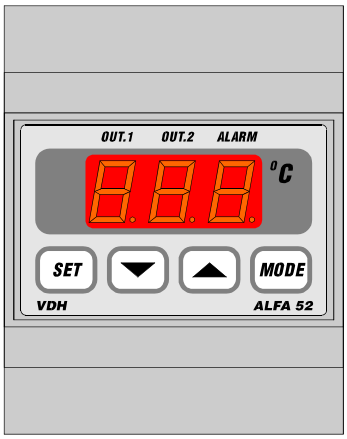
User manual
ALFA(NET) 52
Double Thermostat.



VDH doc. 072383 **Version: v1.0** **Date: 18-10-2007**
Software: ALFA 52 **File: Do072383.WPD** **Range: -50/+50˚C**

* Installation.

On the connection diagram of the **ALFA(NET) 52** is shown how the sensors, power supply and relays has to be connected. After connecting the **ALFA(NET) 52** to the power supply, a self test function is started. As this test is finished, the measured temperature of thermostat-1 appears in the display. Thermostat-1 works with sensor-1 and relay-1. Thermostat-2 works with sensor-2 and relay-2. Relay-3 can function as alarm relay or functions as second stage of thermostat-2.

* Control.

The **ALFA(NET) 52** thermostat can be controlled by four pushbuttons on the front These keys are:

SET - view / change set point and reset the alarm
▲ (UP) - increase the set point.
▼ (DOWN) - decrease the set point.
MODE - relays status key.

* Viewing the temperature of sensor-2.

By pressing the **UP** key, the measured temperature of sensor-2 is shown in the display. After releasing the key, the measured temperature of sensor-1 is shown again in the display.

* Viewing set points.

Viewing set point of thermostat-1:

By pushing the **SET** key and then simultaneously pushing the **UP** key, the set point of thermostat-1 appears in the display.

Viewing set point of thermostat-2:

By pushing the **SET** key and then simultaneously pushing the **DOWN** key, the set point of thermostat-2 appears in the display.

A few seconds after releasing the keys the set point disappears and the measured temperature of thermostat-1 is shown again in the display.

* Changing set points.

Push the **SET** key together with the **UP** or **DOWN** key in order to select the desired set point (see above). Release the **SET** key. Now push the **SET** key again together with the **UP** or **DOWN** keys to change the set point. A few seconds after releasing the keys, the measured temperature of sensor-1 is shown again in the display.

* Status of the Relays.

By pushing the **MODE** key the display shows the status of the relays. Each display segment shows the status of the relay output, showing 0=off and 1=on. The code 110 means relay 1 and 2 are on and relay 3 is off.

* Setting internal parameters.

Next to the adjustment of the set point, internal settings can be made like differential, sensor offset, set point range and the functions of the thermostat.
Push the **DOWN** key more than 10 seconds, to enter the 'Internal Programming Menu'. In the left display the upper and lower segment are blinking. Over the **UP** and **DOWN** keys the required parameter can be selected (see table for the parameters).
If the required parameter is selected, the value can be read-out by pushing the **SET** key. Pushing the **UP** or **DOWN** key to change the value of this parameter.
If after 20 seconds no key is pushed, the **ALFA(NET) 52** changes to the normal operation mode.

* Adjustment sensors.

Sensor-1 can be adjusted by using the Sensor Offset parameter 05 and Sensor-2 can be adjusted by using the Sensor Offset parameter 06. Indicates a Sensor e.g. 2˚C to much, the according Sensor Offset has to be decreased with 2˚C.

* Error messages.

In the display of the **ALFA(NET) 52** the following error messages can appear:

Lo1	- Minimum alarm thermostat-1.	Solution E1,E2:
Hi1	- Maximum alarm thermostat-1.	- Check if the sensor is connected correctly.
Lo2	- Minimum alarm thermostat-2.	- Check sensor (1000Ω at 25˚C).
Hi2	- Maximum alarm thermostat-2.	- Replace sensor.
E1	- Sensor-1 failure.	
E2	- Sensor-2 failure.	Solution EEE:
EEE	- Settings are lost.	- Reprogram the settings.

