMS voltage, between phase A and N, harmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_40_avg	RMS voltage, between phase A and N, harmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_41_avg	RMS voltage, between phase A and N, harmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_42_avg	RMS voltage, between phase A and N, harmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_43_avg	RMS voltage, between phase A and N, harmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_44_avg	RMS voltage, between phase A and N, harmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_45_avg	RMS voltage, between phase A and N, harmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_46_avg	RMS voltage, between phase A and N, harmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_47_avg	RMS voltage, between phase A and N, harmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_48_avg	RMS voltage, between phase A and N, harmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_49_avg	RMS voltage, between phase A and N, harmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_harm_50_avg	RMS voltage, between phase A and N, harmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_0_avg	RMS voltage, between phase B and N, harmonic component DC, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_1_avg	RMS voltage, between phase B and N, harmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_2_avg	RMS voltage, between phase B and N, harmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_3_avg	RMS voltage, between phase B and N, harmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_4_avg	RMS voltage, between phase B and N, harmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_5_avg	RMS voltage, between phase B and N, harmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_harm_6_avg	RMS voltage, between phase B and N, harmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_7_avg	RMS voltage, between phase B and N, harmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_8_avg	RMS voltage, between phase B and N, harmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_9_avg	RMS voltage, between phase B and N, harmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_10_avg	RMS voltage, between phase B and N, harmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_11_avg	RMS voltage, between phase B and N, harmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_12_avg	RMS voltage, between phase B and N, harmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_13_avg	RMS voltage, between phase B and N, harmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_14_avg	RMS voltage, between phase B and N, harmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_15_avg	RMS voltage, between phase B and N, harmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_16_avg	RMS voltage, between phase B and N, harmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_17_avg	RMS voltage, between phase B and N, harmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_18_avg	RMS voltage, between phase B and N, harmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_19_avg	RMS voltage, between phase B and N, harmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_20_avg	RMS voltage, between phase B and N, harmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_21_avg	RMS voltage, between phase B and N, harmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_22_avg	RMS voltage, between phase B and N, harmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_23_avg	RMS voltage, between phase B and N, harmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_24_avg	RMS voltage, between phase B and N, harmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_25_avg	RMS voltage, between phase B and N, harmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_26_avg	RMS voltage, between phase B and N, harmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_27_avg	RMS voltage, between phase B and N, harmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_28_avg	RMS voltage, between phase B and N, harmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_29_avg	RMS voltage, between phase B and N, harmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_30_avg	RMS voltage, between phase B and N, harmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_31_avg	RMS voltage, between phase B and N, harmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_32_avg	RMS voltage, between phase B and N, harmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_33_avg	RMS voltage, between phase B and N, harmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_34_avg	RMS voltage, between phase B and N, harmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_35_avg	RMS voltage, between phase B and N, harmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_36_avg	RMS voltage, between phase B and N, harmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_37_avg	RMS voltage, between phase B and N, harmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_38_avg	RMS voltage, between phase B and N, harmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_39_avg	RMS voltage, between phase B and N, harmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_40_avg	RMS voltage, between phase B and N, harmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_41_avg	RMS voltage, between phase B and N, harmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_42_avg	RMS voltage, between phase B and N, harmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_43_avg	RMS voltage, between phase B and N, harmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_44_avg	RMS voltage, between phase B and N, harmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_harm_45_avg	RMS voltage, between phase B and N, harmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_46_avg	RMS voltage, between phase B and N, harmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_47_avg	RMS voltage, between phase B and N, harmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_48_avg	RMS voltage, between phase B and N, harmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_49_avg	RMS voltage, between phase B and N, harmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_harm_50_avg	RMS voltage, between phase B and N, harmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_0_avg	RMS voltage, between phase C and N, harmonic component DC, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_1_avg	RMS voltage, between phase C and N, harmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_2_avg	RMS voltage, between phase C and N, harmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_3_avg	RMS voltage, between phase C and N, harmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_4_avg	RMS voltage, between phase C and N, harmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_5_avg	RMS voltage, between phase C and N, harmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_6_avg	RMS voltage, between phase C and N, harmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_7_avg	RMS voltage, between phase C and N, harmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_8_avg	RMS voltage, between phase C and N, harmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_9_avg	RMS voltage, between phase C and N, harmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_10_avg	RMS voltage, between phase C and N, harmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_11_avg	RMS voltage, between phase C and N, harmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_12_avg	RMS voltage, between phase C and N, harmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_13_avg	RMS voltage, between phase C and N, harmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_14_avg	RMS voltage, between phase C and N, harmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_15_avg	RMS voltage, between phase C and N, harmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_16_avg	RMS voltage, between phase C and N, harmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_17_avg	RMS voltage, between phase C and N, harmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_18_avg	RMS voltage, between phase C and N, harmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_19_avg	RMS voltage, between phase C and N, harmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_20_avg	RMS voltage, between phase C and N, harmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_21_avg	RMS voltage, between phase C and N, harmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_22_avg	RMS voltage, between phase C and N, harmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_23_avg	RMS voltage, between phase C and N, harmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_24_avg	RMS voltage, between phase C and N, harmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_25_avg	RMS voltage, between phase C and N, harmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_26_avg	RMS voltage, between phase C and N, harmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_27_avg	RMS voltage, between phase C and N, harmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_28_avg	RMS voltage, between phase C and N, harmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_29_avg	RMS voltage, between phase C and N, harmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_30_avg	RMS voltage, between phase C and N, harmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_31_avg	RMS voltage, between phase C and N, harmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_32_avg	RMS voltage, between phase C and N, harmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CN_harm_33_avg	RMS voltage, between phase C and N, harmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_34_avg	RMS voltage, between phase C and N, harmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_35_avg	RMS voltage, between phase C and N, harmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_36_avg	RMS voltage, between phase C and N, harmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_37_avg	RMS voltage, between phase C and N, harmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_38_avg	RMS voltage, between phase C and N, harmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_39_avg	RMS voltage, between phase C and N, harmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_40_avg	RMS voltage, between phase C and N, harmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_41_avg	RMS voltage, between phase C and N, harmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_42_avg	RMS voltage, between phase C and N, harmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_43_avg	RMS voltage, between phase C and N, harmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_44_avg	RMS voltage, between phase C and N, harmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_45_avg	RMS voltage, between phase C and N, harmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_46_avg	RMS voltage, between phase C and N, harmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_47_avg	RMS voltage, between phase C and N, harmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_48_avg	RMS voltage, between phase C and N, harmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_49_avg	RMS voltage, between phase C and N, harmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_harm_50_avg	RMS voltage, between phase C and N, harmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_0_avg	RMS voltage, between phase A and B, harmonic component DC, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_1_avg	RMS voltage, between phase A and B, harmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_2_avg	RMS voltage, between phase A and B, harmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_3_avg	RMS voltage, between phase A and B, harmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_4_avg	RMS voltage, between phase A and B, harmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_5_avg	RMS voltage, between phase A and B, harmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_6_avg	RMS voltage, between phase A and B, harmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_7_avg	RMS voltage, between phase A and B, harmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_8_avg	RMS voltage, between phase A and B, harmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_9_avg	RMS voltage, between phase A and B, harmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_10_avg	RMS voltage, between phase A and B, harmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_11_avg	RMS voltage, between phase A and B, harmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_12_avg	RMS voltage, between phase A and B, harmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_13_avg	RMS voltage, between phase A and B, harmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_14_avg	RMS voltage, between phase A and B, harmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_15_avg	RMS voltage, between phase A and B, harmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_16_avg	RMS voltage, between phase A and B, harmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_17_avg	RMS voltage, between phase A and B, harmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_18_avg	RMS voltage, between phase A and B, harmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_19_avg	RMS voltage, between phase A and B, harmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_20_avg	RMS voltage, between phase A and B, harmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AB_harm_21_avg	RMS voltage, between phase A and B, harmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_22_avg	RMS voltage, between phase A and B, harmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_23_avg	RMS voltage, between phase A and B, harmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_24_avg	RMS voltage, between phase A and B, harmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_25_avg	RMS voltage, between phase A and B, harmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_26_avg	RMS voltage, between phase A and B, harmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_27_avg	RMS voltage, between phase A and B, harmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_28_avg	RMS voltage, between phase A and B, harmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_29_avg	RMS voltage, between phase A and B, harmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_30_avg	RMS voltage, between phase A and B, harmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_31_avg	RMS voltage, between phase A and B, harmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_32_avg	RMS voltage, between phase A and B, harmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_33_avg	RMS voltage, between phase A and B, harmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_34_avg	RMS voltage, between phase A and B, harmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_35_avg	RMS voltage, between phase A and B, harmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_36_avg	RMS voltage, between phase A and B, harmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_37_avg	RMS voltage, between phase A and B, harmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_38_avg	RMS voltage, between phase A and B, harmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_39_avg	RMS voltage, between phase A and B, harmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_40_avg	RMS voltage, between phase A and B, harmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_41_avg	RMS voltage, between phase A and B, harmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_42_avg	RMS voltage, between phase A and B, harmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_43_avg	RMS voltage, between phase A and B, harmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_44_avg	RMS voltage, between phase A and B, harmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_45_avg	RMS voltage, between phase A and B, harmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_46_avg	RMS voltage, between phase A and B, harmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_47_avg	RMS voltage, between phase A and B, harmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_48_avg	RMS voltage, between phase A and B, harmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_49_avg	RMS voltage, between phase A and B, harmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_harm_50_avg	RMS voltage, between phase A and B, harmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_0_avg	RMS voltage, between phase B and C, harmonic component DC, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_1_avg	RMS voltage, between phase B and C, harmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_2_avg	RMS voltage, between phase B and C, harmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_3_avg	RMS voltage, between phase B and C, harmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_4_avg	RMS voltage, between phase B and C, harmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_5_avg	RMS voltage, between phase B and C, harmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_6_avg	RMS voltage, between phase B and C, harmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_7_avg	RMS voltage, between phase B and C, harmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_8_avg	RMS voltage, between phase B and C, harmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BC_harm_9_avg	RMS voltage, between phase B and C, harmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_10_avg	RMS voltage, between phase B and C, harmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_11_avg	RMS voltage, between phase B and C, harmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_12_avg	RMS voltage, between phase B and C, harmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_13_avg	RMS voltage, between phase B and C, harmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_14_avg	RMS voltage, between phase B and C, harmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_15_avg	RMS voltage, between phase B and C, harmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_16_avg	RMS voltage, between phase B and C, harmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_17_avg	RMS voltage, between phase B and C, harmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_18_avg	RMS voltage, between phase B and C, harmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_19_avg	RMS voltage, between phase B and C, harmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_20_avg	RMS voltage, between phase B and C, harmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_21_avg	RMS voltage, between phase B and C, harmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_22_avg	RMS voltage, between phase B and C, harmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_23_avg	RMS voltage, between phase B and C, harmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_24_avg	RMS voltage, between phase B and C, harmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_25_avg	RMS voltage, between phase B and C, harmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_26_avg	RMS voltage, between phase B and C, harmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_27_avg	RMS voltage, between phase B and C, harmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_28_avg	RMS voltage, between phase B and C, harmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_29_avg	RMS voltage, between phase B and C, harmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_30_avg	RMS voltage, between phase B and C, harmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_31_avg	RMS voltage, between phase B and C, harmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_32_avg	RMS voltage, between phase B and C, harmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_33_avg	RMS voltage, between phase B and C, harmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_34_avg	RMS voltage, between phase B and C, harmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_35_avg	RMS voltage, between phase B and C, harmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_36_avg	RMS voltage, between phase B and C, harmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_37_avg	RMS voltage, between phase B and C, harmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_38_avg	RMS voltage, between phase B and C, harmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_39_avg	RMS voltage, between phase B and C, harmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_40_avg	RMS voltage, between phase B and C, harmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_41_avg	RMS voltage, between phase B and C, harmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_42_avg	RMS voltage, between phase B and C, harmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_43_avg	RMS voltage, between phase B and C, harmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_44_avg	RMS voltage, between phase B and C, harmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_45_avg	RMS voltage, between phase B and C, harmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_46_avg	RMS voltage, between phase B and C, harmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_47_avg	RMS voltage, between phase B and C, harmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BC_harm_48_avg	RMS voltage, between phase B and C, harmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_49_avg	RMS voltage, between phase B and C, harmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_harm_50_avg	RMS voltage, between phase B and C, harmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_0_avg	RMS voltage, between phase C and A, harmonic component DC, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_1_avg	RMS voltage, between phase C and A, harmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_2_avg	RMS voltage, between phase C and A, harmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_3_avg	RMS voltage, between phase C and A, harmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_4_avg	RMS voltage, between phase C and A, harmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_5_avg	RMS voltage, between phase C and A, harmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_6_avg	RMS voltage, between phase C and A, harmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_7_avg	RMS voltage, between phase C and A, harmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_8_avg	RMS voltage, between phase C and A, harmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_9_avg	RMS voltage, between phase C and A, harmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_10_avg	RMS voltage, between phase C and A, harmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_11_avg	RMS voltage, between phase C and A, harmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_12_avg	RMS voltage, between phase C and A, harmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_13_avg	RMS voltage, between phase C and A, harmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_14_avg	RMS voltage, between phase C and A, harmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_15_avg	RMS voltage, between phase C and A, harmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_16_avg	RMS voltage, between phase C and A, harmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_17_avg	RMS voltage, between phase C and A, harmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_18_avg	RMS voltage, between phase C and A, harmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_19_avg	RMS voltage, between phase C and A, harmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_20_avg	RMS voltage, between phase C and A, harmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_21_avg	RMS voltage, between phase C and A, harmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_22_avg	RMS voltage, between phase C and A, harmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_23_avg	RMS voltage, between phase C and A, harmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_24_avg	RMS voltage, between phase C and A, harmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_25_avg	RMS voltage, between phase C and A, harmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_26_avg	RMS voltage, between phase C and A, harmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_27_avg	RMS voltage, between phase C and A, harmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_28_avg	RMS voltage, between phase C and A, harmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_29_avg	RMS voltage, between phase C and A, harmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_30_avg	RMS voltage, between phase C and A, harmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_31_avg	RMS voltage, between phase C and A, harmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_32_avg	RMS voltage, between phase C and A, harmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_33_avg	RMS voltage, between phase C and A, harmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_34_avg	RMS voltage, between phase C and A, harmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_35_avg	RMS voltage, between phase C and A, harmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CA_harm_36_avg	RMS voltage, between phase C and A, harmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_37_avg	RMS voltage, between phase C and A, harmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_38_avg	RMS voltage, between phase C and A, harmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_39_avg	RMS voltage, between phase C and A, harmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_40_avg	RMS voltage, between phase C and A, harmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_41_avg	RMS voltage, between phase C and A, harmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_42_avg	RMS voltage, between phase C and A, harmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_43_avg	RMS voltage, between phase C and A, harmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_44_avg	RMS voltage, between phase C and A, harmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_45_avg	RMS voltage, between phase C and A, harmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_46_avg	RMS voltage, between phase C and A, harmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_47_avg	RMS voltage, between phase C and A, harmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_48_avg	RMS voltage, between phase C and A, harmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_49_avg	RMS voltage, between phase C and A, harmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_harm_50_avg	RMS voltage, between phase C and A, harmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
a_AN_harm_0_avg	RMS current, between phase A and N, harmonic component DC, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_1_avg	RMS current, between phase A and N, harmonic component #1, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_2_avg	RMS current, between phase A and N, harmonic component #2, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_3_avg	RMS current, between phase A and N, harmonic component #3, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_4_avg	RMS current, between phase A and N, harmonic component #4, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_5_avg	RMS current, between phase A and N, harmonic component #5, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_6_avg	RMS current, between phase A and N, harmonic component #6, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_7_avg	RMS current, between phase A and N, harmonic component #7, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_8_avg	RMS current, between phase A and N, harmonic component #8, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_9_avg	RMS current, between phase A and N, harmonic component #9, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_10_avg	RMS current, between phase A and N, harmonic component #10, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_11_avg	RMS current, between phase A and N, harmonic component #11, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_12_avg	RMS current, between phase A and N, harmonic component #12, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_13_avg	RMS current, between phase A and N, harmonic component #13, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_14_avg	RMS current, between phase A and N, harmonic component #14, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_15_avg	RMS current, between phase A and N, harmonic component #15, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_16_avg	RMS current, between phase A and N, harmonic component #16, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_17_avg	RMS current, between phase A and N, harmonic component #17, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_18_avg	RMS current, between phase A and N, harmonic component #18, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_19_avg	RMS current, between phase A and N, harmonic component #19, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_20_avg	RMS current, between phase A and N, harmonic component #20, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_21_avg	RMS current, between phase A and N, harmonic component #21, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_22_avg	RMS current, between phase A and N, harmonic component #22, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_23_avg	RMS current, between phase A and N, harmonic component #23, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_AN_harm_24_avg	RMS current, between phase A and N, harmonic component #24, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_25_avg	RMS current, between phase A and N, harmonic component #25, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_26_avg	RMS current, between phase A and N, harmonic component #26, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_27_avg	RMS current, between phase A and N, harmonic component #27, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_28_avg	RMS current, between phase A and N, harmonic component #28, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_29_avg	RMS current, between phase A and N, harmonic component #29, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_30_avg	RMS current, between phase A and N, harmonic component #30, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_31_avg	RMS current, between phase A and N, harmonic component #31, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_32_avg	RMS current, between phase A and N, harmonic component #32, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_33_avg	RMS current, between phase A and N, harmonic component #33, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_34_avg	RMS current, between phase A and N, harmonic component #34, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_35_avg	RMS current, between phase A and N, harmonic component #35, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_36_avg	RMS current, between phase A and N, harmonic component #36, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_37_avg	RMS current, between phase A and N, harmonic component #37, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_38_avg	RMS current, between phase A and N, harmonic component #38, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_39_avg	RMS current, between phase A and N, harmonic component #39, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_40_avg	RMS current, between phase A and N, harmonic component #40, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_41_avg	RMS current, between phase A and N, harmonic component #41, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_42_avg	RMS current, between phase A and N, harmonic component #42, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_43_avg	RMS current, between phase A and N, harmonic component #43, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_44_avg	RMS current, between phase A and N, harmonic component #44, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_45_avg	RMS current, between phase A and N, harmonic component #45, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_46_avg	RMS current, between phase A and N, harmonic component #46, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_47_avg	RMS current, between phase A and N, harmonic component #47, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_48_avg	RMS current, between phase A and N, harmonic component #48, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_49_avg	RMS current, between phase A and N, harmonic component #49, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_harm_50_avg	RMS current, between phase A and N, harmonic component #50, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_0_avg	RMS current, between phase B and N, harmonic component DC, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_1_avg	RMS current, between phase B and N, harmonic component #1, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_2_avg	RMS current, between phase B and N, harmonic component #2, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_3_avg	RMS current, between phase B and N, harmonic component #3, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_4_avg	RMS current, between phase B and N, harmonic component #4, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_5_avg	RMS current, between phase B and N, harmonic component #5, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_6_avg	RMS current, between phase B and N, harmonic component #6, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_7_avg	RMS current, between phase B and N, harmonic component #7, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_8_avg	RMS current, between phase B and N, harmonic component #8, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_9_avg	RMS current, between phase B and N, harmonic component #9, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_10_avg	RMS current, between phase B and N, harmonic component #10, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_11_avg	RMS current, between phase B and N, harmonic component #11, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_BN_harm_12_avg	RMS current, between phase B and N, harmonic component #12, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_13_avg	RMS current, between phase B and N, harmonic component #13, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_14_avg	RMS current, between phase B and N, harmonic component #14, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_15_avg	RMS current, between phase B and N, harmonic component #15, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_16_avg	RMS current, between phase B and N, harmonic component #16, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_17_avg	RMS current, between phase B and N, harmonic component #17, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_18_avg	RMS current, between phase B and N, harmonic component #18, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_19_avg	RMS current, between phase B and N, harmonic component #19, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_20_avg	RMS current, between phase B and N, harmonic component #20, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_21_avg	RMS current, between phase B and N, harmonic component #21, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_22_avg	RMS current, between phase B and N, harmonic component #22, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_23_avg	RMS current, between phase B and N, harmonic component #23, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_24_avg	RMS current, between phase B and N, harmonic component #24, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_25_avg	RMS current, between phase B and N, harmonic component #25, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_26_avg	RMS current, between phase B and N, harmonic component #26, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_27_avg	RMS current, between phase B and N, harmonic component #27, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_28_avg	RMS current, between phase B and N, harmonic component #28, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_29_avg	RMS current, between phase B and N, harmonic component #29, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_30_avg	RMS current, between phase B and N, harmonic component #30, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_31_avg	RMS current, between phase B and N, harmonic component #31, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_32_avg	RMS current, between phase B and N, harmonic component #32, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_33_avg	RMS current, between phase B and N, harmonic component #33, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_34_avg	RMS current, between phase B and N, harmonic component #34, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_35_avg	RMS current, between phase B and N, harmonic component #35, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_36_avg	RMS current, between phase B and N, harmonic component #36, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_37_avg	RMS current, between phase B and N, harmonic component #37, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_38_avg	RMS current, between phase B and N, harmonic component #38, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_39_avg	RMS current, between phase B and N, harmonic component #39, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_40_avg	RMS current, between phase B and N, harmonic component #40, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_41_avg	RMS current, between phase B and N, harmonic component #41, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_42_avg	RMS current, between phase B and N, harmonic component #42, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_43_avg	RMS current, between phase B and N, harmonic component #43, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_44_avg	RMS current, between phase B and N, harmonic component #44, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_45_avg	RMS current, between phase B and N, harmonic component #45, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_46_avg	RMS current, between phase B and N, harmonic component #46, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_47_avg	RMS current, between phase B and N, harmonic component #47, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_48_avg	RMS current, between phase B and N, harmonic component #48, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_49_avg	RMS current, between phase B and N, harmonic component #49, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_harm_50_avg	RMS current, between phase B and N, harmonic component #50, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_CN_harm_0_avg	RMS current, between phase C and N, harmonic component DC, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_1_avg	RMS current, between phase C and N, harmonic component #1, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_2_avg	RMS current, between phase C and N, harmonic component #2, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_3_avg	RMS current, between phase C and N, harmonic component #3, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_4_avg	RMS current, between phase C and N, harmonic component #4, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_5_avg	RMS current, between phase C and N, harmonic component #5, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_6_avg	RMS current, between phase C and N, harmonic component #6, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_7_avg	RMS current, between phase C and N, harmonic component #7, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_8_avg	RMS current, between phase C and N, harmonic component #8, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_9_avg	RMS current, between phase C and N, harmonic component #9, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_10_avg	RMS current, between phase C and N, harmonic component #10, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_11_avg	RMS current, between phase C and N, harmonic component #11, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_12_avg	RMS current, between phase C and N, harmonic component #12, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_13_avg	RMS current, between phase C and N, harmonic component #13, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_14_avg	RMS current, between phase C and N, harmonic component #14, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_15_avg	RMS current, between phase C and N, harmonic component #15, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_16_avg	RMS current, between phase C and N, harmonic component #16, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_17_avg	RMS current, between phase C and N, harmonic component #17, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_18_avg	RMS current, between phase C and N, harmonic component #18, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_19_avg	RMS current, between phase C and N, harmonic component #19, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_20_avg	RMS current, between phase C and N, harmonic component #20, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_21_avg	RMS current, between phase C and N, harmonic component #21, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_22_avg	RMS current, between phase C and N, harmonic component #22, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_23_avg	RMS current, between phase C and N, harmonic component #23, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_24_avg	RMS current, between phase C and N, harmonic component #24, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_25_avg	RMS current, between phase C and N, harmonic component #25, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_26_avg	RMS current, between phase C and N, harmonic component #26, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_27_avg	RMS current, between phase C and N, harmonic component #27, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_28_avg	RMS current, between phase C and N, harmonic component #28, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_29_avg	RMS current, between phase C and N, harmonic component #29, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_30_avg	RMS current, between phase C and N, harmonic component #30, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_31_avg	RMS current, between phase C and N, harmonic component #31, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_32_avg	RMS current, between phase C and N, harmonic component #32, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_33_avg	RMS current, between phase C and N, harmonic component #33, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_34_avg	RMS current, between phase C and N, harmonic component #34, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_35_avg	RMS current, between phase C and N, harmonic component #35, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_36_avg	RMS current, between phase C and N, harmonic component #36, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_37_avg	RMS current, between phase C and N, harmonic component #37, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_38_avg	RMS current, between phase C and N, harmonic component #38, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_CN_harm_39_avg	RMS current, between phase C and N, harmonic component #39, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_40_avg	RMS current, between phase C and N, harmonic component #40, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_41_avg	RMS current, between phase C and N, harmonic component #41, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_42_avg	RMS current, between phase C and N, harmonic component #42, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_43_avg	RMS current, between phase C and N, harmonic component #43, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_44_avg	RMS current, between phase C and N, harmonic component #44, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_45_avg	RMS current, between phase C and N, harmonic component #45, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_46_avg	RMS current, between phase C and N, harmonic component #46, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_47_avg	RMS current, between phase C and N, harmonic component #47, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_48_avg	RMS current, between phase C and N, harmonic component #48, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_49_avg	RMS current, between phase C and N, harmonic component #49, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_harm_50_avg	RMS current, between phase C and N, harmonic component #50, average of 10/12-cycle intervals	A	600	YES	YES
v_AN_THD_avg	RMS voltage, between phase A and N, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
v_BN_THD_avg	RMS voltage, between phase B and N, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
v_CN_THD_avg	RMS voltage, between phase C and N, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
v_AB_THD_avg	RMS voltage, between phase A and B, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
v_BC_THD_avg	RMS voltage, between phase B and C, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
v_CA_THD_avg	RMS voltage, between phase C and A, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
a_AN_THD_avg	RMS current, between phase A and N, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
a_BN_THD_avg	RMS current, between phase B and N, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
a_CN_THD_avg	RMS current, between phase C and N, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
a_AN_TDD_avg	RMS current, between phase A and N, total demand distortion, average of 10/12-cycle intervals	%	600	YES	YES
a_BN_TDD_avg	RMS current, between phase B and N, total demand distortion, average of 10/12-cycle intervals	%	600	YES	YES
a_CN_TDD_avg	RMS current, between phase C and N, total demand distortion, average of 10/12-cycle intervals	%	600	YES	YES
v_p2p_pos_avg	RMS phase-to-phase voltage, positive sequence component, average of 10/12-cycle intervals	V	600		
v_p2p_neg_avg	RMS phase-to-phase voltage, negative sequence component, average of 10/12-cycle intervals	V	600		
unbal_p2p_avg	Phase-to-phase negative sequence voltage unbalance, average of 10/12-cycle intervals	%	600	YES	YES
v_p2n_pos_avg	RMS line voltage, positive sequence component, average of 10/12-cycle intervals	V	600		
v_p2n_neg_avg	RMS line voltage, negative sequence component, average of 10/12-cycle intervals	V	600		
v_p2n_zero_avg	RMS line voltage, zero sequence component, average of 10/12-cycle intervals	V	600		
unbal_p2n_avg	Phase-to-neutral negative sequence voltage unbalance, average of 10/12-cycle intervals	%	600	YES	YES
freq_avg	frequency, average of 10/12-cycle intervals	Hz	600	YES	YES
v_AN_pst	RMS voltage, between phase A and NEUTRAL, short term flicker	None	600	YES	YES
v_BN_pst	RMS voltage, between phase B and NEUTRAL, short term flicker	None	600	YES	YES
v_CN_pst	RMS voltage, between phase C and NEUTRAL, short term flicker	None	600	YES	YES
v_AN_plt	RMS voltage, between phase A and NEUTRAL, long term flicker	None	7200	YES	YES
v_BN_plt	RMS voltage, between phase B and NEUTRAL, long term flicker	None	7200	YES	YES
v_CN_plt	RMS voltage, between phase C and NEUTRAL, long term flicker	None	7200	YES	YES
v_AN_max	RMS voltage, between phase A and NEUTRAL, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_max	RMS voltage, between phase B and NEUTRAL, maximum of 10/12-cycle intervals	V	600		
v_CN_max	RMS voltage, between phase C and NEUTRAL, maximum of 10/12-cycle intervals	V	600		
v_AB_max	RMS voltage, between phase A and B, maximum of 10/12-cycle intervals	V	600		
v_BC_max	RMS voltage, between phase B and C, maximum of 10/12-cycle intervals	V	600		
v_CA_max	RMS voltage, between phase C and A, maximum of 10/12-cycle intervals	V	600		
a_AN_max	RMS current, phase A, maximum of 10/12-cycle intervals	A	600		
a_BN_max	RMS current, phase B, maximum of 10/12-cycle intervals	A	600		
a_CN_max	RMS current, phase C, maximum of 10/12-cycle intervals	A	600		
p_AN_max	Active power, phase A, maximum of 10/12-cycle intervals	W	600 or 900		
p_BN_max	Active power, phase B, maximum of 10/12-cycle intervals	W	600 or 900		
p_CN_max	Active power, phase C, maximum of 10/12-cycle intervals	W	600 or 900		
p_TOTAL_max	Active power, total, maximum of 10/12-cycle intervals	W	600 or 900		
q_AN_max	Reactive power, phase A, maximum of 10/12-cycle intervals	VAr	600 or 900		
q_BN_max	Reactive power, phase B, maximum of 10/12-cycle intervals	VAr	600 or 900		
q_CN_max	Reactive power, phase C, maximum of 10/12-cycle intervals	VAr	600 or 900		
q_TOTAL_max	Reactive power, total, maximum of 10/12-cycle intervals	VAr	600 or 900		
