

Alarm Unit Type M3118

- ✓ 2 alarm contacts
- ✓ Input signals for current & voltage or temperature
- ✓ Signal output (current or voltage)
- ✓ Universal supply 20...253VAC/DC
- ✓ Modbus (optional)
- ✓ USB – logger (optional)
- ✓ Optical alarm contact
- ✓ Rail mounting 35mm



Technical description

The alarm unit M3118 is used to check or control any type of signal current or voltage. It converts the input signal to an internal standard signal of for example 0 to 100.0%. In this range two alarm contacts can be set independently. The 4-digit measuring value, as well as the status of the alarm contacts, is shown on an easy to read LCD-Display.

All settings as alarm values, hysteresis, range and operating mode of the floating contacts can be set with a link cable, connected to a personal computer or a laptop.

Both limit values can also be changed directly on the device using push buttons.

A typical application would be to measure and monitor pressure in a process vessel. The pressure transmitter converts the pressure of 1 to 10 bar to a current signal of 4 to 20mA. The M3118 monitors under and overpressure in the vessel. It converts the 4... 20mA signal current to 1.00bar...10.00bar. The alarm contacts can be set between 1bar and 10bar. With these floating alarm contacts, overpressure valves, compressors, etc. are driven directly.

Optionally, a galvanic isolated output signal of 0...20mA or 4...20mA is available.

The alarm unit M3118 uses a universal supply from 20 to 253VAC/DC.

Technical data

Input signal:	M3118-AR: 0/4...20mA; 0...1/10V, other values in these ranges are free programmable M3118-TR: Platinum-/Nickelsensors, 2- or 3-wire connection 100Ω, 200 Ω, 500Ω or 1000Ω at 0°C (DIN 43 760) Other input signals on request
Input load / impedance:	Current signal = 51Ω ; voltage signal = 1MΩ
2-Wire transmitter supply:	24VDC, max. 25mA
Display:	LCD-Display, 4-digit, 15mm height, color adjustable
Display range:	-9999...9999, optional -99999...99999
Accuracy:	±0.1% at 23°C ambient temperature
Reproducibility:	±0.1%
Temperature coefficient:	Zero drift: 30ppM/°C typical Gain drift: 25ppM/°C typical
Long-term stability:	±0.1%
Working temperature range:	-5°C to +45°C
Maximum humidity:	95%, non-condensing
Range adjustment:	Programmable by PC / laptop with programming unit
Zero-/Gain adjustment:	Programmable by PC / laptop or directly on the device with small keys
Limit contacts:	Two floating change-over contacts may be adjusted over the full range. Each can be defined as normally open or normally closed contact in the menu via the keys.
Status:	on easy to read LCD-Display
Hysteresis:	Adjustable, factory settings is ±5 digit
Contacts rating:	1A with resistiv load / 230VAC
Max. contact load:	100'000 operations at max. load
Max. contact lifecycle:	10'000'000 operations mechanically, without load
Display unit:	on easy to read LCD-Display, 8 units programmable
Option signal output:	0/4...20mA, galvanically isolated
Max. load:	500Ω
Output impedance:	>1MΩ typical
Power supply:	20 to 253VAC or DC
Power supply load:	4.5W to 7.0W at 230VAC
CE-conformity:	Fulfilled
Terminals:	Plug-in screw terminals
Mounting:	35mm mounting rail, EN50022-35
Weight:	200g
Warranty:	2 years
Options:	<ul style="list-style-type: none">- USB programming unit, with cable and software- Other, user-specific in- and output signals- USB-logger- Modbus (without I-Output)- 5-digit LCD-display

Terminals

1	Supply voltage: AC~/DC(+)	5	Signal output: +	9	Alarm contact 1: normally open
2	Supply voltage: AC~/DC(-)	6	Signal output: -	10	Alarm contact 2: change over
3	Supply voltage: PE	7	Alarm contact 1: change over	11	Alarm contact 2: normally closed
4	Signal output: PE	8	Alarm contact 1: normally closed	12	Alarm contact 2: normally open

M3118-AR:

13	Signal input: PE	15	Signal input current +	17	2-Wire transmitter supply +24V
14	Signal input -	16	Signal input voltage +	18	2-Wire transmitter supply PE

M3118-TR:

19	Signal input: sensor +	21	Signal input: sensor sense -	23	n.c.
20	Signal input: sensor -	22	Signal input: sensor PE	24	n.c.