-L- - In case of sensor short-circuit the display alternates between error-code **E..** and **-L-**, as indication for a short-circuit sensor.

-H- - In case of open-circuit sensor the display alternates between error-code **E..** and **-H-**, as indication for a open circuit sensor.

Reset Alarm. When an error-messages appears it can be reset by pushing the **SET** key. The function of this key depends on parameter P42.

* Technical data ALFA(NET) 52.

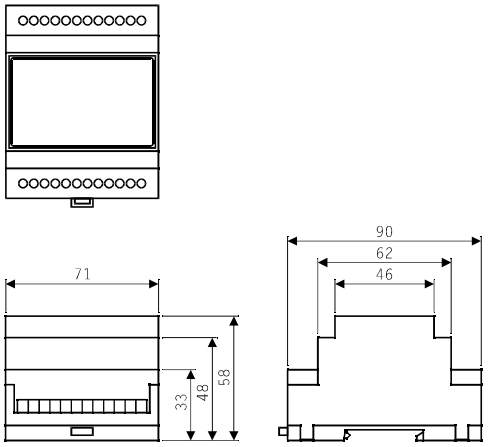
Type	: ALFA(NET) 52 Double thermostat (Rail-mounting)	
Range	: -50/+50˚C per 0,1˚C	
Supply	: 230Vac 50/60Hz (-5/+10%)	
Readout	: 3-digit 7-segment display	
Relays	: Ry1= SPST(NO)	250V/8A(cos ϕ=1) or 250V/5A (cos ϕ=0.4)
	Ry2= SPST(NO)	250V/8A (cos ϕ=1) or 250V/5A (cos ϕ=0.4)
	Ry3= SPDT(NO/NC)	250V/8A (cos ϕ=1) or 250V/5A (cos ϕ=0.4)
	Relays have one common (C).	
Control	: By push buttons on front.	
Front	: Polycarbonate	
Sensors	: 2x SM 811/2m (PTC 1000Ω/25˚C).	
Communication	: RS 485 Network (2xtwisted pair shielded) only at ALFANET model.	
Dimensions	: 90 x 71 x 58mm (HWD)	
Panel cutout	: 46 x 71mm (HW) at front mounting	
Accuracy	: ± 0,5% of the range.	

- Provided with memory protection during power failure.
- Connections with screw terminals on the back side.
- Equipped with sensor failure detection.
- Special versions on request available.

