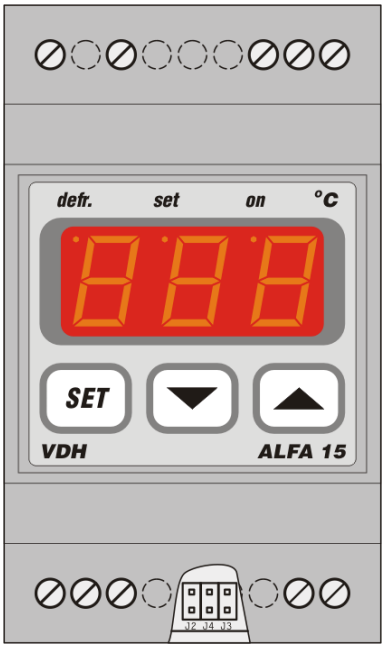
User manual
ALFA 15 and
ALFANET 15

Cool/Defrost Thermostat.



VDH doc. 061283 **Version: v2.1** **Date: 05-12-2007**
Software: 043376_ALFA 15/25/35 File: Do061283.wpd Range: -50/+50˚C per 1˚C

* Function.

The **ALFA(NET) 15** is a digital thermostat for rail mounting. The thermostat controls the cooling and defrost. The temperature readout is in hole degrees Celsius.
Defrost will be done by temporarily switching off the cooling (natural defrost). The defrost starts on intervals or on compressor runtime. The defrost stops on time.
The **ALFA*NET* 15** has a RS 485 network connection so it can be read out and adjusted on the Alfanet.

* Installation.

On the connection diagram of the **ALFA(NET) 15** you can see how the sensor, power supply and relay have to be connected.
After connecting the **ALFA(NET) 15** 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) 15** 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 is show in the display.

* Starting/stopping defrost.

The defrost cycle is automatically started and stopped. Programming by the internal parameters. During defrost the led 'defrost' will light-up.
If there is a defrost cycle, the defrost can be stopped by hand, pushing the **UP** key and then the **SET** key, while the **UP** key is held.
If there is no defrost cycle, the defrost can be started by hand, pushing the **UP** key and then the **SET** key, while the **UP** key is held.

* Adjustment sensor.

The sensor can be adjusted by using the 'Sensor Offset' (parameter 04). Indicates the **ALFA(NET) 15** 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) 15** 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 15 Cool/Defrost Thermostat ALFANET 15 Cool/Defrost Thermostat with Network
Range	:	-50/+50˚C, readout per 1˚C
Supply	:	230 Vac / 1,2VA 50/60Hz (or else see product sticker)
Relay	:	SPDT 250V/16A(C-NO), 8A(C-NC) (cos phi=1)
Control	:	by pushbuttons on the front.
Communication	:	RS 485 Network (2xtwisted pair shielded) only at ALFANET model.
Front	:	Polycarbonate IP65
Sensor	:	SM 811/2m (1000Ω at 25˚C)
Sizes	:	90 x 53 x 58mm (hwd)
Panel hole	:	46 x 53mm (hw)

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

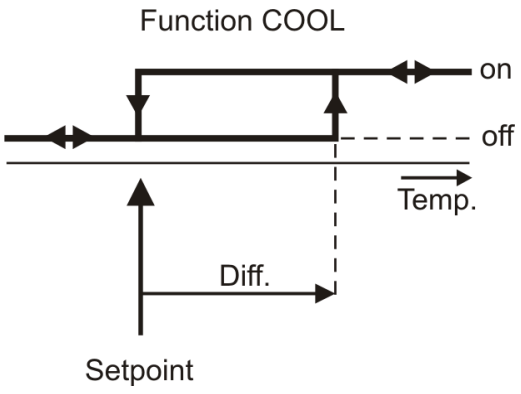
* Setting internal parameters.

Next to the adjustment of the setpoint, some internal settings are possible like differential, sensor-offset, setpoint range and the defrost function.
By pushing the **DOWN** key for more than 10 seconds, you enter the 'internal programming menu'. In the left display the upper and lower segments are blinking. With 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** keys allows you to change the value of this parameter.
If no key is pushed for 20 seconds, the **ALFA(NET) 15** changes to it's normal operation mode.

