

User Manual

ALFA 23 and

ALFANET 23

Minimum / Maximum
Alarm Thermostat.
0-100°C



VDH doc: 070709

Version v1.0

Datum: 04-07-2007

Software: ALFA 13/23/33 0-100°C

File: Do070709.wpd

Range: 0/+100°C per 1°C

* Function.

The **ALFA(NET) 23** is a digital alarm thermostat for wall and panel mounting. The thermostat watches the minimum and maximum temperature. The **ALFA(NET) 23** has one relay for both alarms. The **ALFANET 23** has a RS 485 network connection so it can be read out and adjusted on the Alfabet.

* Installation.

On the topside of the **ALFA(NET) 23** is shown how the sensor, power supply and relay are connected.

After connecting the **ALFA(NET) 23** to the power supply, a self-test function is started. As this test is finished, the measured temperature appears in the display.

The relay is normally activated, and with an alarm it is deactivated, and the led 'alarm' will light-up in the display.

* Control.

The **ALFA(NET) 23** alarm thermostat can be controlled by three push buttons on the front;

SET - view / change setpoints and reset of alarm.

UP - increase a setpoint.

DOWN - decrease a setpoint.



* **Viewing setpoints.**

Viewing setpoint of maximum alarm:

By pushing the **SET** key first and then the **UP** key together the maximum alarm setpoint appears in the display. The led 'set high' starts blinking.

Viewing setpoint of minimum alarm:

By pushing the **SET** key first and then the **DOWN** key together the maximum alarm setpoint appears in the display. The led 'set low' starts blinking.

A few seconds after releasing the keys the setpoint disappears and the measured temperature is shown in the display.

* **Changing setpoints.**

Push the **SET** key together with the **UP** or **DOWN** key and the maximum alarm setpoint or minimum alarm setpoint appears in the display. Release both keys.

Now push and hold the **SET** key again and together with the **UP** or **DOWN** keys the setpoint can be changed. A few seconds after releasing the keys the measured temperature is shown again in the display.

* **Action of the alarm functions.**

The **ALFA(NET) 23** alarm thermostat has a minimum alarm and a maximum alarm, both with there own setpoint. We can choose off two different kind of alarms (PARAMETER 27) namely:

a watchdog alarm (relay normally activated, at alarm, it falls off and the led 'alarm' burns. On power failure the alarm relay also falls off.)

or a regulated alarm (relay normally not activated, at alarm, it will be activated and the led 'alarm' burns.

With PARAMETER 28 we can choose for a auto reset alarm or a hold alarm after temperature recovering. Also it is possible to give both setpoints there own offset and differential, see function diagram.

Each alarm can be set at an alarm-delay time (PARAMETER 23 and 24), when the temperature passes the set alarm point, the led 'alarm' first starts to blink. If the temperature will recover within the delay time, no alarm occurs. If an alarm will continue after the delay time, the led 'alarm' burns continuously, and the display alternates between the temperature and 'H' for high-alarm (max.) or 'L' for low-alarm (min.) to indicate the alarm.

To reset an alarm press the **SET** key.

* **Setting internal parameters.**

Next to the adjustment of the setpoint, some other internal settings are possible, like differential, sensor-offset, setpoint range.

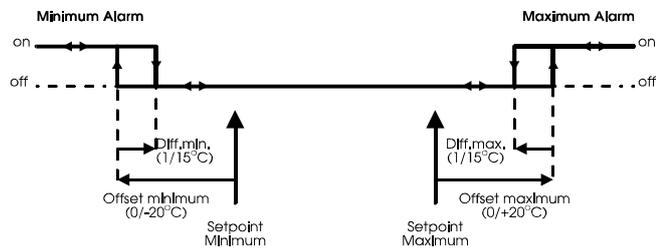
By pushing the **DOWN** key more than 10 seconds, you enter the 'internal programming menu'. In the left display the upper and lower segments are blinking. With the **UP** and **DOWN** keys the required parameter can be selected (see table for the parameters). If the required parameter is selected, the value can be read-out by pushing the **SET** key. Pushing the **UP** and **DOWN** keys, allows you to change the value of this parameter. If after 20 seconds no key is pushed, the **ALFA(NET) 23** changes to it's normal operation mode.

* **Parameter ALFA(NET) 23.**

Parameter	Description Parameter	Range	Standard Value
02	Minimum setpoint	0/+100°C	0
03	Maximum setpoint	0/+100°C	+100
04	Offset temperature sensor	-15/+15°C	0
10	Startup delay after power failure	0..99 Minutes	0
11	Relay on at sensor failure	0 = No, 1 = Yes	0

Parameter	Description Parameter	Range	Standard Value
21	Differential maximum alarm	-1..-15°C	-1
22	Differential minimum alarm	+1..+15°C	+1
23	Time delay maximum alarm	0..99 Minutes	0
24	Time delay minimum alarm	0..99 Minutes	0
25	Offset setpoint High (Max.)	0/+20°C	0
26	Offset setpoint Low (Min.)	-20/0°C	0
27	Relay alarm function (0=watchdog 1=regulated alarm)	0 = No, 1 = Yes	0
28	Auto reset alarm after temp. recovering (0=hold)	0 = No, 1 = Yes	0
90	Network number	1..250	1
95	Software version	0..255	-
96	Production year	00..99	-
97	Production week	1..52	-
98	Serial number (x1000)	0..255	-
99	Serial number (units)	0..999	-

* **Funktion diagram.**



* **Adjustment sensor.**

The sensor can be adjusted by using the Sensor Offset (parameter 04). Indicates the ALFA(NET) 23 e.g. 2°C too much, the Sensor Offset has to be decreased with 2°C.

