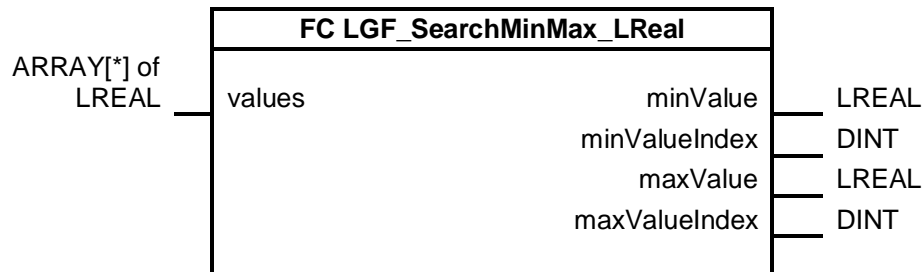## LGF_SearchMinMax_LReal

Short description

This function block searches, in an array of the data type LREAL, for the maximum and minimum value and the respective index in the array.

Block

```
              ┌─────────────────────────────────────┐
              │     FC LGF_SearchMinMax_LReal       │
              ├─────────────────────────────────────┤
ARRAY[*] of   │                                     │
LREAL ────────┤ values                     minValue ├──── LREAL
              │                       minValueIndex ├──── DINT
              │                            maxValue ├──── LREAL
              │                       maxValueIndex ├──── DINT
              │                                     │
              └─────────────────────────────────────┘
```

Input/output parameters (InOut)

Parameters	Data type	Description
values	ARRAY[*] of LREAL	Array in whose fields the maximum and minimum are searched.

Output parameters

Parameters	Data type	Description
minValue	LREAL	Smallest found value.
minValueIndex	DINT	Start index of the array plus minArrayIndex results in the array index of the smallest value. The index starts with 0.
maxValue	LREAL	Largest found value.
maxValueIndex	DINT	Start index of the array plus maxArrayIndex results in the array index of the largest value. The index starts with 0.

Principle of operation

An array of any size is connected via the "values" input. The elements are then compared in turn. The smallest and largest values, as well as their corresponding index are output to the array.

Note	If there are several identical min. or max. values, the index of the first min. or max. value is output.

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