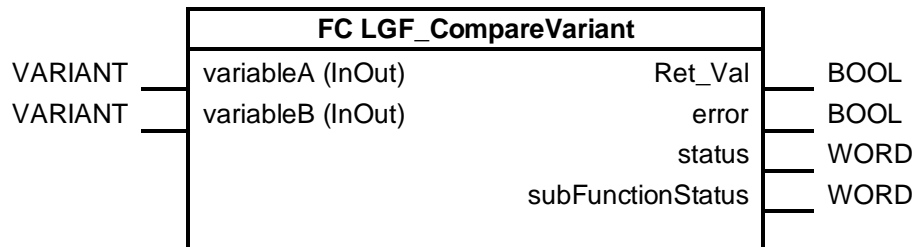


LGF_CompareVariant

Short description

This block compares two structured (array, PLC data type) actual parameters and outputs whether they are of the same type and have the same values.

Block



Input/output parameters (InOut)

Parameters	Data type	Description
variable1	VARIANT	First comparison variable with any data type
variable2	VARIANT	Second comparison variable with any data type

Output parameters

Parameters	Data type	Description
Ret_Val	BOOL	FALSE: Values of comparison variables or PLC data types are different. TRUE: Values of the comparison variables are equal and PLC data types are identical.
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#8201	Error, the input types must match.	-
16#8202	Error, the input types have different lengths after serialization.	"subFunctionStatus" provides an indicator for the different length.
16#8601	Error in "Serialize" "variableA" command.	Check the error code in "subFunctionStatus"
16#8602	Error in "Serialize" "variableB" 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

This block compares two (structured) actual parameters and shows whether they equate to the same value.

Note

The following differences cannot be detected with the comparison method (byte level):

- Variables of the data type "Struct" cannot be compared.
- For strings, there may be differences in the range between the actual length and the maximum length.
- With REAL numbers in the structure, a disparity can also be displayed for "same" variables.
- Variables of the type "ARRAY of BOOL" cannot be checked for equality with the function, because the command used, "CountOfElements", also counts the filling elements (e.g. 8 is returned with an ARRAY[0..1] of BOOL).

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>