

User manual

ALFANET 71 VS-PI

Differential Thermostat



VDH doc. 080702

Version: v1.0

Date: 22-05-2008

Software: 030802_A(N)71 VS-PI

File: Do080702.wpd

Range: -50/+50,0°C

* Installation.

On the upperside from the **ALFANET 71 VS-PI** is shown how the sensors, supply, network and both outputs should be connected.

After power up the a self test is running. If the self test is completed, the measured differential temperature is shown on the display.

The **ALFANET 71 VS-PI** can be read out and controlled on the PC.

* Control.

The **ALFANET 71 VS-PI** thermostat can be controlled by four push buttons on the front:

- SET** - view / change the adjusted value and reset alarm.
- UP** - raise the adjusted value.
- DOWN** - lower the adjusted value.
- °C** - hidden key above the **SET** key.

* Viewing temperatures sensor-1 and sensor-2.

Push the **UP** and **DOWN** keys simultaneously. Release the keys and push the **UP** key for read out sensor-1 or the **DOWN** key for sensor-2. A few seconds after releasing the keys the measured differential temperature appears on the display again.

* Viewing delta set point.

By pushing the **SET** key, the adjusted set point will be visible. A few seconds after releasing the **SET** key the measured differential temperature appears on the display again.

* Changing the delta set point.

Push the **SET** key. The delta set point appears on the display. Release the **SET** key. By pushing the **SET** key again the set point can be changed with the **UP** or **DOWN** keys. A few seconds after releasing the keys the measured differential temperature appears on the display again. The Delta set point is adjustable from -20,0 till +20,0°C.

* Status from the outputs.

Push the hidden **°C** key. The display shows PI. By pushing the **UP** key the output percentage from output 1 becomes visible from 0-100%.

If the **DOWN** key is pushed the output percentage from output 2 becomes visible from 0-100%.

A few seconds after releasing the keys the measured differential temperature appears on the display again.



* **Adjusting internal parameters.**

Next to the adjustment of the set point, some internal settings can be made like P-band, I-time, sensor-adjustments and set point-range.

By pushing the **DOWN** key for more than 10 seconds, you enter the 'internal programming menu'. On the left display the upper and the lower segments are flashing. 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** and **DOWN** keys allows you to change the value of this parameter.

If no key is pushed for 20 seconds, the **ALFANET 71 VS-PI** changes to it's normal operation mode.

* **Afregeling voeler.**

The sensors can be adjusted with the Sensor Offset (parameter 05(sensor-1) and parameter 06(sensor-2)). Indicates a sensor e.g. 2°C too much, the according Sensor-offset parameter has to be decreased with 2°C.

* **Error codes.**

On the display from the **ALFANET 71 VS-PI** can appear the following error codes:

E1 - Sensor-1 (-) defect.

Solution E1, E2:

E2 - Sensor-2 (+) defect.

- Check if the sensor is connected well.

- Check the sensor (1000Ω/25°C).

- Replace the sensor.

L-L - In case of a sensor short-circuit the display alternates between error-code **E..** and **L** (left for sensor-1 and right for sensor-2),

H-H - In case of open-circuit sensor the display alternates between error-code **E..** en **H** (left for sensor-1 and right for sensor-2)

EEE - Adjustments are lost.

Solution EEE:

- Reprogram the adjustments.

If an error code appears, it can be reset with the **SET** key.

* **Technical details.**

Type	: ALFANET 71 VS-PI Thermostat
Range	: -50/+50,0°C above -10°C read out per 0,1°C
Supply	: 12Vac 50/60Hz (-5/+10%)
Read out	: 3-digit 7-segments display
Communication	: RS485 network (2xTwisted-pair shielded min. 0,5mm ²)
Control	: Through push buttons on the front.
Front	: Polycarbonate IP65
Sensor	: SM 811/2m (PTC 1000Ω/25°C).
Analogue outputs	: PI-1= Cooling 0...10Vdc PI output. PI-2= Heating 0...10Vdc PI output.
Dimension	: 35 x 77 x 71,5mm (h-w-d)
Panel cut out	: 28 x 70mm (h-w)
Accuracy	: ± 0,5% from the range.

