

GENERAL CHARACTERISTICS

- input: PT100 2 or 3 wire connection with linearisation;
- DIP-switch selection of input full-scale (0..100 °C, 0..200 °C and 0..400 °C)
- isolated analog output, with voltage and current output (active or passive connection)
- DIP-switch selection of output signal (0..20 mA, 4..20 mA, 0..5 V, 1..5 V, 0..10 V and 2..10 V).
- “power-on” indicator on front panel.
- 3 points galvanic isolation – power supply / input / output : 1500Vac.

TECHNICAL SPECIFICATIONS

Power supply:	19 - 40Vdc, 19 - 28Vac 50-60Hz, max 2.5W; 1.6W @ 24Vcc on 20mA output.			
Thermal resistor input (RTD) PT100:	two or three wire measurement, selection range 0..100 °C, 0..200 °C and 0..400 °C Energising current : approximately 1 mA .			
Output:	Current 0..20 / 4..20mA, max load resistance 600 ohm Voltage 0..5V / 0..10V / 1..5V / 2..10V, min load resistance 2500 ohm			
Ambient conditions:	Temperature: 0..50°C, Humidity - min:30%, max 90% at 40°C non condensing (also see section Installation standards).			
Errors referred to maximum measuring range ⁽¹⁾	Calibration error:	Thermal coefficient:	Linearity error:	others
	0.2%	0.02%/°C	0.1%	EMI: <1% ⁽³⁾
Voltage output ⁽²⁾	0.1%	0.01%/°C	0.1%	
Protection for outputs/power supply:	against impulsive over-voltages 400W/ms.			
The instrument conforms to the following standards:	EN50081-2 (electromagnetic emissions, industrial ambient) EN50082-2 (electromagnetic immunity, industrial ambient) EN61010-1 (safety)			

⁽¹⁾ influence of resistance of cables 0.005%/ohm max 10ohm.

⁽²⁾ values to be added to errors concerning selected input.

⁽³⁾ EMI: electromagnetic noise.

INSTALLATION INSTRUCTIONS

The Z109Pt module is designed for installation on a DIN 46277 guide, in vertical position.

For efficient operation and long-life, the modules must be adequately ventilated. Do not install any raceways or place other objects that could obstruct the ventilation slits.

Do not install the modules above heat generating appliances – we advise you to install the modules in the lower part of the panel.

SEVERE OPERATING CONDITIONS:

These are considered severe operating conditions:

- *High supply voltage (> 30Vdc / > 26 Vac)*
- *Sensor powered at input*
- *Output used on generated current.*

If the modules are installed side-by-side, it may be **necessary to separate them by at least 5 mm** in the following cases:

- If panel temperature exceeds 45°C and at least one of the severe operating conditions occurs.
- If panel temperature exceeds 35°C and at least two of the severe operating conditions occur.



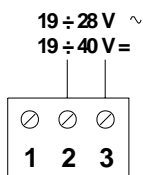
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ELECTRICAL CONNECTIONS

You are recommended to use shielded cables for connection of signals – the shield must be connected to an earthing point giving priority to the instrumentation. Moreover, we advise you not to route the conductors near to power cables serving inverters, motors, induction ovens, etc.

POWER SUPPLY

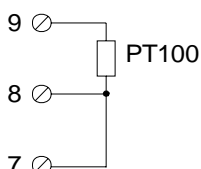


Power supply must be in the range 19 to 40 Vdc (at any polarity), or 19 to 28 Vac – also consult the section **Installation standards**.

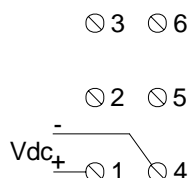
The upper limits must not be exceeded, otherwise the module may be seriously damaged.

The power source must be protected against any trouble to the module by a fuse of adequate size.

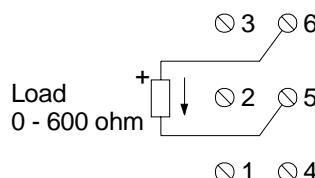
INPUT PT100



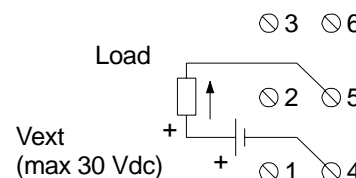
OUTPUTS Voltage



Generated current



Current with external loop supply



SELECTION OF INPUT FULL-SCALE

RANGE	
SW	
12	
<input type="checkbox"/>	0.100°C
<input type="checkbox"/>	0.200°C
<input type="checkbox"/>	0.400°C

To select the input full-scale, set DIP-switch group SW1 at the side of the module.

N.B.: DIP-switches must be set only when the module is not powered, to avoid serious damage to the module.

SELECTION OF OUTPUT SIGNAL

OUTPUT SETTINGS	
SW2	
12 34	
<input type="checkbox"/>	0.10V
<input type="checkbox"/>	0.5V
<input type="checkbox"/>	2.10V
<input type="checkbox"/>	1..5V
<input type="checkbox"/>	0..20mA
<input type="checkbox"/>	4..20mA

To select the output signal, set DIP-switch group SW2 at the side of the module.

N.B.: DIP-switches must be set only when the module is not powered, to avoid serious damage to the module.



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