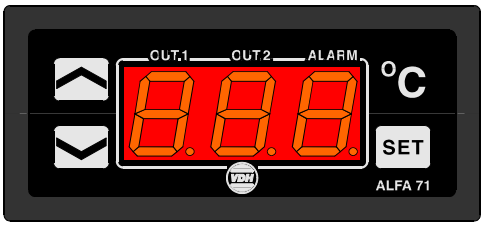
User manual
ALFANET 71 PI
Thermostat.



VDH doc. 002148 **Version: v1.0** **Date: 29-09-2000**
Software: ALFA(NET)71PI **File: Do002148.WP8** **Range: -50/+50,0°C**

* Installation.

On the top side of the **ALFANET 71 PI** is shown how the sensors, power supply, relays and 0..10Vdc PI output has to be connected. After connecting the **ALFANET 71 PI** to the power supply, a self test function is started. As this test is finished the measured temperature appears in the display. And the **ALFANET -71 PI** is by use of the **ALFANET PC-INTERFACE** controllable on the PC.

* Control.

The **ALFANET 71 PI** thermostat can be controlled by four pushbuttons on the front.
These keys are:

SET	- view / change the setpoint.
UP	- increase the setpoint.
DOWN	- decrease the setpoint.
°C	- hidden push button above the **SET** key and behind **°C** symbol.

* Viewing setpoint.

By pushing the **SET** key the setpoint appears in the display. The decimal point of the last display starts blinking. A few seconds after releasing the **SET** key the setpoint disappears and the measured temperature is shown again 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 together with the **UP** or **DOWN** keys to change the setpoint. A few seconds after releasing the keys the measured temperature shows again in the display.

* Status of the Relays.

By pushing the hidden **°C** 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 setpoint, internal settings can be made like differential, sensor-offset, setpoint 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 **ALFANET 71 PI** changes to the normal operation mode.

* Adjustment sensors.

The temperature sensor can be adjusted by using the Sensor Offset parameter 05.
Indicates the Sensor e.g. 2°C to much, the Sensor Offset has to be decreased with 2°C.

* Error messages.

In the display of the **ALFANET 71 PI** the following error messages can appear:

LO	- Minimum alarm.	Solution E1:
HI	- Maximum alarm.	- Check if the sensor is connected correctly.
E1	- Sensor-1 failure.	- Check sensor (1000Ω at 25°C).
		- Replace sensor.
EEE	- Settings are lost.	Solution EEE:
		- 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 a error-messages appears it can be resetted by pushing the **SET** key. The function of this key depends on parameter P37.

* Technical details.

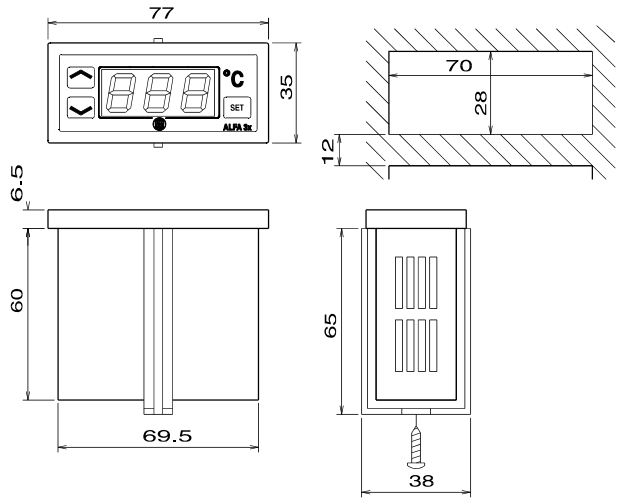
Type	: ALFANET 71 PI Thermostat
Range	: -50/+50,0°C, above -10°C display per 0,1°C
Supply	: 12Vac 50/60Hz (-5/+10%)
Display	: 3-digit 7-segment display
Relays	: Ry1= SPST(NO) 250V/8A (cosφ=1) of 250V/5A (cos φ=0.4) Ry2= SPST(NO) 250V/8A (cosφ=1) of 250V/5A (cos φ=0.4) Ry3= SPDT(NO/NC) 250V/8A (cosφ=1) of 250V/5A (cos φ=0.4) Relays have one common (C).
Control	: By push buttons on front.
Communication	: RS485-Network (2-wire shielded cable min. 0,75mm^2)
Front	: Polycarbonate IP65
Sensor	: SM 811/2m (PTC 1000Ω/25°C).
Analog output	: 0..10 Vdc PI output (cool or heat)
Dimensions	: 35 x 77 x 71,5mm (HWD)
Panel cutout	: 28 x 70mm (HW)
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.

