Firmware history

# Release Notes CU5000

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| Version | Change log |
|---------|-----------|
| V3.16 – 10900 (2024/07/23) | ***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.***<br><br>**New features**<br>☐ Pulse outputs can be set to any pulse rate.<br><br>**Security upgrades**<br>☐ Nginx from 1.21.1 to 1.25.3<br><br>**Fixes**<br>☐ SFTP configuration menu was present even for device versions without data logger<br>☐ Time scaling of waveform display could be wrong<br>☐ Option PME: Possible wrong units in CSV export of PME data<br>☐ 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.<br>☐ An application stored in the device (as .zip) was deleted due to firmware update |
| V3.13 – 10505 (2024/02/13) | **New features**<br>☐ Status of time synchronization directly visible via status bar on the device website<br>☐ Limit values can now be set also to negative values, e.g. for monitoring power quantities for both import and export<br>☐ Option PME: Configurable radio channel map<br><br>**Security upgrades**<br>☐ OpenSSH from 8.7p1 to 8.9p1<br>☐ Host Key Algorithms SSH-RSA and SSH-DSS no longer supported by default, but may be activated if required for SFTP communication<br><br>**Fixes**<br>☐ Unreliable meter logger data download via WEB interface if larger time ranges are read<br>☐ Configuration menu for temperature input settings did not work properly<br>☐ In units of digital input meters the time factor (h) was missing<br>☐ Option PME: Automatic adjustment of radio transmission power did not work<br>☐ Option PME: Current IN calculated if measuring in a 4-wire network using 3-phase modules<br>☐ Option PME: Improved battery load level estimation |
| V3.10 – 9665 (2023/08/30) | **New features**<br>☐ Support for option PME central unit<br><br>**Fixes**<br>☐ For devices with data logger for periodic data: 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.<br>☐ For devices without data logger the SFTP configuration menu is displayed, although no data is available for export via SFTP<br>☐ Possible settings values for limits were restricted to a maximum of 100'000'000, now changed to 10'000'000'000. |
| V3.06 – 9366 (2023/02/23) | **Fixes**<br>☐ Setting of meter contents did not work properly<br>☐ Reset of meter contents in case of overflow |

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| **V3.05 – 9108**<br>(2022/11/23) | **Security upgrades**<br>☐ Nginx from 1.16.0 to 1.21.1<br>☐ OpenSSH from 8.2p1 to 8.7p1<br>**Fixes**<br>☐ Improved error reporting for SFTP communication test function<br>☐ SFTP server export not possible if file names containing UTF8 characters<br>☐ Wrong maximum values for THD_U<br>☐ Setting parameter for homopolar voltage measurement not available<br>☐ Wrong time stamps in CSV export of waveform display data<br>☐ Delayed entries to alarm and event list<br>☐ New Audit log entry when pending SFTP file exports complete<br>☐ Reset of min/max values via Modbus coils did not work<br>☐ Activation of whitelist blocks Modbus/TCP communication<br>☐ Missing data in meter logger if 1 min. interval is used |
| **V2.05 – 8160**<br>(2022/03/02) | *Once installed, it is not possible to return to an older firmware version*<br><br>**New features**<br>☐ Support for measuring homopolar voltage (zero displacement voltage) in 3-wire systems.<br>**Fixes**<br>☐ In rare cases an Ethernet interface connection could not be established after a factory reset or device restart<br>☐ Password length for SFTP server access was limited to 12 characters<br>☐ Configuration parameter for maximum load current (for scaling of TDD values) not available via menu<br>☐ Homopolar voltage (zero displacement voltage) may be displayed in event recordings for 3-wire systems<br>☐ RCM channels and temperature sensor types could not be activated via on-site display |
| **V2.04 – 7857**<br>(2021/12/07) | *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.*<br><br>**New features**<br>☐ Support for Unicode characters (UTF8) in all user-defined description texts. These texts are used as part of the CSV file names.<br>**Fixes**<br>☐ Wrong storage path for local storage of CSV data files. Files stored in the wrong directory will be transferred to the correct folder.<br>☐ Crash of WEB-GUI when displaying mains signaling events<br>☐ $U_{NE}$ could not be displayed in event samples visualization<br>☐ Fault current module configuration not protected via RBAC<br>☐ Event state in status bar was not reset if event duration was longer than 3 minutes<br>☐ Devices with RCM get stuck after a certain period of time<br>☐ Texts for "Device location" and "Test point" could not be configured |

