

Intrinsically Safe Temperature / Resistance / Potentiometer Transmitter

Product features

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



Type Designation

DT1310		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	●	●
	Pt500	Pt500 0-2000 ohm	●	●
	Pt1000	Pt500, Pt1000 0-4000 ohm	●	●

The **DT1310 ... Intrinsically Safe Temperature / Resistance / Potentiometer Transmitter** provide signal transmission and conversion between Pt100 / Pt500 / Pt1000 sensor or resistance / potentiometer, – operate in potentially explosive area (zone 0, zone 1) – and the signal procession unit – operates in the safe area.

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 **DT1310 ...** via wireless transmission.

Datcon provides a low cost USB-IR interface for this purpose, and a free of charge configuration software. Front panel LED indicators help the troubleshooting.

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

The supply voltage range is 19-35 VDC, thus the transmitter is insensitive to the supply voltage change.

The transmitter's ambient temperature range is -20°C to +50°C.

The module can be mounted on standard 35 mm DIN-rail and also features keyed plug-in terminals for easy and safe wiring.

Intrinsical safety data:

Certification: BKI 07 ATEX 037X

Protection marking:  II (1) GD [EEx ia] IIC (-20 °C <Ta< +50 °C)**Safety data:**

Típus	Uo [V]	Io [mA]	Po [mW]	IIC	
				Co [uF]	Lo [mH]
DT1310 ...	8.75	3.6	8	5	1000

Um: 250 Veff

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: see the table on the previous page

Burden (current output): 700 ohm (max.)

Load (voltage output): 500 ohm

Output current max.: 20.8 mA

Error: 0.1°C + 0,05%

Temperature-coefficient: 50 ppm / °C (max.)

Display:

Display: 2 LED (power on, configuration mode)

Configuration:

Configuration: infra transmission

Power supply:

Supply voltage: 19-35 VDC

Consumption: 1,5 W

Ambient conditions:

Operating temperature range: -20°C-50°C

Relative humidity: 90% (max., non-condensing)

Place of installation: safe area, cabinet

Electromagnetic compatibility (EMC)**accordance with the standard EN 61326:2000:**

Immunity: -A- criterion

Noise emission: -A- class

General data:

Housing: terminal assembly box, rail mounting on TS-35 rail, material: polyamide PA6.6

Connection: plug-in screw terminal

Connection cable: 0.25-2.5 mm²

Dimensions / weight: 12.5 x 99 x 115 mm (width x height x depth) / 0.15 kg

Protection: IP 20

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