v_AN_harm_0_max	RMS voltage, between phase A and N, harmonic component DC, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_1_max	RMS voltage, between phase A and N, harmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_2_max	RMS voltage, between phase A and N, harmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_3_max	RMS voltage, between phase A and N, harmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_4_max	RMS voltage, between phase A and N, harmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_5_max	RMS voltage, between phase A and N, harmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_6_max	RMS voltage, between phase A and N, harmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_7_max	RMS voltage, between phase A and N, harmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_8_max	RMS voltage, between phase A and N, harmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_9_max	RMS voltage, between phase A and N, harmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_10_max	RMS voltage, between phase A and N, harmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_11_max	RMS voltage, between phase A and N, harmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_12_max	RMS voltage, between phase A and N, harmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_13_max	RMS voltage, between phase A and N, harmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_14_max	RMS voltage, between phase A and N, harmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_15_max	RMS voltage, between phase A and N, harmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_16_max	RMS voltage, between phase A and N, harmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_17_max	RMS voltage, between phase A and N, harmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_18_max	RMS voltage, between phase A and N, harmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_19_max	RMS voltage, between phase A and N, harmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_20_max	RMS voltage, between phase A and N, harmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_21_max	RMS voltage, between phase A and N, harmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_22_max	RMS voltage, between phase A and N, harmonic component #22, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AN_harm_23_max	RMS voltage, between phase A and N, harmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_24_max	RMS voltage, between phase A and N, harmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_25_max	RMS voltage, between phase A and N, harmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_26_max	RMS voltage, between phase A and N, harmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_27_max	RMS voltage, between phase A and N, harmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_28_max	RMS voltage, between phase A and N, harmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_29_max	RMS voltage, between phase A and N, harmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_30_max	RMS voltage, between phase A and N, harmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_31_max	RMS voltage, between phase A and N, harmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_32_max	RMS voltage, between phase A and N, harmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_33_max	RMS voltage, between phase A and N, harmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_34_max	RMS voltage, between phase A and N, harmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_35_max	RMS voltage, between phase A and N, harmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_36_max	RMS voltage, between phase A and N, harmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_37_max	RMS voltage, between phase A and N, harmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_38_max	RMS voltage, between phase A and N, harmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_39_max	RMS voltage, between phase A and N, harmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_40_max	RMS voltage, between phase A and N, harmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_41_max	RMS voltage, between phase A and N, harmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_42_max	RMS voltage, between phase A and N, harmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_43_max	RMS voltage, between phase A and N, harmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_44_max	RMS voltage, between phase A and N, harmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_45_max	RMS voltage, between phase A and N, harmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_46_max	RMS voltage, between phase A and N, harmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_47_max	RMS voltage, between phase A and N, harmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_48_max	RMS voltage, between phase A and N, harmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_49_max	RMS voltage, between phase A and N, harmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_AN_harm_50_max	RMS voltage, between phase A and N, harmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_0_max	RMS voltage, between phase B and N, harmonic component DC, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_1_max	RMS voltage, between phase B and N, harmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_2_max	RMS voltage, between phase B and N, harmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_3_max	RMS voltage, between phase B and N, harmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_4_max	RMS voltage, between phase B and N, harmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_5_max	RMS voltage, between phase B and N, harmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_6_max	RMS voltage, between phase B and N, harmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_7_max	RMS voltage, between phase B and N, harmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_8_max	RMS voltage, between phase B and N, harmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_9_max	RMS voltage, between phase B and N, harmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_10_max	RMS voltage, between phase B and N, harmonic component #10, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_harm_11_max	RMS voltage, between phase B and N, harmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_12_max	RMS voltage, between phase B and N, harmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_13_max	RMS voltage, between phase B and N, harmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_14_max	RMS voltage, between phase B and N, harmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_15_max	RMS voltage, between phase B and N, harmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_16_max	RMS voltage, between phase B and N, harmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_17_max	RMS voltage, between phase B and N, harmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_18_max	RMS voltage, between phase B and N, harmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_19_max	RMS voltage, between phase B and N, harmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_20_max	RMS voltage, between phase B and N, harmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_21_max	RMS voltage, between phase B and N, harmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_22_max	RMS voltage, between phase B and N, harmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_23_max	RMS voltage, between phase B and N, harmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_24_max	RMS voltage, between phase B and N, harmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_25_max	RMS voltage, between phase B and N, harmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_26_max	RMS voltage, between phase B and N, harmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_27_max	RMS voltage, between phase B and N, harmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_28_max	RMS voltage, between phase B and N, harmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_29_max	RMS voltage, between phase B and N, harmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_30_max	RMS voltage, between phase B and N, harmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_31_max	RMS voltage, between phase B and N, harmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_32_max	RMS voltage, between phase B and N, harmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_33_max	RMS voltage, between phase B and N, harmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_34_max	RMS voltage, between phase B and N, harmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_35_max	RMS voltage, between phase B and N, harmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_36_max	RMS voltage, between phase B and N, harmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_37_max	RMS voltage, between phase B and N, harmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_38_max	RMS voltage, between phase B and N, harmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_39_max	RMS voltage, between phase B and N, harmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_40_max	RMS voltage, between phase B and N, harmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_41_max	RMS voltage, between phase B and N, harmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_42_max	RMS voltage, between phase B and N, harmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_43_max	RMS voltage, between phase B and N, harmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_44_max	RMS voltage, between phase B and N, harmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_45_max	RMS voltage, between phase B and N, harmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_46_max	RMS voltage, between phase B and N, harmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_47_max	RMS voltage, between phase B and N, harmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_48_max	RMS voltage, between phase B and N, harmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_BN_harm_49_max	RMS voltage, between phase B and N, harmonic component #49, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_harm_50_max	RMS voltage, between phase B and N, harmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_0_max	RMS voltage, between phase C and N, harmonic component DC, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_1_max	RMS voltage, between phase C and N, harmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_2_max	RMS voltage, between phase C and N, harmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_3_max	RMS voltage, between phase C and N, harmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_4_max	RMS voltage, between phase C and N, harmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_5_max	RMS voltage, between phase C and N, harmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_6_max	RMS voltage, between phase C and N, harmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_7_max	RMS voltage, between phase C and N, harmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_8_max	RMS voltage, between phase C and N, harmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_9_max	RMS voltage, between phase C and N, harmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_10_max	RMS voltage, between phase C and N, harmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_11_max	RMS voltage, between phase C and N, harmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_12_max	RMS voltage, between phase C and N, harmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_13_max	RMS voltage, between phase C and N, harmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_14_max	RMS voltage, between phase C and N, harmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_15_max	RMS voltage, between phase C and N, harmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_16_max	RMS voltage, between phase C and N, harmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_17_max	RMS voltage, between phase C and N, harmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_18_max	RMS voltage, between phase C and N, harmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_19_max	RMS voltage, between phase C and N, harmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_20_max	RMS voltage, between phase C and N, harmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_21_max	RMS voltage, between phase C and N, harmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_22_max	RMS voltage, between phase C and N, harmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_23_max	RMS voltage, between phase C and N, harmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_24_max	RMS voltage, between phase C and N, harmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_25_max	RMS voltage, between phase C and N, harmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_26_max	RMS voltage, between phase C and N, harmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_27_max	RMS voltage, between phase C and N, harmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_28_max	RMS voltage, between phase C and N, harmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_29_max	RMS voltage, between phase C and N, harmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_30_max	RMS voltage, between phase C and N, harmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_31_max	RMS voltage, between phase C and N, harmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_32_max	RMS voltage, between phase C and N, harmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_33_max	RMS voltage, between phase C and N, harmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_34_max	RMS voltage, between phase C and N, harmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_35_max	RMS voltage, between phase C and N, harmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_36_max	RMS voltage, between phase C and N, harmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_37_max	RMS voltage, between phase C and N, harmonic component #37, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CN_harm_38_max	RMS voltage, between phase C and N, harmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_39_max	RMS voltage, between phase C and N, harmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_40_max	RMS voltage, between phase C and N, harmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_41_max	RMS voltage, between phase C and N, harmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_42_max	RMS voltage, between phase C and N, harmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_43_max	RMS voltage, between phase C and N, harmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_44_max	RMS voltage, between phase C and N, harmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_45_max	RMS voltage, between phase C and N, harmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_46_max	RMS voltage, between phase C and N, harmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_47_max	RMS voltage, between phase C and N, harmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_48_max	RMS voltage, between phase C and N, harmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_49_max	RMS voltage, between phase C and N, harmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_CN_harm_50_max	RMS voltage, between phase C and N, harmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_0_max	RMS voltage, between phase A and B, harmonic component DC, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_1_max	RMS voltage, between phase A and B, harmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_2_max	RMS voltage, between phase A and B, harmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_3_max	RMS voltage, between phase A and B, harmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_4_max	RMS voltage, between phase A and B, harmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_5_max	RMS voltage, between phase A and B, harmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_6_max	RMS voltage, between phase A and B, harmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_7_max	RMS voltage, between phase A and B, harmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_8_max	RMS voltage, between phase A and B, harmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_9_max	RMS voltage, between phase A and B, harmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_10_max	RMS voltage, between phase A and B, harmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_11_max	RMS voltage, between phase A and B, harmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_12_max	RMS voltage, between phase A and B, harmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_13_max	RMS voltage, between phase A and B, harmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_14_max	RMS voltage, between phase A and B, harmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_15_max	RMS voltage, between phase A and B, harmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_16_max	RMS voltage, between phase A and B, harmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_17_max	RMS voltage, between phase A and B, harmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_18_max	RMS voltage, between phase A and B, harmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_19_max	RMS voltage, between phase A and B, harmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_20_max	RMS voltage, between phase A and B, harmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_21_max	RMS voltage, between phase A and B, harmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_22_max	RMS voltage, between phase A and B, harmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_23_max	RMS voltage, between phase A and B, harmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_24_max	RMS voltage, between phase A and B, harmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_25_max	RMS voltage, between phase A and B, harmonic component #25, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AB_harm_26_max	RMS voltage, between phase A and B, harmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_27_max	RMS voltage, between phase A and B, harmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_28_max	RMS voltage, between phase A and B, harmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_29_max	RMS voltage, between phase A and B, harmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_30_max	RMS voltage, between phase A and B, harmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_31_max	RMS voltage, between phase A and B, harmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_32_max	RMS voltage, between phase A and B, harmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_33_max	RMS voltage, between phase A and B, harmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_34_max	RMS voltage, between phase A and B, harmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_35_max	RMS voltage, between phase A and B, harmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_36_max	RMS voltage, between phase A and B, harmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_37_max	RMS voltage, between phase A and B, harmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_38_max	RMS voltage, between phase A and B, harmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_39_max	RMS voltage, between phase A and B, harmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_40_max	RMS voltage, between phase A and B, harmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_41_max	RMS voltage, between phase A and B, harmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_42_max	RMS voltage, between phase A and B, harmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_43_max	RMS voltage, between phase A and B, harmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_44_max	RMS voltage, between phase A and B, harmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_45_max	RMS voltage, between phase A and B, harmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_46_max	RMS voltage, between phase A and B, harmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_47_max	RMS voltage, between phase A and B, harmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_48_max	RMS voltage, between phase A and B, harmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_49_max	RMS voltage, between phase A and B, harmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_AB_harm_50_max	RMS voltage, between phase A and B, harmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_0_max	RMS voltage, between phase B and C, harmonic component DC, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_1_max	RMS voltage, between phase B and C, harmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_2_max	RMS voltage, between phase B and C, harmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_3_max	RMS voltage, between phase B and C, harmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_4_max	RMS voltage, between phase B and C, harmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_5_max	RMS voltage, between phase B and C, harmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_6_max	RMS voltage, between phase B and C, harmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_7_max	RMS voltage, between phase B and C, harmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_8_max	RMS voltage, between phase B and C, harmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_9_max	RMS voltage, between phase B and C, harmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_10_max	RMS voltage, between phase B and C, harmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_11_max	RMS voltage, between phase B and C, harmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_12_max	RMS voltage, between phase B and C, harmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_13_max	RMS voltage, between phase B and C, harmonic component #13, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BC_harm_14_max	RMS voltage, between phase B and C, harmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_15_max	RMS voltage, between phase B and C, harmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_16_max	RMS voltage, between phase B and C, harmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_17_max	RMS voltage, between phase B and C, harmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_18_max	RMS voltage, between phase B and C, harmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_19_max	RMS voltage, between phase B and C, harmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_20_max	RMS voltage, between phase B and C, harmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_21_max	RMS voltage, between phase B and C, harmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_22_max	RMS voltage, between phase B and C, harmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_23_max	RMS voltage, between phase B and C, harmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_24_max	RMS voltage, between phase B and C, harmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_25_max	RMS voltage, between phase B and C, harmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_26_max	RMS voltage, between phase B and C, harmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_27_max	RMS voltage, between phase B and C, harmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_28_max	RMS voltage, between phase B and C, harmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_29_max	RMS voltage, between phase B and C, harmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_30_max	RMS voltage, between phase B and C, harmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_31_max	RMS voltage, between phase B and C, harmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_32_max	RMS voltage, between phase B and C, harmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_33_max	RMS voltage, between phase B and C, harmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_34_max	RMS voltage, between phase B and C, harmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_35_max	RMS voltage, between phase B and C, harmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_36_max	RMS voltage, between phase B and C, harmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_37_max	RMS voltage, between phase B and C, harmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_38_max	RMS voltage, between phase B and C, harmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_39_max	RMS voltage, between phase B and C, harmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_40_max	RMS voltage, between phase B and C, harmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_41_max	RMS voltage, between phase B and C, harmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_42_max	RMS voltage, between phase B and C, harmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_43_max	RMS voltage, between phase B and C, harmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_44_max	RMS voltage, between phase B and C, harmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_45_max	RMS voltage, between phase B and C, harmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_46_max	RMS voltage, between phase B and C, harmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_47_max	RMS voltage, between phase B and C, harmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_48_max	RMS voltage, between phase B and C, harmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_49_max	RMS voltage, between phase B and C, harmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_BC_harm_50_max	RMS voltage, between phase B and C, harmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_0_max	RMS voltage, between phase C and A, harmonic component DC, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_1_max	RMS voltage, between phase C and A, harmonic component #1, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CA_harm_2_max	RMS voltage, between phase C and A, harmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_3_max	RMS voltage, between phase C and A, harmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_4_max	RMS voltage, between phase C and A, harmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_5_max	RMS voltage, between phase C and A, harmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_6_max	RMS voltage, between phase C and A, harmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_7_max	RMS voltage, between phase C and A, harmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_8_max	RMS voltage, between phase C and A, harmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_9_max	RMS voltage, between phase C and A, harmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_10_max	RMS voltage, between phase C and A, harmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_11_max	RMS voltage, between phase C and A, harmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_12_max	RMS voltage, between phase C and A, harmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_13_max	RMS voltage, between phase C and A, harmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_14_max	RMS voltage, between phase C and A, harmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_15_max	RMS voltage, between phase C and A, harmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_16_max	RMS voltage, between phase C and A, harmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_17_max	RMS voltage, between phase C and A, harmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_18_max	RMS voltage, between phase C and A, harmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_19_max	RMS voltage, between phase C and A, harmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_20_max	RMS voltage, between phase C and A, harmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_21_max	RMS voltage, between phase C and A, harmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_22_max	RMS voltage, between phase C and A, harmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_23_max	RMS voltage, between phase C and A, harmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_24_max	RMS voltage, between phase C and A, harmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_25_max	RMS voltage, between phase C and A, harmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_26_max	RMS voltage, between phase C and A, harmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_27_max	RMS voltage, between phase C and A, harmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_28_max	RMS voltage, between phase C and A, harmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_29_max	RMS voltage, between phase C and A, harmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_30_max	RMS voltage, between phase C and A, harmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_31_max	RMS voltage, between phase C and A, harmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_32_max	RMS voltage, between phase C and A, harmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_33_max	RMS voltage, between phase C and A, harmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_34_max	RMS voltage, between phase C and A, harmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_35_max	RMS voltage, between phase C and A, harmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_36_max	RMS voltage, between phase C and A, harmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_37_max	RMS voltage, between phase C and A, harmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_38_max	RMS voltage, between phase C and A, harmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_39_max	RMS voltage, between phase C and A, harmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_40_max	RMS voltage, between phase C and A, harmonic component #40, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CA_harm_41_max	RMS voltage, between phase C and A, harmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_42_max	RMS voltage, between phase C and A, harmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_43_max	RMS voltage, between phase C and A, harmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_44_max	RMS voltage, between phase C and A, harmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_45_max	RMS voltage, between phase C and A, harmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_46_max	RMS voltage, between phase C and A, harmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_47_max	RMS voltage, between phase C and A, harmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_48_max	RMS voltage, between phase C and A, harmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_49_max	RMS voltage, between phase C and A, harmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_CA_harm_50_max	RMS voltage, between phase C and A, harmonic component #50, maximum of 10/12-cycle intervals	V	600		
a_AN_harm_0_max	RMS current, between phase A and N, harmonic component DC, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_1_max	RMS current, between phase A and N, harmonic component #1, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_2_max	RMS current, between phase A and N, harmonic component #2, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_3_max	RMS current, between phase A and N, harmonic component #3, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_4_max	RMS current, between phase A and N, harmonic component #4, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_5_max	RMS current, between phase A and N, harmonic component #5, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_6_max	RMS current, between phase A and N, harmonic component #6, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_7_max	RMS current, between phase A and N, harmonic component #7, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_8_max	RMS current, between phase A and N, harmonic component #8, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_9_max	RMS current, between phase A and N, harmonic component #9, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_10_max	RMS current, between phase A and N, harmonic component #10, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_11_max	RMS current, between phase A and N, harmonic component #11, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_12_max	RMS current, between phase A and N, harmonic component #12, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_13_max	RMS current, between phase A and N, harmonic component #13, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_14_max	RMS current, between phase A and N, harmonic component #14, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_15_max	RMS current, between phase A and N, harmonic component #15, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_16_max	RMS current, between phase A and N, harmonic component #16, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_17_max	RMS current, between phase A and N, harmonic component #17, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_18_max	RMS current, between phase A and N, harmonic component #18, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_19_max	RMS current, between phase A and N, harmonic component #19, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_20_max	RMS current, between phase A and N, harmonic component #20, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_21_max	RMS current, between phase A and N, harmonic component #21, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_22_max	RMS current, between phase A and N, harmonic component #22, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_23_max	RMS current, between phase A and N, harmonic component #23, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_24_max	RMS current, between phase A and N, harmonic component #24, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_25_max	RMS current, between phase A and N, harmonic component #25, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_26_max	RMS current, between phase A and N, harmonic component #26, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_27_max	RMS current, between phase A and N, harmonic component #27, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_28_max	RMS current, between phase A and N, harmonic component #28, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_AN_harm_29_max	RMS current, between phase A and N, harmonic component #29, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_30_max	RMS current, between phase A and N, harmonic component #30, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_31_max	RMS current, between phase A and N, harmonic component #31, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_32_max	RMS current, between phase A and N, harmonic component #32, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_33_max	RMS current, between phase A and N, harmonic component #33, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_34_max	RMS current, between phase A and N, harmonic component #34, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_35_max	RMS current, between phase A and N, harmonic component #35, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_36_max	RMS current, between phase A and N, harmonic component #36, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_37_max	RMS current, between phase A and N, harmonic component #37, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_38_max	RMS current, between phase A and N, harmonic component #38, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_39_max	RMS current, between phase A and N, harmonic component #39, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_40_max	RMS current, between phase A and N, harmonic component #40, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_41_max	RMS current, between phase A and N, harmonic component #41, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_42_max	RMS current, between phase A and N, harmonic component #42, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_43_max	RMS current, between phase A and N, harmonic component #43, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_44_max	RMS current, between phase A and N, harmonic component #44, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_45_max	RMS current, between phase A and N, harmonic component #45, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_46_max	RMS current, between phase A and N, harmonic component #46, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_47_max	RMS current, between phase A and N, harmonic component #47, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_48_max	RMS current, between phase A and N, harmonic component #48, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_49_max	RMS current, between phase A and N, harmonic component #49, maximum of 10/12-cycle intervals	A	600		
a_AN_harm_50_max	RMS current, between phase A and N, harmonic component #50, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_0_max	RMS current, between phase B and N, harmonic component DC, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_1_max	RMS current, between phase B and N, harmonic component #1, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_2_max	RMS current, between phase B and N, harmonic component #2, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_3_max	RMS current, between phase B and N, harmonic component #3, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_4_max	RMS current, between phase B and N, harmonic component #4, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_5_max	RMS current, between phase B and N, harmonic component #5, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_6_max	RMS current, between phase B and N, harmonic component #6, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_7_max	RMS current, between phase B and N, harmonic component #7, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_8_max	RMS current, between phase B and N, harmonic component #8, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_9_max	RMS current, between phase B and N, harmonic component #9, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_10_max	RMS current, between phase B and N, harmonic component #10, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_11_max	RMS current, between phase B and N, harmonic component #11, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_12_max	RMS current, between phase B and N, harmonic component #12, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_13_max	RMS current, between phase B and N, harmonic component #13, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_14_max	RMS current, between phase B and N, harmonic component #14, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_15_max	RMS current, between phase B and N, harmonic component #15, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_16_max	RMS current, between phase B and N, harmonic component #16, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_BN_harm_17_max	RMS current, between phase B and N, harmonic component #17, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_18_max	RMS current, between phase B and N, harmonic component #18, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_19_max	RMS current, between phase B and N, harmonic component #19, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_20_max	RMS current, between phase B and N, harmonic component #20, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_21_max	RMS current, between phase B and N, harmonic component #21, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_22_max	RMS current, between phase B and N, harmonic component #22, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_23_max	RMS current, between phase B and N, harmonic component #23, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_24_max	RMS current, between phase B and N, harmonic component #24, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_25_max	RMS current, between phase B and N, harmonic component #25, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_26_max	RMS current, between phase B and N, harmonic component #26, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_27_max	RMS current, between phase B and N, harmonic component #27, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_28_max	RMS current, between phase B and N, harmonic component #28, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_29_max	RMS current, between phase B and N, harmonic component #29, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_30_max	RMS current, between phase B and N, harmonic component #30, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_31_max	RMS current, between phase B and N, harmonic component #31, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_32_max	RMS current, between phase B and N, harmonic component #32, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_33_max	RMS current, between phase B and N, harmonic component #33, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_34_max	RMS current, between phase B and N, harmonic component #34, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_35_max	RMS current, between phase B and N, harmonic component #35, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_36_max	RMS current, between phase B and N, harmonic component #36, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_37_max	RMS current, between phase B and N, harmonic component #37, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_38_max	RMS current, between phase B and N, harmonic component #38, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_39_max	RMS current, between phase B and N, harmonic component #39, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_40_max	RMS current, between phase B and N, harmonic component #40, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_41_max	RMS current, between phase B and N, harmonic component #41, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_42_max	RMS current, between phase B and N, harmonic component #42, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_43_max	RMS current, between phase B and N, harmonic component #43, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_44_max	RMS current, between phase B and N, harmonic component #44, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_45_max	RMS current, between phase B and N, harmonic component #45, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_46_max	RMS current, between phase B and N, harmonic component #46, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_47_max	RMS current, between phase B and N, harmonic component #47, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_48_max	RMS current, between phase B and N, harmonic component #48, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_49_max	RMS current, between phase B and N, harmonic component #49, maximum of 10/12-cycle intervals	A	600		
a_BN_harm_50_max	RMS current, between phase B and N, harmonic component #50, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_0_max	RMS current, between phase C and N, harmonic component DC, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_1_max	RMS current, between phase C and N, harmonic component #1, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_2_max	RMS current, between phase C and N, harmonic component #2, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_3_max	RMS current, between phase C and N, harmonic component #3, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_4_max	RMS current, between phase C and N, harmonic component #4, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_CN_harm_5_max	RMS current, between phase C and N, harmonic component #5, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_6_max	RMS current, between phase C and N, harmonic component #6, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_7_max	RMS current, between phase C and N, harmonic component #7, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_8_max	RMS current, between phase C and N, harmonic component #8, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_9_max	RMS current, between phase C and N, harmonic component #9, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_10_max	RMS current, between phase C and N, harmonic component #10, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_11_max	RMS current, between phase C and N, harmonic component #11, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_12_max	RMS current, between phase C and N, harmonic component #12, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_13_max	RMS current, between phase C and N, harmonic component #13, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_14_max	RMS current, between phase C and N, harmonic component #14, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_15_max	RMS current, between phase C and N, harmonic component #15, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_16_max	RMS current, between phase C and N, harmonic component #16, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_17_max	RMS current, between phase C and N, harmonic component #17, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_18_max	RMS current, between phase C and N, harmonic component #18, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_19_max	RMS current, between phase C and N, harmonic component #19, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_20_max	RMS current, between phase C and N, harmonic component #20, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_21_max	RMS current, between phase C and N, harmonic component #21, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_22_max	RMS current, between phase C and N, harmonic component #22, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_23_max	RMS current, between phase C and N, harmonic component #23, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_24_max	RMS current, between phase C and N, harmonic component #24, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_25_max	RMS current, between phase C and N, harmonic component #25, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_26_max	RMS current, between phase C and N, harmonic component #26, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_27_max	RMS current, between phase C and N, harmonic component #27, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_28_max	RMS current, between phase C and N, harmonic component #28, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_29_max	RMS current, between phase C and N, harmonic component #29, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_30_max	RMS current, between phase C and N, harmonic component #30, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_31_max	RMS current, between phase C and N, harmonic component #31, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_32_max	RMS current, between phase C and N, harmonic component #32, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_33_max	RMS current, between phase C and N, harmonic component #33, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_34_max	RMS current, between phase C and N, harmonic component #34, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_35_max	RMS current, between phase C and N, harmonic component #35, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_36_max	RMS current, between phase C and N, harmonic component #36, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_37_max	RMS current, between phase C and N, harmonic component #37, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_38_max	RMS current, between phase C and N, harmonic component #38, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_39_max	RMS current, between phase C and N, harmonic component #39, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_40_max	RMS current, between phase C and N, harmonic component #40, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_41_max	RMS current, between phase C and N, harmonic component #41, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_42_max	RMS current, between phase C and N, harmonic component #42, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_43_max	RMS current, between phase C and N, harmonic component #43, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_CN_harm_44_max	RMS current, between phase C and N, harmonic component #44, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_45_max	RMS current, between phase C and N, harmonic component #45, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_46_max	RMS current, between phase C and N, harmonic component #46, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_47_max	RMS current, between phase C and N, harmonic component #47, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_48_max	RMS current, between phase C and N, harmonic component #48, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_49_max	RMS current, between phase C and N, harmonic component #49, maximum of 10/12-cycle intervals	A	600		
a_CN_harm_50_max	RMS current, between phase C and N, harmonic component #50, maximum of 10/12-cycle intervals	A	600		
v_AN_THD_max	RMS voltage, between phase A and N, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
v_BN_THD_max	RMS voltage, between phase B and N, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
v_CN_THD_max	RMS voltage, between phase C and N, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
v_AB_THD_max	RMS voltage, between phase A and B, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
v_BC_THD_max	RMS voltage, between phase B and C, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
v_CA_THD_max	RMS voltage, between phase C and A, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
a_AN_THD_max	RMS current, between phase A and N, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
a_BN_THD_max	RMS current, between phase B and N, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
a_CN_THD_max	RMS current, between phase C and N, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
a_AN_TDD_max	RMS current, between phase A and N, total demand distortion, maximum of 10/12-cycle intervals	%	600		
a_BN_TDD_max	RMS current, between phase B and N, total demand distortion, maximum of 10/12-cycle intervals	%	600		
a_CN_TDD_max	RMS current, between phase C and N, total demand distortion, maximum of 10/12-cycle intervals	%	600		
v_zero_max	RMS voltage, zero sequence component, maximum of 10/12-cycle intervals	V	600		
v_neg_max	RMS voltage, negative sequence component, maximum of 10/12-cycle intervals	V	600		
freq_max	frequency, maximum of 10/12-cycle intervals	Hz	600		
v_AN	RMS voltage, between A and NEUTRAL, instantaneous (10/12 cycle window)	V	not applicable		
v_BN	RMS voltage, between B and NEUTRAL, instantaneous (10/12 cycle window)	V	not applicable		
v_CN	RMS voltage, between C and NEUTRAL, instantaneous (10/12 cycle window)	V	not applicable		
v_AB	RMS voltage, between A and B, instantaneous (10/12 cycle window)	V	not applicable		
v_BC	RMS voltage, between B and C, instantaneous (10/12 cycle window)	V	not applicable		
v_CA	RMS voltage, between C and A, instantaneous (10/12 cycle window)	V	not applicable		
a_AN	RMS current, phase A, instantaneous (10/12 cycle window)	A	not applicable		
a_BN	RMS current, phase B, instantaneous (10/12 cycle window)	A	not applicable		
a_CN	RMS current, phase C, instantaneous (10/12 cycle window)	A	not applicable		
p_AN	active power, between phase A and NEUTRAL, instantaneous (10/12 cycle window)	W	not applicable		
p_BN	active power, between phase B and NEUTRAL, instantaneous (10/12 cycle window)	W	not applicable		
p_CN	active power, between phase C and NEUTRAL, instantaneous (10/12 cycle window)	W	not applicable		
p_TOTAL	active power, total, instaneous (10/12 cycle window)	W	not applicable		
q_AN	reactive power, between phase A and NEUTRAL, instantaneous (10/12 cycle window)	VAr	not applicable		
q_BN	reactive power, between phase B and NEUTRAL, instantaneous (10/12 cycle window)	VAr	not applicable		
q_CN	reactive power, between phase C and NEUTRAL, instantaneous (10/12 cycle window)	VAr	not applicable		
q_TOTAL	reactive power, total, instantaneous (10/12 cycle window)	VAr	not applicable		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
s_AN	apparent power, between phase A and NEUTRAL, instantaneous (10/12 cycle window)	VA	not applicable		
s_BN	apparent power, between phase B and NEUTRAL, instantaneous (10/12 cycle window)	VA	not applicable		
s_CN	apparent power, between phase C and NEUTRAL, instantaneous (10/12 cycle window)	VA	not applicable		
s_TOTAL	apparent power, total, instaneous (10/12 cycle window)	VA	not applicable		
freq	frequency, instantaneous value (moving averaging window)	Hz	not applicable		
