Temperature / Resistance / Potentiometer Transmitter

Product features

- Pt100 / Pt500 / Pt1000 inputs
- Resistance / potentiometer inputs
- 2 / 3 / 4 wire measurement
- -200 - +800 °C / 0-4000 ohm measurement ranges
- 0-20 mA / 4-20 mA / 0-10 V / 2-10 V output ranges
- 0.03% accuracy
- Easy configuration via USB port
- 19-35 VDC / 180-250 V AC/DC supply voltage
- TS-35 rail mounting, 12.5 / 17.5 mm width

Type designation

DT1010			Output		
			IA	**IP**	**U**
			0 / 4-20 mA active configurable	0 / 4-20 mA passive configurable	0 / 2-10 V configurable
Input	**Pt100**	Pt100 0-400 ohm	●	●	●
	Pt1000	Pt500, Pt1000 0-4000 ohm	●	●	●

DT1010			**PS**	180-250 V AC/DC Supply Voltage

The **DT1010 … Temperature / Resistance / Potentiometer Transmitter** provide signal transmission and conversion between Pt100 / Pt500 / Pt1000 sensor or resistance / potentiometer and signal procession unit.

The transmitter feature complete 3-way isolation: the input to output and power supply circuits are isolated using state-of-the-art planar transformer design. The output signal may be 0-20 mA, 4-20 mA, 0-10 V, 2-10 V.

The Pt100 / Pt500 / Pt1000 / resistance / potentiometer can be connected to the input either with 2 / 3 or 4 wire.

The module features complete configuration of sensor input variables and process signal outputs.

Some of the configuration options are: sensor type, resistance range, signal output scaling, 2 / 3 or 4 wire measuring mode, signal filtering, calibrated sensor curve fitting, etc.

The configuration software is capable of storing all the parameters for future reconfigurations.

The configuration parameters are downloaded from the PC to the DT1010 ... via USB port.

Datcon provide a free configuration software.

The overall full-scale accuracy of the module is < 0.1% and the temperature coefficient is < 50 ppm / °C.

The DT1010 ... has two power supply versions: 19-35 VDC (DT1010 ...) or 180-250 V AC/DC (DT1010 ... PS).

Safety data:

The DT1010 ... connection terminals of the supply voltage are isolated from each other; the isolation is in compliance with the standard EN 61010-1, taking into consideration the following:

Pollution level:	2
Measurement category:	II

Input parameters:

Input signal:	Pt100 / Pt500 / Pt1000 sensor / resistance / potentiometer
Connection:	2 / 3 / 4 wire
Measurement range:	-200 °C - +800 °C @ Pt100 / Pt500 / Pt1000
	0-4000 ohm @ resistance / potentiometer

Output parameters:

Output type:	DC current or DC voltage
Ranges:	0-20 mA / 4-20 mA / 0-10 V / 2-10 V
Load (voltage output):	500 ohm
Burden (current output):	700 ohm (max.)
Max. output current:	20.8 mA
Error:	0.1 °C + 0.05% (max.)
Temperature-coefficient:	< 50 ppm / °C (max.)

Display:

Display:	2 LED (power on, configuration mode)

Configuration:

Configuration:	via USB port

Power supply:

Power supply:	19-35 VDC (DT1010 ...)
	180-250 V AC/DC (DT1010 ... PS)
Consumption:	1.4 W 2 VA

Ambient conditions:

Operating temperature range:	0-50 °C (-20 - +50 °C for customer request)
Relative humidity:	90% (max., non-condensing)
Place of installation:	cabinet
Mounting position:	vertical (horizontal rail position)

Electromagnetic compatibility (EMC):
accordance with the standard EN 61326

Immunity:	industrial area
Noise emission:	Group 1, Class B

General data:

Housing:	terminal assembly box, rail mounting on TS-35 rail,
	material: polyamide PA6.6
Connection:	screw terminal
Connection cable:	0.25-2.5 mm² (max.)
Dimensions:	DT1010 ... : 12.5 × 99 × 115 mm (width × height × depth)
	DT1010 ... PS: 17.5 × 99 × 115 mm (width × height × depth)
Weight:	DT1010 ... : 0.1 kg
	DT1010 ... PS: 0.2 kg
Protection:	IP 20

Detailed information see in operating instructions. The Manufacturer maintains the right to change the technical data!

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