PQube® 3 Firmware 3.5.0 Release Notes

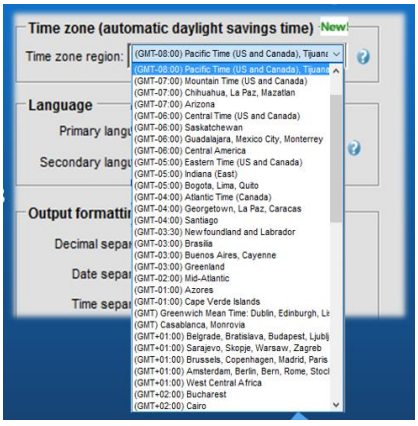
Deployment note

The firmware upgrade will reset to zero your PQube3 energy accumulators.
Please read the last section of this document “Firmware 3.5.0. Important information”

Firmware 3.5.0 NEW FEATURES

- Firmware 3.5.0 support the new PQube 3e (14 current channel PQube3)

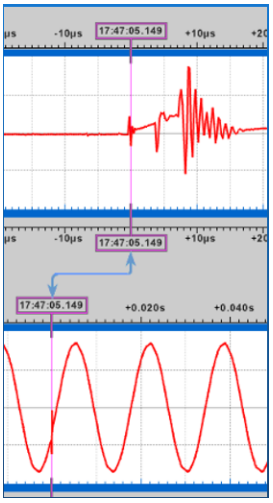
- Power/Energy computed on all 8 (or 14*) current channels!
  - ✓ up to 8 X single phase loads, or up to 2 x 3-phase loads with PQube 3
  - ✓ up to 14 X single phase loads, or up to 4 x 3-phase loads with PQube 3e
  - ✓ 4-Quadrant energy metering for each load:
    kW,kVA, kVARs, CosPHI (DPF) or TPF.
    kWh (net, import,export), kVARh (net, positive, negative)
  - ✓ real time meters on web meter page, and display screen
  - ✓ all accessible via Modbus registers
  - ✓ User defined (3, 5, 10, 15, 30 mins) interval power/energy recording file



- PQube 3 can record up to 4 events with RMS and waveform, simultaneously or back to back
- PQube 3 supports up to 8 (or 14*) PSL flexible CT’s (Rogowski coils), no integrator, no power supply needed!
- Automatic Daylight Saving Time management, easy configuration with the PQube 3 configurator
- PQube 3 records 4MHz HF impulses and shows their position in the waveform (RMS also recorded)

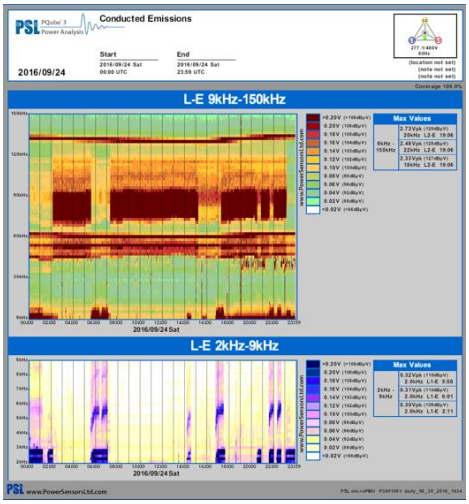
- RVC (Rapid Voltage change) events now have a RMS and waveform recording
- Current harmonic distortion : TDD or THDi, user selectable
- Weekly and monthly statistics added
- Nightly measurement data backup (files copied every day) to USB drive or external micro SDCard
- Uploading of PQube 3 Screen logo (splash.GIF) remotely via Web command page
- Uploading of PQube 3 GIF graph and Web page logo (location.GIF) remotely via Web command page

(*)14 channels for PQube 3e



Firmware 3.5.0 Improvements

- Ultra-precise CT's and CTI-1A/5A harmonic frequency response (up to H50) compliant to IEC 61000-4-30 Ed3.
- New 2kHz-150kHz conducted emission with separate 2kHz-9kHz spectrum and 8kHz-150kHz spectrum – with each their own color map.



- Separate 2kHz-9kHz Max emission meter, and 8kHz-150kHz Max emission meter
- The HF impulse 4MHz single channel trigger mode allows to choose between L1-N or N-E in single phase mode.
- Both fundamental voltage amplitude AND angle displayed on the Web meter page
- Peak demand/ peak load current registers can be reset separately from energy accumulators
- CSV files may be excluded from email attachments (option)
- Daily statistics for THD and frequency added
- Improved graph vertical scaling for ENV2 Accelerometer – mechanical shock/seismic disturbance
- The user can define the vertical scaling of the accelerometer recording in daily/weekly/monthly trends
- EnviroSensor probes names (user defined) are displayed in the daily/weekly/monthly trend graphs
- Company logo (splash.gif) can be seen on the main screen display by pushing on the PSL blue banner
- Auto-detection of the power configuration at 50Hz and 100VAC (e.g. in Japan)
- More user friendly definition of the digital input parameters
- PQDIF files compatibility with PQVIEW improved (e.g. harmonics), also includes the PQDIF index file

- Slovakian, Croatian, Hebrew, Portuguese, Russian, Korean language translations improved

Firmware 3.5.0 Bug fixes

- RVC events now show as an exclamation mark on the screen display , event counter is now incremented with RVC events
- 'AN1-AN2' or 'AN3-AN4' waveforms displayed inverted in the event GIF graphs
- Web meter angles are now all relative to Voltage phase L1-N

Firmware 3.5.0 Important information

This firmware implements new measurement channels and changes the PQube 3 internal recording structure.

After firmware upgrade:
(1) the energy accumulators (kWh, KVAh, kVARh), will be reset to 0.
The energy accumulator start dates are also set to the date of firmware upgrade.

(2) the first daily trend file after firmware upgrade will contain only a partial day : from the time of the firmware upgrade to the end of the day. The previous part of the day trend measurements are lost.

(3) the first weekly and monthly trend files after firmware upgrade will also contain partial measurements: from the time of upgrade to the end of week , or month.