v_AN_iharm_0_min	RMS voltage, between phase A and N, interharmonic component #0, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_1_min	RMS voltage, between phase A and N, interharmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_2_min	RMS voltage, between phase A and N, interharmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_3_min	RMS voltage, between phase A and N, interharmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_4_min	RMS voltage, between phase A and N, interharmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_5_min	RMS voltage, between phase A and N, interharmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_6_min	RMS voltage, between phase A and N, interharmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_7_min	RMS voltage, between phase A and N, interharmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_8_min	RMS voltage, between phase A and N, interharmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_9_min	RMS voltage, between phase A and N, interharmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_10_min	RMS voltage, between phase A and N, interharmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_11_min	RMS voltage, between phase A and N, interharmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_12_min	RMS voltage, between phase A and N, interharmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_13_min	RMS voltage, between phase A and N, interharmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_14_min	RMS voltage, between phase A and N, interharmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_15_min	RMS voltage, between phase A and N, interharmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_16_min	RMS voltage, between phase A and N, interharmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_17_min	RMS voltage, between phase A and N, interharmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_18_min	RMS voltage, between phase A and N, interharmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_19_min	RMS voltage, between phase A and N, interharmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_20_min	RMS voltage, between phase A and N, interharmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_21_min	RMS voltage, between phase A and N, interharmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_22_min	RMS voltage, between phase A and N, interharmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_23_min	RMS voltage, between phase A and N, interharmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_24_min	RMS voltage, between phase A and N, interharmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_25_min	RMS voltage, between phase A and N, interharmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_26_min	RMS voltage, between phase A and N, interharmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_27_min	RMS voltage, between phase A and N, interharmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_28_min	RMS voltage, between phase A and N, interharmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_29_min	RMS voltage, between phase A and N, interharmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_30_min	RMS voltage, between phase A and N, interharmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_31_min	RMS voltage, between phase A and N, interharmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_32_min	RMS voltage, between phase A and N, interharmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_33_min	RMS voltage, between phase A and N, interharmonic component #33, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AN_iharm_34_min	RMS voltage, between phase A and N, interharmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_35_min	RMS voltage, between phase A and N, interharmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_36_min	RMS voltage, between phase A and N, interharmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_37_min	RMS voltage, between phase A and N, interharmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_38_min	RMS voltage, between phase A and N, interharmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_39_min	RMS voltage, between phase A and N, interharmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_40_min	RMS voltage, between phase A and N, interharmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_41_min	RMS voltage, between phase A and N, interharmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_42_min	RMS voltage, between phase A and N, interharmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_43_min	RMS voltage, between phase A and N, interharmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_44_min	RMS voltage, between phase A and N, interharmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_45_min	RMS voltage, between phase A and N, interharmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_46_min	RMS voltage, between phase A and N, interharmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_47_min	RMS voltage, between phase A and N, interharmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_48_min	RMS voltage, between phase A and N, interharmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_49_min	RMS voltage, between phase A and N, interharmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_AN_iharm_50_min	RMS voltage, between phase A and N, interharmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_0_min	RMS voltage, between phase B and N, interharmonic component #0, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_1_min	RMS voltage, between phase B and N, interharmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_2_min	RMS voltage, between phase B and N, interharmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_3_min	RMS voltage, between phase B and N, interharmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_4_min	RMS voltage, between phase B and N, interharmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_5_min	RMS voltage, between phase B and N, interharmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_6_min	RMS voltage, between phase B and N, interharmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_7_min	RMS voltage, between phase B and N, interharmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_8_min	RMS voltage, between phase B and N, interharmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_9_min	RMS voltage, between phase B and N, interharmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_10_min	RMS voltage, between phase B and N, interharmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_11_min	RMS voltage, between phase B and N, interharmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_12_min	RMS voltage, between phase B and N, interharmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_13_min	RMS voltage, between phase B and N, interharmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_14_min	RMS voltage, between phase B and N, interharmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_15_min	RMS voltage, between phase B and N, interharmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_16_min	RMS voltage, between phase B and N, interharmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_17_min	RMS voltage, between phase B and N, interharmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_18_min	RMS voltage, between phase B and N, interharmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_19_min	RMS voltage, between phase B and N, interharmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_20_min	RMS voltage, between phase B and N, interharmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_21_min	RMS voltage, between phase B and N, interharmonic component #21, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_iharm_22_min	RMS voltage, between phase B and N, interharmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_23_min	RMS voltage, between phase B and N, interharmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_24_min	RMS voltage, between phase B and N, interharmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_25_min	RMS voltage, between phase B and N, interharmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_26_min	RMS voltage, between phase B and N, interharmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_27_min	RMS voltage, between phase B and N, interharmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_28_min	RMS voltage, between phase B and N, interharmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_29_min	RMS voltage, between phase B and N, interharmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_30_min	RMS voltage, between phase B and N, interharmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_31_min	RMS voltage, between phase B and N, interharmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_32_min	RMS voltage, between phase B and N, interharmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_33_min	RMS voltage, between phase B and N, interharmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_34_min	RMS voltage, between phase B and N, interharmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_35_min	RMS voltage, between phase B and N, interharmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_36_min	RMS voltage, between phase B and N, interharmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_37_min	RMS voltage, between phase B and N, interharmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_38_min	RMS voltage, between phase B and N, interharmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_39_min	RMS voltage, between phase B and N, interharmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_40_min	RMS voltage, between phase B and N, interharmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_41_min	RMS voltage, between phase B and N, interharmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_42_min	RMS voltage, between phase B and N, interharmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_43_min	RMS voltage, between phase B and N, interharmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_44_min	RMS voltage, between phase B and N, interharmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_45_min	RMS voltage, between phase B and N, interharmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_46_min	RMS voltage, between phase B and N, interharmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_47_min	RMS voltage, between phase B and N, interharmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_48_min	RMS voltage, between phase B and N, interharmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_49_min	RMS voltage, between phase B and N, interharmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_BN_iharm_50_min	RMS voltage, between phase B and N, interharmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_0_min	RMS voltage, between phase C and N, interharmonic component #0, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_1_min	RMS voltage, between phase C and N, interharmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_2_min	RMS voltage, between phase C and N, interharmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_3_min	RMS voltage, between phase C and N, interharmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_4_min	RMS voltage, between phase C and N, interharmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_5_min	RMS voltage, between phase C and N, interharmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_6_min	RMS voltage, between phase C and N, interharmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_7_min	RMS voltage, between phase C and N, interharmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_8_min	RMS voltage, between phase C and N, interharmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_9_min	RMS voltage, between phase C and N, interharmonic component #9, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CN_iharm_10_min	RMS voltage, between phase C and N, interharmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_11_min	RMS voltage, between phase C and N, interharmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_12_min	RMS voltage, between phase C and N, interharmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_13_min	RMS voltage, between phase C and N, interharmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_14_min	RMS voltage, between phase C and N, interharmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_15_min	RMS voltage, between phase C and N, interharmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_16_min	RMS voltage, between phase C and N, interharmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_17_min	RMS voltage, between phase C and N, interharmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_18_min	RMS voltage, between phase C and N, interharmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_19_min	RMS voltage, between phase C and N, interharmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_20_min	RMS voltage, between phase C and N, interharmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_21_min	RMS voltage, between phase C and N, interharmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_22_min	RMS voltage, between phase C and N, interharmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_23_min	RMS voltage, between phase C and N, interharmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_24_min	RMS voltage, between phase C and N, interharmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_25_min	RMS voltage, between phase C and N, interharmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_26_min	RMS voltage, between phase C and N, interharmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_27_min	RMS voltage, between phase C and N, interharmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_28_min	RMS voltage, between phase C and N, interharmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_29_min	RMS voltage, between phase C and N, interharmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_30_min	RMS voltage, between phase C and N, interharmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_31_min	RMS voltage, between phase C and N, interharmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_32_min	RMS voltage, between phase C and N, interharmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_33_min	RMS voltage, between phase C and N, interharmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_34_min	RMS voltage, between phase C and N, interharmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_35_min	RMS voltage, between phase C and N, interharmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_36_min	RMS voltage, between phase C and N, interharmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_37_min	RMS voltage, between phase C and N, interharmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_38_min	RMS voltage, between phase C and N, interharmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_39_min	RMS voltage, between phase C and N, interharmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_40_min	RMS voltage, between phase C and N, interharmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_41_min	RMS voltage, between phase C and N, interharmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_42_min	RMS voltage, between phase C and N, interharmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_43_min	RMS voltage, between phase C and N, interharmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_44_min	RMS voltage, between phase C and N, interharmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_45_min	RMS voltage, between phase C and N, interharmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_46_min	RMS voltage, between phase C and N, interharmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_47_min	RMS voltage, between phase C and N, interharmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_48_min	RMS voltage, between phase C and N, interharmonic component #48, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CN_iharm_49_min	RMS voltage, between phase C and N, interharmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_CN_iharm_50_min	RMS voltage, between phase C and N, interharmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_0_min	RMS voltage, between phase A and B, interharmonic component #0, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_1_min	RMS voltage, between phase A and B, interharmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_2_min	RMS voltage, between phase A and B, interharmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_3_min	RMS voltage, between phase A and B, interharmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_4_min	RMS voltage, between phase A and B, interharmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_5_min	RMS voltage, between phase A and B, interharmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_6_min	RMS voltage, between phase A and B, interharmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_7_min	RMS voltage, between phase A and B, interharmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_8_min	RMS voltage, between phase A and B, interharmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_9_min	RMS voltage, between phase A and B, interharmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_10_min	RMS voltage, between phase A and B, interharmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_11_min	RMS voltage, between phase A and B, interharmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_12_min	RMS voltage, between phase A and B, interharmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_13_min	RMS voltage, between phase A and B, interharmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_14_min	RMS voltage, between phase A and B, interharmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_15_min	RMS voltage, between phase A and B, interharmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_16_min	RMS voltage, between phase A and B, interharmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_17_min	RMS voltage, between phase A and B, interharmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_18_min	RMS voltage, between phase A and B, interharmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_19_min	RMS voltage, between phase A and B, interharmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_20_min	RMS voltage, between phase A and B, interharmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_21_min	RMS voltage, between phase A and B, interharmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_22_min	RMS voltage, between phase A and B, interharmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_23_min	RMS voltage, between phase A and B, interharmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_24_min	RMS voltage, between phase A and B, interharmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_25_min	RMS voltage, between phase A and B, interharmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_26_min	RMS voltage, between phase A and B, interharmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_27_min	RMS voltage, between phase A and B, interharmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_28_min	RMS voltage, between phase A and B, interharmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_29_min	RMS voltage, between phase A and B, interharmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_30_min	RMS voltage, between phase A and B, interharmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_31_min	RMS voltage, between phase A and B, interharmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_32_min	RMS voltage, between phase A and B, interharmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_33_min	RMS voltage, between phase A and B, interharmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_34_min	RMS voltage, between phase A and B, interharmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_35_min	RMS voltage, between phase A and B, interharmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_36_min	RMS voltage, between phase A and B, interharmonic component #36, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AB_iharm_37_min	RMS voltage, between phase A and B, interharmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_38_min	RMS voltage, between phase A and B, interharmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_39_min	RMS voltage, between phase A and B, interharmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_40_min	RMS voltage, between phase A and B, interharmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_41_min	RMS voltage, between phase A and B, interharmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_42_min	RMS voltage, between phase A and B, interharmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_43_min	RMS voltage, between phase A and B, interharmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_44_min	RMS voltage, between phase A and B, interharmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_45_min	RMS voltage, between phase A and B, interharmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_46_min	RMS voltage, between phase A and B, interharmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_47_min	RMS voltage, between phase A and B, interharmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_48_min	RMS voltage, between phase A and B, interharmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_49_min	RMS voltage, between phase A and B, interharmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_AB_iharm_50_min	RMS voltage, between phase A and B, interharmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_0_min	RMS voltage, between phase B and C, interharmonic component #0, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_1_min	RMS voltage, between phase B and C, interharmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_2_min	RMS voltage, between phase B and C, interharmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_3_min	RMS voltage, between phase B and C, interharmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_4_min	RMS voltage, between phase B and C, interharmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_5_min	RMS voltage, between phase B and C, interharmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_6_min	RMS voltage, between phase B and C, interharmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_7_min	RMS voltage, between phase B and C, interharmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_8_min	RMS voltage, between phase B and C, interharmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_9_min	RMS voltage, between phase B and C, interharmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_10_min	RMS voltage, between phase B and C, interharmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_11_min	RMS voltage, between phase B and C, interharmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_12_min	RMS voltage, between phase B and C, interharmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_13_min	RMS voltage, between phase B and C, interharmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_14_min	RMS voltage, between phase B and C, interharmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_15_min	RMS voltage, between phase B and C, interharmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_16_min	RMS voltage, between phase B and C, interharmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_17_min	RMS voltage, between phase B and C, interharmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_18_min	RMS voltage, between phase B and C, interharmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_19_min	RMS voltage, between phase B and C, interharmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_20_min	RMS voltage, between phase B and C, interharmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_21_min	RMS voltage, between phase B and C, interharmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_22_min	RMS voltage, between phase B and C, interharmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_23_min	RMS voltage, between phase B and C, interharmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_24_min	RMS voltage, between phase B and C, interharmonic component #24, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BC_iharm_25_min	RMS voltage, between phase B and C, interharmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_26_min	RMS voltage, between phase B and C, interharmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_27_min	RMS voltage, between phase B and C, interharmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_28_min	RMS voltage, between phase B and C, interharmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_29_min	RMS voltage, between phase B and C, interharmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_30_min	RMS voltage, between phase B and C, interharmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_31_min	RMS voltage, between phase B and C, interharmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_32_min	RMS voltage, between phase B and C, interharmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_33_min	RMS voltage, between phase B and C, interharmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_34_min	RMS voltage, between phase B and C, interharmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_35_min	RMS voltage, between phase B and C, interharmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_36_min	RMS voltage, between phase B and C, interharmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_37_min	RMS voltage, between phase B and C, interharmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_38_min	RMS voltage, between phase B and C, interharmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_39_min	RMS voltage, between phase B and C, interharmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_40_min	RMS voltage, between phase B and C, interharmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_41_min	RMS voltage, between phase B and C, interharmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_42_min	RMS voltage, between phase B and C, interharmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_43_min	RMS voltage, between phase B and C, interharmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_44_min	RMS voltage, between phase B and C, interharmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_45_min	RMS voltage, between phase B and C, interharmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_46_min	RMS voltage, between phase B and C, interharmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_47_min	RMS voltage, between phase B and C, interharmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_48_min	RMS voltage, between phase B and C, interharmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_49_min	RMS voltage, between phase B and C, interharmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_BC_iharm_50_min	RMS voltage, between phase B and C, interharmonic component #50, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_0_min	RMS voltage, between phase C and A, interharmonic component #0, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_1_min	RMS voltage, between phase C and A, interharmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_2_min	RMS voltage, between phase C and A, interharmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_3_min	RMS voltage, between phase C and A, interharmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_4_min	RMS voltage, between phase C and A, interharmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_5_min	RMS voltage, between phase C and A, interharmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_6_min	RMS voltage, between phase C and A, interharmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_7_min	RMS voltage, between phase C and A, interharmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_8_min	RMS voltage, between phase C and A, interharmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_9_min	RMS voltage, between phase C and A, interharmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_10_min	RMS voltage, between phase C and A, interharmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_11_min	RMS voltage, between phase C and A, interharmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_12_min	RMS voltage, between phase C and A, interharmonic component #12, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CA_iharm_13_min	RMS voltage, between phase C and A, interharmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_14_min	RMS voltage, between phase C and A, interharmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_15_min	RMS voltage, between phase C and A, interharmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_16_min	RMS voltage, between phase C and A, interharmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_17_min	RMS voltage, between phase C and A, interharmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_18_min	RMS voltage, between phase C and A, interharmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_19_min	RMS voltage, between phase C and A, interharmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_20_min	RMS voltage, between phase C and A, interharmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_21_min	RMS voltage, between phase C and A, interharmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_22_min	RMS voltage, between phase C and A, interharmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_23_min	RMS voltage, between phase C and A, interharmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_24_min	RMS voltage, between phase C and A, interharmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_25_min	RMS voltage, between phase C and A, interharmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_26_min	RMS voltage, between phase C and A, interharmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_27_min	RMS voltage, between phase C and A, interharmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_28_min	RMS voltage, between phase C and A, interharmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_29_min	RMS voltage, between phase C and A, interharmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_30_min	RMS voltage, between phase C and A, interharmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_31_min	RMS voltage, between phase C and A, interharmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_32_min	RMS voltage, between phase C and A, interharmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_33_min	RMS voltage, between phase C and A, interharmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_34_min	RMS voltage, between phase C and A, interharmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_35_min	RMS voltage, between phase C and A, interharmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_36_min	RMS voltage, between phase C and A, interharmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_37_min	RMS voltage, between phase C and A, interharmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_38_min	RMS voltage, between phase C and A, interharmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_39_min	RMS voltage, between phase C and A, interharmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_40_min	RMS voltage, between phase C and A, interharmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_41_min	RMS voltage, between phase C and A, interharmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_42_min	RMS voltage, between phase C and A, interharmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_43_min	RMS voltage, between phase C and A, interharmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_44_min	RMS voltage, between phase C and A, interharmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_45_min	RMS voltage, between phase C and A, interharmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_46_min	RMS voltage, between phase C and A, interharmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_47_min	RMS voltage, between phase C and A, interharmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_48_min	RMS voltage, between phase C and A, interharmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_49_min	RMS voltage, between phase C and A, interharmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_CA_iharm_50_min	RMS voltage, between phase C and A, interharmonic component #50, minimum of 10/12-cycle intervals	V	600		
a_AN_iharm_0_min	RMS current, between phase A and N, interharmonic component #0, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_AN_iharm_1_min	RMS current, between phase A and N, interharmonic component #1, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_2_min	RMS current, between phase A and N, interharmonic component #2, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_3_min	RMS current, between phase A and N, interharmonic component #3, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_4_min	RMS current, between phase A and N, interharmonic component #4, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_5_min	RMS current, between phase A and N, interharmonic component #5, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_6_min	RMS current, between phase A and N, interharmonic component #6, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_7_min	RMS current, between phase A and N, interharmonic component #7, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_8_min	RMS current, between phase A and N, interharmonic component #8, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_9_min	RMS current, between phase A and N, interharmonic component #9, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_10_min	RMS current, between phase A and N, interharmonic component #10, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_11_min	RMS current, between phase A and N, interharmonic component #11, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_12_min	RMS current, between phase A and N, interharmonic component #12, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_13_min	RMS current, between phase A and N, interharmonic component #13, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_14_min	RMS current, between phase A and N, interharmonic component #14, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_15_min	RMS current, between phase A and N, interharmonic component #15, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_16_min	RMS current, between phase A and N, interharmonic component #16, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_17_min	RMS current, between phase A and N, interharmonic component #17, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_18_min	RMS current, between phase A and N, interharmonic component #18, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_19_min	RMS current, between phase A and N, interharmonic component #19, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_20_min	RMS current, between phase A and N, interharmonic component #20, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_21_min	RMS current, between phase A and N, interharmonic component #21, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_22_min	RMS current, between phase A and N, interharmonic component #22, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_23_min	RMS current, between phase A and N, interharmonic component #23, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_24_min	RMS current, between phase A and N, interharmonic component #24, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_25_min	RMS current, between phase A and N, interharmonic component #25, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_26_min	RMS current, between phase A and N, interharmonic component #26, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_27_min	RMS current, between phase A and N, interharmonic component #27, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_28_min	RMS current, between phase A and N, interharmonic component #28, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_29_min	RMS current, between phase A and N, interharmonic component #29, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_30_min	RMS current, between phase A and N, interharmonic component #30, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_31_min	RMS current, between phase A and N, interharmonic component #31, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_32_min	RMS current, between phase A and N, interharmonic component #32, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_33_min	RMS current, between phase A and N, interharmonic component #33, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_34_min	RMS current, between phase A and N, interharmonic component #34, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_35_min	RMS current, between phase A and N, interharmonic component #35, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_36_min	RMS current, between phase A and N, interharmonic component #36, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_37_min	RMS current, between phase A and N, interharmonic component #37, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_38_min	RMS current, between phase A and N, interharmonic component #38, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_39_min	RMS current, between phase A and N, interharmonic component #39, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_AN_iharm_40_min	RMS current, between phase A and N, interharmonic component #40, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_41_min	RMS current, between phase A and N, interharmonic component #41, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_42_min	RMS current, between phase A and N, interharmonic component #42, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_43_min	RMS current, between phase A and N, interharmonic component #43, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_44_min	RMS current, between phase A and N, interharmonic component #44, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_45_min	RMS current, between phase A and N, interharmonic component #45, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_46_min	RMS current, between phase A and N, interharmonic component #46, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_47_min	RMS current, between phase A and N, interharmonic component #47, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_48_min	RMS current, between phase A and N, interharmonic component #48, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_49_min	RMS current, between phase A and N, interharmonic component #49, minimum of 10/12-cycle intervals	A	600		
a_AN_iharm_50_min	RMS current, between phase A and N, interharmonic component #50, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_0_min	RMS current, between phase B and N, interharmonic component #0, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_1_min	RMS current, between phase B and N, interharmonic component #1, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_2_min	RMS current, between phase B and N, interharmonic component #2, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_3_min	RMS current, between phase B and N, interharmonic component #3, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_4_min	RMS current, between phase B and N, interharmonic component #4, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_5_min	RMS current, between phase B and N, interharmonic component #5, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_6_min	RMS current, between phase B and N, interharmonic component #6, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_7_min	RMS current, between phase B and N, interharmonic component #7, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_8_min	RMS current, between phase B and N, interharmonic component #8, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_9_min	RMS current, between phase B and N, interharmonic component #9, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_10_min	RMS current, between phase B and N, interharmonic component #10, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_11_min	RMS current, between phase B and N, interharmonic component #11, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_12_min	RMS current, between phase B and N, interharmonic component #12, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_13_min	RMS current, between phase B and N, interharmonic component #13, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_14_min	RMS current, between phase B and N, interharmonic component #14, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_15_min	RMS current, between phase B and N, interharmonic component #15, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_16_min	RMS current, between phase B and N, interharmonic component #16, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_17_min	RMS current, between phase B and N, interharmonic component #17, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_18_min	RMS current, between phase B and N, interharmonic component #18, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_19_min	RMS current, between phase B and N, interharmonic component #19, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_20_min	RMS current, between phase B and N, interharmonic component #20, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_21_min	RMS current, between phase B and N, interharmonic component #21, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_22_min	RMS current, between phase B and N, interharmonic component #22, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_23_min	RMS current, between phase B and N, interharmonic component #23, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_24_min	RMS current, between phase B and N, interharmonic component #24, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_25_min	RMS current, between phase B and N, interharmonic component #25, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_26_min	RMS current, between phase B and N, interharmonic component #26, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_27_min	RMS current, between phase B and N, interharmonic component #27, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_BN_iharm_28_min	RMS current, between phase B and N, interharmonic component #28, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_29_min	RMS current, between phase B and N, interharmonic component #29, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_30_min	RMS current, between phase B and N, interharmonic component #30, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_31_min	RMS current, between phase B and N, interharmonic component #31, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_32_min	RMS current, between phase B and N, interharmonic component #32, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_33_min	RMS current, between phase B and N, interharmonic component #33, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_34_min	RMS current, between phase B and N, interharmonic component #34, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_35_min	RMS current, between phase B and N, interharmonic component #35, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_36_min	RMS current, between phase B and N, interharmonic component #36, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_37_min	RMS current, between phase B and N, interharmonic component #37, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_38_min	RMS current, between phase B and N, interharmonic component #38, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_39_min	RMS current, between phase B and N, interharmonic component #39, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_40_min	RMS current, between phase B and N, interharmonic component #40, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_41_min	RMS current, between phase B and N, interharmonic component #41, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_42_min	RMS current, between phase B and N, interharmonic component #42, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_43_min	RMS current, between phase B and N, interharmonic component #43, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_44_min	RMS current, between phase B and N, interharmonic component #44, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_45_min	RMS current, between phase B and N, interharmonic component #45, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_46_min	RMS current, between phase B and N, interharmonic component #46, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_47_min	RMS current, between phase B and N, interharmonic component #47, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_48_min	RMS current, between phase B and N, interharmonic component #48, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_49_min	RMS current, between phase B and N, interharmonic component #49, minimum of 10/12-cycle intervals	A	600		
a_BN_iharm_50_min	RMS current, between phase B and N, interharmonic component #50, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_0_min	RMS current, between phase C and N, interharmonic component #0, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_1_min	RMS current, between phase C and N, interharmonic component #1, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_2_min	RMS current, between phase C and N, interharmonic component #2, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_3_min	RMS current, between phase C and N, interharmonic component #3, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_4_min	RMS current, between phase C and N, interharmonic component #4, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_5_min	RMS current, between phase C and N, interharmonic component #5, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_6_min	RMS current, between phase C and N, interharmonic component #6, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_7_min	RMS current, between phase C and N, interharmonic component #7, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_8_min	RMS current, between phase C and N, interharmonic component #8, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_9_min	RMS current, between phase C and N, interharmonic component #9, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_10_min	RMS current, between phase C and N, interharmonic component #10, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_11_min	RMS current, between phase C and N, interharmonic component #11, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_12_min	RMS current, between phase C and N, interharmonic component #12, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_13_min	RMS current, between phase C and N, interharmonic component #13, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_14_min	RMS current, between phase C and N, interharmonic component #14, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_15_min	RMS current, between phase C and N, interharmonic component #15, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_CN_iharm_16_min	RMS current, between phase C and N, interharmonic component #16, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_17_min	RMS current, between phase C and N, interharmonic component #17, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_18_min	RMS current, between phase C and N, interharmonic component #18, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_19_min	RMS current, between phase C and N, interharmonic component #19, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_20_min	RMS current, between phase C and N, interharmonic component #20, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_21_min	RMS current, between phase C and N, interharmonic component #21, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_22_min	RMS current, between phase C and N, interharmonic component #22, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_23_min	RMS current, between phase C and N, interharmonic component #23, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_24_min	RMS current, between phase C and N, interharmonic component #24, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_25_min	RMS current, between phase C and N, interharmonic component #25, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_26_min	RMS current, between phase C and N, interharmonic component #26, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_27_min	RMS current, between phase C and N, interharmonic component #27, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_28_min	RMS current, between phase C and N, interharmonic component #28, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_29_min	RMS current, between phase C and N, interharmonic component #29, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_30_min	RMS current, between phase C and N, interharmonic component #30, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_31_min	RMS current, between phase C and N, interharmonic component #31, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_32_min	RMS current, between phase C and N, interharmonic component #32, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_33_min	RMS current, between phase C and N, interharmonic component #33, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_34_min	RMS current, between phase C and N, interharmonic component #34, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_35_min	RMS current, between phase C and N, interharmonic component #35, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_36_min	RMS current, between phase C and N, interharmonic component #36, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_37_min	RMS current, between phase C and N, interharmonic component #37, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_38_min	RMS current, between phase C and N, interharmonic component #38, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_39_min	RMS current, between phase C and N, interharmonic component #39, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_40_min	RMS current, between phase C and N, interharmonic component #40, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_41_min	RMS current, between phase C and N, interharmonic component #41, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_42_min	RMS current, between phase C and N, interharmonic component #42, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_43_min	RMS current, between phase C and N, interharmonic component #43, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_44_min	RMS current, between phase C and N, interharmonic component #44, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_45_min	RMS current, between phase C and N, interharmonic component #45, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_46_min	RMS current, between phase C and N, interharmonic component #46, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_47_min	RMS current, between phase C and N, interharmonic component #47, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_48_min	RMS current, between phase C and N, interharmonic component #48, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_49_min	RMS current, between phase C and N, interharmonic component #49, minimum of 10/12-cycle intervals	A	600		
a_CN_iharm_50_min	RMS current, between phase C and N, interharmonic component #50, minimum of 10/12-cycle intervals	A	600		
