

RELEASE NOTE, 2NGA002467

## REX610 firmware update release 1.2.1

### Scope

Firmware update release 1.2.1 is for the following product:

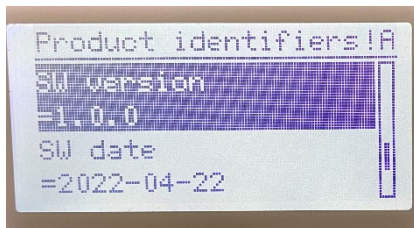
- REX610

To verify that the firmware update applies to the product version, ensure that the first six characters of the order code on the label on the human-machine interface (HMI) match the corresponding characters of the order code in Fig. 1.

**REX610**xxxxxxxx

*Fig 1. Order code of the REX610 protection relay*

To identify the current firmware (SW) revision of the REX610 protection relay, please refer to Fig. 2.



*Fig. 2. The firmware revision of the REX610 protection relay*

## Implemented usability improvements

The firmware update release includes usability and operational improvements. The following additions have been implemented:<sup>1</sup>

### Firmware update release 1.2.1:

#### Communication

- Improvement to PEMXXU signals not visible in CMT tool

- Improvement to IEC 61850 communication

- Improvement to Modbus communication

#### Other

- Improvement to FW update for ARC module

- Improvement to SNTP to support also NTP version 3

- Improvement to LHMI functionality

---

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

**Firmware update release 1.2.0:**

**Logging**

Fault recorder FLTRFRC (FAULTREC / FR)

**Communication**

IEC 61850 Edition 2 conformance

## **Firmware update release 1.1.1:**

### **HMI**

Improvement to local HMI firmware to avoid some rare HMI freezing. The HMI freeze might not be visually noticed as the Ready LED is still lit, but the keypad is unresponsive and relay fault contact is activated. It is recommended that all REX610 are updated to firmware 1.1.1 or later.

Improvement to LED handling during restart.

Improvement to reservation handling while using HMI to avoid failed common write from PCM600.

### **Protection**

Improvement to ARCSARC that calculated residual current can also be used.

### **Control**

Improvement to control authority handling so state is not turned off when changing test mode setting.

### **Communication**

Improvement to SNTP time synchronization.

Improvement on GOOSE receiving when VLAN is changed.

Improvement to IEC 61850 MMS report trigger options.

Improvement to Mod and beh parameters for ARC1PIOC, ARC2PIOC, ARCPTRC, FRPFRC, FRPTUF, FRPTOF, STTPMRI and PEMMTR.

Improvement to GOOSE subscription when publisher is restarting.

### **Supervision**

Improvement to DIO card error handling to avoid multiple events triggered to HMI during DIO card fault.

### **Engineering**

Improvement to parameter setting tool not showing login pop-up after session timeout.

### **Other**

Improvement to MAPGAPC input signal that was not updating in the HMI menu.

Improvement to MPTTR thermal value in measurement view of HMI.

Improvement to IED name in DR file.

**Firmware update release 1.1.0:****Hardware support**

Support for the ARC2001 module having 3 arc sensor inputs.

**Protection**

Arc protection ARCSARC (ARC / AFD)

Arc function block FSTADAGGIO (FSTADAGGIO / FSTADAGGIO)

Emergency start-up ESMGAPC (ESTART / EST, 62)

Motor load jam protection JAMPTOC (Ist> / 50TDJAM)

Loss of load supervision LOFLPTUC (3I< / 37)

Negative-sequence overcurrent protection for machines MNSPTOC (I2>M / 46M)

Thermal overload protection for motors MPTTR (3Ith>M / 49M)

Negative-sequence overvoltage protection NSPTOV (U2> / 59NS)

Phase reversal protection PREVPTOC (I2>> / 46R)

Motor start-up supervision STTPMSU (Is2t n< / 49, 66, 48, 50TDLR)

Positive-sequence undervoltage protection PSPTUV (U1< / 27PS)

Frequency protection FRPFRQ (f>/f<, df/dt / 81)

**Control**

Synchronism and energizing check SECRSYN (SYNC / 25)

**Measurement**

Additional instance of three-phase voltage measurement VMMXU (3U / VA, VB, VC)

Frequency measurement FMMXU (f / f)

Three-phase power and energy measurement PEMMXU (P, E / P, E)

Sequence voltage measurement VSMSQI (U1, U2, U0 / V1, V2, V0)

**Condition monitoring and supervision**

Runtime counter for machines and devices MDSOPT (OPTS / OPTM)

**Other**

Additional instance of phase and residual voltage preprocessing UTVTR (UTVTR / UTVTR)

## Tools for updating the IED

Tools needed to update to REX610 firmware version 1.2.1:

- PCM600 2.13 or newer
- REX610 Connectivity package 1.2.1 or newer
- REX610 Firmware file version 1.2.1

## 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 REX610 products manufactured later than January 16, 2025, include the stated relay firmware update 1.2.1 or newer. Process of updating the latest firmware to the REX610 can be found in the Engineering Manual, Chapter 3.6 "IED Firmware Update".

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 devices.