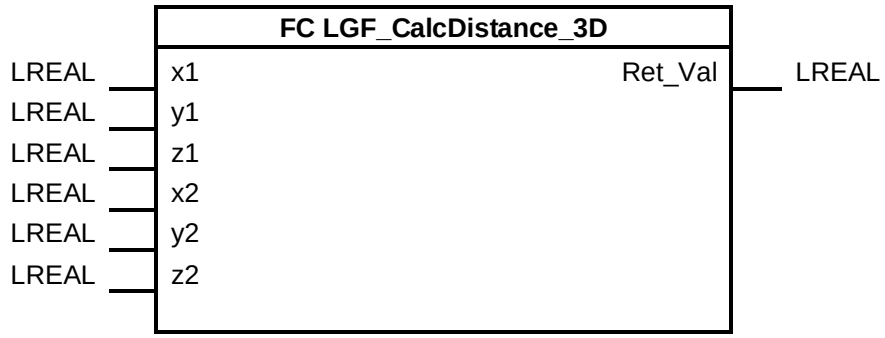
LGF_CalcDistance_3D

Short description

The function calculates the distance between two points in space.

Block



Input parameters

Parameters	Data type	Description
x1	LREAL	X coordinate point 1
y1	LREAL	Y coordinate point 1
z1	LREAL	Z-coordinate point 1
x2	LREAL	X coordinate point 2
y2	LREAL	Y-coordinate point 2
z2	LREAL	Z-coordinate point 2

Output parameters

Parameters	Data type	Description
Ret_Val	LREAL	Calculated distance

Principle of operation

The block calculates the distance between two points in a Cartesian coordinate system. The distance is calculated with the following formula:

$$Ret\_Val = \sqrt[root]{(x2 - x1)^2 + (y2 - y1)^2 + (z2 - z1)^2}$$

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