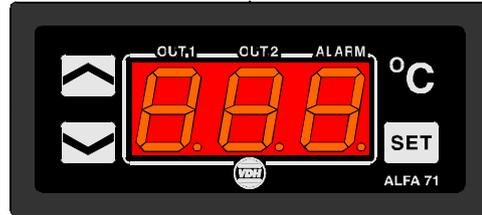


User manual

ALFA 71 MODulation

Thermostat.

0-100°C



VDH doc. 080349

Version: v1.0

Date: 07-03-2008

Software: ALFA71MOD100

File: DO080349.WPD

Range: 0/+100,0°C

* Installation.

On the top side of the **ALFA 71 MOD** is shown how the sensors, power supply and relays has to be connected.

After connecting the **ALFA 71 MOD** to the power supply, a self test function is started. As this test is finished the measured temperature appears in the display.

* Control.

The **ALFA 71 MOD** 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 set point.

By pushing the **SET** key the set point 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 set point.

Push the **SET** key and the set point 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.

* Readout valve position.

By pushing the **UP** key the display shows the current valve position.



* 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 **ALFA 71 MOD** 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 **ALFA 71 MOD** the following error messages can appear:

- | | | |
|------------|---|---|
| LO | - Minimum alarm. | <u>Solution E1:</u> |
| 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. | <u>Solution EEE:</u> |
| | | - 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	: ALFA 71 MOD Thermostat
Range	: 0/+100,0°C, per 0,1°C
Supply	: 12Vac 50/60Hz (-5/+10%)
Display	: 3-digit 7-segment display
Relays	: Ry1= Open SPST(NO)250V/8A (cos φ=1) of 250V/5A (cos φ=0.4) Ry2= Close SPST(NO)250V/8A (cos φ=1) of 250V/5A (cos φ=0.4) Ry3= Alarm SPDT(NO/NC)250V/8A (cos φ=1) of 250V/5A (cos φ=0.4) Relays have one common (C).
Control	: By push buttons on front.
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.

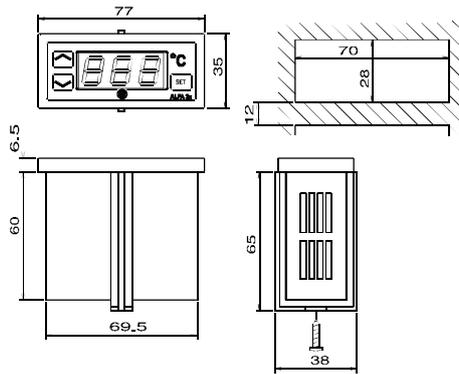


* **Parameters ALFA 71 MOD**

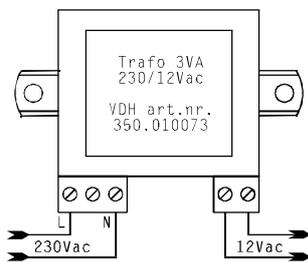
Parameter	Description Parameter	Range	Default
01	Function thermostat	1=Cool 2=Heat	1
02	Offset temperature sensor-1	-15.0...+15.0°C	0.0
10	P-band	0,0...+15,0°C	5,0
11	I-time	0..99 Minutes	0
12	Runtime valve	0..999 Seconds	120
13	Reset time	0..999 Minutes	60
14	Reset to minimum or maximum valve position	0 = minimum 1 = maximum	0
20	Minimum set point	0,0...+100,0	0,0
21	Maximum set point	0,0...+100,0	+100,0
22	Read-out above -10°C per 1°C	0= no, 1= yes	0
30	Alarm type	0= None 1= Absolute 2= Relative	1
31	Minimum alarm set point	0.0...+100.0°C	0
32	Maximum alarm set point	0.0...+100.0°C	+100
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	0
36	Reset alarm relay after recovering alarm	0= No, 1= Yes	0
37	Reset alarm relay after manual reset	0= No, 1= Yes	0
40	Start up delay after power failure	0..99 Minutes	0
41	Forced relay function at sensor failure	0= None 1= Min. 2= Max.	0
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



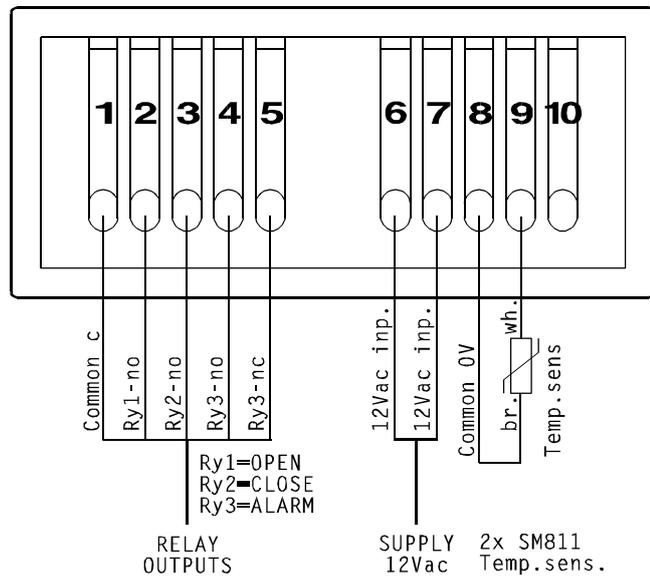
* **Dimensions.**



* **Connections.**



ALFA 71 MOD



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