

# Resistance Transmitter DR 41

## Measuring of Resistors with Fixed Setting

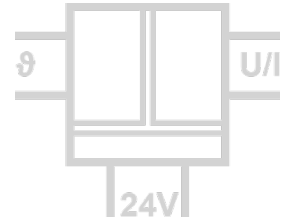
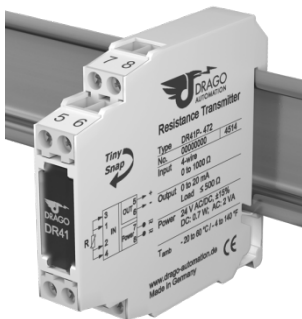
The Resistance Transmitter DR 41 converts the sensor resistance value to a standard signal and makes it galvanic isolated available on output.

For applications where one measuring range only is used, the Resistance Transmitters DR 41 offers a cost-effective alternative.

A cross-connector for the auxiliary power supply ensures fast and easy installation. The slim housing with 11.2 mm width saves significant space on the DIN-rail. If required a measuring range compensation can be performed at the Zero/Scan potentiometers behind the front cover.

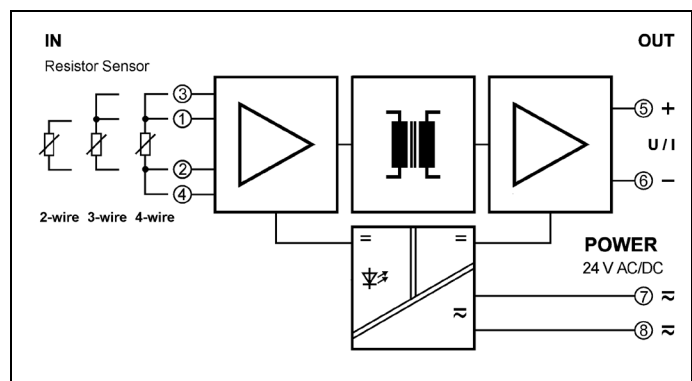
Analog signal processing guarantees precise measured values with short response times and outstanding signal reproduction at the output.

Protective Separation and the 24 V AC/DC power supply make the DR 41 universally applicable for all measurement and industrial applications, as well as for building automation.



- **Cost optimized resistance measuring**  
in 2-, 3- and 4-wire sensor connection
- **Only 60 mm installation depth, 11.2 mm wide**  
Can be installed in economical standard terminal boxes
- **Fixed ranges, easy to use**  
Ready to use without any settings or adjustments
- **Zero/Span compensation on front panel**  
for readjustment of sensor and measuring equipment or line compensation at 2-wire sensor connection
- **True 3-port separation**  
Protection against erroneous measurements due to parasitic voltages or ground loops
- **Protective Separation acc. to EN 61140**  
Protects service personnel and downstream devices against impermissibly high voltage
- **Unlimited use with 24 V AC/DC power supply**  
Universally applicable for all measurement and industrial applications
- **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				
Measuring range	Fixed ranges within 20 Ω ... 1 MΩ			see product line
Sensor connection	2-wire, 3-wire, 4-wire sensor connection			see product line
Sensor wire resistance	< 25 Ω / wire, maximum 5 % of final value at 2-wire connection			
Sensor current	0.1 μA ... 5 mA, depends on measuring range			
Output				
Output signal	0 to 20 mA 4 to 20 mA	0 to 5 V 1 to 5 V	0 to 10 V 2 to 10 V	see product line
Load	Current output ≤ 500 Ω Voltage output ≥ 2 kΩ			
Residual ripple	< 10 mV <sub>rms</sub>			
General Data				
Transmission error	< 0.2 % full scale			
Temperature coefficient <sup>1)</sup>	< 0.025 %/K			
Zero/Span compensation	± 5 %			
Response time T <sub>99</sub>	< 2 ms			
Test voltage	3 kV AC, 50 Hz, 1 min.			input against output against power supply
Working voltage <sup>2)</sup> (Basic Insulation)	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 - 20 to + 60 °C (- 4 to + 140 °F) Transport and storage - 35 to + 85 °C (- 31 to + 185 °F)			
Power supply	24 V AC/DC, ± 15 %		AC: 48 to 62 Hz, approx. 2 VA,	DC: approx. 0.7 W
EMC <sup>3)</sup>	EN 61326-1			
Construction	11.2 mm (0.44") housing, protection class: IP 20, mounting on 35 mm DIN rail acc. to EN 60715			
Weight	Approx. 50 g			

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

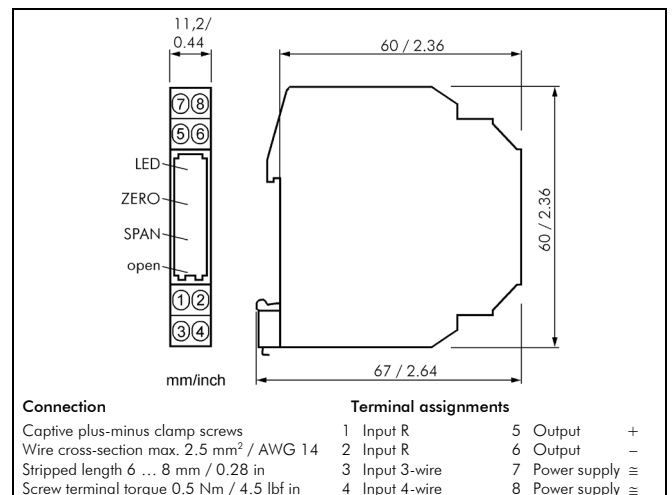
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

3) Minor deviations possible during interference

## Product line

Device	Sensor connection	Order No.
Resistance	2-wire connection	DR 41 P - 2 X X
Transmitter	3-wire connection	DR 41 P - 3 X X
	4-wire connection	DR 41 P - 4 X X
		↓
Input	0 ... 20 Ω	2
	0 ... 50 Ω	3
	0 ... 100 Ω	4
	0 ... 200 Ω	5
	0 ... 500 Ω	6
	0 ... 1000 Ω	7
	0 ... 2000 Ω	8
	0 ... 5000 Ω	9
	0 ... 10 k Ω	A
	0 ... 20 k Ω	B
	0 ... 50 k Ω	C
	0 ... 100 k Ω	D
	0 ... 200 k Ω	E
	0 ... 500 k Ω	F
	0 ... 1 M Ω	G
Output	0 ... 20 mA	2
	4 ... 20 mA	4
	0 ... 5 V	5
	1 ... 5 V	8
	0 ... 10 V	6
	2 ... 10 V	7
Cross-connector (2 pcs)	for looping through the power supply for up to 10 units, splittable	DZU 0801

## Dimensions



Subject to change!