

ProcessMaster 630 CRC Checksum

Tracking parameter changes in field devices

EN
English

Vaild for FEP630, FEW630, FEH630, FET632
Firmware version \geq 01.15.00

With the help of CRC checksums in the field device, changes and manipulations to the device can be detected quite quickly. Furthermore, it is also possible to easily check whether device settings are identical on different field devices.

The following use cases apply here:

- The plant engineer wants to check, that parameter set of the same device has not changed since last observation (no change at all).
- The plant engineer wants to configure multiple devices with same parameters. It shall be easy to verify, that all parameters have been transferred correctly. Consider, that ways like HMI, Blue-tooth, Webserver are used to setup devices, which might not support to upload, store and download whole parameter sets.
- For SIL devices, the safety relevant parameters are checked for undocumented changes on a regular base (usually one year)

For displaying the current checksum, three parameters are available in the device menu in the configuration level 'Device Info / ...Transmitter / ... CRC Checksum':

Device Info / ...Transmitter / ... CRC Checksum

All Parameters	CRC 16 checksum of all device parameters
Custom Parameter	CRC 16 checksum of all customer parameters
SIL Safety Parameter	CRC 16 checksum of all SIL-relevant safety parameters

CRC checksum All Parameters

All parameters that can be modified by the user, such as via the LCD-indicator or communication protocols, are included in the checksum calculation. This includes, for example, parameters in the customer area such as units, damping, filters, measurement ranges, or configurations of the field device's inputs and outputs. Additionally, parameters stored in the service menu are also included.

Exceptions are:

- Special communication-specific settings such as baud rate, IP addresses, host names, IEEE format, etc.
- Resetting counters or presetting counters
- Calibration parameters in the service area
- Certain internal service functions in the service area.

The parameters associated with the CRC checksum can be determined using the Excel table attached to this PDF file. See **Excel file with assignment of parameters to CRC checksums** for details.

CRC checksum Custom Parameter

All parameters that are present in the customer-accessible area of the field device and that influence the output of the process parameters. Examples include: measurement ranges, units, configurations of the field device's inputs and outputs, alarm limits, field optimization functions.

Exceptions are:

- Special communication-specific settings such as baud rate, IP addresses, host names, IEEE format, etc.
- Resetting or presetting totalizers.

The parameters associated with the CRC checksum can be determined using the Excel table attached to this PDF file. See **Excel file with assignment of parameters to CRC checksums** for details.

CRC checksum SIL Safety Parameter

All parameters described in the SIL safety manual and relevant to safety. This includes, for example, measurement ranges, operating modes, diagnostic functionalities, or alarm limits.

The parameters associated with the CRC checksum can be determined using the Excel table attached to this PDF file. See **Excel file with assignment of parameters to CRC checksums** for details.

Note

The checksums are recalculated immediately upon saving the associated parameters.

Excel file with assignment of parameters to CRC checksums

Die Excel-Datei befindet sich im Anhang dieser PDF-Datei.

To open the file, simply click on the following icon (function requires JavaScript enabled in the PDF viewer):



ProcessMaster_Che
cksumGroups_FWv0

Alternatively, the file can be opened via the attachment list of the PDF viewer:

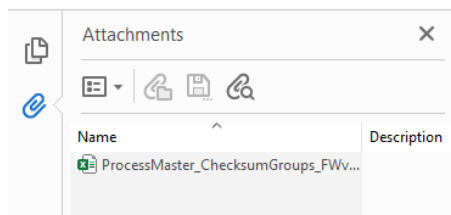


Figure 1: Attachment list in the PDF viewer (example - Adobe Acrobat)

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