

Firmware history

Release Notes PQ3000



GMC INSTRUMENTS

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Version	Change log
V3.16 – 10900 (2024/07/23)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><i>For devices using the pulse outputs: After an update to this firmware version, the configuration of the pulse outputs is void and must be done again.</i></p> </div> <p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Pulse outputs can be set to any pulse rate. <p>Security upgrades</p> <ul style="list-style-type: none"> <input type="checkbox"/> Nginx from 1.21.1 to 1.25.3 <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Large number of frequency events if used outside the rated frequency range <input type="checkbox"/> PQ overview: No graphical display for current harmonics and interharmonics <input type="checkbox"/> SFTP configuration menu was present even for device versions without data logger <input type="checkbox"/> Time scaling of waveform display could be wrong <input type="checkbox"/> In PQ statistic frequency was shown with one decimal place <input type="checkbox"/> CU: An application stored in the device (as .zip) was deleted due to firmware update <input type="checkbox"/> Option PME: Possible wrong units in CSV export of PME data <input type="checkbox"/> CSV data export for 7 days: File was stored in the folder of the first day of the interval rather than the day of the end of the interval, in addition the time range of the file was not visible within the file name and could overwrite daily files with the same content.
V3.13 – 10464 (2024/02/08)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Status of time synchronization directly visible via status bar on the device website <input type="checkbox"/> PQ and energy management data can be periodically saved in specific CSV file format and downloaded for use with PQIS® software <input type="checkbox"/> In the PQ statistic section harmonics and interharmonics of voltages and current can be displayed as daily statistic or as time series <input type="checkbox"/> Limit values can now be set also to negative values, e.g. for monitoring power quantities for both import and export <input type="checkbox"/> Option PME: Configurable radio channel map <p>Security upgrades</p> <ul style="list-style-type: none"> <input type="checkbox"/> OpenSSH from 8.7p1 to 8.9p1 <input type="checkbox"/> Host Key Algorithms SSH-RSA and SSH-DSS no longer supported by default, but may be activated if required for SFTP communication <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Unreliable meter logger data download via WEB interface if larger time ranges are read <input type="checkbox"/> Configuration menu for temperature input settings did not work properly <input type="checkbox"/> In units of digital input meters the time factor (h) was missing <input type="checkbox"/> Option PME: Automatic adjustment of radio transmission power did not work <input type="checkbox"/> Option PME: Current IN calculated if measuring in a 4-wire network using 3-phase modules <input type="checkbox"/> Option PME: Improved battery load level estimation
V3.10 – 9665 (2023/08/30)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Support for option PME central unit <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> The list of CSV files created via data export scheduler could no longer be displayed via device website when too may files were stored in the device. The storage of the files and the export capability to SFTP servers were not affected. <input type="checkbox"/> Possible settings values for limits were restricted to a maximum of 100'000'000, now changed to 10'000'000'000.

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V3.08 – 9533 (2023/04/20)	Fixes <ul style="list-style-type: none"> <input type="checkbox"/> IEEE519: Missing data reported although all values were present <input type="checkbox"/> IEEE519: Wrong assessment of 3 sec. voltage harmonics if rated voltage $\geq 1\text{kV}$ <input type="checkbox"/> IEC61000-2-4 class 3: Wrong limit value for 15th voltage harmonic
V3.06 – 9366 (2023/02/23)	Fixes <ul style="list-style-type: none"> <input type="checkbox"/> Setting of meter contents did not work properly <input type="checkbox"/> Reset of meter contents in case of overflow
V3.05 – 9108 (2022/11/23)	New features <ul style="list-style-type: none"> <input type="checkbox"/> Zoom functionality in PQ daily statistics <input type="checkbox"/> Improved graphical representation of PQ statistic overview including mouse-over functionality Security upgrades <ul style="list-style-type: none"> <input type="checkbox"/> Nginx from 1.16.0 to 1.21.1 <input type="checkbox"/> OpenSSH from 8.2p1 to 8.7p1 Fixes <ul style="list-style-type: none"> <input type="checkbox"/> Improved error reporting for SFTP communication test function <input type="checkbox"/> SFTP server export not possible if file names contain UTF8 characters <input type="checkbox"/> Wrong maximum values for THD_U <input type="checkbox"/> Setting parameter for homopolar voltage measurement not available <input type="checkbox"/> Wrong time stamps in CSV export of waveform display data <input type="checkbox"/> Delayed entries to alarm and event list <input type="checkbox"/> New Audit log entry when pending SFTP file exports complete <input type="checkbox"/> Reset of min/max values via Modbus coils did not work <input type="checkbox"/> Activation of whitelist blocks Modbus/TCP communication <input type="checkbox"/> Missing data in meter logger if 1 min. interval is used
V2.05 – 8160 (2022/03/02)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><i>Once installed, it is not possible to return to an older firmware version</i></p> </div> Fixes <ul style="list-style-type: none"> <input type="checkbox"/> In rare cases an Ethernet interface connection could not be established after a factory reset or device restart <input type="checkbox"/> Password length for SFTP server access was limited to 12 characters <input type="checkbox"/> Configuration parameter for maximum load current (for scaling of TDD values) not available via menu <input type="checkbox"/> Homopolar voltage (zero displacement voltage) may be displayed in event recordings for 3-wire systems <input type="checkbox"/> RCM channels and temperature sensor types could not be activated via on-site display