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



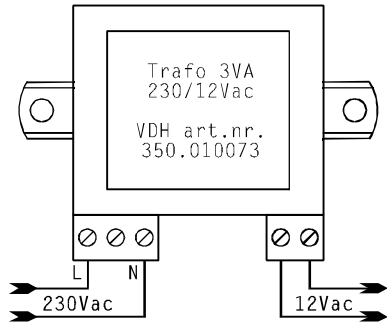
* **Parameters ALFANET 71 VS-PI.**

Parameter	Description Parameter	Range	Default value
01	Function PI output-1 0 = Non 1 = PI Cooling 2 = PI Heating	0..2	1
02	Function PI output-2 (idem)	0..2	2
05	Offset temperature sensor 1 (+ sensor)	-15.0...+15.0°C	0
06	Offset temperature sensor 2 (- sensor)	-15.0...+15.0°C	0
10	Offset PI output-1 (zone)	-15...+15°C	0.0
11	P-band output-1	0,1...50,0°C	5.0
12	I-time output-1	0...99 Minutes	0 (off)
13	Offset PI output-2 (zone)	-15...+15°C	0.0
14	P-band output-2	0,1...50,0°C	5.0
15	I-time output-2	0...99 Minutes	0 (off)
16	Delay between cooling and heating	0...60 Minutes	5
20	Minimum adjustable set point	-50.0...+50.0°C	-20
21	Maximum adjustable set point	-50.0...+50.0°C	+20
22	Read out above -10°C on whole degrees	0 = No, 1 = Yes	0
40	Control delay after power failure	0..99 min.	0
41	Forced analogue outputs-function at sensor failure	0 = No 1 = PI Cooling 2 = PI Heating	0
42	Forced percentage	0..100%	50
90	Network number	1..255	1
95	Software version	-	-
96	Production year	-	-
97	Production week	-	-
98	Serial number (x1000)	-	-
99	Serial number (units)	-	-

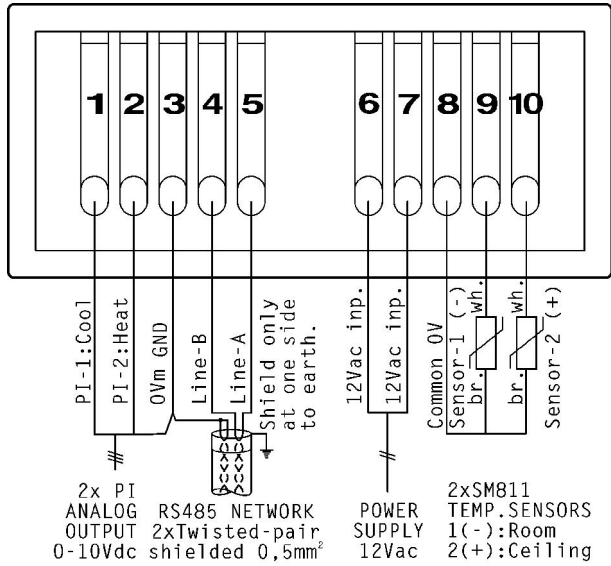
Remarks: Alarm can only be report through the ALFANET.



* **Connections.**

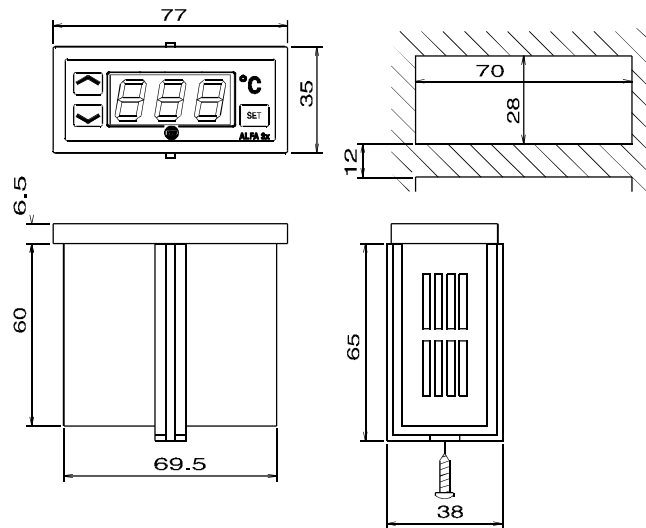


ALFANET 71 VS-PI



REMARK: Connect a 250 Ohm Resistor between Line-A and Line-B at both CABLE-ENDS of RS485-Network (2-wire with shield).

* **Dimensions.**



* **Address.**

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