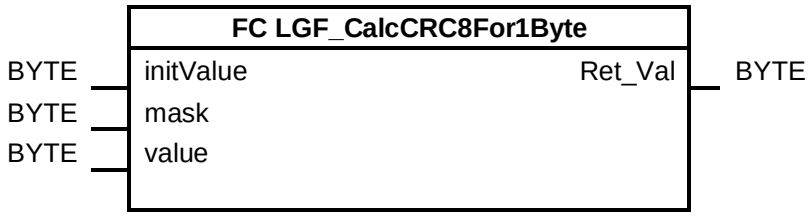
LGF_CalcCRC8For1Byte

Short description

The CRC calculation is used for error detection at data transmission. The result of the calculation provides a CRC value over the transmitted data (BYTE). The receiver detects a faulty transmission due to the unequal CRC value. The function “LGF_CalcCRC8For1Byte” uses 8 bits as the generator polynomial (mask).

Block



Input parameters

Parameters	Data type	Description
initValue	BYTE	Start value with which the calculation is executed. If you do not need a start value, assign 0x0 to the parameter.
mask	BYTE	Generator polynomial with which the calculation is executed.
value	BYTE	Data byte for which the CRC value will be calculated.

Output parameters

Parameters	Data type	Description
Ret_Val	BYTE	Calculated CRC value (return value of the function).

Principle of operation

The block calculates the CRC value from a data byte “value”. The start value “initValue” and the generator polynomial “mask” can be freely selected.

Note

Various online tools are available for calculating the CRC values. The function of the block was tested with the following online tool, since it supports the input parameters “mask” (“Polynomial”) and “initValue” (“Initial Value”):

http://www.sunshine2k.de/coding/javascript/crc/crc_js.html

Further information on libraries in TIA Portal:

- Topic page libraries
  https://support.industry.siemens.com/cs/ww/en/view/109738702
- Guideline on Library Handling
  https://support.industry.siemens.com/cs/ww/en/view/109747503
- Programming Guideline for S7-1200/1500 in chapter “Libraries”
  https://support.industry.siemens.com/cs/ww/en/view/81318674
- Programming Styleguide
  https://support.industry.siemens.com/cs/ww/en/view/81318674