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V2.04 – 7857 (2021/12/07)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><i>This is a crucial update for the long-term stability improvement of the device. Once installed, it is not possible to return to an older version of the firmware.</i></p> </div> <p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Support for Unicode characters (UTF8) in all user-defined event and description texts. These texts are used in event lists, for PQ reporting and as part of the CSV and PQDIF file names. <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Missing scaling for current harmonics / interharmonics in PQ daily statistic <input type="checkbox"/> Wrong storage path for local storage of CSV data files. Files stored in the wrong directory will be transferred to the correct folder. <input type="checkbox"/> Crash of WEB-GUI when displaying mains signaling events <input type="checkbox"/> U_{NE} could not be displayed in event samples visualization <input type="checkbox"/> Fault current module configuration not protected via RBAC <input type="checkbox"/> PQ event list display could be different for local and WEB-GUI <input type="checkbox"/> Via local display input values in analog output configuration had to be entered in basic units rather than the displayed unit <input type="checkbox"/> Event state in status bar was not reset if event duration was longer than 3 minutes <input type="checkbox"/> Devices with RCM get stuck after a certain period of time
V2.03 – 7001 (2021/06/11)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> EasyUpdater: Software for firmware updates <input type="checkbox"/> Selectable periodic PQDIF format: Data in three files or one file, generated daily or weekly, either for one or 7 days <input type="checkbox"/> PQDIF with additional frequency trend data (10-min average) <input type="checkbox"/> Selectable decimal separator for CSV export for easy import into Excel <input type="checkbox"/> Additional daily PQ assessment for 3-s quantities according IEEE519 <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Factory reset <input type="checkbox"/> Double ITIC graphic in PQEasy report <input type="checkbox"/> Event-driven PQDIF generation did not work <input type="checkbox"/> States of optional temperature and fault-current channels not selectable as input in monitoring functions or as source for digital output states <input type="checkbox"/> Possibly wrong display values of fault-current module if channel 1 is not used <input type="checkbox"/> Wrong scaling of instantaneous values of user defined mean-values when displayed on local GUI or webpage
V2.02 – 6518 (2021/03/08)	<p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Factory reset not complete <input type="checkbox"/> Non-working screensaver in power-down mode <input type="checkbox"/> Mains signaling events not visible in appropriate event list <input type="checkbox"/> Date selection not always displayed in mean-values logger display

