

**WAVESERIES PT 100/2 and
PT 100/3 Signal Conditioners
for Voltage Output**





Fig. 1

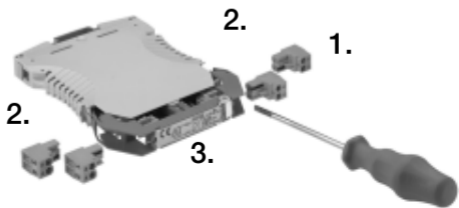


Fig. 2



Fig. 3

Potentiometer



Fig. 4

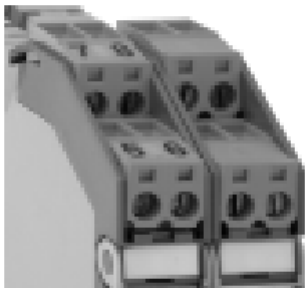
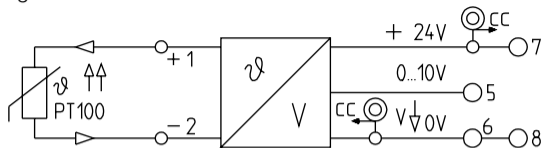


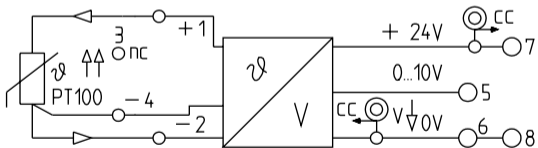
Fig. 5

Fig. 6



2-Leitertechnik

Fig. 7



3-Leitertechnik

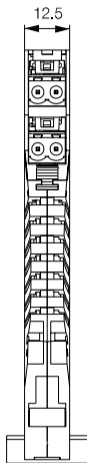
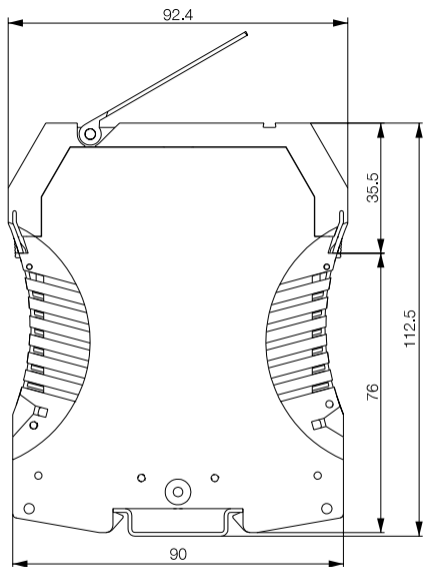


Fig. 8

WAVESERIES

PT 100/2 and PT 100/3 Signal Conditioners for Voltage Output

Type	Cat. No.
Screw-type connection	
WTS4 PT100/2 Select V	8432180000
WTS4 PT100/3 Select V	8432090000
Tension clamp connection	
WTZ4 PT100/2 Select V	8432190000
WTZ4 PT100/3 Select V	8432130000

Read these instructions before using the product
and retain for future information.

1 General instructions

The WAVESERIES signal conditioner PT 100 should only be installed by qualified staff. The signal conditioner PT 100 should only be powered up following professional installation.

2 Application

The WAVESERIES signal conditioner PT 100 can be used to connect PT 100 sensors as well as converting temperature data into standard linear voltage signals. The temperature range can be set by DIP switches on the printed circuit board.

3 Mounting and dismounting

Warning!! Mounting and dismounting may only be carried out when the power supply has been disconnected. Failure to observe will lead to considerable damage!

3.1 Mounting onto TS 35 DIN rails

(v. Fig. 1)

3.2 Pluggable electronic components for range alteration (depending on model)

(v. Fig. 2)

1. Remove connector, (depending on model either screw-type or tension clamp).
2. Press locking clips on both sides of the enclosure.
3. Pull out the circuit board.

Warning!! The circuit board can only be inserted in one position.

The connectors have been coded by the manufacturer, ensuring that they cannot be reversed.

3.3 Setting the potentiometer (depending on model)

(v. Fig. 3)

The module has been exactly calibrated by the manufacturer. Should nevertheless a follow-up adjustment be necessary, open the hinged cover upwards.

The potentiometers are on the front panel.

3.4 Pluggable cross-connections for voltage supply

(v. Fig. 4)

A maximum feed through of 2 A is possible.

If a signal conditioner is accidentally rotated through 180°, the cross-connection cannot be inserted.

3.5 Labelling possibilities

(v. Fig. 5)

WS 10 connector markers can be used to label module.

4 Calibration

Warning!! The power supply must be disconnected, before changing the signal conditioner settings using the DIP switches.

Failure to observe will lead to considerable damage!

4.1 Equipment

- Power supply 24 Vdc, 50 mA
- Simulator for PT 100 or precision resistance decade
- Current meter/voltmeter that can be so calibrated, as to allow an accuracy of > 0.1 % from the upper range value

4.2 Calibration with a signal output from 0 ... 10 V

1. Select the temperature range on the printed circuit board using the DIP switch, see table on the module or page 19. The DIP switches 1, 2 and 3 set the minimum input temperature ϑ_{\min} .
The span (difference between minimum and maximum input temperature) is set using the DIP switches 4, 5 and 6.
2. Professionally install module.

3. Add 1% of the temperature span to the selected "*minimum*" temperature and set this value on a PT 100 simulator (when using a precision resistance decade, where necessary observe DIN IEC 751 conversion table from °C to Ω !) and calibrate the signal conditioner output signal to 0.100 V using the null potentiometer. (The potentiometers are located behind the hinged cover).
4. Set the "*maximum*" selected temperature on a PT 100 simulator (or precision resistance decade) and calibrate the signal output to 10.000 V using the *Span* potentiometer.
5. Repeat steps 3 and 4 (approx. 2-3 times), until the required accuracy is achieved.

4.3 Setting the DIP switches

Warning!! The signal conditioner PT 100 must be protected against a direct electrostatic discharge when setting the DIP switches.