

VARIABLES

VAR_GLOBAL

ETemperature : ARRAY[0..15] OF REAL; (* External temperature (°C) *)

STemperature : ARRAY[0..15] OF REAL; (* Supply water temperature (°C) *)

LCurve AT %IX0.0 : BOOL; (* Low curve *)

MCurve AT %IX0.1 : BOOL; (* Medium curve *)

HCurve AT %IX0.2 : BOOL; (* High curve *)

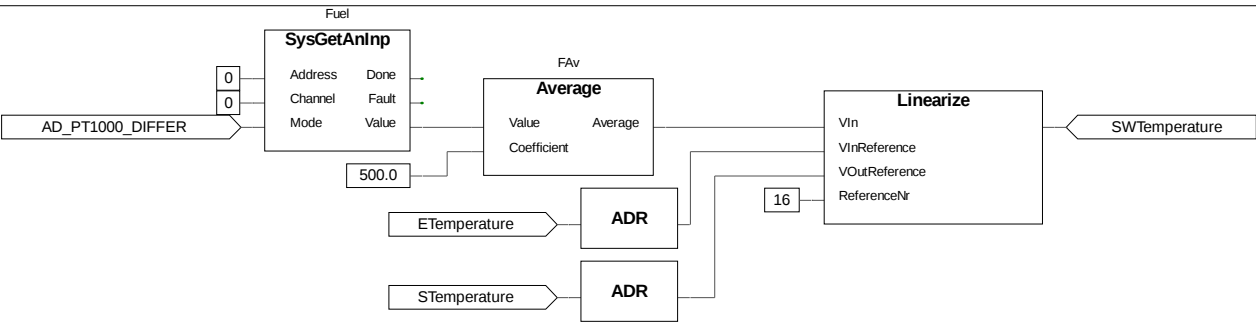
END_VAR

	Project : ClimateCurve	
	VARIABLES :	
	Release : ClimateCur	Ver :1.00
	Author :	Date:30/01/2014
	Note :	Page:1 of 1

PROGRAM SWaterTemp

```
VAR
Fuel : SysGetAnInp; (* Analog acquisition *)
SWTemperature : REAL; (* Supply water temperature (°C) *)
FAv : Average; (* Level average *)
END_VAR
```

1



	Project : ClimateCurve	
	PROGRAM : SWaterTemp	
	Release : ClimateCur	Ver :1.00
	Author :	Date:30/01/2014
	Note :	Page:1 of 1

```
VAR
i : USINT; (* Auxiliary counter *)
Curves : ARRAY[ 0..2 ] OF BOOL; (* Curve selectors *)
END_VAR
```

```
1 (* ***** *)
2 (* PROGRAM "Curves" *)
3 (* ***** *)
4 (* Questo programma esegue l'impostazione curve temperatura. *)
5 (* *)
6 (* ----- *)
7
8 (* ----- *)
9 (* SET CLIMATE CURVES *)
10 (* ----- *)
11 (* Su variazione selezione curva eseguo impostazione valori. *)
12
13 IF (LCurve = Curves[0]) AND (MCurve = Curves[1]) AND (HCurve = Curves[2]) THEN RETURN; END_IF;
14
15 (* Copio valori per one shot variazione. *)
16
17 Curves[0]:=LCurve; (* Low curve *)
18 Curves[1]:=MCurve; (* Low curve *)
19 Curves[2]:=HCurve; (* Low curve *)
20
21 (* Azzero curve di temperatura per inizializzare tutti i valori. *)
22
23 FOR i:=0 TO SIZEOF(ETemperature)/4 DO ETemperature[i]:=0.0; END_FOR;
24 FOR i:=0 TO SIZEOF(STemperature)/4 DO STemperature[i]:=0.0; END_FOR;
25
26 (* ----- *)
27 (* DEFINIZIONE CURVA ALTA *)
28 (* ----- *)
29 (* Definizione valori primo segmento curva. *)
30
31 IF (HCurve) THEN
32     ETemperature[0]:=-5.0; (* External temperature (°C) *)
33     STemperature[0]:=80.0; (* Supply water temperature (°C) *)
34
35     ETemperature[1]:=-2.0; (* External temperature (°C) *)
36     STemperature[1]:=83.0; (* Supply water temperature (°C) *)
37
38     (* Definizione valori secondo segmento curva. *)
39
40     ETemperature[2]:=0.0; (* External temperature (°C) *)
41     STemperature[2]:=80.0; (* Supply water temperature (°C) *)
42
43     ETemperature[3]:=15.0; (* External temperature (°C) *)
44     STemperature[3]:=28.0; (* Supply water temperature (°C) *)
45
46     (* Definizione valori terzo segmento curva. *)
47
48     ETemperature[4]:=20.0; (* External temperature (°C) *)
49     STemperature[4]:=25.0; (* Supply water temperature (°C) *)
50 END_IF;
51
52 (* ----- *)
```