v_AN_iharm_0_avg	RMS voltage, between phase A and N, interharmonic component #0, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_1_avg	RMS voltage, between phase A and N, interharmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_2_avg	RMS voltage, between phase A and N, interharmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_3_avg	RMS voltage, between phase A and N, interharmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AN_iharm_4_avg	RMS voltage, between phase A and N, interharmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_5_avg	RMS voltage, between phase A and N, interharmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_6_avg	RMS voltage, between phase A and N, interharmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_7_avg	RMS voltage, between phase A and N, interharmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_8_avg	RMS voltage, between phase A and N, interharmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_9_avg	RMS voltage, between phase A and N, interharmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_10_avg	RMS voltage, between phase A and N, interharmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_11_avg	RMS voltage, between phase A and N, interharmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_12_avg	RMS voltage, between phase A and N, interharmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_13_avg	RMS voltage, between phase A and N, interharmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_14_avg	RMS voltage, between phase A and N, interharmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_15_avg	RMS voltage, between phase A and N, interharmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_16_avg	RMS voltage, between phase A and N, interharmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_17_avg	RMS voltage, between phase A and N, interharmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_18_avg	RMS voltage, between phase A and N, interharmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_19_avg	RMS voltage, between phase A and N, interharmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_20_avg	RMS voltage, between phase A and N, interharmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_21_avg	RMS voltage, between phase A and N, interharmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_22_avg	RMS voltage, between phase A and N, interharmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_23_avg	RMS voltage, between phase A and N, interharmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_24_avg	RMS voltage, between phase A and N, interharmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_25_avg	RMS voltage, between phase A and N, interharmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_26_avg	RMS voltage, between phase A and N, interharmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_27_avg	RMS voltage, between phase A and N, interharmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_28_avg	RMS voltage, between phase A and N, interharmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_29_avg	RMS voltage, between phase A and N, interharmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_30_avg	RMS voltage, between phase A and N, interharmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_31_avg	RMS voltage, between phase A and N, interharmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_32_avg	RMS voltage, between phase A and N, interharmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_33_avg	RMS voltage, between phase A and N, interharmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_34_avg	RMS voltage, between phase A and N, interharmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_35_avg	RMS voltage, between phase A and N, interharmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_36_avg	RMS voltage, between phase A and N, interharmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_37_avg	RMS voltage, between phase A and N, interharmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_38_avg	RMS voltage, between phase A and N, interharmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_39_avg	RMS voltage, between phase A and N, interharmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_40_avg	RMS voltage, between phase A and N, interharmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_41_avg	RMS voltage, between phase A and N, interharmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_42_avg	RMS voltage, between phase A and N, interharmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AN_iharm_43_avg	RMS voltage, between phase A and N, interharmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_44_avg	RMS voltage, between phase A and N, interharmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_45_avg	RMS voltage, between phase A and N, interharmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_46_avg	RMS voltage, between phase A and N, interharmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_47_avg	RMS voltage, between phase A and N, interharmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_48_avg	RMS voltage, between phase A and N, interharmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_49_avg	RMS voltage, between phase A and N, interharmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_AN_iharm_50_avg	RMS voltage, between phase A and N, interharmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_0_avg	RMS voltage, between phase B and N, interharmonic component #0, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_1_avg	RMS voltage, between phase B and N, interharmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_2_avg	RMS voltage, between phase B and N, interharmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_3_avg	RMS voltage, between phase B and N, interharmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_4_avg	RMS voltage, between phase B and N, interharmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_5_avg	RMS voltage, between phase B and N, interharmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_6_avg	RMS voltage, between phase B and N, interharmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_7_avg	RMS voltage, between phase B and N, interharmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_8_avg	RMS voltage, between phase B and N, interharmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_9_avg	RMS voltage, between phase B and N, interharmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_10_avg	RMS voltage, between phase B and N, interharmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_11_avg	RMS voltage, between phase B and N, interharmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_12_avg	RMS voltage, between phase B and N, interharmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_13_avg	RMS voltage, between phase B and N, interharmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_14_avg	RMS voltage, between phase B and N, interharmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_15_avg	RMS voltage, between phase B and N, interharmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_16_avg	RMS voltage, between phase B and N, interharmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_17_avg	RMS voltage, between phase B and N, interharmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_18_avg	RMS voltage, between phase B and N, interharmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_19_avg	RMS voltage, between phase B and N, interharmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_20_avg	RMS voltage, between phase B and N, interharmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_21_avg	RMS voltage, between phase B and N, interharmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_22_avg	RMS voltage, between phase B and N, interharmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_23_avg	RMS voltage, between phase B and N, interharmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_24_avg	RMS voltage, between phase B and N, interharmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_25_avg	RMS voltage, between phase B and N, interharmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_26_avg	RMS voltage, between phase B and N, interharmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_27_avg	RMS voltage, between phase B and N, interharmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_28_avg	RMS voltage, between phase B and N, interharmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_29_avg	RMS voltage, between phase B and N, interharmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_30_avg	RMS voltage, between phase B and N, interharmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_iharm_31_avg	RMS voltage, between phase B and N, interharmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_32_avg	RMS voltage, between phase B and N, interharmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_33_avg	RMS voltage, between phase B and N, interharmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_34_avg	RMS voltage, between phase B and N, interharmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_35_avg	RMS voltage, between phase B and N, interharmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_36_avg	RMS voltage, between phase B and N, interharmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_37_avg	RMS voltage, between phase B and N, interharmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_38_avg	RMS voltage, between phase B and N, interharmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_39_avg	RMS voltage, between phase B and N, interharmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_40_avg	RMS voltage, between phase B and N, interharmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_41_avg	RMS voltage, between phase B and N, interharmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_42_avg	RMS voltage, between phase B and N, interharmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_43_avg	RMS voltage, between phase B and N, interharmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_44_avg	RMS voltage, between phase B and N, interharmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_45_avg	RMS voltage, between phase B and N, interharmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_46_avg	RMS voltage, between phase B and N, interharmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_47_avg	RMS voltage, between phase B and N, interharmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_48_avg	RMS voltage, between phase B and N, interharmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_49_avg	RMS voltage, between phase B and N, interharmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_BN_iharm_50_avg	RMS voltage, between phase B and N, interharmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_0_avg	RMS voltage, between phase C and N, interharmonic component #0, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_1_avg	RMS voltage, between phase C and N, interharmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_2_avg	RMS voltage, between phase C and N, interharmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_3_avg	RMS voltage, between phase C and N, interharmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_4_avg	RMS voltage, between phase C and N, interharmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_5_avg	RMS voltage, between phase C and N, interharmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_6_avg	RMS voltage, between phase C and N, interharmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_7_avg	RMS voltage, between phase C and N, interharmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_8_avg	RMS voltage, between phase C and N, interharmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_9_avg	RMS voltage, between phase C and N, interharmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_10_avg	RMS voltage, between phase C and N, interharmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_11_avg	RMS voltage, between phase C and N, interharmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_12_avg	RMS voltage, between phase C and N, interharmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_13_avg	RMS voltage, between phase C and N, interharmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_14_avg	RMS voltage, between phase C and N, interharmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_15_avg	RMS voltage, between phase C and N, interharmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_16_avg	RMS voltage, between phase C and N, interharmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_17_avg	RMS voltage, between phase C and N, interharmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_18_avg	RMS voltage, between phase C and N, interharmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CN_iharm_19_avg	RMS voltage, between phase C and N, interharmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_20_avg	RMS voltage, between phase C and N, interharmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_21_avg	RMS voltage, between phase C and N, interharmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_22_avg	RMS voltage, between phase C and N, interharmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_23_avg	RMS voltage, between phase C and N, interharmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_24_avg	RMS voltage, between phase C and N, interharmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_25_avg	RMS voltage, between phase C and N, interharmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_26_avg	RMS voltage, between phase C and N, interharmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_27_avg	RMS voltage, between phase C and N, interharmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_28_avg	RMS voltage, between phase C and N, interharmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_29_avg	RMS voltage, between phase C and N, interharmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_30_avg	RMS voltage, between phase C and N, interharmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_31_avg	RMS voltage, between phase C and N, interharmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_32_avg	RMS voltage, between phase C and N, interharmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_33_avg	RMS voltage, between phase C and N, interharmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_34_avg	RMS voltage, between phase C and N, interharmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_35_avg	RMS voltage, between phase C and N, interharmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_36_avg	RMS voltage, between phase C and N, interharmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_37_avg	RMS voltage, between phase C and N, interharmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_38_avg	RMS voltage, between phase C and N, interharmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_39_avg	RMS voltage, between phase C and N, interharmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_40_avg	RMS voltage, between phase C and N, interharmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_41_avg	RMS voltage, between phase C and N, interharmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_42_avg	RMS voltage, between phase C and N, interharmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_43_avg	RMS voltage, between phase C and N, interharmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_44_avg	RMS voltage, between phase C and N, interharmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_45_avg	RMS voltage, between phase C and N, interharmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_46_avg	RMS voltage, between phase C and N, interharmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_47_avg	RMS voltage, between phase C and N, interharmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_48_avg	RMS voltage, between phase C and N, interharmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_49_avg	RMS voltage, between phase C and N, interharmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_CN_iharm_50_avg	RMS voltage, between phase C and N, interharmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_0_avg	RMS voltage, between phase A and B, interharmonic component #0, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_1_avg	RMS voltage, between phase A and B, interharmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_2_avg	RMS voltage, between phase A and B, interharmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_3_avg	RMS voltage, between phase A and B, interharmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_4_avg	RMS voltage, between phase A and B, interharmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_5_avg	RMS voltage, between phase A and B, interharmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_6_avg	RMS voltage, between phase A and B, interharmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AB_iharm_7_avg	RMS voltage, between phase A and B, interharmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_8_avg	RMS voltage, between phase A and B, interharmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_9_avg	RMS voltage, between phase A and B, interharmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_10_avg	RMS voltage, between phase A and B, interharmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_11_avg	RMS voltage, between phase A and B, interharmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_12_avg	RMS voltage, between phase A and B, interharmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_13_avg	RMS voltage, between phase A and B, interharmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_14_avg	RMS voltage, between phase A and B, interharmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_15_avg	RMS voltage, between phase A and B, interharmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_16_avg	RMS voltage, between phase A and B, interharmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_17_avg	RMS voltage, between phase A and B, interharmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_18_avg	RMS voltage, between phase A and B, interharmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_19_avg	RMS voltage, between phase A and B, interharmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_20_avg	RMS voltage, between phase A and B, interharmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_21_avg	RMS voltage, between phase A and B, interharmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_22_avg	RMS voltage, between phase A and B, interharmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_23_avg	RMS voltage, between phase A and B, interharmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_24_avg	RMS voltage, between phase A and B, interharmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_25_avg	RMS voltage, between phase A and B, interharmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_26_avg	RMS voltage, between phase A and B, interharmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_27_avg	RMS voltage, between phase A and B, interharmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_28_avg	RMS voltage, between phase A and B, interharmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_29_avg	RMS voltage, between phase A and B, interharmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_30_avg	RMS voltage, between phase A and B, interharmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_31_avg	RMS voltage, between phase A and B, interharmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_32_avg	RMS voltage, between phase A and B, interharmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_33_avg	RMS voltage, between phase A and B, interharmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_34_avg	RMS voltage, between phase A and B, interharmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_35_avg	RMS voltage, between phase A and B, interharmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_36_avg	RMS voltage, between phase A and B, interharmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_37_avg	RMS voltage, between phase A and B, interharmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_38_avg	RMS voltage, between phase A and B, interharmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_39_avg	RMS voltage, between phase A and B, interharmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_40_avg	RMS voltage, between phase A and B, interharmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_41_avg	RMS voltage, between phase A and B, interharmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_42_avg	RMS voltage, between phase A and B, interharmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_43_avg	RMS voltage, between phase A and B, interharmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_44_avg	RMS voltage, between phase A and B, interharmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_45_avg	RMS voltage, between phase A and B, interharmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AB_iharm_46_avg	RMS voltage, between phase A and B, interharmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_47_avg	RMS voltage, between phase A and B, interharmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_48_avg	RMS voltage, between phase A and B, interharmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_49_avg	RMS voltage, between phase A and B, interharmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_AB_iharm_50_avg	RMS voltage, between phase A and B, interharmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_0_avg	RMS voltage, between phase B and C, interharmonic component #0, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_1_avg	RMS voltage, between phase B and C, interharmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_2_avg	RMS voltage, between phase B and C, interharmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_3_avg	RMS voltage, between phase B and C, interharmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_4_avg	RMS voltage, between phase B and C, interharmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_5_avg	RMS voltage, between phase B and C, interharmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_6_avg	RMS voltage, between phase B and C, interharmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_7_avg	RMS voltage, between phase B and C, interharmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_8_avg	RMS voltage, between phase B and C, interharmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_9_avg	RMS voltage, between phase B and C, interharmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_10_avg	RMS voltage, between phase B and C, interharmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_11_avg	RMS voltage, between phase B and C, interharmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_12_avg	RMS voltage, between phase B and C, interharmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_13_avg	RMS voltage, between phase B and C, interharmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_14_avg	RMS voltage, between phase B and C, interharmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_15_avg	RMS voltage, between phase B and C, interharmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_16_avg	RMS voltage, between phase B and C, interharmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_17_avg	RMS voltage, between phase B and C, interharmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_18_avg	RMS voltage, between phase B and C, interharmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_19_avg	RMS voltage, between phase B and C, interharmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_20_avg	RMS voltage, between phase B and C, interharmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_21_avg	RMS voltage, between phase B and C, interharmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_22_avg	RMS voltage, between phase B and C, interharmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_23_avg	RMS voltage, between phase B and C, interharmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_24_avg	RMS voltage, between phase B and C, interharmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_25_avg	RMS voltage, between phase B and C, interharmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_26_avg	RMS voltage, between phase B and C, interharmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_27_avg	RMS voltage, between phase B and C, interharmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_28_avg	RMS voltage, between phase B and C, interharmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_29_avg	RMS voltage, between phase B and C, interharmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_30_avg	RMS voltage, between phase B and C, interharmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_31_avg	RMS voltage, between phase B and C, interharmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_32_avg	RMS voltage, between phase B and C, interharmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_33_avg	RMS voltage, between phase B and C, interharmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BC_iharm_34_avg	RMS voltage, between phase B and C, interharmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_35_avg	RMS voltage, between phase B and C, interharmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_36_avg	RMS voltage, between phase B and C, interharmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_37_avg	RMS voltage, between phase B and C, interharmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_38_avg	RMS voltage, between phase B and C, interharmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_39_avg	RMS voltage, between phase B and C, interharmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_40_avg	RMS voltage, between phase B and C, interharmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_41_avg	RMS voltage, between phase B and C, interharmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_42_avg	RMS voltage, between phase B and C, interharmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_43_avg	RMS voltage, between phase B and C, interharmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_44_avg	RMS voltage, between phase B and C, interharmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_45_avg	RMS voltage, between phase B and C, interharmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_46_avg	RMS voltage, between phase B and C, interharmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_47_avg	RMS voltage, between phase B and C, interharmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_48_avg	RMS voltage, between phase B and C, interharmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_49_avg	RMS voltage, between phase B and C, interharmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_BC_iharm_50_avg	RMS voltage, between phase B and C, interharmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_0_avg	RMS voltage, between phase C and A, interharmonic component #0, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_1_avg	RMS voltage, between phase C and A, interharmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_2_avg	RMS voltage, between phase C and A, interharmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_3_avg	RMS voltage, between phase C and A, interharmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_4_avg	RMS voltage, between phase C and A, interharmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_5_avg	RMS voltage, between phase C and A, interharmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_6_avg	RMS voltage, between phase C and A, interharmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_7_avg	RMS voltage, between phase C and A, interharmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_8_avg	RMS voltage, between phase C and A, interharmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_9_avg	RMS voltage, between phase C and A, interharmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_10_avg	RMS voltage, between phase C and A, interharmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_11_avg	RMS voltage, between phase C and A, interharmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_12_avg	RMS voltage, between phase C and A, interharmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_13_avg	RMS voltage, between phase C and A, interharmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_14_avg	RMS voltage, between phase C and A, interharmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_15_avg	RMS voltage, between phase C and A, interharmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_16_avg	RMS voltage, between phase C and A, interharmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_17_avg	RMS voltage, between phase C and A, interharmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_18_avg	RMS voltage, between phase C and A, interharmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_19_avg	RMS voltage, between phase C and A, interharmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_20_avg	RMS voltage, between phase C and A, interharmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_21_avg	RMS voltage, between phase C and A, interharmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CA_iharm_22_avg	RMS voltage, between phase C and A, interharmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_23_avg	RMS voltage, between phase C and A, interharmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_24_avg	RMS voltage, between phase C and A, interharmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_25_avg	RMS voltage, between phase C and A, interharmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_26_avg	RMS voltage, between phase C and A, interharmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_27_avg	RMS voltage, between phase C and A, interharmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_28_avg	RMS voltage, between phase C and A, interharmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_29_avg	RMS voltage, between phase C and A, interharmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_30_avg	RMS voltage, between phase C and A, interharmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_31_avg	RMS voltage, between phase C and A, interharmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_32_avg	RMS voltage, between phase C and A, interharmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_33_avg	RMS voltage, between phase C and A, interharmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_34_avg	RMS voltage, between phase C and A, interharmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_35_avg	RMS voltage, between phase C and A, interharmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_36_avg	RMS voltage, between phase C and A, interharmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_37_avg	RMS voltage, between phase C and A, interharmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_38_avg	RMS voltage, between phase C and A, interharmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_39_avg	RMS voltage, between phase C and A, interharmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_40_avg	RMS voltage, between phase C and A, interharmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_41_avg	RMS voltage, between phase C and A, interharmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_42_avg	RMS voltage, between phase C and A, interharmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_43_avg	RMS voltage, between phase C and A, interharmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_44_avg	RMS voltage, between phase C and A, interharmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_45_avg	RMS voltage, between phase C and A, interharmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_46_avg	RMS voltage, between phase C and A, interharmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_47_avg	RMS voltage, between phase C and A, interharmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_48_avg	RMS voltage, between phase C and A, interharmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_49_avg	RMS voltage, between phase C and A, interharmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_CA_iharm_50_avg	RMS voltage, between phase C and A, interharmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
a_AN_iharm_0_avg	RMS current, between phase A and N, interharmonic component #0, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_1_avg	RMS current, between phase A and N, interharmonic component #1, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_2_avg	RMS current, between phase A and N, interharmonic component #2, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_3_avg	RMS current, between phase A and N, interharmonic component #3, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_4_avg	RMS current, between phase A and N, interharmonic component #4, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_5_avg	RMS current, between phase A and N, interharmonic component #5, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_6_avg	RMS current, between phase A and N, interharmonic component #6, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_7_avg	RMS current, between phase A and N, interharmonic component #7, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_8_avg	RMS current, between phase A and N, interharmonic component #8, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_9_avg	RMS current, between phase A and N, interharmonic component #9, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_AN_iharm_10_avg	RMS current, between phase A and N, interharmonic component #10, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_11_avg	RMS current, between phase A and N, interharmonic component #11, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_12_avg	RMS current, between phase A and N, interharmonic component #12, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_13_avg	RMS current, between phase A and N, interharmonic component #13, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_14_avg	RMS current, between phase A and N, interharmonic component #14, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_15_avg	RMS current, between phase A and N, interharmonic component #15, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_16_avg	RMS current, between phase A and N, interharmonic component #16, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_17_avg	RMS current, between phase A and N, interharmonic component #17, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_18_avg	RMS current, between phase A and N, interharmonic component #18, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_19_avg	RMS current, between phase A and N, interharmonic component #19, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_20_avg	RMS current, between phase A and N, interharmonic component #20, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_21_avg	RMS current, between phase A and N, interharmonic component #21, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_22_avg	RMS current, between phase A and N, interharmonic component #22, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_23_avg	RMS current, between phase A and N, interharmonic component #23, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_24_avg	RMS current, between phase A and N, interharmonic component #24, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_25_avg	RMS current, between phase A and N, interharmonic component #25, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_26_avg	RMS current, between phase A and N, interharmonic component #26, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_27_avg	RMS current, between phase A and N, interharmonic component #27, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_28_avg	RMS current, between phase A and N, interharmonic component #28, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_29_avg	RMS current, between phase A and N, interharmonic component #29, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_30_avg	RMS current, between phase A and N, interharmonic component #30, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_31_avg	RMS current, between phase A and N, interharmonic component #31, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_32_avg	RMS current, between phase A and N, interharmonic component #32, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_33_avg	RMS current, between phase A and N, interharmonic component #33, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_34_avg	RMS current, between phase A and N, interharmonic component #34, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_35_avg	RMS current, between phase A and N, interharmonic component #35, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_36_avg	RMS current, between phase A and N, interharmonic component #36, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_37_avg	RMS current, between phase A and N, interharmonic component #37, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_38_avg	RMS current, between phase A and N, interharmonic component #38, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_39_avg	RMS current, between phase A and N, interharmonic component #39, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_40_avg	RMS current, between phase A and N, interharmonic component #40, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_41_avg	RMS current, between phase A and N, interharmonic component #41, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_42_avg	RMS current, between phase A and N, interharmonic component #42, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_43_avg	RMS current, between phase A and N, interharmonic component #43, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_44_avg	RMS current, between phase A and N, interharmonic component #44, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_45_avg	RMS current, between phase A and N, interharmonic component #45, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_46_avg	RMS current, between phase A and N, interharmonic component #46, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_47_avg	RMS current, between phase A and N, interharmonic component #47, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_48_avg	RMS current, between phase A and N, interharmonic component #48, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_AN_iharm_49_avg	RMS current, between phase A and N, interharmonic component #49, average of 10/12-cycle intervals	A	600	YES	YES
a_AN_iharm_50_avg	RMS current, between phase A and N, interharmonic component #50, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_0_avg	RMS current, between phase B and N, interharmonic component #0, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_1_avg	RMS current, between phase B and N, interharmonic component #1, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_2_avg	RMS current, between phase B and N, interharmonic component #2, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_3_avg	RMS current, between phase B and N, interharmonic component #3, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_4_avg	RMS current, between phase B and N, interharmonic component #4, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_5_avg	RMS current, between phase B and N, interharmonic component #5, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_6_avg	RMS current, between phase B and N, interharmonic component #6, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_7_avg	RMS current, between phase B and N, interharmonic component #7, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_8_avg	RMS current, between phase B and N, interharmonic component #8, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_9_avg	RMS current, between phase B and N, interharmonic component #9, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_10_avg	RMS current, between phase B and N, interharmonic component #10, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_11_avg	RMS current, between phase B and N, interharmonic component #11, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_12_avg	RMS current, between phase B and N, interharmonic component #12, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_13_avg	RMS current, between phase B and N, interharmonic component #13, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_14_avg	RMS current, between phase B and N, interharmonic component #14, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_15_avg	RMS current, between phase B and N, interharmonic component #15, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_16_avg	RMS current, between phase B and N, interharmonic component #16, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_17_avg	RMS current, between phase B and N, interharmonic component #17, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_18_avg	RMS current, between phase B and N, interharmonic component #18, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_19_avg	RMS current, between phase B and N, interharmonic component #19, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_20_avg	RMS current, between phase B and N, interharmonic component #20, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_21_avg	RMS current, between phase B and N, interharmonic component #21, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_22_avg	RMS current, between phase B and N, interharmonic component #22, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_23_avg	RMS current, between phase B and N, interharmonic component #23, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_24_avg	RMS current, between phase B and N, interharmonic component #24, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_25_avg	RMS current, between phase B and N, interharmonic component #25, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_26_avg	RMS current, between phase B and N, interharmonic component #26, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_27_avg	RMS current, between phase B and N, interharmonic component #27, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_28_avg	RMS current, between phase B and N, interharmonic component #28, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_29_avg	RMS current, between phase B and N, interharmonic component #29, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_30_avg	RMS current, between phase B and N, interharmonic component #30, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_31_avg	RMS current, between phase B and N, interharmonic component #31, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_32_avg	RMS current, between phase B and N, interharmonic component #32, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_33_avg	RMS current, between phase B and N, interharmonic component #33, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_34_avg	RMS current, between phase B and N, interharmonic component #34, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_35_avg	RMS current, between phase B and N, interharmonic component #35, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_36_avg	RMS current, between phase B and N, interharmonic component #36, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_BN_iharm_37_avg	RMS current, between phase B and N, interharmonic component #37, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_38_avg	RMS current, between phase B and N, interharmonic component #38, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_39_avg	RMS current, between phase B and N, interharmonic component #39, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_40_avg	RMS current, between phase B and N, interharmonic component #40, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_41_avg	RMS current, between phase B and N, interharmonic component #41, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_42_avg	RMS current, between phase B and N, interharmonic component #42, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_43_avg	RMS current, between phase B and N, interharmonic component #43, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_44_avg	RMS current, between phase B and N, interharmonic component #44, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_45_avg	RMS current, between phase B and N, interharmonic component #45, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_46_avg	RMS current, between phase B and N, interharmonic component #46, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_47_avg	RMS current, between phase B and N, interharmonic component #47, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_48_avg	RMS current, between phase B and N, interharmonic component #48, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_49_avg	RMS current, between phase B and N, interharmonic component #49, average of 10/12-cycle intervals	A	600	YES	YES
a_BN_iharm_50_avg	RMS current, between phase B and N, interharmonic component #50, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_0_avg	RMS current, between phase C and N, interharmonic component #0, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_1_avg	RMS current, between phase C and N, interharmonic component #1, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_2_avg	RMS current, between phase C and N, interharmonic component #2, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_3_avg	RMS current, between phase C and N, interharmonic component #3, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_4_avg	RMS current, between phase C and N, interharmonic component #4, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_5_avg	RMS current, between phase C and N, interharmonic component #5, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_6_avg	RMS current, between phase C and N, interharmonic component #6, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_7_avg	RMS current, between phase C and N, interharmonic component #7, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_8_avg	RMS current, between phase C and N, interharmonic component #8, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_9_avg	RMS current, between phase C and N, interharmonic component #9, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_10_avg	RMS current, between phase C and N, interharmonic component #10, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_11_avg	RMS current, between phase C and N, interharmonic component #11, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_12_avg	RMS current, between phase C and N, interharmonic component #12, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_13_avg	RMS current, between phase C and N, interharmonic component #13, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_14_avg	RMS current, between phase C and N, interharmonic component #14, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_15_avg	RMS current, between phase C and N, interharmonic component #15, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_16_avg	RMS current, between phase C and N, interharmonic component #16, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_17_avg	RMS current, between phase C and N, interharmonic component #17, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_18_avg	RMS current, between phase C and N, interharmonic component #18, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_19_avg	RMS current, between phase C and N, interharmonic component #19, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_20_avg	RMS current, between phase C and N, interharmonic component #20, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_21_avg	RMS current, between phase C and N, interharmonic component #21, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_22_avg	RMS current, between phase C and N, interharmonic component #22, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_23_avg	RMS current, between phase C and N, interharmonic component #23, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_24_avg	RMS current, between phase C and N, interharmonic component #24, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_CN_iharm_25_avg	RMS current, between phase C and N, interharmonic component #25, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_26_avg	RMS current, between phase C and N, interharmonic component #26, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_27_avg	RMS current, between phase C and N, interharmonic component #27, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_28_avg	RMS current, between phase C and N, interharmonic component #28, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_29_avg	RMS current, between phase C and N, interharmonic component #29, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_30_avg	RMS current, between phase C and N, interharmonic component #30, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_31_avg	RMS current, between phase C and N, interharmonic component #31, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_32_avg	RMS current, between phase C and N, interharmonic component #32, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_33_avg	RMS current, between phase C and N, interharmonic component #33, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_34_avg	RMS current, between phase C and N, interharmonic component #34, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_35_avg	RMS current, between phase C and N, interharmonic component #35, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_36_avg	RMS current, between phase C and N, interharmonic component #36, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_37_avg	RMS current, between phase C and N, interharmonic component #37, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_38_avg	RMS current, between phase C and N, interharmonic component #38, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_39_avg	RMS current, between phase C and N, interharmonic component #39, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_40_avg	RMS current, between phase C and N, interharmonic component #40, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_41_avg	RMS current, between phase C and N, interharmonic component #41, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_42_avg	RMS current, between phase C and N, interharmonic component #42, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_43_avg	RMS current, between phase C and N, interharmonic component #43, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_44_avg	RMS current, between phase C and N, interharmonic component #44, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_45_avg	RMS current, between phase C and N, interharmonic component #45, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_46_avg	RMS current, between phase C and N, interharmonic component #46, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_47_avg	RMS current, between phase C and N, interharmonic component #47, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_48_avg	RMS current, between phase C and N, interharmonic component #48, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_49_avg	RMS current, between phase C and N, interharmonic component #49, average of 10/12-cycle intervals	A	600	YES	YES
a_CN_iharm_50_avg	RMS current, between phase C and N, interharmonic component #50, average of 10/12-cycle intervals	A	600	YES	YES