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| V2.03 – 7001<br>(2021/06/11) | **New features**<br>☐ EasyUpdater: Software for firmware updates<br>☐ Selectable decimal separator for CSV export for easy import into Excel<br><br>**Fixes**<br>☐ Factory reset<br>☐ Wrong scaling of instantaneous values of user defined mean-values when displayed on local GUI or webpage<br>☐ Possibly wrong display values of fault-current module if channel 1 is not used |
| V2.02 – 6518<br>(2021/03/08) | **Fixes**<br>☐ Factory reset not complete<br>☐ Non-working screensaver in power-down mode<br>☐ Date selection not always displayed in mean-values logger display |
| V2.01 – 6308<br>(2021/02/01) | **New features**<br>☐ Support for IPv6 communication<br><br>**Fixes**<br>☐ Non-working screensaver<br>☐ Configuration file could not be uploaded via web-interface<br>☐ Defining new tasks in the export scheduler not possible<br>☐ Possibility to set improper alarm limits for fault-current module via local GUI |
| V2.00 – 6162<br>(2020/12/04) | **New features**<br>☐ 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.<br>☐ Security: Audit log as replacement for the operator list. Logging of all activities relevant to safety.<br>☐ Security: Support for Syslog protocol for transferring all audit log entries to a central grid monitoring server<br>☐ New features when analyzing events via webpage: Zoom and value display<br>☐ 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.<br>☐ Language support Turkish, Czech and Spanish<br>☐ Device handbook available via webpage<br>☐ On further firmware updates the Codesys application will no longer be deleted<br>☐ Available random access memory for storage of process variables (≤ 50MB) is checked during compilation in the Codesys environment. |
| V1.16 – 5261<br>(2020/03/19) | **New features**<br>☐ Language support Ukrainian<br>☐ Language support Russian<br><br>**Requirements**<br>☐ At least updater v2.0 is required for firmware update |

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| V1.15 – 4973<br>(2019/11/18) | **Fixes**<br>☐ After device restart energy meter contents may be smaller than the values before the restart<br><br>**Requirements**<br>☐ At least updater v2.0 is required for firmware update |
| V1.14 – 4884<br>(2019/09/06) | **New features**<br>☐ Encrypted communication via HTTPS using either a provided self-signed or customer certificate<br>☐ 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<br>☐ Enhanced SD card state information (percent of usage, failure state)<br><br>**Requirements**<br>☐ At least updater v2.0 is required for firmware update |
| V1.13 – 4544<br>(2019/03/15) | **New features**<br>☐ Support for optional temperature input module<br><br>**Requirements**<br>☐ At least updater v2.0 is required for firmware update |
| V1.12 – 4386<br>(2019/02/28) | **New features**<br>☐ Network status display in status bar<br>☐ Signalling of measuring range overflow situations<br>☐ Whitelist for Ethernet interface for blocking unauthorized clients<br><br>**Fixes**<br>☐ Improvements in CSV file export<br><br>**Requirements**<br>☐ At least updater v2.0 is required for firmware update |
| V1.11 – 4213<br>(2019/02/06) | **Fixes**<br>☐ Mismatch in alarming of fault current channels in slot 2<br><br>**Requirements**<br>☐ At least updater v2.0 is required for firmware update |

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| V1.10 – 3864<br>(2018/11/16) | **Associated device package**<br>☐  V1.10.1.194<br><br>**New features**<br>☐  Support for RETAIN variables (non-volatile memory), up to 1000 bytes, for all performance classes<br>☐  Free usable CODESYS Modbus registers (4x: 48528 – 48655; 0x: 60 – 75) can now also be written via CODESYS application<br>☐  Usage of RS485 interface programmable, either as Modbus/RTU slave or for CODESYS as Modbus/RTU master<br>☐  Release of Performance class PROFESSIONAL including<br>   o  Support for user-defined WEB visualizations (WebVisu)<br>   o  Support for user-defined visualizations on the local display (TargetVisu) for device versions with display<br>   o  Data logging via CODESYS application: Up to 20 BOOL, 20 REAL and 20 LREAL variables with freely definable names and units<br><br>**Fixes**<br>☐  Disturbance logger data could not be loaded on the local display (if present)<br>☐  Measurements with bad quality (such as overload) could have been stored as minimum or maximum value<br><br>**Requirements**<br>☐  At least updater v2.0 is required for firmware update |
| V1.09 – 3280<br>(2018/08/12) | **Associated device package**<br>☐  V1.9.1.140<br><br>**New features**<br>☐  Support for optional IEC61850 communication<br><br>**Requirements**<br>☐  At least updater v2.0 is required for firmware update |
| V1.08 – 3224<br>(2018/07/26) | **Associated device package**<br>☐  V1.8.1.148<br><br>**New features**<br>☐  Language support Vietnamese<br><br>**Fixes**<br>☐  In case of aborting the configuration of fault current channels some parameters were still saved by mistake<br>☐  The local display could freeze when disconnecting the Ethernet interface connector<br><br>**Requirements**<br>☐  At least updater v2.0 is required for firmware update |