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V2.01 – 6308 (2021/02/01)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Support for IPv6 communication <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Non-working screensaver <input type="checkbox"/> Configuration file could not be uploaded via web-interface <input type="checkbox"/> Defining new tasks in the export scheduler not possible <input type="checkbox"/> Possibility to set improper alarm limits for fault-current module via local GUI <input type="checkbox"/> Time difference of events in PQ-Easy report if device is located in a different time zone
V2.00 – 6162 (2020/12/04)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Security: Role-Based Access Control (RBAC) as replacement for the Simple Password Protection. Individual access rights may be assigned to up to 8 users with own login credentials. No plain-text transmission of login information, increase of the latency period in case of repeated login attempts, software access only via access keys etc. <input type="checkbox"/> Security: Audit log as replacement for the operator list. Logging of all activities relevant to safety. <input type="checkbox"/> Security: Support for Syslog protocol for transferring all audit log entries to a central grid monitoring server <input type="checkbox"/> Enhanced monitoring of PQ events: Current swell, voltage imbalance (homopolar voltage) and frequency event <input type="checkbox"/> Enhanced PQ event recording capability for waveforms: Up to 1 second before and 5 seconds after the event <input type="checkbox"/> Additional recordings of 10-min trends of frequency and mains signaling voltage, previously available as daily histogram only <input type="checkbox"/> New features when analyzing events via webpage: Zoom and value display <input type="checkbox"/> New features when analyzing daily PQ trends: Values display without limits and / or min/max fluctuation <input type="checkbox"/> PQ Easy-Report: Support for IEE519 and GB/T <input type="checkbox"/> PQ-Easy-Report: Lower limit of no-damage region in ITIC curve configurable <input type="checkbox"/> Data export scheduler for pushing CSV or PQDIF files periodically or event-driven to an SFTP server. The same files may be stored locally in the device as well. <input type="checkbox"/> Language support Turkish, Czech and Spanish <input type="checkbox"/> Filters for time range and event type in PQ event list <input type="checkbox"/> Device handbook available via webpage <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Character set problems when creating PQ-Easy-Reports if Chinese, Ukrainian or Russian language is selected
V1.16 – 5261 (2020/03/19)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Language support Ukrainian <input type="checkbox"/> Language support Russian <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update

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V1.15 – 4973 (2019/11/18)	<p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Rare occurrences of wrong out of range 10-sec frequency measurements affecting the appropriate PQ statistic <input type="checkbox"/> After device restart energy meter contents may be smaller than the values before the restart <p>Requirements</p> <p>At least updater v2.0 is required for firmware update</p>
V1.14 – 4884 (2019/09/06)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Encrypted communication via HTTPS using either a provided self-signed or customer certificate <input type="checkbox"/> Client whitelist: User may define a list of up to 10 clients allowed to access the device. If activated, all other clients will be blocked <input type="checkbox"/> Simulation of digital and analog outputs without changing the device configuration <input type="checkbox"/> Extended PQDIF for power quality data export. Added quantities are: current statistics for mean values, imbalance, harmonics, interharmonics and TDD as well as standard mean values for active / reactive power demand and apparent power <input type="checkbox"/> Enhanced SD card state information (percent of usage, failure state) <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Customized PQ statistic limit values cannot be stored in the device <input type="checkbox"/> Power quality data analysis when measurement device and analysis PC are located in different time zones <input type="checkbox"/> Possibly wrong unit in created csv files of PQ events <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update
V1.13 – 4544 (2019/03/15)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Support for optional temperature input module <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update
V1.12 – 4386 (2019/02/28)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Support for optional PROFINET IO interface <input type="checkbox"/> Network status display in status bar <input type="checkbox"/> Signalling of measuring range overflow situations <input type="checkbox"/> Whitelist for Ethernet interface for blocking unauthorized clients <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Improvements in CSV file export <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update
V1.11 – 4213 (2019/02/06)	<p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Mismatch in alarming of fault current channels in slot 2 <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update

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V1.10 – 3864 (2018/11/16)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> PQ conformity report directly via webpage of the device <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fault current module: Missing entries for user-defined channel names <input type="checkbox"/> Measurements with bad quality (such as overload) could have been stored as minimum or maximum value <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update
V1.09 – 3280 (2018/08/12)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Support for optional IEC61850 communication <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update
V1.08 – 3224 (2018/07/26)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Language support Vietnamese <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fault current module: Missing entries for user-defined channel names <input type="checkbox"/> The local display could freeze when disconnecting the Ethernet interface connector <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update
V1.07 – 3171 (2018/06/28)	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Support for new 2-channel fault current module: <ul style="list-style-type: none"> - Alarm and pre-warning thresholds - Response and dropout delays - Alarming via digital outputs and relays - Alarming or breakage activates the summary alarm - In case of alarm violation: Entry into alarm list - In case of pre-warning violation: Entry into event list - Measurements available via WEB-interface, Modbus RTU/TCP, local display and analog outputs <input type="checkbox"/> Language support Polish <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> New color sequence of phases in graphical displays: red - yellow - blue <input type="checkbox"/> Demo mode for product presentations fixed <input type="checkbox"/> Summary alarm state no longer influenced by reset of associated output <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update

