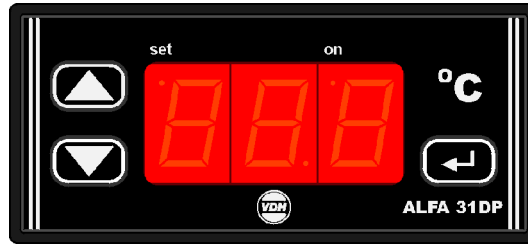


# User manual

## ALFA(NET) 31 DP -10/+90°C

### Cool/Heat Thermostat.



VDH doc. 091112

Version: v1.0

Date: 16-11-2009

Software: ALFA(NET)31DP -10/+90°C

File: Do053809.wpd

Range: -10/+90°C per 0,1°C

#### \* **Function.**

The **ALFA(NET) 31 DP** is a digital thermostat for panel mounting. The function from the thermostat can be programmed for cooling or heating.

The **ALFANET 31 DP** has a RS 485 network connection so it can be read out and adjusted on the Alfanet.

#### \* **Installation.**




On the topside of the **ALFA(NET) 31 DP** you can see how the sensor, power supply and relay have to be connected.

After connecting the **ALFA(NET) 31 DP** to the power supply, a self test function is started. As this test is finished, the measured temperature appears in the display.

When the relay is activated, the led 'on' will light-up in the display.

#### \* **Control.**

The **ALFA(NET) 31 DP** thermostat can be controlled by three pushbuttons on the front. These keys are;

-  **SET** - view / change the setpoint.
-  **UP** - increase the setpoint.
-  **DOWN** - decrease the setpoint.

#### \* **Viewing setpoint.**

By pushing the **SET** key the setpoint appears in the display. The led 'set' starts blinking. A few seconds after releasing the **SET** key the setpoint disappears and the measured temperature is shown in the display.

#### \* **Changing setpoint.**

Push the **SET** key and the setpoint appears in the display. Release the **SET** key. Now push 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 shows again in the display.



\* **Setting internal parameters.**

Next to the adjustment of the setpoint, some internal settings are possible like differential, sensor-offset, setpoint range and the function cooling or heating.

By pushing the **DOWN** key for more than 10 seconds, you enter the 'internal programming menu'. In the left display the upper and lower segment, are blinking. With the **UP** and **DOWN** keys the required parameter can be selected (see the parameter table).

If the required parameter is selected, the value can be read-out by pushing the **SET** key. Pushing the **UP** or **DOWN** keys, together with the **SET** key allows you to change the value of this parameter.

If no key is pushed for 20 seconds, the **ALFA(NET) 31 DP** changes to its normal operation mode.

\* **Adjustment sensor.**

The sensor can be adjusted by using the Sensor Offset (parameter 04). Indicates the **ALFA(NET) 31 DP** e.g. 2°C too much, the Sensor Offset has to be decreased by 2°C.

\* **Error messages.**

In the display of the **ALFA(NET) 31 DP** 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) 31 DP  
Range : -10/+40°C, readout per 0,1°C  
Supply : 230Vac 50/60Hz (or else see productsticker), 3VA  
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 : 35 x 77 x 71,5mm (hwd)  
Panel hole : 28 x 70mm (hw)

- Provided with memory protection during power failure.
- Connection with screw terminals on the back side.
- Equipped with self test function and sensor failure detection.
- Special versions are available upon request.

