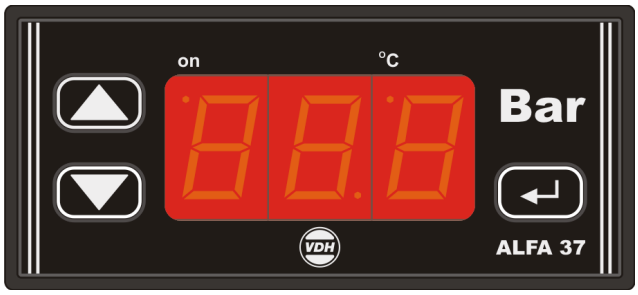
User manual
ALFA(NET) 37 BAR
(4-20mA)

Pressostat with temperature -read out and -controlling on base of several coolants.



VDH doc. 071744 **Version: v1.1** **Date: 24-03-2010**
Software: 071508 A(N)17/27/37 BAR File: Do071744.wpd Range: -1,0/+99,9 BAR per 0,1 BAR

* Description.
The **ALFA(NET) 37** is a Pressostat with three relays functions and the possibility to control on pressure or temperature from several coolants.
The **ALFA*NET* 37** has a RS 485 network connection so it can be read out and adjusted on the Alfanet.

* Installation.
On the topside of the **ALFA(NET) 37** you can see how the sensor, power supply and relay have to be connected. After connecting the **ALFA(NET) 37** to the power supply, a self test function is started. As this test is finished, the measured pressure or temperature appears in the display.

* Control.
The **ALFA(NET) 31** thermostat can be controlled by three pushbuttons on the front.
These keys are;

SET - view / change the set point.
UP - increase the set point.
DOWN - decrease the set point.

* Read-out and controlling on Temperature.
The **ALFA(NET) 37** pressostat controls normally on atmospheric pressure (no absolute pressure). If a coolant is chosen with parameter P08, it is also possible to read-out and control on temperature. This can be adjusted with parameter P09. The indication for temperature read-out is shown by the most right point (top) in the display. There is a '**°C** sign at this point.
If the read-out changes from pressure to temperature and reverse, several parameters becomes other units. These parameters are marked with #. It will be wise to check the value of all parameters as soon as the read-out (and control) changes.

* 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 set point disappears and the measured value is shown in the display.

* Changing setpoint.
Push the **SET** key and the set point appears in the display. Release the at **SET** key. Now push the **SET** key again and together with the **UP** or **DOWN** keys the set point can be changed. A few seconds after releasing the keys the measured value shows again in the display.

* Status from the Relay.

The most upper left point with the text **'on'** indicates the status of the relay. If this one is on, the relay is energized except if the relay is programmed as a fail safe alarm. In this case the relay is normally energized and the led is off and as soon as an alarm occurs, the led will light in and the relay will de-energized.

* Adjusting the pressure sensor.

First the range of the pressure sensor must be set with parameter 06 (4mA value) and parameter 07 (20mA value).
The pressure sensor can be adjusted with the Offset pressure sensor (parameter 05).
Indicates the sensor from the **ALFA(NET) 37** e.g. 0,2 BAR to much, than the Offset pressure sensor should be decreased with 0,2 BAR.

* Error messages.

On the display from the **ALFA(NET) 37** can appear the following error messages:

- **LO** - Minimum alarm.
- **HI** - Maximum alarm.
- **EE** - Settings are lost. Solution: - Reprogram the settings.

* Working Alarm.

If there appears a error message or alarm, the buzzer switches on (if present) and an error message appears on the display. The **ALFA(NET) 37** remembers the error message (parameter P36 default on 0), even if the error is already solved.

The error message can be reset through the **SET** key (if parameter P37 is 1). If the **SET** key (=reset alarm) is pushed and the alarm is not solved, the **ALFA(NET) 37** shows alternate the pressure (temperature) and the error message. If the alarm is solved than the error message disappears and the pressure (temperature) will be shown.

The alarm function can be changed with parameter P35 (default is fail safe) to control alarm. This means that if an alarm occurs, the relay will be energized. When a fail safe alarm is active, the relay will be de-energized. With parameter P30 it is possible to make a choice between no alarm, absolute or relative alarm. A relative alarm is related to the set point.