v_AN_iharm_0_max	RMS voltage, between phase A and N, interharmonic component #0, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_1_max	RMS voltage, between phase A and N, interharmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_2_max	RMS voltage, between phase A and N, interharmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_3_max	RMS voltage, between phase A and N, interharmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_4_max	RMS voltage, between phase A and N, interharmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_5_max	RMS voltage, between phase A and N, interharmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_6_max	RMS voltage, between phase A and N, interharmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_7_max	RMS voltage, between phase A and N, interharmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_8_max	RMS voltage, between phase A and N, interharmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_9_max	RMS voltage, between phase A and N, interharmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_10_max	RMS voltage, between phase A and N, interharmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_11_max	RMS voltage, between phase A and N, interharmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_12_max	RMS voltage, between phase A and N, interharmonic component #12, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AN_iharm_13_max	RMS voltage, between phase A and N, interharmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_14_max	RMS voltage, between phase A and N, interharmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_15_max	RMS voltage, between phase A and N, interharmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_16_max	RMS voltage, between phase A and N, interharmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_17_max	RMS voltage, between phase A and N, interharmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_18_max	RMS voltage, between phase A and N, interharmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_19_max	RMS voltage, between phase A and N, interharmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_20_max	RMS voltage, between phase A and N, interharmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_21_max	RMS voltage, between phase A and N, interharmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_22_max	RMS voltage, between phase A and N, interharmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_23_max	RMS voltage, between phase A and N, interharmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_24_max	RMS voltage, between phase A and N, interharmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_25_max	RMS voltage, between phase A and N, interharmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_26_max	RMS voltage, between phase A and N, interharmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_27_max	RMS voltage, between phase A and N, interharmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_28_max	RMS voltage, between phase A and N, interharmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_29_max	RMS voltage, between phase A and N, interharmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_30_max	RMS voltage, between phase A and N, interharmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_31_max	RMS voltage, between phase A and N, interharmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_32_max	RMS voltage, between phase A and N, interharmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_33_max	RMS voltage, between phase A and N, interharmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_34_max	RMS voltage, between phase A and N, interharmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_35_max	RMS voltage, between phase A and N, interharmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_36_max	RMS voltage, between phase A and N, interharmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_37_max	RMS voltage, between phase A and N, interharmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_38_max	RMS voltage, between phase A and N, interharmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_39_max	RMS voltage, between phase A and N, interharmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_40_max	RMS voltage, between phase A and N, interharmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_41_max	RMS voltage, between phase A and N, interharmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_42_max	RMS voltage, between phase A and N, interharmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_43_max	RMS voltage, between phase A and N, interharmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_44_max	RMS voltage, between phase A and N, interharmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_45_max	RMS voltage, between phase A and N, interharmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_46_max	RMS voltage, between phase A and N, interharmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_47_max	RMS voltage, between phase A and N, interharmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_48_max	RMS voltage, between phase A and N, interharmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_49_max	RMS voltage, between phase A and N, interharmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_AN_iharm_50_max	RMS voltage, between phase A and N, interharmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_0_max	RMS voltage, between phase B and N, interharmonic component #0, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_iharm_1_max	RMS voltage, between phase B and N, interharmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_2_max	RMS voltage, between phase B and N, interharmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_3_max	RMS voltage, between phase B and N, interharmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_4_max	RMS voltage, between phase B and N, interharmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_5_max	RMS voltage, between phase B and N, interharmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_6_max	RMS voltage, between phase B and N, interharmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_7_max	RMS voltage, between phase B and N, interharmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_8_max	RMS voltage, between phase B and N, interharmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_9_max	RMS voltage, between phase B and N, interharmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_10_max	RMS voltage, between phase B and N, interharmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_11_max	RMS voltage, between phase B and N, interharmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_12_max	RMS voltage, between phase B and N, interharmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_13_max	RMS voltage, between phase B and N, interharmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_14_max	RMS voltage, between phase B and N, interharmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_15_max	RMS voltage, between phase B and N, interharmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_16_max	RMS voltage, between phase B and N, interharmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_17_max	RMS voltage, between phase B and N, interharmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_18_max	RMS voltage, between phase B and N, interharmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_19_max	RMS voltage, between phase B and N, interharmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_20_max	RMS voltage, between phase B and N, interharmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_21_max	RMS voltage, between phase B and N, interharmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_22_max	RMS voltage, between phase B and N, interharmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_23_max	RMS voltage, between phase B and N, interharmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_24_max	RMS voltage, between phase B and N, interharmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_25_max	RMS voltage, between phase B and N, interharmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_26_max	RMS voltage, between phase B and N, interharmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_27_max	RMS voltage, between phase B and N, interharmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_28_max	RMS voltage, between phase B and N, interharmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_29_max	RMS voltage, between phase B and N, interharmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_30_max	RMS voltage, between phase B and N, interharmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_31_max	RMS voltage, between phase B and N, interharmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_32_max	RMS voltage, between phase B and N, interharmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_33_max	RMS voltage, between phase B and N, interharmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_34_max	RMS voltage, between phase B and N, interharmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_35_max	RMS voltage, between phase B and N, interharmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_36_max	RMS voltage, between phase B and N, interharmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_37_max	RMS voltage, between phase B and N, interharmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_38_max	RMS voltage, between phase B and N, interharmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_39_max	RMS voltage, between phase B and N, interharmonic component #39, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BN_iharm_40_max	RMS voltage, between phase B and N, interharmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_41_max	RMS voltage, between phase B and N, interharmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_42_max	RMS voltage, between phase B and N, interharmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_43_max	RMS voltage, between phase B and N, interharmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_44_max	RMS voltage, between phase B and N, interharmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_45_max	RMS voltage, between phase B and N, interharmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_46_max	RMS voltage, between phase B and N, interharmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_47_max	RMS voltage, between phase B and N, interharmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_48_max	RMS voltage, between phase B and N, interharmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_49_max	RMS voltage, between phase B and N, interharmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_BN_iharm_50_max	RMS voltage, between phase B and N, interharmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_0_max	RMS voltage, between phase C and N, interharmonic component #0, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_1_max	RMS voltage, between phase C and N, interharmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_2_max	RMS voltage, between phase C and N, interharmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_3_max	RMS voltage, between phase C and N, interharmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_4_max	RMS voltage, between phase C and N, interharmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_5_max	RMS voltage, between phase C and N, interharmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_6_max	RMS voltage, between phase C and N, interharmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_7_max	RMS voltage, between phase C and N, interharmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_8_max	RMS voltage, between phase C and N, interharmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_9_max	RMS voltage, between phase C and N, interharmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_10_max	RMS voltage, between phase C and N, interharmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_11_max	RMS voltage, between phase C and N, interharmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_12_max	RMS voltage, between phase C and N, interharmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_13_max	RMS voltage, between phase C and N, interharmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_14_max	RMS voltage, between phase C and N, interharmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_15_max	RMS voltage, between phase C and N, interharmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_16_max	RMS voltage, between phase C and N, interharmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_17_max	RMS voltage, between phase C and N, interharmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_18_max	RMS voltage, between phase C and N, interharmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_19_max	RMS voltage, between phase C and N, interharmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_20_max	RMS voltage, between phase C and N, interharmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_21_max	RMS voltage, between phase C and N, interharmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_22_max	RMS voltage, between phase C and N, interharmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_23_max	RMS voltage, between phase C and N, interharmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_24_max	RMS voltage, between phase C and N, interharmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_25_max	RMS voltage, between phase C and N, interharmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_26_max	RMS voltage, between phase C and N, interharmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_27_max	RMS voltage, between phase C and N, interharmonic component #27, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CN_iharm_28_max	RMS voltage, between phase C and N, interharmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_29_max	RMS voltage, between phase C and N, interharmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_30_max	RMS voltage, between phase C and N, interharmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_31_max	RMS voltage, between phase C and N, interharmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_32_max	RMS voltage, between phase C and N, interharmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_33_max	RMS voltage, between phase C and N, interharmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_34_max	RMS voltage, between phase C and N, interharmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_35_max	RMS voltage, between phase C and N, interharmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_36_max	RMS voltage, between phase C and N, interharmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_37_max	RMS voltage, between phase C and N, interharmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_38_max	RMS voltage, between phase C and N, interharmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_39_max	RMS voltage, between phase C and N, interharmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_40_max	RMS voltage, between phase C and N, interharmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_41_max	RMS voltage, between phase C and N, interharmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_42_max	RMS voltage, between phase C and N, interharmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_43_max	RMS voltage, between phase C and N, interharmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_44_max	RMS voltage, between phase C and N, interharmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_45_max	RMS voltage, between phase C and N, interharmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_46_max	RMS voltage, between phase C and N, interharmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_47_max	RMS voltage, between phase C and N, interharmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_48_max	RMS voltage, between phase C and N, interharmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_49_max	RMS voltage, between phase C and N, interharmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_CN_iharm_50_max	RMS voltage, between phase C and N, interharmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_0_max	RMS voltage, between phase A and B, interharmonic component #0, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_1_max	RMS voltage, between phase A and B, interharmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_2_max	RMS voltage, between phase A and B, interharmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_3_max	RMS voltage, between phase A and B, interharmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_4_max	RMS voltage, between phase A and B, interharmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_5_max	RMS voltage, between phase A and B, interharmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_6_max	RMS voltage, between phase A and B, interharmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_7_max	RMS voltage, between phase A and B, interharmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_8_max	RMS voltage, between phase A and B, interharmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_9_max	RMS voltage, between phase A and B, interharmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_10_max	RMS voltage, between phase A and B, interharmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_11_max	RMS voltage, between phase A and B, interharmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_12_max	RMS voltage, between phase A and B, interharmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_13_max	RMS voltage, between phase A and B, interharmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_14_max	RMS voltage, between phase A and B, interharmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_15_max	RMS voltage, between phase A and B, interharmonic component #15, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_AB_iharm_16_max	RMS voltage, between phase A and B, interharmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_17_max	RMS voltage, between phase A and B, interharmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_18_max	RMS voltage, between phase A and B, interharmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_19_max	RMS voltage, between phase A and B, interharmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_20_max	RMS voltage, between phase A and B, interharmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_21_max	RMS voltage, between phase A and B, interharmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_22_max	RMS voltage, between phase A and B, interharmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_23_max	RMS voltage, between phase A and B, interharmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_24_max	RMS voltage, between phase A and B, interharmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_25_max	RMS voltage, between phase A and B, interharmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_26_max	RMS voltage, between phase A and B, interharmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_27_max	RMS voltage, between phase A and B, interharmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_28_max	RMS voltage, between phase A and B, interharmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_29_max	RMS voltage, between phase A and B, interharmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_30_max	RMS voltage, between phase A and B, interharmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_31_max	RMS voltage, between phase A and B, interharmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_32_max	RMS voltage, between phase A and B, interharmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_33_max	RMS voltage, between phase A and B, interharmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_34_max	RMS voltage, between phase A and B, interharmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_35_max	RMS voltage, between phase A and B, interharmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_36_max	RMS voltage, between phase A and B, interharmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_37_max	RMS voltage, between phase A and B, interharmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_38_max	RMS voltage, between phase A and B, interharmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_39_max	RMS voltage, between phase A and B, interharmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_40_max	RMS voltage, between phase A and B, interharmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_41_max	RMS voltage, between phase A and B, interharmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_42_max	RMS voltage, between phase A and B, interharmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_43_max	RMS voltage, between phase A and B, interharmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_44_max	RMS voltage, between phase A and B, interharmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_45_max	RMS voltage, between phase A and B, interharmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_46_max	RMS voltage, between phase A and B, interharmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_47_max	RMS voltage, between phase A and B, interharmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_48_max	RMS voltage, between phase A and B, interharmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_49_max	RMS voltage, between phase A and B, interharmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_AB_iharm_50_max	RMS voltage, between phase A and B, interharmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_0_max	RMS voltage, between phase B and C, interharmonic component #0, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_1_max	RMS voltage, between phase B and C, interharmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_2_max	RMS voltage, between phase B and C, interharmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_3_max	RMS voltage, between phase B and C, interharmonic component #3, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BC_iharm_4_max	RMS voltage, between phase B and C, interharmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_5_max	RMS voltage, between phase B and C, interharmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_6_max	RMS voltage, between phase B and C, interharmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_7_max	RMS voltage, between phase B and C, interharmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_8_max	RMS voltage, between phase B and C, interharmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_9_max	RMS voltage, between phase B and C, interharmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_10_max	RMS voltage, between phase B and C, interharmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_11_max	RMS voltage, between phase B and C, interharmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_12_max	RMS voltage, between phase B and C, interharmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_13_max	RMS voltage, between phase B and C, interharmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_14_max	RMS voltage, between phase B and C, interharmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_15_max	RMS voltage, between phase B and C, interharmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_16_max	RMS voltage, between phase B and C, interharmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_17_max	RMS voltage, between phase B and C, interharmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_18_max	RMS voltage, between phase B and C, interharmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_19_max	RMS voltage, between phase B and C, interharmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_20_max	RMS voltage, between phase B and C, interharmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_21_max	RMS voltage, between phase B and C, interharmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_22_max	RMS voltage, between phase B and C, interharmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_23_max	RMS voltage, between phase B and C, interharmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_24_max	RMS voltage, between phase B and C, interharmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_25_max	RMS voltage, between phase B and C, interharmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_26_max	RMS voltage, between phase B and C, interharmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_27_max	RMS voltage, between phase B and C, interharmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_28_max	RMS voltage, between phase B and C, interharmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_29_max	RMS voltage, between phase B and C, interharmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_30_max	RMS voltage, between phase B and C, interharmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_31_max	RMS voltage, between phase B and C, interharmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_32_max	RMS voltage, between phase B and C, interharmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_33_max	RMS voltage, between phase B and C, interharmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_34_max	RMS voltage, between phase B and C, interharmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_35_max	RMS voltage, between phase B and C, interharmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_36_max	RMS voltage, between phase B and C, interharmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_37_max	RMS voltage, between phase B and C, interharmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_38_max	RMS voltage, between phase B and C, interharmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_39_max	RMS voltage, between phase B and C, interharmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_40_max	RMS voltage, between phase B and C, interharmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_41_max	RMS voltage, between phase B and C, interharmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_42_max	RMS voltage, between phase B and C, interharmonic component #42, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_BC_iharm_43_max	RMS voltage, between phase B and C, interharmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_44_max	RMS voltage, between phase B and C, interharmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_45_max	RMS voltage, between phase B and C, interharmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_46_max	RMS voltage, between phase B and C, interharmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_47_max	RMS voltage, between phase B and C, interharmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_48_max	RMS voltage, between phase B and C, interharmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_49_max	RMS voltage, between phase B and C, interharmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_BC_iharm_50_max	RMS voltage, between phase B and C, interharmonic component #50, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_0_max	RMS voltage, between phase C and A, interharmonic component #0, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_1_max	RMS voltage, between phase C and A, interharmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_2_max	RMS voltage, between phase C and A, interharmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_3_max	RMS voltage, between phase C and A, interharmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_4_max	RMS voltage, between phase C and A, interharmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_5_max	RMS voltage, between phase C and A, interharmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_6_max	RMS voltage, between phase C and A, interharmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_7_max	RMS voltage, between phase C and A, interharmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_8_max	RMS voltage, between phase C and A, interharmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_9_max	RMS voltage, between phase C and A, interharmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_10_max	RMS voltage, between phase C and A, interharmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_11_max	RMS voltage, between phase C and A, interharmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_12_max	RMS voltage, between phase C and A, interharmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_13_max	RMS voltage, between phase C and A, interharmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_14_max	RMS voltage, between phase C and A, interharmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_15_max	RMS voltage, between phase C and A, interharmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_16_max	RMS voltage, between phase C and A, interharmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_17_max	RMS voltage, between phase C and A, interharmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_18_max	RMS voltage, between phase C and A, interharmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_19_max	RMS voltage, between phase C and A, interharmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_20_max	RMS voltage, between phase C and A, interharmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_21_max	RMS voltage, between phase C and A, interharmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_22_max	RMS voltage, between phase C and A, interharmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_23_max	RMS voltage, between phase C and A, interharmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_24_max	RMS voltage, between phase C and A, interharmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_25_max	RMS voltage, between phase C and A, interharmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_26_max	RMS voltage, between phase C and A, interharmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_27_max	RMS voltage, between phase C and A, interharmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_28_max	RMS voltage, between phase C and A, interharmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_29_max	RMS voltage, between phase C and A, interharmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_30_max	RMS voltage, between phase C and A, interharmonic component #30, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_CA_iharm_31_max	RMS voltage, between phase C and A, interharmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_32_max	RMS voltage, between phase C and A, interharmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_33_max	RMS voltage, between phase C and A, interharmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_34_max	RMS voltage, between phase C and A, interharmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_35_max	RMS voltage, between phase C and A, interharmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_36_max	RMS voltage, between phase C and A, interharmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_37_max	RMS voltage, between phase C and A, interharmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_38_max	RMS voltage, between phase C and A, interharmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_39_max	RMS voltage, between phase C and A, interharmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_40_max	RMS voltage, between phase C and A, interharmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_41_max	RMS voltage, between phase C and A, interharmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_42_max	RMS voltage, between phase C and A, interharmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_43_max	RMS voltage, between phase C and A, interharmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_44_max	RMS voltage, between phase C and A, interharmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_45_max	RMS voltage, between phase C and A, interharmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_46_max	RMS voltage, between phase C and A, interharmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_47_max	RMS voltage, between phase C and A, interharmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_48_max	RMS voltage, between phase C and A, interharmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_49_max	RMS voltage, between phase C and A, interharmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_CA_iharm_50_max	RMS voltage, between phase C and A, interharmonic component #50, maximum of 10/12-cycle intervals	V	600		
a_AN_iharm_0_max	RMS current, between phase A and N, interharmonic component #0, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_1_max	RMS current, between phase A and N, interharmonic component #1, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_2_max	RMS current, between phase A and N, interharmonic component #2, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_3_max	RMS current, between phase A and N, interharmonic component #3, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_4_max	RMS current, between phase A and N, interharmonic component #4, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_5_max	RMS current, between phase A and N, interharmonic component #5, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_6_max	RMS current, between phase A and N, interharmonic component #6, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_7_max	RMS current, between phase A and N, interharmonic component #7, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_8_max	RMS current, between phase A and N, interharmonic component #8, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_9_max	RMS current, between phase A and N, interharmonic component #9, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_10_max	RMS current, between phase A and N, interharmonic component #10, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_11_max	RMS current, between phase A and N, interharmonic component #11, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_12_max	RMS current, between phase A and N, interharmonic component #12, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_13_max	RMS current, between phase A and N, interharmonic component #13, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_14_max	RMS current, between phase A and N, interharmonic component #14, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_15_max	RMS current, between phase A and N, interharmonic component #15, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_16_max	RMS current, between phase A and N, interharmonic component #16, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_17_max	RMS current, between phase A and N, interharmonic component #17, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_18_max	RMS current, between phase A and N, interharmonic component #18, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_AN_iharm_19_max	RMS current, between phase A and N, interharmonic component #19, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_20_max	RMS current, between phase A and N, interharmonic component #20, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_21_max	RMS current, between phase A and N, interharmonic component #21, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_22_max	RMS current, between phase A and N, interharmonic component #22, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_23_max	RMS current, between phase A and N, interharmonic component #23, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_24_max	RMS current, between phase A and N, interharmonic component #24, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_25_max	RMS current, between phase A and N, interharmonic component #25, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_26_max	RMS current, between phase A and N, interharmonic component #26, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_27_max	RMS current, between phase A and N, interharmonic component #27, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_28_max	RMS current, between phase A and N, interharmonic component #28, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_29_max	RMS current, between phase A and N, interharmonic component #29, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_30_max	RMS current, between phase A and N, interharmonic component #30, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_31_max	RMS current, between phase A and N, interharmonic component #31, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_32_max	RMS current, between phase A and N, interharmonic component #32, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_33_max	RMS current, between phase A and N, interharmonic component #33, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_34_max	RMS current, between phase A and N, interharmonic component #34, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_35_max	RMS current, between phase A and N, interharmonic component #35, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_36_max	RMS current, between phase A and N, interharmonic component #36, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_37_max	RMS current, between phase A and N, interharmonic component #37, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_38_max	RMS current, between phase A and N, interharmonic component #38, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_39_max	RMS current, between phase A and N, interharmonic component #39, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_40_max	RMS current, between phase A and N, interharmonic component #40, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_41_max	RMS current, between phase A and N, interharmonic component #41, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_42_max	RMS current, between phase A and N, interharmonic component #42, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_43_max	RMS current, between phase A and N, interharmonic component #43, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_44_max	RMS current, between phase A and N, interharmonic component #44, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_45_max	RMS current, between phase A and N, interharmonic component #45, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_46_max	RMS current, between phase A and N, interharmonic component #46, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_47_max	RMS current, between phase A and N, interharmonic component #47, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_48_max	RMS current, between phase A and N, interharmonic component #48, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_49_max	RMS current, between phase A and N, interharmonic component #49, maximum of 10/12-cycle intervals	A	600		
a_AN_iharm_50_max	RMS current, between phase A and N, interharmonic component #50, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_0_max	RMS current, between phase B and N, interharmonic component #0, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_1_max	RMS current, between phase B and N, interharmonic component #1, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_2_max	RMS current, between phase B and N, interharmonic component #2, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_3_max	RMS current, between phase B and N, interharmonic component #3, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_4_max	RMS current, between phase B and N, interharmonic component #4, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_5_max	RMS current, between phase B and N, interharmonic component #5, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_6_max	RMS current, between phase B and N, interharmonic component #6, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_BN_iharm_7_max	RMS current, between phase B and N, interharmonic component #7, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_8_max	RMS current, between phase B and N, interharmonic component #8, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_9_max	RMS current, between phase B and N, interharmonic component #9, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_10_max	RMS current, between phase B and N, interharmonic component #10, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_11_max	RMS current, between phase B and N, interharmonic component #11, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_12_max	RMS current, between phase B and N, interharmonic component #12, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_13_max	RMS current, between phase B and N, interharmonic component #13, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_14_max	RMS current, between phase B and N, interharmonic component #14, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_15_max	RMS current, between phase B and N, interharmonic component #15, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_16_max	RMS current, between phase B and N, interharmonic component #16, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_17_max	RMS current, between phase B and N, interharmonic component #17, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_18_max	RMS current, between phase B and N, interharmonic component #18, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_19_max	RMS current, between phase B and N, interharmonic component #19, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_20_max	RMS current, between phase B and N, interharmonic component #20, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_21_max	RMS current, between phase B and N, interharmonic component #21, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_22_max	RMS current, between phase B and N, interharmonic component #22, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_23_max	RMS current, between phase B and N, interharmonic component #23, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_24_max	RMS current, between phase B and N, interharmonic component #24, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_25_max	RMS current, between phase B and N, interharmonic component #25, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_26_max	RMS current, between phase B and N, interharmonic component #26, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_27_max	RMS current, between phase B and N, interharmonic component #27, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_28_max	RMS current, between phase B and N, interharmonic component #28, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_29_max	RMS current, between phase B and N, interharmonic component #29, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_30_max	RMS current, between phase B and N, interharmonic component #30, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_31_max	RMS current, between phase B and N, interharmonic component #31, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_32_max	RMS current, between phase B and N, interharmonic component #32, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_33_max	RMS current, between phase B and N, interharmonic component #33, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_34_max	RMS current, between phase B and N, interharmonic component #34, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_35_max	RMS current, between phase B and N, interharmonic component #35, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_36_max	RMS current, between phase B and N, interharmonic component #36, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_37_max	RMS current, between phase B and N, interharmonic component #37, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_38_max	RMS current, between phase B and N, interharmonic component #38, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_39_max	RMS current, between phase B and N, interharmonic component #39, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_40_max	RMS current, between phase B and N, interharmonic component #40, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_41_max	RMS current, between phase B and N, interharmonic component #41, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_42_max	RMS current, between phase B and N, interharmonic component #42, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_43_max	RMS current, between phase B and N, interharmonic component #43, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_44_max	RMS current, between phase B and N, interharmonic component #44, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_45_max	RMS current, between phase B and N, interharmonic component #45, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_BN_iharm_46_max	RMS current, between phase B and N, interharmonic component #46, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_47_max	RMS current, between phase B and N, interharmonic component #47, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_48_max	RMS current, between phase B and N, interharmonic component #48, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_49_max	RMS current, between phase B and N, interharmonic component #49, maximum of 10/12-cycle intervals	A	600		
a_BN_iharm_50_max	RMS current, between phase B and N, interharmonic component #50, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_0_max	RMS current, between phase C and N, interharmonic component #0, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_1_max	RMS current, between phase C and N, interharmonic component #1, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_2_max	RMS current, between phase C and N, interharmonic component #2, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_3_max	RMS current, between phase C and N, interharmonic component #3, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_4_max	RMS current, between phase C and N, interharmonic component #4, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_5_max	RMS current, between phase C and N, interharmonic component #5, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_6_max	RMS current, between phase C and N, interharmonic component #6, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_7_max	RMS current, between phase C and N, interharmonic component #7, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_8_max	RMS current, between phase C and N, interharmonic component #8, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_9_max	RMS current, between phase C and N, interharmonic component #9, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_10_max	RMS current, between phase C and N, interharmonic component #10, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_11_max	RMS current, between phase C and N, interharmonic component #11, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_12_max	RMS current, between phase C and N, interharmonic component #12, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_13_max	RMS current, between phase C and N, interharmonic component #13, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_14_max	RMS current, between phase C and N, interharmonic component #14, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_15_max	RMS current, between phase C and N, interharmonic component #15, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_16_max	RMS current, between phase C and N, interharmonic component #16, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_17_max	RMS current, between phase C and N, interharmonic component #17, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_18_max	RMS current, between phase C and N, interharmonic component #18, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_19_max	RMS current, between phase C and N, interharmonic component #19, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_20_max	RMS current, between phase C and N, interharmonic component #20, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_21_max	RMS current, between phase C and N, interharmonic component #21, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_22_max	RMS current, between phase C and N, interharmonic component #22, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_23_max	RMS current, between phase C and N, interharmonic component #23, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_24_max	RMS current, between phase C and N, interharmonic component #24, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_25_max	RMS current, between phase C and N, interharmonic component #25, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_26_max	RMS current, between phase C and N, interharmonic component #26, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_27_max	RMS current, between phase C and N, interharmonic component #27, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_28_max	RMS current, between phase C and N, interharmonic component #28, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_29_max	RMS current, between phase C and N, interharmonic component #29, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_30_max	RMS current, between phase C and N, interharmonic component #30, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_31_max	RMS current, between phase C and N, interharmonic component #31, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_32_max	RMS current, between phase C and N, interharmonic component #32, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_33_max	RMS current, between phase C and N, interharmonic component #33, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_CN_iharm_34_max	RMS current, between phase C and N, interharmonic component #34, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_35_max	RMS current, between phase C and N, interharmonic component #35, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_36_max	RMS current, between phase C and N, interharmonic component #36, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_37_max	RMS current, between phase C and N, interharmonic component #37, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_38_max	RMS current, between phase C and N, interharmonic component #38, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_39_max	RMS current, between phase C and N, interharmonic component #39, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_40_max	RMS current, between phase C and N, interharmonic component #40, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_41_max	RMS current, between phase C and N, interharmonic component #41, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_42_max	RMS current, between phase C and N, interharmonic component #42, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_43_max	RMS current, between phase C and N, interharmonic component #43, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_44_max	RMS current, between phase C and N, interharmonic component #44, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_45_max	RMS current, between phase C and N, interharmonic component #45, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_46_max	RMS current, between phase C and N, interharmonic component #46, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_47_max	RMS current, between phase C and N, interharmonic component #47, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_48_max	RMS current, between phase C and N, interharmonic component #48, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_49_max	RMS current, between phase C and N, interharmonic component #49, maximum of 10/12-cycle intervals	A	600		
a_CN_iharm_50_max	RMS current, between phase C and N, interharmonic component #50, maximum of 10/12-cycle intervals	A	600		
v_AB_pst	RMS voltage, between phase A and B, short term flicker	None	600	YES	YES
v_BC_pst	RMS voltage, between phase B and C, short term flicker	None	600	YES	YES
v_CA_pst	RMS voltage, between phase C and A, short term flicker	None	600	YES	YES
v_AB_plt	RMS voltage, between phase A and B, long term flicker	None	7200	YES	YES
v_BC_plt	RMS voltage, between phase B and C, long term flicker	None	7200	YES	YES
v_CA_plt	RMS voltage, between phase C and A, long term flicker	None	7200	YES	YES
v_NG_min	RMS voltage, between NEUTRAL and GROUND, minimum of 10/12-cycle intervals	V	600		
a_NG_min	RMS current, NEUTRAL, minimum of 10/12-cycle intervals	A	600		