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| V1.07 – 3171<br>(2018/06/28) | **Associated device package**<br>☐ V1.7.1.136<br><br>**New features**<br>☐ Support for new 2-channel fault current module:<br>   - Alarm and pre-warning thresholds<br>   - Response and dropout delays<br>   - Alarming via digital outputs and relays<br>   - Alarming or breakage activates the summary alarm<br>   - In case of alarm violation: Entry into alarm list<br>   - In case of pre-warning violation: Entry into event list<br>   - Measurements available via WEB-interface, Modbus RTU/TCP, local display and analog outputs<br>☐ Language support Polish<br><br>**Fixes**<br>☐ New color sequence of phases in graphical displays: red - yellow - blue<br>☐ Demo mode for product presentations fixed<br>☐ Summary alarm state no longer influenced by reset of associated output<br>☐ Modbus/RTU master functionality<br><br>**Requirements**<br>☐ At least updater v2.0 is required for firmware update |
| V1.06 – 2958<br>(2018/05/07) | **Associated device package**<br>☐ V1.6.1.97<br><br>**New features**<br>☐ Phase sequence display for voltages and currents<br>☐ In the visualization of user mean-values and meters now the base quantity is directly visible<br>☐ New service menu: Device reboot<br>☐ Support for time synchronization via GPS<br>☐ Unused U/I quantities in waveform and event displays are faded out<br>☐ Language support Chinese<br><br>**Fixes**<br>☐ For mean-values modifications a device reboot was required<br>☐ Overwriting of security settings when loading configuration file even if not selected<br>☐ Time / date setting via local display<br>☐ Missing support for optional digital inputs in Codesys<br><br>**Requirements**<br>☐ At least updater v2.0 is required for firmware update |

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| V1.05 – 2468<br>(2017/12/18) | **Associated device package**<br>☐ V1.5.1.78<br><br>**New features**<br>☐ Release of Performance class ADVANCED including<br>  o User definable Modbus image with up to 1000 registers for measurement data and up to 200 status information<br>  o Modbus/RTU master functionality (via optional RS-485)<br>  o Modbus/TCP master functionality (via Ethernet)<br>  o Extensive library with predefined Modbus devices<br>☐ New communication tests: PING, DNS, NTP<br>☐ Support for time functions and other time sequences<br><br>**Fixes**<br>☐ Correction of manual time setting<br><br>**Requirements**<br>☐ Updater v2.0 is required for firmware update |
| V1.04 – 2378<br>(2017/11/17) | **Associated device package**<br>☐ V1.4.1.52<br><br>**New features**<br>☐ Support for optional module "4 digital inputs" active / passive<br>☐ Support for optional UPS module<br><br>**Fixes**<br>☐ Removing a backdoor security gap<br>☐ Wrong unit in disturbance logger when used in medium voltage applications<br>☐ Partly hang-up on webpage when closing popup window with answer "No" or "x"<br>☐ CSV export of large logger data sets<br>   Disturbance logger: Event detection in 3 phase 3 wire applications<br><br>**Requirements**<br>☐ Updater v2.0 is required for firmware update |
| V1.03 – 2194<br>(2017/09/21) | **Associated device package**<br>☐ V1.3.1.29<br><br>**New features**<br>☐ Minimum cycle time for main task reduced to 20ms<br>☐ Main task may be synchronized to instantaneous values creation<br><br>**Fixes**<br>☐ Stability of data logger functionality<br>☐ Improvement of device startup behavior<br>☐ Event text input issue when using special symbols<br>☐ Summary alarm state may remain active when removing monitoring functions from the status evaluation<br>☐ Endless hourglass symbol on empty event lists<br>☐ Minor bug fixes<br>☐ Faster reaction time for analog / digital outputs<br><br>**Requirements**<br>☐ Updater v2.0 is required for firmware update |

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| V1.02 – 1795<br>(2017/05/12) | **Associated device package**<br>☐ V1.2.0.219<br><br>**New features**<br>☐ startup (faster)<br><br>**Fixes**<br>☐ stability of configuration data<br><br>**Requirements**<br>☐ Updater v2.0 is required for firmware update |
| V1.01 - 1547 | **Associated device package**<br>☐ V1.0.158.0<br><br>Initial release BASIC edition |
| V1.00 - 1394 | Initial release for internal demo use |