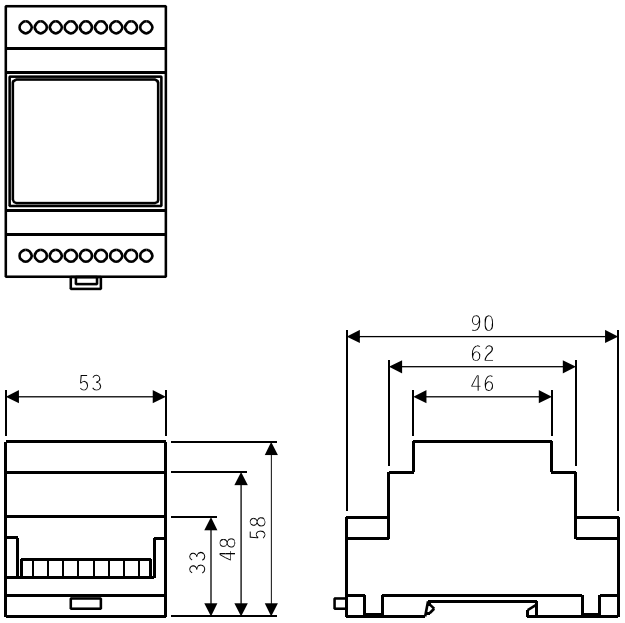
* Parameters ALFA(NET) 15 .

PARA-METER	DESCRIPTION PARAMETER	RANGE	STANDARD VALUE
01	Switching differential	1..15˚C	3
02	Minimum setpoint	-50..+50˚C	-50
03	Maximum setpoint	-50..+50˚C	+50
04	Offset temperature sensor	-15..+15˚C	0
05	Compressor start-up protection 0 = start-up delay in seconds 1 = start-up delay in minutes 2 = delay between switch off and switch on in minutes 3 = delay between switch on and switch on in minutes	0..3	0
06	Compressor start-up time belonging to parameter 05	0..99	10
07	Defrost cycle time	1..99 hours.	12
08	Defrost time	0..99 minutes	15
09	Defrost delay after power failure (if parameter 14 is 1)	0..99 minutes	0
10	Startup delay after power failure	0..99 minutes	0
11	Relay on at sensor failure	0 = No, 1 = Yes	0
12	Defrost cycle time based on compressor on time	0 = No, 1 = Yes	0
13	Temperature display locked during defrost cycle	0 = No, 1 = Yes	0
14	After power failure starting with defrost cycle	0 = No, 1 = Yes	0
15	Maximum time display locked after defrost (if parameter 13 = 1)	0..60 minutes	5
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	-

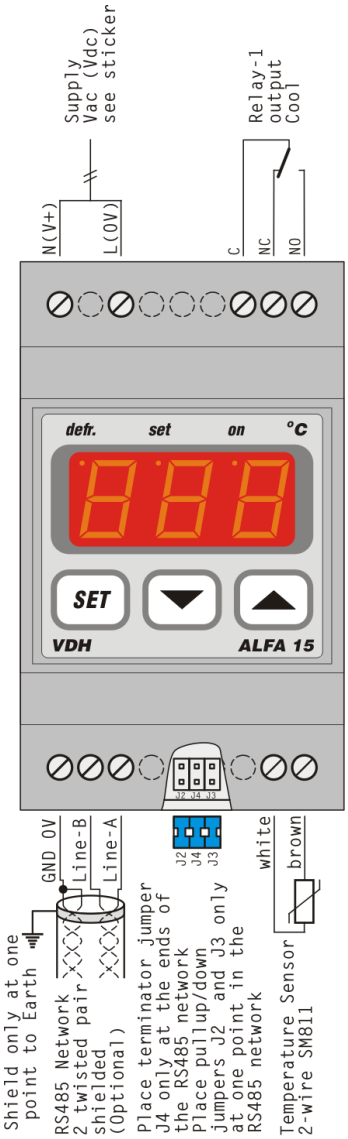
* Function diagram.



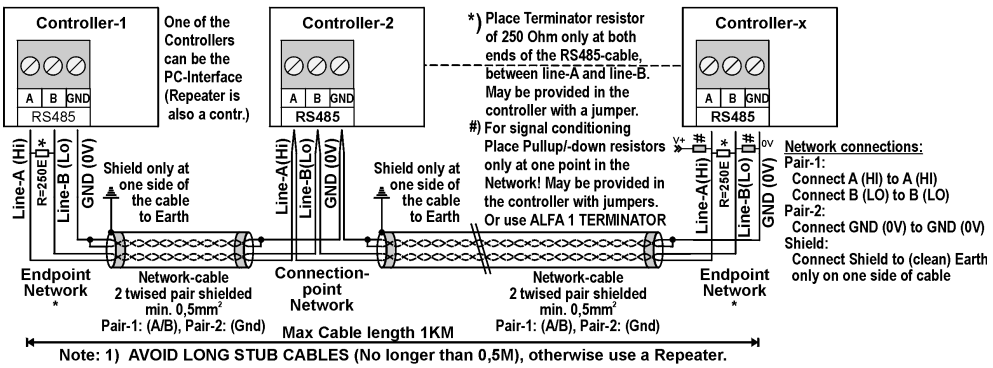
* Dimensions.



* Connection diagram.



RS 485 NETWORK CONNECTIONS 2-twisted pair shielded cable:



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