

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

		Output		
		I0	I4	U10
Input		0-20 mA	4-20 mA	0-10 V
	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:	II (1)G [Ex ia Ga] IIC/IIB (-20 °C < Ta < +50 °C)
	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 mm ²
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!