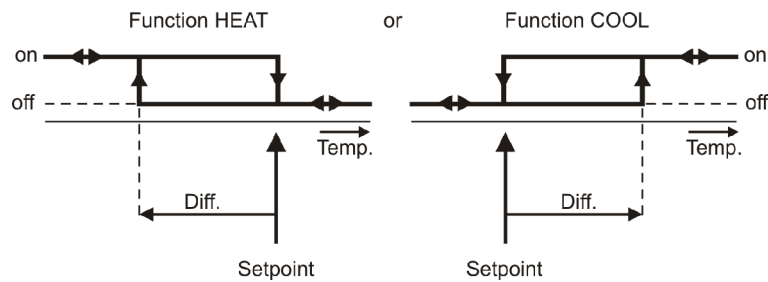


\* **Parameters ALFA(NET) 31 DP.**

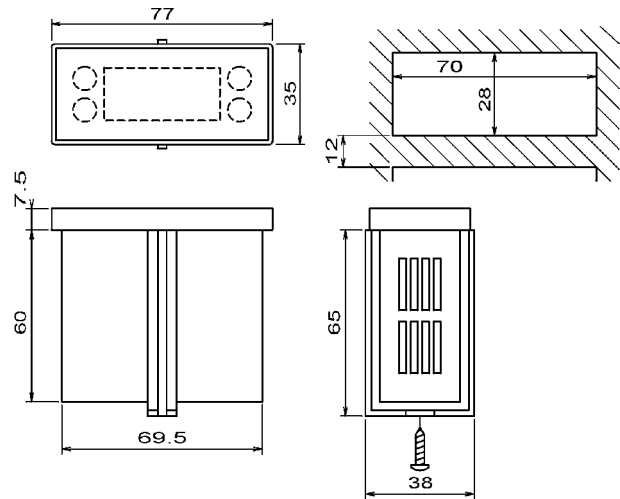
PARAMETER	DESCRIPTION PARAMETER	RANGE	STANDARD VALUE
01	Switching differential	1..15°C	3
02	Minimum setpoint	-10..+40°C	-10
03	Maximum setpoint	-10..+40°C	+40
04	Offset temperature sensor	-15..+15°C	0
10	Startup delay after power failure	0..99 Minutes	0
11	Relays on at sensor failure	0 = No 1 = Yes	0
15	Function cooling or heating	0 = Cool 1 = Heat	0
16	Switch on delay relays	1) 0..99	0
17	Switch off delay relays	1) 0..99	0
18	Parameter 16/17 in seconds or minutes	0 = Seconds 1 = Minutes	0
19	Minimum on-time relays	0..99 Minutes	0
20	Minimum off-time relays	0..99 Minutes	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	-

1) On active delay led 'on' blinks.

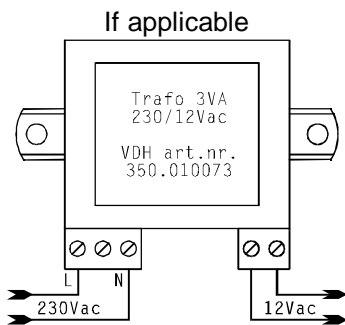
\* **Function Diagram.**



\* **Dimensions.**

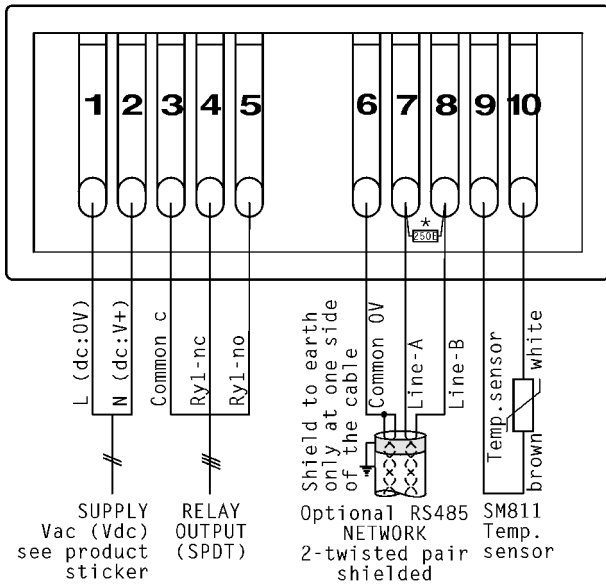


\* **Connection diagram.**

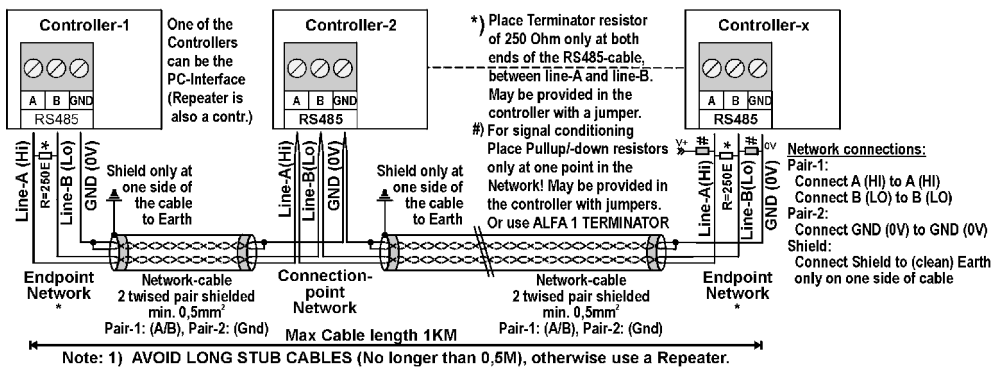


**ALFA(Net)  
3X-series**

\*)REMARK: To terminate RS485-Network  
Connect a 250 Ohm resistor between  
Line-A and Line-B at both cable-ends



**RS 485 NETWORK CONNECTIONS 2-twisted pair shielded cable:**



\* **Address.**

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Produktieweg 1  
9301 ZS Roden  
The Netherlands

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