	Project : ClimateCurve	
	PROGRAM : Curves	
	Release : ClimateCur	Ver :1.00
	Author :	Date:30/01/2014
	Note :	Page:1 of 2

PROGRAM Curves

```

53  (* DEFINIZIONE CURVA MEDIA *)
54  (* ----- *)
55  (* Definizione valori primo segmento curva. *)
56
57  IF (MCurve) THEN
58      ETemperature[0]:=-5.0; (* External temperature (°C) *)
59      STemperature[0]:=60.0; (* Supply water temperature (°C) *)
60
61      (* Definizione valori secondo segmento curva. *)
62
63      ETemperature[1]:=0.0; (* External temperature (°C) *)
64      STemperature[1]:=60.0; (* Supply water temperature (°C) *)
65
66      ETemperature[2]:=15.0; (* External temperature (°C) *)
67      STemperature[2]:=43.0; (* Supply water temperature (°C) *)
68
69      (* Definizione valori terzo segmento curva. *)
70
71      ETemperature[3]:=20.0; (* External temperature (°C) *)
72      STemperature[3]:=40.0; (* Supply water temperature (°C) *)
73  END_IF;
74
75  (* ----- *)
76  (* DEFINIZIONE CURVA BASSA *)
77  (* ----- *)
78  (* Definizione valori primo segmento curva. *)
79
80  IF (LCurve) THEN
81      ETemperature[0]:=-5.0; (* External temperature (°C) *)
82      STemperature[0]:=40.0; (* Supply water temperature (°C) *)
83
84      (* Definizione valori secondo segmento curva. *)
85
86      ETemperature[1]:=0.0; (* External temperature (°C) *)
87      STemperature[1]:=40.0; (* Supply water temperature (°C) *)
88
89      ETemperature[2]:=15.0; (* External temperature (°C) *)
90      STemperature[2]:=26.0; (* Supply water temperature (°C) *)
91
92      (* Definizione valori terzo segmento curva. *)
93
94      ETemperature[3]:=20.0; (* External temperature (°C) *)
95      STemperature[3]:=25.0; (* Supply water temperature (°C) *)
96  END_IF;
97
98  (* [End of file] *)
99
100

```

	Project : ClimateCurve	
	PROGRAM : Curves	
	Release : ClimateCur	Ver :1.00
	Author :	Date:30/01/2014
	Note :	Page:2 of 2

FUNCTION_BLOCK Average

(SFR054B220) Executes the average over a value
ENCRYPTED CODE

VAR_INPUT
Value : REAL; (* Value to mediate *)
Coefficient : REAL; (* Media coefficient *)
END_VAR

VAR_OUTPUT
Average : REAL; (* Average value *)
END_VAR

1

Project : ClimateCurve

FUNCTION BLOCK : Average

Release : ClimateCur

Ver :1.00

Author :

Date:30/01/2014

Note :

Page:1 of 1

FUNCTION Linearize

(SFR054B220) Linearizes a nonlinear value
ENCRYPTED CODE

```
VAR_INPUT
Vin : REAL; (* Valore in ingresso *)
VinReference : @REAL; (* Valori di riferimento ingresso *)
VOutReference : @REAL; (* Valori di riferimento uscita *)
ReferenceNr : USINT; (* Numero valori di riferimento *)
END_VAR
```

1

	Project : ClimateCurve	
	FUNCTION : Linearize	
	Release : ClimateCur	Ver :1.00
	Author :	Date:30/01/2014
	Note :	Page:1 of 1