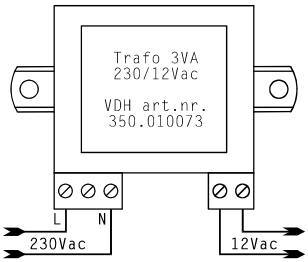
* Parameters ALFANET 71 PI

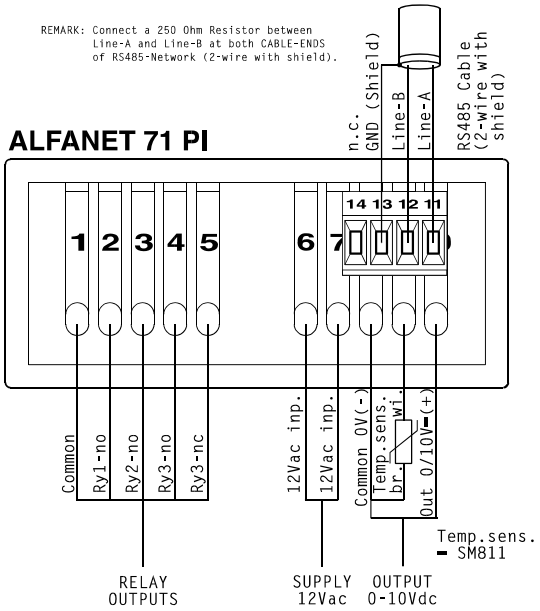
Para-meter	Description Parameter	Range	Default
01	Function Relay 1	1=Cool 2=Heat 3=Alarm	1
02	Function Relay 2	1=Cool 2=Heat 3=Alarm	2
03	Function Relay 3	1=Cool 2=Heat 3=Alarm	3
04	Function PI-output	1=Cool 2=Heat	1
05	Offset temperature sensor-1	-15.0..+15.0°C	0.0
06	Setpoint offset PI function	-15.0..+15.0°C	0.0
07	P-band setting	0.0..+20.0°C	5.0
08	I-time setting	0..99 Minutes	0 (off)
10	Switch on relay 2 by	0=Temperature 1=Time	0
11	Switch on relay 3 by	0=Temperature 1=Time	0
12	Switch on delay relay 2	0..99 Minutes	15
13	Switch on delay relay 3	0..99 Minutes	15
14	Switching differential relay 1	0.1..15.0	0.5
15	Setpoint offset relay 1	-15..+15	0.0
16	Switching differential relay 2	0.1..15.0	0.5
17	Setpoint offset relay 2	-15..+15	0.0
18	Switching differentia relay 3	0.1..15.0	0.5
19	Setpoint offset relay 3	-15..+15	0.0
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 setpoint	-50.0..+50.0°C	-50
26	Maximum setpoint	-50.0..+50.0°C	+50
27	Read-out above -10°C per 1°C	0= No 1= Yes	0
30	Alarm type (to setpoint)	0= None 1= Absolute 2= Relatief	1
31	Minimum alarm setpoint	-50.0..+50.0°C	-50
32	Maximum alarm setpoint	-50.0..+50.0°C	+50
33	Time delay minimum alarm	0..99 min.	0
34	Time delay maximum alarm	0..99 min.	0
35	Relay function alarm relay	0= Watch alarm 1= Control alarm	0
36	Reset alarm relay after recovering alarm	0= No	0
37	Reset alarm relay after manual reset	1= Yes 0= Noe 1= Yes	0 0
40	Start up delay after power failure	0..99 Minutes	0
41	Forced relay function at sensor failure	0= None 1= Cool 2= Heat	0
50	Time correction (at realtime clock)	-99..+99	0
90	Network number	1..255	1
95	Software version	-	-
96	Production year	-	-
97	Production week	-	-
98	Serial number (x1000)	-	-
99	Serial number (units)	-	-

* Dimensions.



* Connections.





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