v_NG_harm_0_min	RMS voltage, between N and G, harmonic component DC, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_1_min	RMS voltage, between N and G, harmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_2_min	RMS voltage, between N and G, harmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_3_min	RMS voltage, between N and G, harmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_4_min	RMS voltage, between N and G, harmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_5_min	RMS voltage, between N and G, harmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_6_min	RMS voltage, between N and G, harmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_7_min	RMS voltage, between N and G, harmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_8_min	RMS voltage, between N and G, harmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_9_min	RMS voltage, between N and G, harmonic component #9, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_10_min	RMS voltage, between N and G, harmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_11_min	RMS voltage, between N and G, harmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_12_min	RMS voltage, between N and G, harmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_13_min	RMS voltage, between N and G, harmonic component #13, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_NG_harm_14_min	RMS voltage, between N and G, harmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_15_min	RMS voltage, between N and G, harmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_16_min	RMS voltage, between N and G, harmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_17_min	RMS voltage, between N and G, harmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_18_min	RMS voltage, between N and G, harmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_19_min	RMS voltage, between N and G, harmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_20_min	RMS voltage, between N and G, harmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_21_min	RMS voltage, between N and G, harmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_22_min	RMS voltage, between N and G, harmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_23_min	RMS voltage, between N and G, harmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_24_min	RMS voltage, between N and G, harmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_25_min	RMS voltage, between N and G, harmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_26_min	RMS voltage, between N and G, harmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_27_min	RMS voltage, between N and G, harmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_28_min	RMS voltage, between N and G, harmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_29_min	RMS voltage, between N and G, harmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_30_min	RMS voltage, between N and G, harmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_31_min	RMS voltage, between N and G, harmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_32_min	RMS voltage, between N and G, harmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_33_min	RMS voltage, between N and G, harmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_34_min	RMS voltage, between N and G, harmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_35_min	RMS voltage, between N and G, harmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_36_min	RMS voltage, between N and G, harmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_37_min	RMS voltage, between N and G, harmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_38_min	RMS voltage, between N and G, harmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_39_min	RMS voltage, between N and G, harmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_40_min	RMS voltage, between N and G, harmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_41_min	RMS voltage, between N and G, harmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_42_min	RMS voltage, between N and G, harmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_43_min	RMS voltage, between N and G, harmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_44_min	RMS voltage, between N and G, harmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_45_min	RMS voltage, between N and G, harmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_46_min	RMS voltage, between N and G, harmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_47_min	RMS voltage, between N and G, harmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_48_min	RMS voltage, between N and G, harmonic component #48, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_49_min	RMS voltage, between N and G, harmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_NG_harm_50_min	RMS voltage, between N and G, harmonic component #50, minimum of 10/12-cycle intervals	V	600		
a_NG_harm_0_min	RMS current, between N and G, harmonic component DC, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_1_min	RMS current, between N and G, harmonic component #1, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_NG_harm_2_min	RMS current, between N and G, harmonic component #2, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_3_min	RMS current, between N and G, harmonic component #3, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_4_min	RMS current, between N and G, harmonic component #4, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_5_min	RMS current, between N and G, harmonic component #5, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_6_min	RMS current, between N and G, harmonic component #6, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_7_min	RMS current, between N and G, harmonic component #7, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_8_min	RMS current, between N and G, harmonic component #8, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_9_min	RMS current, between N and G, harmonic component #9, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_10_min	RMS current, between N and G, harmonic component #10, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_11_min	RMS current, between N and G, harmonic component #11, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_12_min	RMS current, between N and G, harmonic component #12, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_13_min	RMS current, between N and G, harmonic component #13, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_14_min	RMS current, between N and G, harmonic component #14, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_15_min	RMS current, between N and G, harmonic component #15, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_16_min	RMS current, between N and G, harmonic component #16, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_17_min	RMS current, between N and G, harmonic component #17, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_18_min	RMS current, between N and G, harmonic component #18, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_19_min	RMS current, between N and G, harmonic component #19, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_20_min	RMS current, between N and G, harmonic component #20, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_21_min	RMS current, between N and G, harmonic component #21, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_22_min	RMS current, between N and G, harmonic component #22, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_23_min	RMS current, between N and G, harmonic component #23, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_24_min	RMS current, between N and G, harmonic component #24, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_25_min	RMS current, between N and G, harmonic component #25, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_26_min	RMS current, between N and G, harmonic component #26, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_27_min	RMS current, between N and G, harmonic component #27, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_28_min	RMS current, between N and G, harmonic component #28, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_29_min	RMS current, between N and G, harmonic component #29, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_30_min	RMS current, between N and G, harmonic component #30, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_31_min	RMS current, between N and G, harmonic component #31, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_32_min	RMS current, between N and G, harmonic component #32, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_33_min	RMS current, between N and G, harmonic component #33, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_34_min	RMS current, between N and G, harmonic component #34, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_35_min	RMS current, between N and G, harmonic component #35, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_36_min	RMS current, between N and G, harmonic component #36, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_37_min	RMS current, between N and G, harmonic component #37, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_38_min	RMS current, between N and G, harmonic component #38, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_39_min	RMS current, between N and G, harmonic component #39, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_40_min	RMS current, between N and G, harmonic component #40, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_NG_harm_41_min	RMS current, between N and G, harmonic component #41, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_42_min	RMS current, between N and G, harmonic component #42, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_43_min	RMS current, between N and G, harmonic component #43, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_44_min	RMS current, between N and G, harmonic component #44, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_45_min	RMS current, between N and G, harmonic component #45, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_46_min	RMS current, between N and G, harmonic component #46, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_47_min	RMS current, between N and G, harmonic component #47, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_48_min	RMS current, between N and G, harmonic component #48, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_49_min	RMS current, between N and G, harmonic component #49, minimum of 10/12-cycle intervals	A	600		
a_NG_harm_50_min	RMS current, between N and G, harmonic component #50, minimum of 10/12-cycle intervals	A	600		
v_NG_THD_min	RMS voltage, between N and G, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
a_NG_THD_min	RMS current, between N and G, total harmonic distortion, minimum of 10/12-cycle intervals	%	600		
v_NG_avg	RMS voltage, between NEUTRAL and GROUND, average of 10/12-cycle intervals	V	600	YES	YES
a_NG_avg	RMS current, NEUTRAL, average of 10/12-cycle intervals	A	600	YES	YES
v_NG_harm_0_avg	RMS voltage, between N and G, harmonic component DC, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_1_avg	RMS voltage, between N and G, harmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_2_avg	RMS voltage, between N and G, harmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_3_avg	RMS voltage, between N and G, harmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_4_avg	RMS voltage, between N and G, harmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_5_avg	RMS voltage, between N and G, harmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_6_avg	RMS voltage, between N and G, harmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_7_avg	RMS voltage, between N and G, harmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_8_avg	RMS voltage, between N and G, harmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_9_avg	RMS voltage, between N and G, harmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_10_avg	RMS voltage, between N and G, harmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_11_avg	RMS voltage, between N and G, harmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_12_avg	RMS voltage, between N and G, harmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_13_avg	RMS voltage, between N and G, harmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_14_avg	RMS voltage, between N and G, harmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_15_avg	RMS voltage, between N and G, harmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_16_avg	RMS voltage, between N and G, harmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_17_avg	RMS voltage, between N and G, harmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_18_avg	RMS voltage, between N and G, harmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_19_avg	RMS voltage, between N and G, harmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_20_avg	RMS voltage, between N and G, harmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_21_avg	RMS voltage, between N and G, harmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_22_avg	RMS voltage, between N and G, harmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_23_avg	RMS voltage, between N and G, harmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_24_avg	RMS voltage, between N and G, harmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_NG_harm_25_avg	RMS voltage, between N and G, harmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_26_avg	RMS voltage, between N and G, harmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_27_avg	RMS voltage, between N and G, harmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_28_avg	RMS voltage, between N and G, harmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_29_avg	RMS voltage, between N and G, harmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_30_avg	RMS voltage, between N and G, harmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_31_avg	RMS voltage, between N and G, harmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_32_avg	RMS voltage, between N and G, harmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_33_avg	RMS voltage, between N and G, harmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_34_avg	RMS voltage, between N and G, harmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_35_avg	RMS voltage, between N and G, harmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_36_avg	RMS voltage, between N and G, harmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_37_avg	RMS voltage, between N and G, harmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_38_avg	RMS voltage, between N and G, harmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_39_avg	RMS voltage, between N and G, harmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_40_avg	RMS voltage, between N and G, harmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_41_avg	RMS voltage, between N and G, harmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_42_avg	RMS voltage, between N and G, harmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_43_avg	RMS voltage, between N and G, harmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_44_avg	RMS voltage, between N and G, harmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_45_avg	RMS voltage, between N and G, harmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_46_avg	RMS voltage, between N and G, harmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_47_avg	RMS voltage, between N and G, harmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_48_avg	RMS voltage, between N and G, harmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_49_avg	RMS voltage, between N and G, harmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_harm_50_avg	RMS voltage, between N and G, harmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
a_NG_harm_0_avg	RMS current, between N and G, harmonic component DC, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_1_avg	RMS current, between N and G, harmonic component #1, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_2_avg	RMS current, between N and G, harmonic component #2, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_3_avg	RMS current, between N and G, harmonic component #3, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_4_avg	RMS current, between N and G, harmonic component #4, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_5_avg	RMS current, between N and G, harmonic component #5, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_6_avg	RMS current, between N and G, harmonic component #6, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_7_avg	RMS current, between N and G, harmonic component #7, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_8_avg	RMS current, between N and G, harmonic component #8, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_9_avg	RMS current, between N and G, harmonic component #9, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_10_avg	RMS current, between N and G, harmonic component #10, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_11_avg	RMS current, between N and G, harmonic component #11, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_12_avg	RMS current, between N and G, harmonic component #12, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_NG_harm_13_avg	RMS current, between N and G, harmonic component #13, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_14_avg	RMS current, between N and G, harmonic component #14, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_15_avg	RMS current, between N and G, harmonic component #15, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_16_avg	RMS current, between N and G, harmonic component #16, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_17_avg	RMS current, between N and G, harmonic component #17, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_18_avg	RMS current, between N and G, harmonic component #18, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_19_avg	RMS current, between N and G, harmonic component #19, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_20_avg	RMS current, between N and G, harmonic component #20, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_21_avg	RMS current, between N and G, harmonic component #21, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_22_avg	RMS current, between N and G, harmonic component #22, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_23_avg	RMS current, between N and G, harmonic component #23, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_24_avg	RMS current, between N and G, harmonic component #24, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_25_avg	RMS current, between N and G, harmonic component #25, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_26_avg	RMS current, between N and G, harmonic component #26, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_27_avg	RMS current, between N and G, harmonic component #27, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_28_avg	RMS current, between N and G, harmonic component #28, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_29_avg	RMS current, between N and G, harmonic component #29, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_30_avg	RMS current, between N and G, harmonic component #30, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_31_avg	RMS current, between N and G, harmonic component #31, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_32_avg	RMS current, between N and G, harmonic component #32, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_33_avg	RMS current, between N and G, harmonic component #33, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_34_avg	RMS current, between N and G, harmonic component #34, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_35_avg	RMS current, between N and G, harmonic component #35, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_36_avg	RMS current, between N and G, harmonic component #36, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_37_avg	RMS current, between N and G, harmonic component #37, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_38_avg	RMS current, between N and G, harmonic component #38, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_39_avg	RMS current, between N and G, harmonic component #39, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_40_avg	RMS current, between N and G, harmonic component #40, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_41_avg	RMS current, between N and G, harmonic component #41, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_42_avg	RMS current, between N and G, harmonic component #42, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_43_avg	RMS current, between N and G, harmonic component #43, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_44_avg	RMS current, between N and G, harmonic component #44, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_45_avg	RMS current, between N and G, harmonic component #45, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_46_avg	RMS current, between N and G, harmonic component #46, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_47_avg	RMS current, between N and G, harmonic component #47, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_48_avg	RMS current, between N and G, harmonic component #48, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_49_avg	RMS current, between N and G, harmonic component #49, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_harm_50_avg	RMS current, between N and G, harmonic component #50, average of 10/12-cycle intervals	A	600	YES	YES
v_NG_THD_avg	RMS voltage, between N and G, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_NG_THD_avg	RMS current, between N and G, total harmonic distortion, average of 10/12-cycle intervals	%	600	YES	YES
v_NG_max	RMS voltage, between NEUTRAL and GROUND, maximum of 10/12-cycle intervals	V	600		
a_NG_max	RMS current, NEUTRAL, maximum of 10/12-cycle intervals	A	600		
v_NG_harm_0_max	RMS voltage, between N and G, harmonic component DC, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_1_max	RMS voltage, between N and G, harmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_2_max	RMS voltage, between N and G, harmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_3_max	RMS voltage, between N and G, harmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_4_max	RMS voltage, between N and G, harmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_5_max	RMS voltage, between N and G, harmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_6_max	RMS voltage, between N and G, harmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_7_max	RMS voltage, between N and G, harmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_8_max	RMS voltage, between N and G, harmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_9_max	RMS voltage, between N and G, harmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_10_max	RMS voltage, between N and G, harmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_11_max	RMS voltage, between N and G, harmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_12_max	RMS voltage, between N and G, harmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_13_max	RMS voltage, between N and G, harmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_14_max	RMS voltage, between N and G, harmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_15_max	RMS voltage, between N and G, harmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_16_max	RMS voltage, between N and G, harmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_17_max	RMS voltage, between N and G, harmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_18_max	RMS voltage, between N and G, harmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_19_max	RMS voltage, between N and G, harmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_20_max	RMS voltage, between N and G, harmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_21_max	RMS voltage, between N and G, harmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_22_max	RMS voltage, between N and G, harmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_23_max	RMS voltage, between N and G, harmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_24_max	RMS voltage, between N and G, harmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_25_max	RMS voltage, between N and G, harmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_26_max	RMS voltage, between N and G, harmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_27_max	RMS voltage, between N and G, harmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_28_max	RMS voltage, between N and G, harmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_29_max	RMS voltage, between N and G, harmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_30_max	RMS voltage, between N and G, harmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_31_max	RMS voltage, between N and G, harmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_32_max	RMS voltage, between N and G, harmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_33_max	RMS voltage, between N and G, harmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_34_max	RMS voltage, between N and G, harmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_35_max	RMS voltage, between N and G, harmonic component #35, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_NG_harm_36_max	RMS voltage, between N and G, harmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_37_max	RMS voltage, between N and G, harmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_38_max	RMS voltage, between N and G, harmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_39_max	RMS voltage, between N and G, harmonic component #39, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_40_max	RMS voltage, between N and G, harmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_41_max	RMS voltage, between N and G, harmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_42_max	RMS voltage, between N and G, harmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_43_max	RMS voltage, between N and G, harmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_44_max	RMS voltage, between N and G, harmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_45_max	RMS voltage, between N and G, harmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_46_max	RMS voltage, between N and G, harmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_47_max	RMS voltage, between N and G, harmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_48_max	RMS voltage, between N and G, harmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_49_max	RMS voltage, between N and G, harmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_NG_harm_50_max	RMS voltage, between N and G, harmonic component #50, maximum of 10/12-cycle intervals	V	600		
a_NG_harm_0_max	RMS current, between N and G, harmonic component DC, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_1_max	RMS current, between N and G, harmonic component #1, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_2_max	RMS current, between N and G, harmonic component #2, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_3_max	RMS current, between N and G, harmonic component #3, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_4_max	RMS current, between N and G, harmonic component #4, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_5_max	RMS current, between N and G, harmonic component #5, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_6_max	RMS current, between N and G, harmonic component #6, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_7_max	RMS current, between N and G, harmonic component #7, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_8_max	RMS current, between N and G, harmonic component #8, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_9_max	RMS current, between N and G, harmonic component #9, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_10_max	RMS current, between N and G, harmonic component #10, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_11_max	RMS current, between N and G, harmonic component #11, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_12_max	RMS current, between N and G, harmonic component #12, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_13_max	RMS current, between N and G, harmonic component #13, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_14_max	RMS current, between N and G, harmonic component #14, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_15_max	RMS current, between N and G, harmonic component #15, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_16_max	RMS current, between N and G, harmonic component #16, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_17_max	RMS current, between N and G, harmonic component #17, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_18_max	RMS current, between N and G, harmonic component #18, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_19_max	RMS current, between N and G, harmonic component #19, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_20_max	RMS current, between N and G, harmonic component #20, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_21_max	RMS current, between N and G, harmonic component #21, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_22_max	RMS current, between N and G, harmonic component #22, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_23_max	RMS current, between N and G, harmonic component #23, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_NG_harm_24_max	RMS current, between N and G, harmonic component #24, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_25_max	RMS current, between N and G, harmonic component #25, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_26_max	RMS current, between N and G, harmonic component #26, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_27_max	RMS current, between N and G, harmonic component #27, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_28_max	RMS current, between N and G, harmonic component #28, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_29_max	RMS current, between N and G, harmonic component #29, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_30_max	RMS current, between N and G, harmonic component #30, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_31_max	RMS current, between N and G, harmonic component #31, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_32_max	RMS current, between N and G, harmonic component #32, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_33_max	RMS current, between N and G, harmonic component #33, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_34_max	RMS current, between N and G, harmonic component #34, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_35_max	RMS current, between N and G, harmonic component #35, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_36_max	RMS current, between N and G, harmonic component #36, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_37_max	RMS current, between N and G, harmonic component #37, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_38_max	RMS current, between N and G, harmonic component #38, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_39_max	RMS current, between N and G, harmonic component #39, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_40_max	RMS current, between N and G, harmonic component #40, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_41_max	RMS current, between N and G, harmonic component #41, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_42_max	RMS current, between N and G, harmonic component #42, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_43_max	RMS current, between N and G, harmonic component #43, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_44_max	RMS current, between N and G, harmonic component #44, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_45_max	RMS current, between N and G, harmonic component #45, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_46_max	RMS current, between N and G, harmonic component #46, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_47_max	RMS current, between N and G, harmonic component #47, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_48_max	RMS current, between N and G, harmonic component #48, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_49_max	RMS current, between N and G, harmonic component #49, maximum of 10/12-cycle intervals	A	600		
a_NG_harm_50_max	RMS current, between N and G, harmonic component #50, maximum of 10/12-cycle intervals	A	600		
v_NG_THD_max	RMS voltage, between N and G, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
a_NG_THD_max	RMS current, between N and G, total harmonic distortion, maximum of 10/12-cycle intervals	%	600		
v_NG_iharm_0_min	RMS voltage, between N and G, interharmonic component #0, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_1_min	RMS voltage, between N and G, interharmonic component #1, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_2_min	RMS voltage, between N and G, interharmonic component #2, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_3_min	RMS voltage, between N and G, interharmonic component #3, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_4_min	RMS voltage, between N and G, interharmonic component #4, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_5_min	RMS voltage, between N and G, interharmonic component #5, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_6_min	RMS voltage, between N and G, interharmonic component #6, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_7_min	RMS voltage, between N and G, interharmonic component #7, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_8_min	RMS voltage, between N and G, interharmonic component #8, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_9_min	RMS voltage, between N and G, interharmonic component #9, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_NG_iharm_10_min	RMS voltage, between N and G, interharmonic component #10, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_11_min	RMS voltage, between N and G, interharmonic component #11, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_12_min	RMS voltage, between N and G, interharmonic component #12, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_13_min	RMS voltage, between N and G, interharmonic component #13, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_14_min	RMS voltage, between N and G, interharmonic component #14, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_15_min	RMS voltage, between N and G, interharmonic component #15, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_16_min	RMS voltage, between N and G, interharmonic component #16, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_17_min	RMS voltage, between N and G, interharmonic component #17, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_18_min	RMS voltage, between N and G, interharmonic component #18, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_19_min	RMS voltage, between N and G, interharmonic component #19, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_20_min	RMS voltage, between N and G, interharmonic component #20, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_21_min	RMS voltage, between N and G, interharmonic component #21, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_22_min	RMS voltage, between N and G, interharmonic component #22, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_23_min	RMS voltage, between N and G, interharmonic component #23, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_24_min	RMS voltage, between N and G, interharmonic component #24, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_25_min	RMS voltage, between N and G, interharmonic component #25, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_26_min	RMS voltage, between N and G, interharmonic component #26, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_27_min	RMS voltage, between N and G, interharmonic component #27, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_28_min	RMS voltage, between N and G, interharmonic component #28, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_29_min	RMS voltage, between N and G, interharmonic component #29, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_30_min	RMS voltage, between N and G, interharmonic component #30, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_31_min	RMS voltage, between N and G, interharmonic component #31, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_32_min	RMS voltage, between N and G, interharmonic component #32, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_33_min	RMS voltage, between N and G, interharmonic component #33, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_34_min	RMS voltage, between N and G, interharmonic component #34, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_35_min	RMS voltage, between N and G, interharmonic component #35, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_36_min	RMS voltage, between N and G, interharmonic component #36, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_37_min	RMS voltage, between N and G, interharmonic component #37, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_38_min	RMS voltage, between N and G, interharmonic component #38, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_39_min	RMS voltage, between N and G, interharmonic component #39, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_40_min	RMS voltage, between N and G, interharmonic component #40, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_41_min	RMS voltage, between N and G, interharmonic component #41, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_42_min	RMS voltage, between N and G, interharmonic component #42, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_43_min	RMS voltage, between N and G, interharmonic component #43, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_44_min	RMS voltage, between N and G, interharmonic component #44, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_45_min	RMS voltage, between N and G, interharmonic component #45, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_46_min	RMS voltage, between N and G, interharmonic component #46, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_47_min	RMS voltage, between N and G, interharmonic component #47, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_48_min	RMS voltage, between N and G, interharmonic component #48, minimum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_NG_iharm_49_min	RMS voltage, between N and G, interharmonic component #49, minimum of 10/12-cycle intervals	V	600		
v_NG_iharm_50_min	RMS voltage, between N and G, interharmonic component #50, minimum of 10/12-cycle intervals	V	600		
a_NG_iharm_0_min	RMS current, between N and G, interharmonic component #0, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_1_min	RMS current, between N and G, interharmonic component #1, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_2_min	RMS current, between N and G, interharmonic component #2, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_3_min	RMS current, between N and G, interharmonic component #3, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_4_min	RMS current, between N and G, interharmonic component #4, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_5_min	RMS current, between N and G, interharmonic component #5, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_6_min	RMS current, between N and G, interharmonic component #6, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_7_min	RMS current, between N and G, interharmonic component #7, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_8_min	RMS current, between N and G, interharmonic component #8, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_9_min	RMS current, between N and G, interharmonic component #9, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_10_min	RMS current, between N and G, interharmonic component #10, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_11_min	RMS current, between N and G, interharmonic component #11, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_12_min	RMS current, between N and G, interharmonic component #12, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_13_min	RMS current, between N and G, interharmonic component #13, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_14_min	RMS current, between N and G, interharmonic component #14, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_15_min	RMS current, between N and G, interharmonic component #15, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_16_min	RMS current, between N and G, interharmonic component #16, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_17_min	RMS current, between N and G, interharmonic component #17, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_18_min	RMS current, between N and G, interharmonic component #18, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_19_min	RMS current, between N and G, interharmonic component #19, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_20_min	RMS current, between N and G, interharmonic component #20, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_21_min	RMS current, between N and G, interharmonic component #21, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_22_min	RMS current, between N and G, interharmonic component #22, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_23_min	RMS current, between N and G, interharmonic component #23, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_24_min	RMS current, between N and G, interharmonic component #24, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_25_min	RMS current, between N and G, interharmonic component #25, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_26_min	RMS current, between N and G, interharmonic component #26, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_27_min	RMS current, between N and G, interharmonic component #27, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_28_min	RMS current, between N and G, interharmonic component #28, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_29_min	RMS current, between N and G, interharmonic component #29, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_30_min	RMS current, between N and G, interharmonic component #30, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_31_min	RMS current, between N and G, interharmonic component #31, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_32_min	RMS current, between N and G, interharmonic component #32, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_33_min	RMS current, between N and G, interharmonic component #33, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_34_min	RMS current, between N and G, interharmonic component #34, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_35_min	RMS current, between N and G, interharmonic component #35, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_36_min	RMS current, between N and G, interharmonic component #36, minimum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_NG_iharm_37_min	RMS current, between N and G, interharmonic component #37, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_38_min	RMS current, between N and G, interharmonic component #38, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_39_min	RMS current, between N and G, interharmonic component #39, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_40_min	RMS current, between N and G, interharmonic component #40, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_41_min	RMS current, between N and G, interharmonic component #41, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_42_min	RMS current, between N and G, interharmonic component #42, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_43_min	RMS current, between N and G, interharmonic component #43, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_44_min	RMS current, between N and G, interharmonic component #44, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_45_min	RMS current, between N and G, interharmonic component #45, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_46_min	RMS current, between N and G, interharmonic component #46, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_47_min	RMS current, between N and G, interharmonic component #47, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_48_min	RMS current, between N and G, interharmonic component #48, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_49_min	RMS current, between N and G, interharmonic component #49, minimum of 10/12-cycle intervals	A	600		
a_NG_iharm_50_min	RMS current, between N and G, interharmonic component #50, minimum of 10/12-cycle intervals	A	600		
v_NG_iharm_0_avg	RMS voltage, between N and G, interharmonic component #0, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_1_avg	RMS voltage, between N and G, interharmonic component #1, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_2_avg	RMS voltage, between N and G, interharmonic component #2, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_3_avg	RMS voltage, between N and G, interharmonic component #3, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_4_avg	RMS voltage, between N and G, interharmonic component #4, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_5_avg	RMS voltage, between N and G, interharmonic component #5, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_6_avg	RMS voltage, between N and G, interharmonic component #6, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_7_avg	RMS voltage, between N and G, interharmonic component #7, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_8_avg	RMS voltage, between N and G, interharmonic component #8, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_9_avg	RMS voltage, between N and G, interharmonic component #9, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_10_avg	RMS voltage, between N and G, interharmonic component #10, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_11_avg	RMS voltage, between N and G, interharmonic component #11, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_12_avg	RMS voltage, between N and G, interharmonic component #12, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_13_avg	RMS voltage, between N and G, interharmonic component #13, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_14_avg	RMS voltage, between N and G, interharmonic component #14, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_15_avg	RMS voltage, between N and G, interharmonic component #15, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_16_avg	RMS voltage, between N and G, interharmonic component #16, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_17_avg	RMS voltage, between N and G, interharmonic component #17, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_18_avg	RMS voltage, between N and G, interharmonic component #18, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_19_avg	RMS voltage, between N and G, interharmonic component #19, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_20_avg	RMS voltage, between N and G, interharmonic component #20, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_21_avg	RMS voltage, between N and G, interharmonic component #21, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_22_avg	RMS voltage, between N and G, interharmonic component #22, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_23_avg	RMS voltage, between N and G, interharmonic component #23, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_24_avg	RMS voltage, between N and G, interharmonic component #24, average of 10/12-cycle intervals	V	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_NG_iharm_25_avg	RMS voltage, between N and G, interharmonic component #25, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_26_avg	RMS voltage, between N and G, interharmonic component #26, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_27_avg	RMS voltage, between N and G, interharmonic component #27, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_28_avg	RMS voltage, between N and G, interharmonic component #28, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_29_avg	RMS voltage, between N and G, interharmonic component #29, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_30_avg	RMS voltage, between N and G, interharmonic component #30, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_31_avg	RMS voltage, between N and G, interharmonic component #31, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_32_avg	RMS voltage, between N and G, interharmonic component #32, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_33_avg	RMS voltage, between N and G, interharmonic component #33, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_34_avg	RMS voltage, between N and G, interharmonic component #34, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_35_avg	RMS voltage, between N and G, interharmonic component #35, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_36_avg	RMS voltage, between N and G, interharmonic component #36, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_37_avg	RMS voltage, between N and G, interharmonic component #37, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_38_avg	RMS voltage, between N and G, interharmonic component #38, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_39_avg	RMS voltage, between N and G, interharmonic component #39, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_40_avg	RMS voltage, between N and G, interharmonic component #40, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_41_avg	RMS voltage, between N and G, interharmonic component #41, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_42_avg	RMS voltage, between N and G, interharmonic component #42, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_43_avg	RMS voltage, between N and G, interharmonic component #43, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_44_avg	RMS voltage, between N and G, interharmonic component #44, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_45_avg	RMS voltage, between N and G, interharmonic component #45, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_46_avg	RMS voltage, between N and G, interharmonic component #46, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_47_avg	RMS voltage, between N and G, interharmonic component #47, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_48_avg	RMS voltage, between N and G, interharmonic component #48, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_49_avg	RMS voltage, between N and G, interharmonic component #49, average of 10/12-cycle intervals	V	600	YES	YES
v_NG_iharm_50_avg	RMS voltage, between N and G, interharmonic component #50, average of 10/12-cycle intervals	V	600	YES	YES
a_NG_iharm_0_avg	RMS current, between N and G, interharmonic component #0, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_1_avg	RMS current, between N and G, interharmonic component #1, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_2_avg	RMS current, between N and G, interharmonic component #2, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_3_avg	RMS current, between N and G, interharmonic component #3, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_4_avg	RMS current, between N and G, interharmonic component #4, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_5_avg	RMS current, between N and G, interharmonic component #5, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_6_avg	RMS current, between N and G, interharmonic component #6, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_7_avg	RMS current, between N and G, interharmonic component #7, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_8_avg	RMS current, between N and G, interharmonic component #8, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_9_avg	RMS current, between N and G, interharmonic component #9, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_10_avg	RMS current, between N and G, interharmonic component #10, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_11_avg	RMS current, between N and G, interharmonic component #11, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_12_avg	RMS current, between N and G, interharmonic component #12, average of 10/12-cycle intervals	A	600	YES	YES