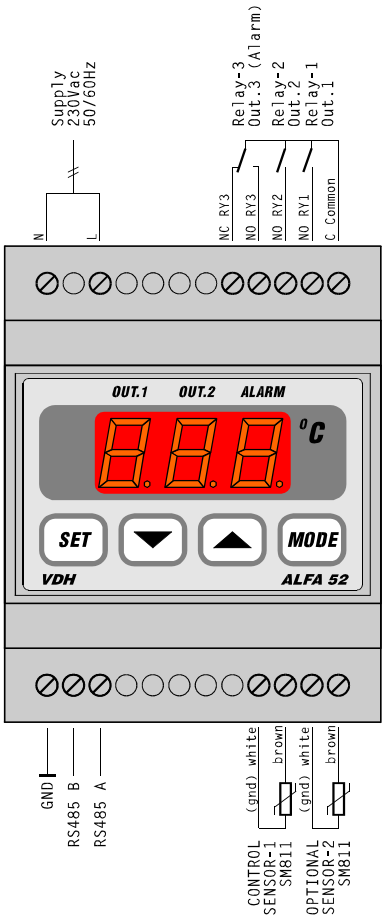
* Parameters ALFA(NET) 52

Para-Meter	Description Parameter	Range	Standard value
01	Function relay 1	1=Cool 2=Heat 3=Alarm	1
02	Function relay 2	1=Cool 2=Heat 3=Alarm	1
03	Function relay 3	1=Cool 2=Heat 3=Alarm	3
05	Offset temperature sensor-1	-15..+15˚C	0
06	Offset temperature sensor-2	-15..+15˚C	0
10	Switching differential relay 1	0.1..15	0.5
11	Set point offset relay 1	-15..+15	0
12	Switching differential relay 2	0.1..15	0.5
13	Set point offset relay 2	-15..+15	0
14	Switching differentia relay 3	0.1..15	0.5
15	Set point offset relay 3	-15..+15	0
20	Switch on delay cooling	0..99	0
21	Switch off delay cooling	0..99	0
22	Parameter 20/21 in Sec. or Min.	0=Seconds 1=Minutes	0
23	Minimum on-time cooling	0..99 Minutes	0
24	Minimum off-time cooling	0..99 Minutes	0
25	Minimum set point	-50..+50˚C	-50
26	Maximum set point	-50..+50˚C	+50
30	Alarm type thermostat-1 (to set point)	0= None 1= Absolute 2= Relative	1
31	Minimum alarm set point-1	-50..+50˚C	-50
32	Maximum alarm set point-1	-50..+50˚C	+50
33	Time delay minimum alarm-1	0..99 min.	0
34	Time delay maximum alarm-1	0..99 min.	0
35	Alarm type thermostat-2 (to set point)	0= None 1= Absolute 2= Relative	1
36	Minimum alarm set point-2	-50..+50˚C	-50
37	Maximum alarm set point-2	-50..+50˚C	+50
38	Time delay minimum alarm-2	0..99 min.	0
39	Time delay maximum alarm-2	0..99 min.	0
40	Relay function alarm relay	0= Watch 1= Control	0
41	Reset alarm relay after recovering alarm	0= No 1= Yes	0
42	Reset alarm relay after manual reset	0= No 1= Yes	0 0
45	Start up delay after power failure	0..99 Minutes	0
46	Forced relay-1 on at sensor-1 failure	0= No, 1=Yes	0
47	Forced relay-2(,3) on at sensor-2 failure	0= None 2= Relay-2 on 3= Relay-3 on	
90	Network number	1..255	1
95	Software version	0..255	0
96	Production year	00..99	0
97	Production week	1..52	1
98	Serial number (x1000)	0..255	0
99	Serial number (units)	0..999	0

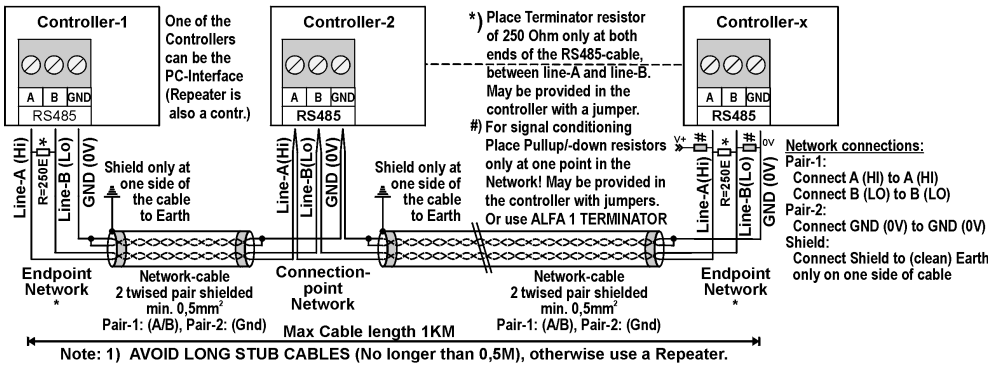
* Dimensions.



* Connections.



RS 485 NETWORK CONNECTIONS 2-twisted pair shielded cable:



* Adress.

VDH Products BV
Produktieweg 1
9301 ZS Roden
The Netherlands

Tel: +31 (0)50 - 30 28 900
Fax: +31 (0)50 - 30 28 980
Email: info@vdhproducts.nl
Internet: www.vdhproducts.nl