

Intrinsically Safe Isolators / Power Supplies

Product features

- 0-20 mA / 4-20 mA / 0-10 V inputs
- 0-20 mA / 4-20 mA / 0-10 V outputs
- Non-linearity < 0.01%
- Temperature-coefficient < 50 ppm / °C
- 19-29 VDC supply voltage
- TS-35 rail mounting, 12.5 mm width
- 9 different types



Type Designation

DT1315		Output		
		I0	I4	U10
		0-20 mA	4-20 mA	0-10 V
Input	I0	0-20 mA	●	●
	I4	4-20 mA	●	●
	U10	0-10 V	●	●

The **DT1315 ... Intrinsically Safe Output Isolators** provide signal transmission between the control equipment and signal sources located in the safe area and actuators, current-to-pressure converters, field process indicators, operate in zone 0, zone 1 potentially explosive area. The units galvanically isolate the input, the output and the power supply.

The input signal may be 0-20 mA, 4-20 mA, 0-10 V, the intrinsically safe output signal also may be 0-20 mA, 4-20 mA, 0-10 V.

The transmission parameters of the isolators are outstandingly good: the non-linearity is < 0.01% and the temperature-coefficient is < 50 ppm / °C.

The supply voltage range is 19-29 VDC, thus the isolators are insensitive to the supply voltage change.

Intrinsic safety data:

Certification: BKI 15 ATEX 0022 X

Protection marking: Ex II (1)G [Ex ia Ga] IIC/IIB (-20 °C < Ta < +50 °C)

Ex II (1)D [Ex ia Da] IIIC (-20 °C < Ta < +50 °C)

Safety data:

Uo [V]	Io [mA]	Po [W]	IIC		IIB	
			Co [nF]	Lo [mH]	Co [nF]	Lo [mH]
19.1	91	0.57	150	4	450	12

Um: 250 Veff

Input parameters:

Input signal: DC current or DC voltage

Ranges: see the table on the previous page

Input resistance (current input): 77 ohm

Input resistance (voltage input): 1 Mohm

Overdrive: 5%

Output parameters:

Output type: DC current or DC voltage

Ranges: see the table on the previous page

Burden (current output): 800 ohm (max.)

Load (voltage output): 500 ohm (min.)

Error: 0.05% @ Ta = 23 °C ±2 °C

Non-linearity: 0.01% (max.)

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

Supply-voltage effect: practically zero

Response time: 10 ms (10-90%)

Galvanic isolation:

Operating isolation voltage: 250 Veff (between the input, the output, and the supply voltage terminals)

Test voltage: 2500 VDC

Power Supply:

Supply voltage: 19–29 VDC

Consumption: 1.6 W

Ambient conditions:

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

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

Place of installation: safe area, cabinet

Installation: with 5 mm space

Electromagnetic compatibility (EMC)

accordance with the standard EN 61326-1:2013:

Immunity: -B- 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!