* Technical data.

Type	: ALFA(NET) 37 Pressostat
Range	: -1,0/+99,9 BAR, read-out per 0,1 BAR (If an coolant is chosen it is also possible to read-out the temperature with a maximum range of -60,0 till +60,0˚C.)
Supply	: 230 Vac 50/60Hz (-5/+10%) or else see product sticker
Relay	: Potential free contact SPDT (C,NO,NC) 250V/8A (cos φ=1)
Communication	: RS 485 network (2x Twisted-pair shielded cable min. 0,5mm^2)
Pressure sensor	: PX25, PX75, PX77-series (External supply 11-33Vdc, Signal input 4-20mA). Only for relative pressure sensors (Not for absolute pressure sensors)
Display	: 3-digit 7-segments display
Control	: Through push buttons on the front.
Front	: Polycarbonate
Dimensions	: 35 x 77 x 71,5mm (hwd)
Panel cut out	: 29 x 70mm (hw)
Accuracy	: ± 0,5 % from the range.

- Provided with memory protection during power failure.
- Connection with screw terminals on the back side.
- Special version on request available.

* Setting internal parameters.

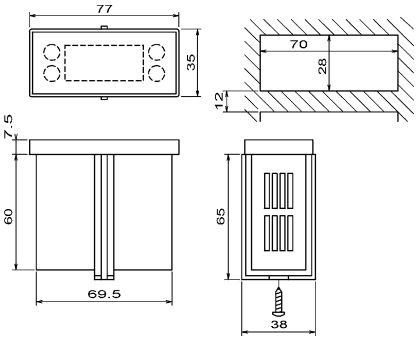
Next to the adjustment of the setpoint, some internal settings are possible like differential, sensor-offset, set point range, coolant choice, read-out and control settings and alarm settings.
By pushing the **DOWN** key more than 10 seconds, you enter the 'internal programming menu'. In the left display the upper and lower segment 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 together with the **SET** key allows you to change the value of this parameter.
If after 20 seconds no key is pushed, the **ALFA(NET) 37** changes to it's normal operation mode.

* Parameters ALFA(NET) 37.

