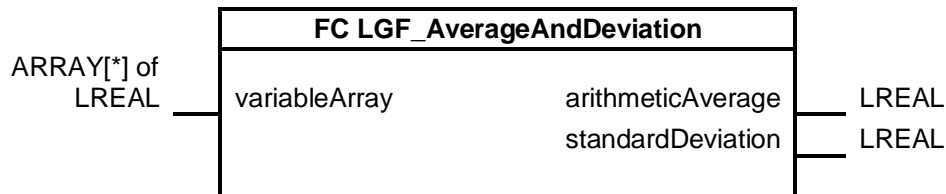


LGF_AverageAndDeviation

Short description

This block calculates the arithmetic mean and the standard deviation from a series of numbers.

Block



Input parameters

Parameters	Data type	Description
variableArray	ARRAY[*] of LREAL	Sequence of numbers to calculate with

Output parameters

Parameters	Data type	Description
arithmeticAverage	LREAL	Arithmetic average value
standardDeviation	LREAL	Standard deviation

Principle of operation

An array of any size is connected via the "variableArray" input. After reading-out the array boundaries, the arithmetic mean value and the standard deviation will be calculated from the values and both will be output.

Note

An array with too many elements can cause the cycle monitoring time to be exceeded.

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>