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_NG_iharm_13_avg	RMS current, between N and G, interharmonic component #13, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_14_avg	RMS current, between N and G, interharmonic component #14, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_15_avg	RMS current, between N and G, interharmonic component #15, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_16_avg	RMS current, between N and G, interharmonic component #16, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_17_avg	RMS current, between N and G, interharmonic component #17, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_18_avg	RMS current, between N and G, interharmonic component #18, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_19_avg	RMS current, between N and G, interharmonic component #19, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_20_avg	RMS current, between N and G, interharmonic component #20, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_21_avg	RMS current, between N and G, interharmonic component #21, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_22_avg	RMS current, between N and G, interharmonic component #22, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_23_avg	RMS current, between N and G, interharmonic component #23, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_24_avg	RMS current, between N and G, interharmonic component #24, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_25_avg	RMS current, between N and G, interharmonic component #25, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_26_avg	RMS current, between N and G, interharmonic component #26, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_27_avg	RMS current, between N and G, interharmonic component #27, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_28_avg	RMS current, between N and G, interharmonic component #28, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_29_avg	RMS current, between N and G, interharmonic component #29, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_30_avg	RMS current, between N and G, interharmonic component #30, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_31_avg	RMS current, between N and G, interharmonic component #31, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_32_avg	RMS current, between N and G, interharmonic component #32, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_33_avg	RMS current, between N and G, interharmonic component #33, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_34_avg	RMS current, between N and G, interharmonic component #34, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_35_avg	RMS current, between N and G, interharmonic component #35, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_36_avg	RMS current, between N and G, interharmonic component #36, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_37_avg	RMS current, between N and G, interharmonic component #37, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_38_avg	RMS current, between N and G, interharmonic component #38, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_39_avg	RMS current, between N and G, interharmonic component #39, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_40_avg	RMS current, between N and G, interharmonic component #40, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_41_avg	RMS current, between N and G, interharmonic component #41, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_42_avg	RMS current, between N and G, interharmonic component #42, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_43_avg	RMS current, between N and G, interharmonic component #43, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_44_avg	RMS current, between N and G, interharmonic component #44, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_45_avg	RMS current, between N and G, interharmonic component #45, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_46_avg	RMS current, between N and G, interharmonic component #46, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_47_avg	RMS current, between N and G, interharmonic component #47, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_48_avg	RMS current, between N and G, interharmonic component #48, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_49_avg	RMS current, between N and G, interharmonic component #49, average of 10/12-cycle intervals	A	600	YES	YES
a_NG_iharm_50_avg	RMS current, between N and G, interharmonic component #50, average of 10/12-cycle intervals	A	600	YES	YES
v_NG_iharm_0_max	RMS voltage, between N and G, interharmonic component #0, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_NG_iharm_1_max	RMS voltage, between N and G, interharmonic component #1, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_2_max	RMS voltage, between N and G, interharmonic component #2, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_3_max	RMS voltage, between N and G, interharmonic component #3, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_4_max	RMS voltage, between N and G, interharmonic component #4, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_5_max	RMS voltage, between N and G, interharmonic component #5, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_6_max	RMS voltage, between N and G, interharmonic component #6, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_7_max	RMS voltage, between N and G, interharmonic component #7, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_8_max	RMS voltage, between N and G, interharmonic component #8, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_9_max	RMS voltage, between N and G, interharmonic component #9, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_10_max	RMS voltage, between N and G, interharmonic component #10, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_11_max	RMS voltage, between N and G, interharmonic component #11, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_12_max	RMS voltage, between N and G, interharmonic component #12, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_13_max	RMS voltage, between N and G, interharmonic component #13, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_14_max	RMS voltage, between N and G, interharmonic component #14, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_15_max	RMS voltage, between N and G, interharmonic component #15, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_16_max	RMS voltage, between N and G, interharmonic component #16, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_17_max	RMS voltage, between N and G, interharmonic component #17, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_18_max	RMS voltage, between N and G, interharmonic component #18, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_19_max	RMS voltage, between N and G, interharmonic component #19, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_20_max	RMS voltage, between N and G, interharmonic component #20, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_21_max	RMS voltage, between N and G, interharmonic component #21, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_22_max	RMS voltage, between N and G, interharmonic component #22, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_23_max	RMS voltage, between N and G, interharmonic component #23, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_24_max	RMS voltage, between N and G, interharmonic component #24, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_25_max	RMS voltage, between N and G, interharmonic component #25, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_26_max	RMS voltage, between N and G, interharmonic component #26, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_27_max	RMS voltage, between N and G, interharmonic component #27, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_28_max	RMS voltage, between N and G, interharmonic component #28, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_29_max	RMS voltage, between N and G, interharmonic component #29, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_30_max	RMS voltage, between N and G, interharmonic component #30, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_31_max	RMS voltage, between N and G, interharmonic component #31, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_32_max	RMS voltage, between N and G, interharmonic component #32, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_33_max	RMS voltage, between N and G, interharmonic component #33, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_34_max	RMS voltage, between N and G, interharmonic component #34, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_35_max	RMS voltage, between N and G, interharmonic component #35, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_36_max	RMS voltage, between N and G, interharmonic component #36, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_37_max	RMS voltage, between N and G, interharmonic component #37, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_38_max	RMS voltage, between N and G, interharmonic component #38, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_39_max	RMS voltage, between N and G, interharmonic component #39, maximum of 10/12-cycle intervals	V	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
v_NG_iharm_40_max	RMS voltage, between N and G, interharmonic component #40, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_41_max	RMS voltage, between N and G, interharmonic component #41, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_42_max	RMS voltage, between N and G, interharmonic component #42, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_43_max	RMS voltage, between N and G, interharmonic component #43, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_44_max	RMS voltage, between N and G, interharmonic component #44, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_45_max	RMS voltage, between N and G, interharmonic component #45, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_46_max	RMS voltage, between N and G, interharmonic component #46, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_47_max	RMS voltage, between N and G, interharmonic component #47, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_48_max	RMS voltage, between N and G, interharmonic component #48, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_49_max	RMS voltage, between N and G, interharmonic component #49, maximum of 10/12-cycle intervals	V	600		
v_NG_iharm_50_max	RMS voltage, between N and G, interharmonic component #50, maximum of 10/12-cycle intervals	V	600		
a_NG_iharm_0_max	RMS current, between N and G, interharmonic component #0, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_1_max	RMS current, between N and G, interharmonic component #1, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_2_max	RMS current, between N and G, interharmonic component #2, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_3_max	RMS current, between N and G, interharmonic component #3, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_4_max	RMS current, between N and G, interharmonic component #4, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_5_max	RMS current, between N and G, interharmonic component #5, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_6_max	RMS current, between N and G, interharmonic component #6, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_7_max	RMS current, between N and G, interharmonic component #7, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_8_max	RMS current, between N and G, interharmonic component #8, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_9_max	RMS current, between N and G, interharmonic component #9, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_10_max	RMS current, between N and G, interharmonic component #10, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_11_max	RMS current, between N and G, interharmonic component #11, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_12_max	RMS current, between N and G, interharmonic component #12, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_13_max	RMS current, between N and G, interharmonic component #13, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_14_max	RMS current, between N and G, interharmonic component #14, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_15_max	RMS current, between N and G, interharmonic component #15, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_16_max	RMS current, between N and G, interharmonic component #16, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_17_max	RMS current, between N and G, interharmonic component #17, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_18_max	RMS current, between N and G, interharmonic component #18, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_19_max	RMS current, between N and G, interharmonic component #19, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_20_max	RMS current, between N and G, interharmonic component #20, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_21_max	RMS current, between N and G, interharmonic component #21, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_22_max	RMS current, between N and G, interharmonic component #22, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_23_max	RMS current, between N and G, interharmonic component #23, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_24_max	RMS current, between N and G, interharmonic component #24, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_25_max	RMS current, between N and G, interharmonic component #25, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_26_max	RMS current, between N and G, interharmonic component #26, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_27_max	RMS current, between N and G, interharmonic component #27, maximum of 10/12-cycle intervals	A	600		