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<p>V1.06 – 2958 (2018/05/07)</p>	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Additional PQDIF content: Duration of PQ events and harmonics / interharmonics up to the 50th <input type="checkbox"/> New PQ logger content: Short time flicker Pst <input type="checkbox"/> Compliance to various standards can now be tested directly via device website by selecting either one of 11 standards with predefined limits or any self-defined limit set. <input type="checkbox"/> Details of the PQ statistic can be displayed directly via website on a daily basis, i.e.: <ul style="list-style-type: none"> - Trend of 10-min values of voltages, currents, Pst / Plt, imbalance U/I and THDU - Statistical distribution of 10-s frequency - Bar graphs of harmonics / interharmonics contents U/I <input type="checkbox"/> Phase sequence display for voltages and currents <input type="checkbox"/> In the visualization of user mean-values and meters now the base quantity is directly visible <input type="checkbox"/> New service menu: Device reboot <input type="checkbox"/> New service menu: Communication tests (Ping, DNS, NTP) <input type="checkbox"/> Support for time synchronization via GPS <input type="checkbox"/> Unused U/I quantities in waveform and event displays are faded out <input type="checkbox"/> Language support Chinese <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Deleting of PQ data on request <input type="checkbox"/> Operating hours of the device: Possible 47 years offset issue solved <input type="checkbox"/> For mean-values modifications a device reboot was required <input type="checkbox"/> Overwriting of security settings when loading configuration file even if not selected <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> At least updater v2.0 is required for firmware update
<p>V1.05 – 2378 (2017/11/17)</p>	<p>New features</p> <ul style="list-style-type: none"> <input type="checkbox"/> Support for module “4 digital inputs” active / passive <p>Fixes</p> <ul style="list-style-type: none"> <input type="checkbox"/> Removing a backdoor security gap <input type="checkbox"/> Wrong unit in disturbance logger when used in medium voltage applications <input type="checkbox"/> Partly hang-up on webpage when closing popup window with answer “No” or “x” <input type="checkbox"/> CSV export of large logger data sets <input type="checkbox"/> PQ event logger: Event detection in 3 phase 3 wire applications <input type="checkbox"/> Deleting PQDIF files when resetting PQ data <input type="checkbox"/> Correction of PQ statistic when used in medium voltage 3-phase 3-wire applications <p>Requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> Updater v2.0 is required for firmware update

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V1.04 – 2194 (2017/09/21)	Update of product release Fixes <ul style="list-style-type: none"> <input type="checkbox"/> Event recognition for 3 phase / 3 wire applications <input type="checkbox"/> Correction of RVC event data <input type="checkbox"/> Startup problems <input type="checkbox"/> Event text input issue when using special symbols <input type="checkbox"/> Summary alarm state may remain active when removing monitoring functions from the status evaluation <input type="checkbox"/> Endless hourglass symbol on empty event lists Requirements <ul style="list-style-type: none"> <input type="checkbox"/> Updater v2.0 is required for firmware update
V1.03 – 2043 (2017/08/09)	Update of product release Fixes <ul style="list-style-type: none"> <input type="checkbox"/> Recording of harmonics and interharmonics did not work <input type="checkbox"/> ΔU_{ss} estimation of RVC events haven't been phase related <input type="checkbox"/> Configuration changes of mean-values and meters needed a power up to be taken over <input type="checkbox"/> No default gateway setting in updater mode Requirements <ul style="list-style-type: none"> <input type="checkbox"/> Updater v2.0 is required for firmware update
V1.02 – 2002 (2017/07/21)	Official product release New features <ul style="list-style-type: none"> <input type="checkbox"/> EN50160 overview completed <input type="checkbox"/> PQDIF file generation for all data needed for a EN50160 analysis <input type="checkbox"/> Reset of PQ data deletes not only event data but also all other PQ recordings <input type="checkbox"/> Support for UPS Fixes <ul style="list-style-type: none"> <input type="checkbox"/> Correction in RVC detection <input type="checkbox"/> Problems with SD card handling fixed Requirements <ul style="list-style-type: none"> <input type="checkbox"/> Updater v2.0 is required for firmware update
V1.01 – 1795 (2017/05/12)	Beta release for internal demo use New features <ul style="list-style-type: none"> <input type="checkbox"/> Startup (faster) <input type="checkbox"/> Daily generation of pqdif files <input type="checkbox"/> Generating statistic files <input type="checkbox"/> EN50160 overview (beta) Fixes <ul style="list-style-type: none"> <input type="checkbox"/> Stability of configuration data Requirements <ul style="list-style-type: none"> <input type="checkbox"/> Updater v2.0 is required for firmware update
V1.00 – 1546 (2017/02/17)	Initial release for internal demo use