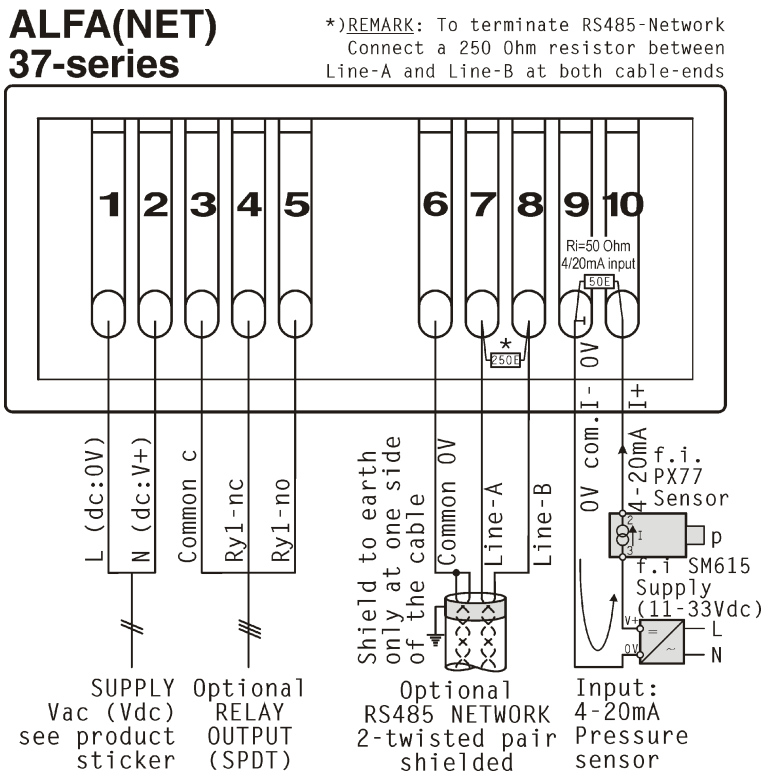
Para-meter	Description Parameter	Range	Default value
01	Function relay 0= Non 1= Increase pressure (temperature) 2= Decrease pressure (temperature) 3= Alarm	0..3	1
05	Offset pressure sensor	-15.0..+15.0 Bar	0.0
06	Value pressure sensor at 4mA input	-1.0..+99.9 Bar	-1.0
07	Value pressure sensor at 20mA input	-1.0..+99.9 Bar	99.9
08	Coolant choice: 0=non 6=R407A(BP) 1=R22 7=R407C(DP) 2=R134A 8=R407C(BP) 3=R404A(DP) 9=R717 (NH3) 4=R404A(BP) 10=R507 5=R407A(DP) (DP=Dewpoint, BP=Bubblepoint)	0..10	0
09	Read-out and control choice 0=Pressure (Bar) 1=Temp. Per 0,1°C (requires coolant choice) 2=Temp. Per 1°C (requires coolant choice)	0..2	0
10	Switching differential relay	0.1..15.0 Bar (°C) #	0.5
11	Switching offset relay	-15..+15.0 Bar (°C) #	0.0
20	Minimum adjustable set point *	-1.0..99.9 Bar (°C) #	-1.0
21	Maximum adjustable set point *	-1.0..99.9 Bar (°C) #	99.9
30	Type of alarm: 0=None 1=Absolute 2=Relative	0..2	1
31	Minimum alarm set point *	-99..+99.9 Bar (°C) #	-1.0
32	Maximum alarm set point *	-99..+99.9 Bar (°C) #	99.9
33	Time delay minimum alarm	0..99 Minutes	0
34	Time delay maximum alarm	0..99 Minutes	0
35	Relay function alarm relay	0=Fail safe alarm 1=Control alarm	0
36	Reset alarm relay if alarm disappears	0=No, 1=Yes	0
37	Reset alarm relay at manual reset	0=No, 1=Yes	0
40	Control delay after power failure	0..99 Minutes	0
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	-

*) Changes when changing from Bar to ˚C or to another coolant. (P09 or P08)
#) Unit changes when changing from Bar to ˚C. (P09)

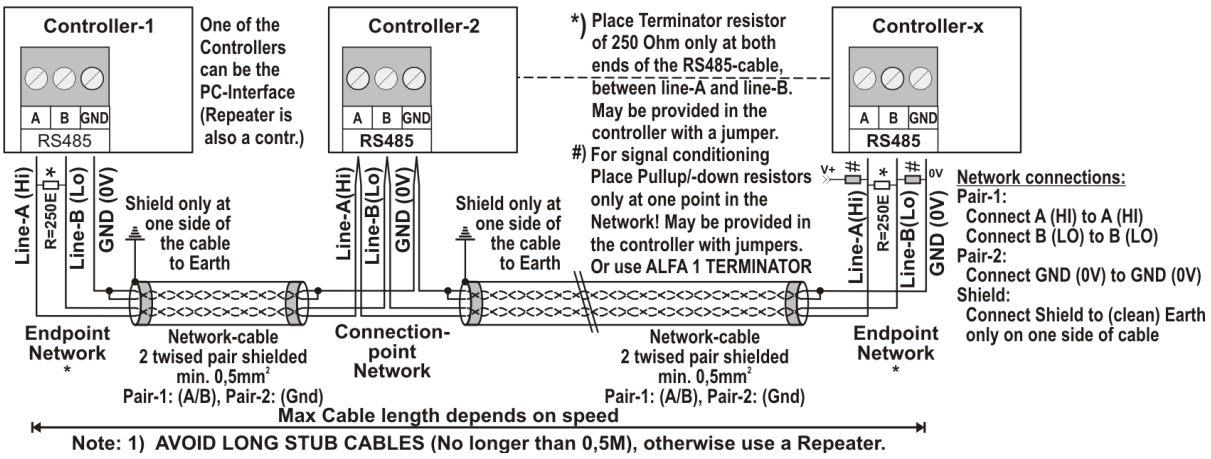
* Dimensions.



* Connections.



RS 485 NETWORK CONNECTIONS 2-twisted pair shielded cable:



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