For Modbus versions:

4	Modbus RS485 – GND	5	Modbus RS485 – A	6	Modbus RS485 – B
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Ordering examples

Example 1:

- M3118-ARS (A = input signals for current/voltage; R = alarm contacts; S = signal output)
- Input: 4...20mA
- Display: 50.0%...100.0%
- Alarm contacts preset to contact 1 = 55.0% and contact 2 = 85.0%; hysteresis ± 2 digit
- Signal output: 50.0%...100.0% = 0...20mA

Example 2:

- M3118-AR (A = input signals for current/voltage; R = alarm contacts)
- Input: 0...10VDC
- Display: 25.00rpm...75.00rpm
- Alarm contacts preset to contact 1 = 30.0rpm and contact 2 = 50.0rpm; hysteresis ± 2 digit

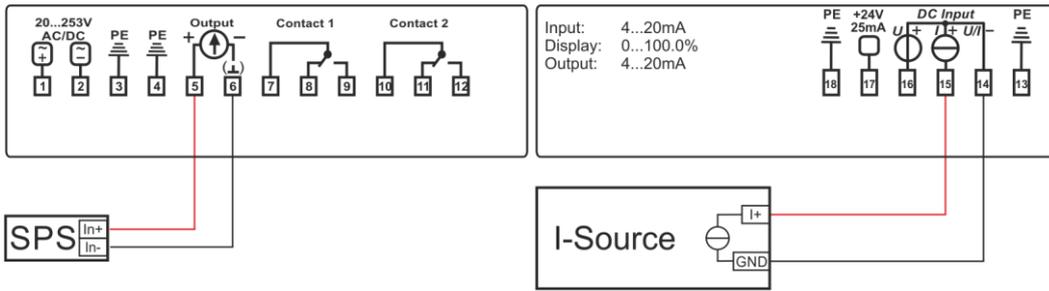
Example 3:

- M3118-TRS (A = input signals for current/voltage; R = alarm contacts; S = signal output)
- Pt-100 sensor, standard range of -50.0°C...300.0°C
- Alarm contacts preset to contact 1 = 50.0°C and contact 2 = 100.0°C; hysteresis ± 2 digit
- Signal output: 25.0°C...125.0°C = 4...20mA

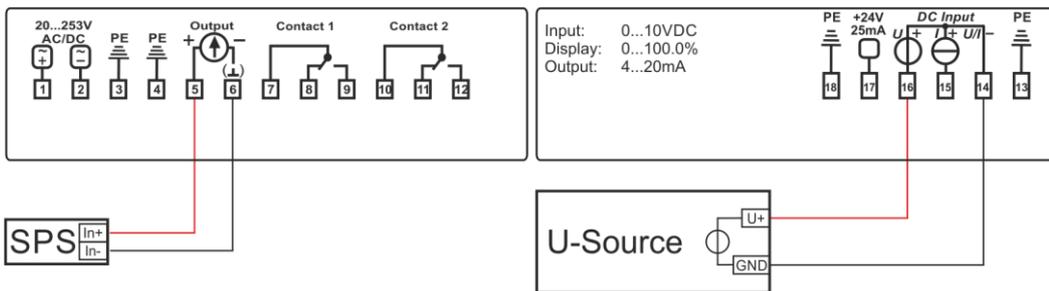
The M3118-AR respectively the M3118-TR is combinable with the S (signal output) option, if needed.

Wiring

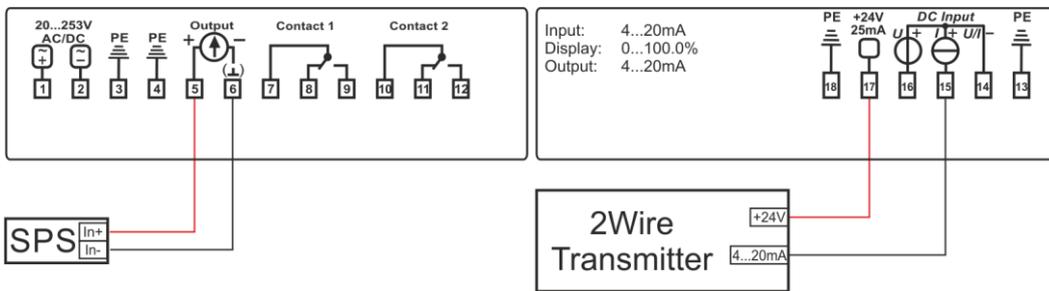
Current input:



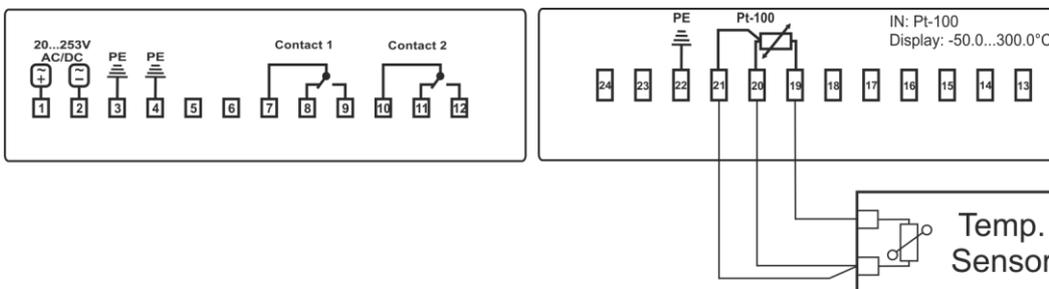
Voltage input:



2-Wire input:



Temperature input:



Dimensions / Cut out dimensions

