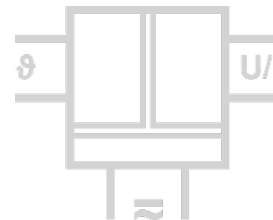


# Temperature Transmitter DR 4700

Temperature Measuring  
with Pt100/Pt1000-Sensors



The Temperature Transmitter DR 4700 converts the Pt sensor signal on input to temperature linear standard signal 0/4 ... 20 mA or 0 ... 5/10 V.

The configuration of the measuring input and the output can be easily switched with DIP switches. The zero/span potentiometers on the front panel provide easy range adjustment. After changing the standard factory setting, the measuring range must be recalibrated with a Pt simulator.

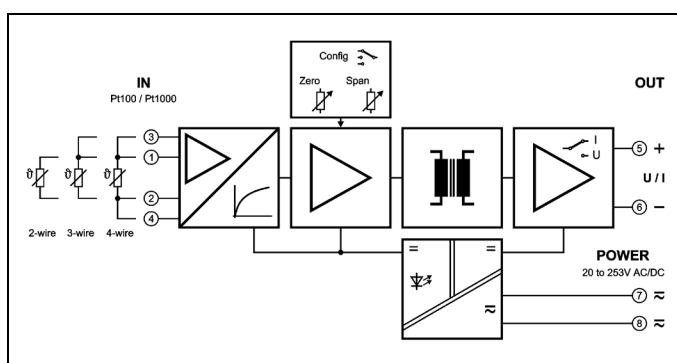
The small housing with 12.5 mm width saves space in your switch cabinet and facilitates by the practical plug-in screw terminal blocks the assembly. For range setting a simple housing unblocking is installed which makes it possible to reach easily all control elements on the mounting rail.

The universal power pack for 20 ... 253 V AC/DC means the DR 4700 can be used anywhere in the world, with all mains power supplies. The unit's high efficiency contributes significantly to reducing the unit's own heat generation. This is reflected in extremely high reliability and long-term stability.

- **Easy measuring range adjustment**  
from -100 °C to +600 °C via potentiometer on the front panel
- **Extensive configuration options**  
Measurement range, type of sensor, sensor connection and output signal can be set by using DIP switch
- **Universal power supply for 20...253 V AC/DC**  
Applicable world-wide for all common supply voltages
- **3-Port Isolation**  
Protection against erroneous measurements due to parasitic voltages or ground loops
- **Ultra small sized housing**  
12.5 mm housing with plug-in screw terminal blocks
- **Protective Separation acc. to EN 61140**  
Protects service personnel and downstream devices against impermissibly high voltage
- **Maximum reliability**  
Highest long-term stability and accuracy
- **5 Years Warranty**  
Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block diagram



## Technical Data

Input				
Input signal	Pt100 / Pt1000		switchable	
Sensor connection	2-wire, 3-wire, 4-wire			
Measuring range	Zero	-100 °C, -50 °C, 0 °C, 50 °C switchable with Potentiometer ZERO 0 ... 50 °C adjustable		
	Span	50 K, 100 K, 200 K, 300 K, switchable with Potentiometer SPAN 100 ... 200 % of span adjustable		
Sensor wire resistance	< 25 Ω per wire			
Sensor current	1 mA / 0.1 mA			
Sensor diagnostic	Sensor / wire break			
Output				
Output signal	0 ... 20 mA 4 ... 20 mA	0 ... 5 V 1 ... 5 V	0 ... 10 V 2 ... 10 V	switchable
Load	Current output Voltage output	≤ 12 V (600 Ω at 20 mA) ≤ 5 mA (2 kΩ at 10 V)		
Residual ripple	< 10 mV <sub>rms</sub>			
Sensor break action	Current output Voltage output	≥ 22 mA ≥ 11 V		
General Data				
Linearity	< 0.2 % of measuring span			
Temperature coefficient <sup>1)</sup>	< 150 ppm/K			
Calibration	Max of 0.1 °C or 0.1 % of measuring span			
Response time T <sub>99</sub>	20 ms			
Test voltage	4 kV AC, 50 Hz, 1 min.	Input against output against power supply		
Working voltage (Basic Insulation) <sup>2)</sup>	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1			
Protection against electrical shock <sup>2)</sup>	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits			
Ambient temperature	Operation Transport and storage	- 10 to + 60 °C (+ 14 to + 140 °F) - 20 to + 80 °C (- 4 to + 176 °F)		
Power supply	20 ... 253 V AC/DC	AC 48 ... 62 Hz, approx. 3 VA DC approx. 1.5 W		
EMC <sup>3)</sup>	EN 61326 -1			
Construction	12.5 mm (0.49") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715			
Weight	Approx. 100 g			

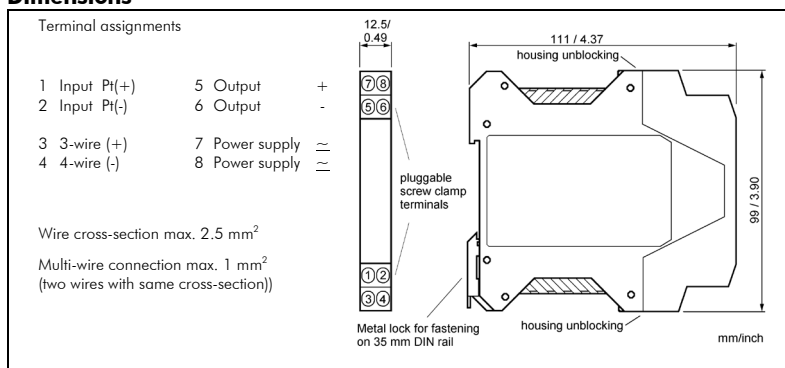
1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C

2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

3) Minor deviations possible during interference

Factory setting: Input: Pt100, 4-wire, Output: 0 ... 20 mA

## Dimensions



Subject to change!

## Product line

Device	Order No.
Temperature Transmitter, configurable (0 ... 100 °C pre adjusted)	DR 4700 AG