

# User manual

## ALFA 71 0/+150°F 24Vac

### Thermostat



VDH doc. 032181  
Software: ALFA71NR

Version: v1.0  
File: Do032131.WP8

Datum: 06-10-2003  
Range: 0/+150,0°F(1)

#### \* Functions.

The **ALFA 71 spec** is a thermostat with one temperature sensor, one relay with function heating on/off and one 0-10Vdc PI-output with function cooling. The power supply is 24Vac.

#### \* Installation.

On the top side of the **ALFA 71 spec** is shown how the sensor, power supply, PI-output and relay are to be connected.

After connecting the **ALFA 71 spec** 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 spec** 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.
- °F** - hidden push button above the **SET** key and behind **°F** symbol.

#### \* Viewing setpoint.

By pushing the **SET** key the setpoint appears in the display.

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 Outputs.

By pushing the hidden **°F** key the display shows the status of the outputs. The first segment indicates the status of relay heating (1 = on, 0 = off)

The last two segments indicate the actual percentage of the PI-cooling output from 00 until 99%.



\* **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 spec** changes to the normal operation mode.

\* **Adjustment sensors.**

The Temperature-sensor can be adjusted by using the Sensor Offset parameter 03. Indicates the Sensor e.g. 2°F too much, the according Sensor Offset has to be decreased with 2°F.

\* **Error messages.**

In the display of the **ALFA 71 spec** the following error messages can appear:

- E1** - Sensor-1 failure.      Solution E1:  
- Check if the sensor is connected correctly.  
- Check sensor (1000Ω at 25°C).  
- Replace sensor.
- EEE** - Settings are lost.      Solution EEE:  
- Reprogram the settings.

\* **Technical details.**

Type : ALFA 71 spec Thermostat  
Range : 0/+150°F, display per 1°F  
Supply : 24Vac 50/60Hz (-5/+10%)  
Display : 3-digit 7-segment display  
Relay : Heating SPDT(C/NO/NC) 250V/8A (cos φ=1) or 250V/5A (cos φ=0.4)  
Analog-out : 0..10Vdc P(I) Cooling output  
Control : By push buttons on front.  
Front : Polycarbonate IP65  
Sensors : 2x SM 811/2m (PTC 1000Ω/25°C).  
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 spec**

Para-Meter	Description Parameters	Range	Default
01	Minimum setpoint setting	0..+150°F	0
02	Maximum setpoint setting	0..+150°F	+150
03	Offset temperature sensor	-15..+15°F	0
10	Switching differential relay heating	1..15 °F	1
11	Switching offset relay heating	-15..+15°F	0
20	PI offset cooling	-15..+15°F	0
21	Proportional-band cooling	1..30°F	10
22	Integration-time (0 gives only P-action)	0..99 Minutes	0
30	Control delay after power failure	0..99 Minutes	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

\* **Address.**

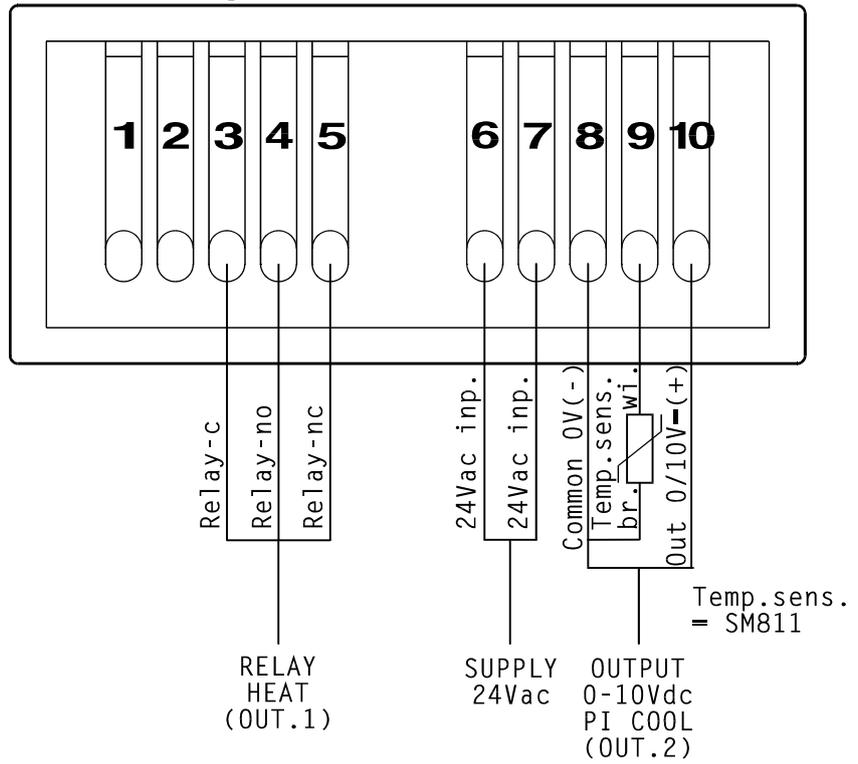
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\* Connections.

**ALFA 71 spec**



\* Dimensions.

