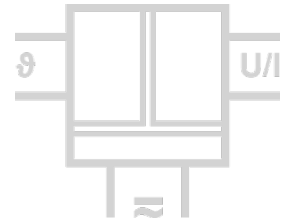


# Temperature Transmitter DR 4700

Temperature Measuring  
with Pt100/Pt1000-Sensors



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

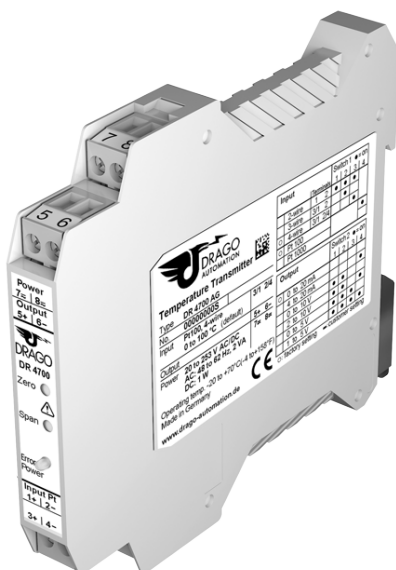
Due to the easy selection of the input and output ranges, the new universal power supply and the ultra-small housing the Temperature Transmitter is suitable for flexible use. High reliability and Protective 3-Port-Separation are further characteristics that make the DR 4700 unrivaled.

The configuration of measurement range can be easily set within -100 to +600 °C by using DIP switch. Subsequent readjustment after range selection or measured range compensation can then be performed at the Zero/Span potentiometers on the front panel. Alternatively, the Temperature Transmitter is also available customer-specific adjusted.

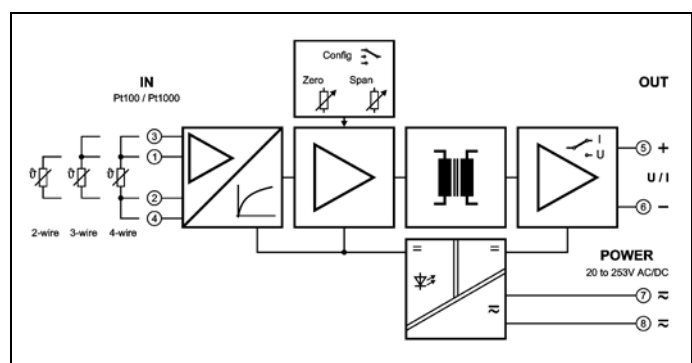
The small housing with 12.5 mm width saves space in your switch cabinet and facilitates by the practical plug-in screw terminal blocks the assembly. For range setting a simple housing unblocking is installed which makes it possible to reach easily all control elements on the mounting rail.

The new 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.

- **Extensive range selection**  
Measurement range within -100 to +600 °C for Pt100 and Pt1000 sensors
- **Easy selection of configuration**  
Measurement range, type of sensor, sensor connection and output signal can be easily 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

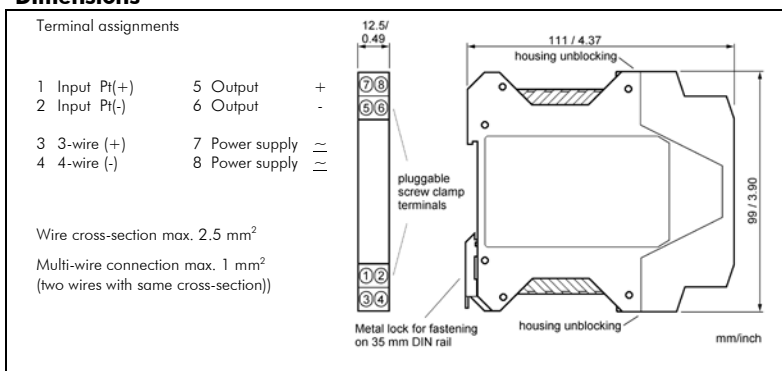


**Technical Data**

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	0 ... 5 V	0 ... 10 V
	4 ... 20 mA	1 ... 5 V	2 ... 10 V
Load	Current output	≤ 12 V (600 Ω at 20 mA)	
	Voltage output	≤ 5 mA (2 kΩ at 10 V)	
Residual ripple	< 10 mV <sub>rms</sub>		
Sensor break action	Current output	≥ 22 mA	
	Voltage output	≥ 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	- 10 to + 60 °C (+ 14 to + 140 °F)	
	Transport and storage	- 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