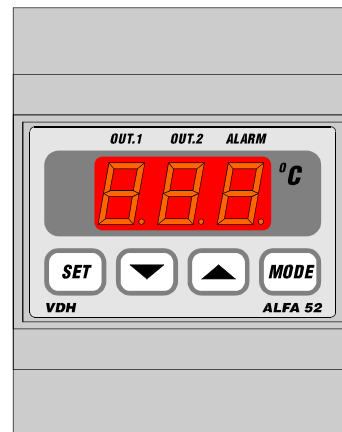


User manual

ALFA(NET) 52 0/+100°C

Double Thermostat.



VDH doc. 072384

Version: v1.0

Date: 18-10-2007

Software: ALFA 52 0-100°C

File: Do072384.WPD

Range: 0/+100°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 too 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.	<u>Solution E1,E2:</u>
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.	<u>Solution EEE:</u>
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	: 0/+100°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.

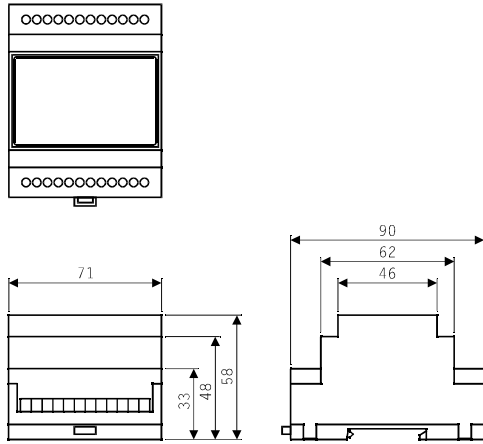


* **Parameters ALFA(NET) 52**

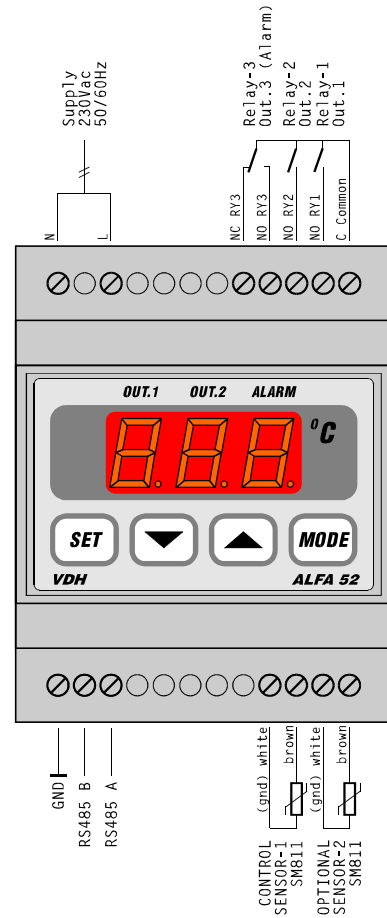
Para-Meter	Description Parameter	Range	Standard value
01	Function relay 1	1=Cool 2=Heat 3=Alarm	1
02	Function relay 2	1=Cool 2=Heat 3=Alarm	1
03	Function relay 3	1=Cool 2=Heat 3=Alarm	3
05	Offset temperature sensor-1	-15..+15°C	0
06	Offset temperature sensor-2	-15..+15°C	0
10	Switching differential relay 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 differential 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	0..+100°C	0
26	Maximum set point	0..+100°C	+100
30	Alarm type thermostat-1 (to set point)	0= None 1= Absolute 2= Relative	1
31	Minimum alarm set point-1	0..+100°C	0
32	Maximum alarm set point-1	0..+100°C	+100
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	0..+100°C	0
37	Maximum alarm set point-2	0..+100°C	+100
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
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



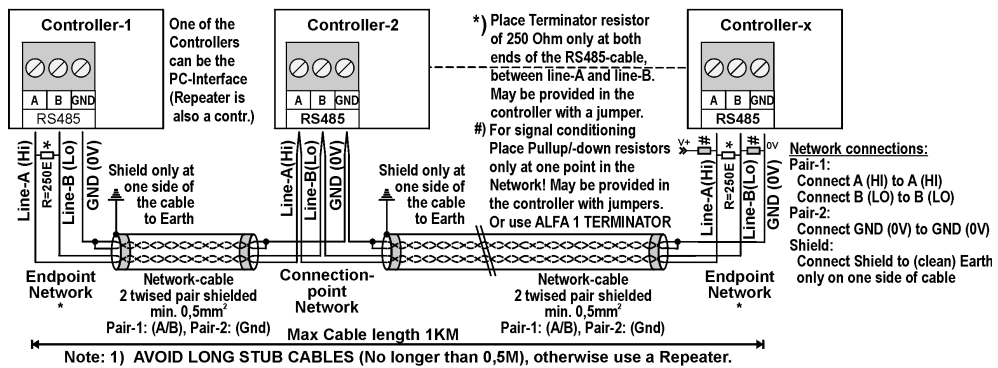
* **Dimensions.**



* **Connections.**



RS 485 NETWORK CONNECTIONS 2-twisted pair shielded cable:



* **Address.**
 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