* **Error messages.**

In the display of the ALFA(NET) 13 the following error messages can appear:

- Er** - Sensor broken. Solution: - Check if the sensor is connected correctly.
- Check the sensor (1000Ω at 25°C).
- Replace the sensor.
- EE** - Settings are lost. Solution: - Reprogram the settings.

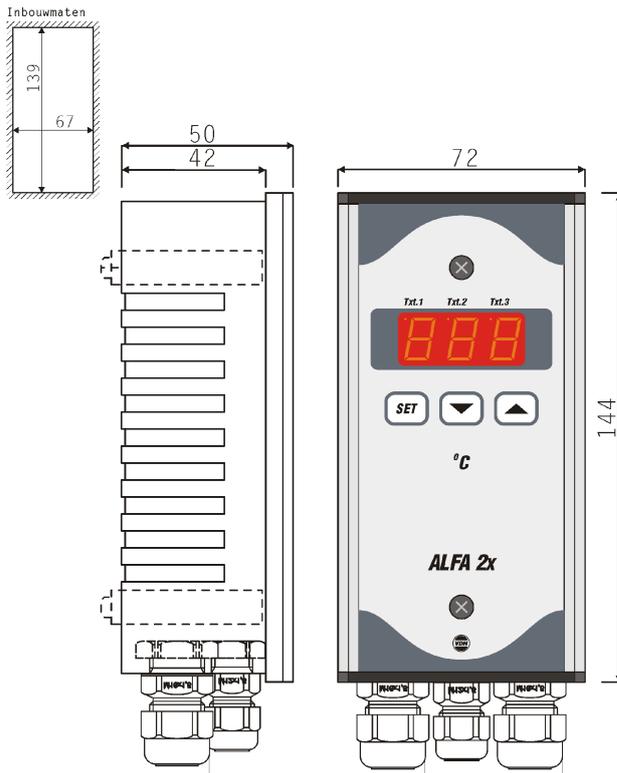
* **Technical details.**

Model : ALFA(NET) 13 Alarm Thermostat
Range : 0/+100°C, readout per 1°C
Supply : 230 Vac (or 24Vdc or 12Vdc)
Relay : SPDT 250V/16A(C-NO), 8A(C-NC) (cos phi=1)
Communication: RS 485 Network (2xtwisted pair shielded) only at ALFANET model.
Control : by pushbuttons on the front.
Front : Polycarbonate IP65
Sensor : SM 811/2m (1000Ω at 25°C)
Sizes : 144 x 72 x 50mm (hwd)
Panel hole : 139 x 67mm (hw)

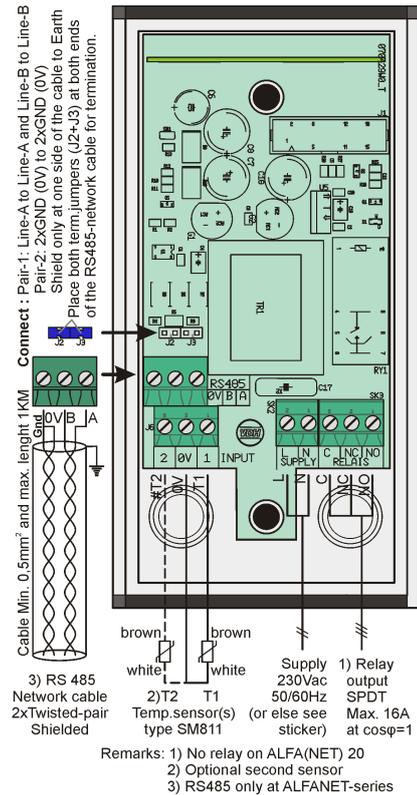
- Provided with memory protection during power failure.
- Connection with screw terminals on the backside.
- Equipped with self test function and sensor failure detection.
- Special version on request available.



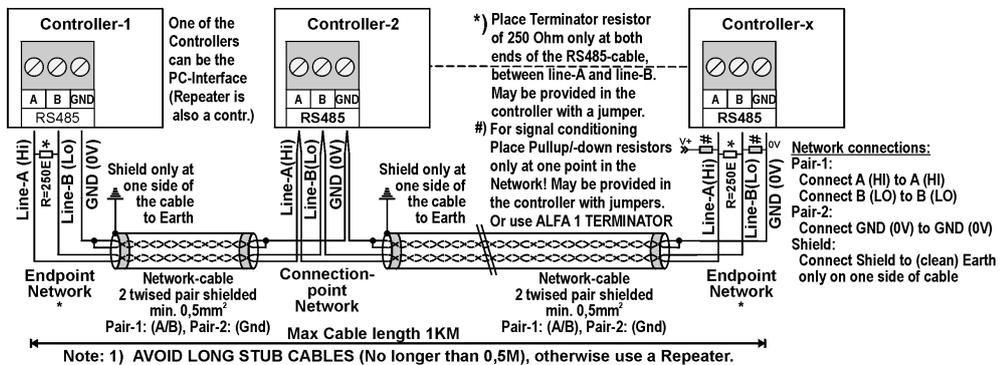
*** Dimensions.**



*** Connections.**



RS 485 NETWORK CONNECTIONS 2-twisted pair shielded cable:



*** Address.**

VDH Products BV
 Produktieweg 1
 9301 ZR Roden
 The Netherlands

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