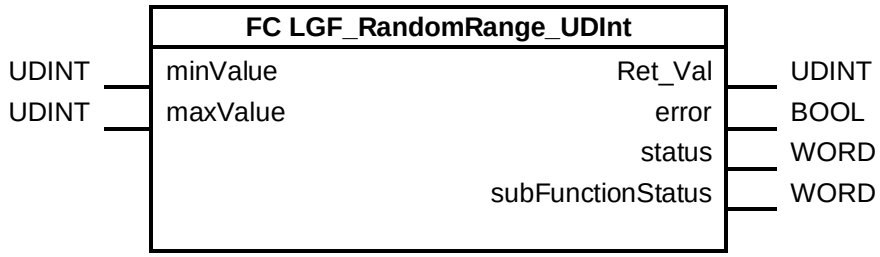
LGF_RandomRange_UDInt

Short description

This block generates a “random” value between a defined maximum and minimum value for each call. The random number has the data type UDINT.

Block



Input parameters

Parameters	Data type	Description
minValue	UDINT	Defines the low limit of the random number.
maxValue	UDINT	Defines the high limit of the random number.

Output parameters

Parameters	Data type	Description
Ret_Val	UDINT	Random number
error	BOOL	FALSE: No error TRUE: An error occurred during the execution of the FB.
status	WORD	16#0000-16#7FFF: Status of the FB, 16#8000-16#FFFF: Error identification (see following Table).
subFunctionStatus	WORD	Status or return value of the called FCs and system blocks.

Status and error displays

status	Meaning	Remedy / notes
16#0000	No error	-
16#8200	“minValue” is greater than “maxValue”.	-
16#8600	Error in “RD_SYS_T” command.	Check the error code in “subFunctionStatus”

Note

The status of called commands is output in “subFunctionStatus”. In this case, the output value in “status” indicates which command caused the error. In this case, refer to the TIA Portal Online Help section for information on the respective commands.

Principle of operation

The block generates random values that are between the specified “minValue” value and the “maxValue” value. This random value is output via the “Ret_Val”.

Background information

The random value is formed from the nanoseconds of the current system time of the CPU. The byte order of this value is inverted and then converted into a normalized integer UDINT.

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