

Bloc Fonction



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N° Indigo 0 825 825 679
0.15€ TTC/mm

Référence	Linear Approximation
Révision	1.0
Auteur	A. CROIZIT
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+ Support	http://support-omron.fr/

Function Block for Linear Approximation (CJ/CS only)

Basic Function	The LinearApproximation FB calculates $y=f(x)$ when $f(x)$ is not linear													
Symbol														
File	LinearApproximation.cxf													
Applicable Models	CJ series and CS series (not CS1D)													
Function description	<p>Calculates data_out for a data_in using tables table-in and table_data doing linear approximation between two points of tables.</p> <table border="0"> <tr> <td>Quantity = &5</td> <td></td> </tr> <tr> <td>D100 : -100,0</td> <td>D300 : -1000,0</td> </tr> <tr> <td>D102 : -50,0</td> <td>D302 : +2000,0</td> </tr> <tr> <td>D104 : +0,0</td> <td>D304 : -3000,0</td> </tr> <tr> <td>D106 : +50,0</td> <td>D306 : +4000,0</td> </tr> <tr> <td>D108 : +100,0</td> <td>D308 : -5000,0</td> </tr> </table> <p> data_in = -101,0 => data_out = -1000,0 data_in = -100,0 => data_out = -1000,0 data_in = -99,0 => data_out = -940,0 data_in = -1,0 => data_out = -2900,0 data_in = 0,0 => data_out = -3000,0 data_in = +1,0 => data_out = -2860,0 data_in = 51,0 => data_out = +3820,0 data_in = +100,0 => data_out = -5000,0 data_in = +101,0 => data_out = -5000,0 </p>		Quantity = &5		D100 : -100,0	D300 : -1000,0	D102 : -50,0	D302 : +2000,0	D104 : +0,0	D304 : -3000,0	D106 : +50,0	D306 : +4000,0	D108 : +100,0	D308 : -5000,0
Quantity = &5														
D100 : -100,0	D300 : -1000,0													
D102 : -50,0	D302 : +2000,0													
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D106 : +50,0	D306 : +4000,0													
D108 : +100,0	D308 : -5000,0													
Restriction	Table_in[0] <= Table_in[1] → <= Table_in[quantity-2] <= Table_in[quantity-1]													

Input Variables

Name	Data type	Range	Description
Data_in	REAL	Limits of REAL data	Value to be converted
Quantity	UINT	2 to 32768	Number of values in Table_in and Table_out

Output Variables

Name	Data type	Range	Description
Data_out	REAL	Limits of REAL data	Value converted

Input/output Variables

Name	Data type	Range	Description
Table_in	REAL	Limits of REAL data	Table of values
Table_out	REAL	Limits of REAL data	Table of values