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## Firmware update release 2.0.3 for 611 series IEC product version G protection relays

### Scope

Firmware update release 2.0.3 is for the following 611 series protection relays:

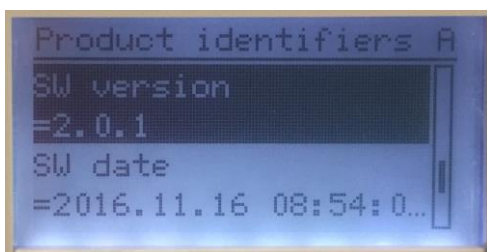
- REF611
- REM611
- REB611
- REU611

To verify that the firmware update applies to the protection relay version, ensure that the last character of the order code on the label on top of the human-machine interface (HMI) match the corresponding character of the order code in Fig. 1.

REx611xxxxxxxxxxxG

*Fig 1. Order code of the 611 series protection relays*

To identify the current firmware revision of the 611 series protection relay, please refer to Fig. 2.



*Fig. 2 Current firmware revision of the 611 series protection relay*

## Implemented usability improvements

The firmware update release includes usability improvements, but introduces no new functionality. The following improvements have been implemented:<sup>1</sup>

### Communication

- Modbus communication bit SSR3 Bit 6 indicating device startup behavior improved.
- Limitation to the maximum number of files that can be opened by the MMS client. This improves the situation with certain types of MMS clients stressing the relay's filesystem and then causing the Internal Fault "File system error" (Fault code 7).
- Relay moving from Application mode to Bootloader mode improved for Ethernet communication.
- Improvement to the 1588 transparent clock message handling when the 1588 time synch source is not being selected but the Switch or HSR Ethernet topology is being used.
- Improved the SNTP time synchronization tolerance that is avoiding unwanted switching between primary and secondary time sync masters with less accurate time sync masters.
- Time synchronization performance improvement for less accurate time master setups causing unwanted Synch status up/down events.
- Improvement to the 1588 time synchronization master switch-over situation.
- Correction to the Modbus protocol initialization in cases where the Modbus is used together with the Profibus/SPA-ZC302. Correction prevents unexpected self-restarting of the relay in the situations where the Modbus is not first manually initialized by restarting the relay after Modbus is enabled.

### Engineering

- Improved currents and voltages IEC 61850 data objects mapping to different data object levels.

### Protection

- Relay setting group change via SPCGGIO outputs control improved.

### Supervision

- Self-supervision recovery time improved in case of IRF Code 83 or 116.
- Self-supervision recovery handling improved in case of IRF Code 79.
- Internal diagnostic improvement for the self-supervision.

## Known limitations

If the PCM600 project is created by using 611 series Connectivity Package 2.0 then you must create a new PCM600 project with the latest (2.0.1 or later) Connectivity Package version. Please note that in this

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<sup>1</sup> The relay firmware update may also include some minor usability improvements not listed in this note.

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case GOOSE configuration has to be re-configured after the firmware update. The detailed instructions are available in the 611 series Firmware Update Guideline.

### **Update procedure**

Firmware updates represent an integral part of ABB's life cycle management of distribution protection and control relays. The updates ensure optimized usability throughout the relay's entire life cycle by offering the latest improvements. The ideal time for a firmware update would be during periodical testing or a maintenance break.

All 611 series IEC/CN version 2.0 (G) product deliveries dispatched later than August 22, 2019 include the stated relay firmware update 2.0.3.

Please note that ABB will not be liable for any direct or indirect costs related to the firmware update procedure. The update procedure shall be performed at the sole responsibility of the possessor of the installed base.