Table 38 – PQ DB: periodic variable codes

code	description	units	typical aggregation [s]	percentile enabled?	timeover enabled?
a_NG_iharm_28_max	RMS current, between N and G, interharmonic component #28, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_29_max	RMS current, between N and G, interharmonic component #29, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_30_max	RMS current, between N and G, interharmonic component #30, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_31_max	RMS current, between N and G, interharmonic component #31, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_32_max	RMS current, between N and G, interharmonic component #32, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_33_max	RMS current, between N and G, interharmonic component #33, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_34_max	RMS current, between N and G, interharmonic component #34, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_35_max	RMS current, between N and G, interharmonic component #35, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_36_max	RMS current, between N and G, interharmonic component #36, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_37_max	RMS current, between N and G, interharmonic component #37, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_38_max	RMS current, between N and G, interharmonic component #38, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_39_max	RMS current, between N and G, interharmonic component #39, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_40_max	RMS current, between N and G, interharmonic component #40, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_41_max	RMS current, between N and G, interharmonic component #41, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_42_max	RMS current, between N and G, interharmonic component #42, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_43_max	RMS current, between N and G, interharmonic component #43, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_44_max	RMS current, between N and G, interharmonic component #44, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_45_max	RMS current, between N and G, interharmonic component #45, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_46_max	RMS current, between N and G, interharmonic component #46, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_47_max	RMS current, between N and G, interharmonic component #47, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_48_max	RMS current, between N and G, interharmonic component #48, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_49_max	RMS current, between N and G, interharmonic component #49, maximum of 10/12-cycle intervals	A	600		
a_NG_iharm_50_max	RMS current, between N and G, interharmonic component #50, maximum of 10/12-cycle intervals	A	600		

19 ANNEX 5: POWER QUALITY PERCENTILE VARIABLES

Any percentile can be calculated on any single periodic variable. The result is then stored as another periodic measurement. Percentiles are evaluated on any average variable. The suffix *avg* is replaced by another one with the percentile type. Typically percentiles are evaluated per week.

Next table shows how to construct them and their configuration parameters.

Table 39 – PQ DB: percentile variables

suffix (replace _avg by this one)	percentile	description	typical agregation [s]
_p00	0%	0% of measurements are lower than this value	604800
_p01	1%	1% of measurements are lower than this value	604800
_p05	5%	5% of measurements are lower than this value	604800
_p10	10%	10% of measurements are lower than this value	604800
_p25	25%	25% of measurements are lower than this value	604800
_p50	50%	50% of measurements are lower than this value	604800
_p75	75%	75% of measurements are lower than this value	604800
_p90	90%	90% of measurements are lower than this value	604800
_p95	95%	95% of measurements are lower than this value	604800
_p99	99%	99% of measurements are lower than this value	604800
_p100	100%	100% of measurements are lower than this value	604800

20 ANNEX 6: POWER QUALITY TIMEOVER VARIABLES

Time over fractions of rated values can be calculated on any single periodic variable. The result is then stored as another periodic measurement. They are evaluated on any average variable. The suffix *avg* is replaced by another one with the type of calculation. Typically the aggregation time is one week.

Next table shows how to construct them and their configuration parameters.

Table 40 – PQ DB: time-over variables

suffix (replace _avg by this one)	rated value	description	typical agregation [s]
_t1	1%	time [seconds] over 1% of rated value	604800
_t5	5%	time [seconds] over 5% of rated value	604800
_t10	10%	time [seconds] over 10% of rated value	604800
_t25	25%	time [seconds] over 25% of rated value	604800
_t50	50%	time [seconds] over 50% of rated value	604800
_t75	75%	time [seconds] over 75% of rated value	604800
_t90	90%	time [seconds] over 90% of rated value	604800
_t95	95%	time [seconds] over 95% of rated value	604800
_t99	99%	time [seconds] over 99% of rated value	604800
_t100	100%	time [seconds] over 100% of rated value	604800
_t101	101%	time [seconds] over 101% of rated value	604800
_t105	105%	time [seconds] over 105% of rated value	604800
_t110	110%	time [seconds] over 110% of rated value	604800
_t125	125%	time [seconds] over 125% of rated value	604800
_t150	150%	time [seconds] over 150% of rated value	604800
_t175	175%	time [seconds] over 175% of rated value	604800
_t190	190%	time [seconds] over 190% of rated value	604800
_t195	195%	time [seconds] over 195% of rated value	604800
_t199	199%	time [seconds] over 199% of rated value	604800
_t200	200%	time [seconds] over 200% of rated value	604800

21 ANNEX 7: POWER QUALITY EVENT CODES

Each PQ event shall be encoded according to the following table:

Table 41 – PQ DB: event codes

type of event	description
dip	voltage dip
swell	voltage swell
interruption	voltage interruption
voltage_variation	voltage variation
voltage_transient	voltage transient
overcurrent	overcurrent event
undercurrent	undercurrent
overfrequency	overfrequency
underfrequency	underfrequency
over_thd	over THD
over_pst	over Pst
over_unbalance	over unbalance
digital	change in digital signal

Phases will be enumerated as follows:

Table 42 – PQ DB: phases and signals

Phases or signals	
AN	voltage between phase A and Neutral
BN	voltage between phase B and Neutral
CN	voltage between phase C and Neutral
AG	voltage between phase A and Ground
BG	voltage between phase B and Ground
CG	voltage between phase C and Ground
NG	voltage between phase N and Ground
AB	voltage between phase A and B
BC	voltage between phase B and C
CA	voltage between phase C and A
A	phase A (for currents)
B	phase B (for currents)
C	phase C (for currents)
N	neutral (for currents)
G	ground (for currents)
DI1	digital input 1
DI2	digital input 2
DI3	digital input 3
DI4	digital input 4
DI5	digital input 5
DI6	digital input 6
DI7	digital input 7
DI8	digital input 8
DI9	digital input 9
DI10	digital input 10
DI11	digital input 11
DI12	digital input 12
DI13	digital input 13
DI14	digital input 14
DI15	digital input 15
DI16	digital input 16
DO1	digital output 1
DO2	digital output 2
DO3	digital output 3
DO4	digital output 4
DO5	digital output 5
DO6	digital output 6
DO7	digital output 7
DO8	digital output 8
DO9	digital output 9
DO10	digital output 10
DO11	digital output 11
DO12	digital output 12
DO13	digital output 13
DO14	digital output 14
DO15	digital output 15
DO16	digital output 16

Any PQ event encoded in JSON shall have the following appearance:

Table 43 – PQ DB: event description (JSON)

```
"type":        choose a type
"phases":      [ enumerate involved phases or signals ]
"magnitude":   [ "min": ,   "max": ,   "avg": ,   "val": ,   "t":   ]
               or just a single value
"info":        [ enumerate extra information (such as HV, MV or LV origin) ]
```

A full description of the above attributes is depicted in the next table:

Table 44 – PQ DB: event attributes

Numeric attributes	
min	minimum value
max	maximum value
avg	maximum value
t	time of occurence
val	single value or code
Extra attributes	
HV	high voltage source
MV	medium voltage source
LV	low voltage source
RSE_ok	OK according to RSE algorithm
RSE_bad	FAIL according to RSE algorithm
RSE_unknown	UNKNOWN according to RSE algorithm

Values associated to digital inputs and outputs will match

ANNEX 3: GRID-EVENTS STATE CODES

Detailed list of any state associated to a circuit breaker, switch or electrical protection or other events.

Table 37 – GRID-EVENTS state codes

code	description
0	open / boolean false
1	closed / boolean true
2	undefined

.