

## Intrinsically Safe NAMUR / CONTACT Isolators

Product features

- NAMUR / contact inputs
- Relay contact / transistor outputs
- 1 / 2 / 4 channel versions
- Line fault detection
- Switch selectable mode of operation
- 3 kHz transmission frequency (transistor output)
- 19-29 VDC supply voltage
- TS-35 rail mounting, 12.5-22.5 mm width devices
- 11 different types



Type designation

Type	Number of Channels	Output Type	Fault Signal Output	Consumption [W]	Dimension [mm] W x H x D (mm)
DT1361	1	SPDT contact		0,6	17,5 × 99 × 115
DT1362	2	SPDT contact		1,0	22,5 × 99 × 115
DT1363	1	SPDT contact	1 NC contact	1,0	17,5 × 99 × 115
DT1364	4	SPDT contact ●●		2,0	22,5 × 99 × 115
DT1371	1	SPDT contact		0,6	12,5 × 99 × 115
DT1372	2	SPDT contact		1,0	17,5 × 99 × 115
DT1373 N	2	SPDT contact ●		1,0	12,5 × 99 × 115
DT1373 P	2	SPDT contact ●		1,0	12,5 × 99 × 115
DT1381	1	passive transistor		0,5	12,5 × 99 × 115
DT1382	2	passive transistor		0,8	17,5 × 99 × 115
DT1384 N	4	passive transistor (common negative point) ●●		1,6	22,5 × 99 × 115
DT1384 P	4	passive transistor (common positive point) ●●		1,6	22,5 × 99 × 115
DT1393 N	2	passive transistor ●		0,8	12,5 × 99 × 115
DT1393 P	2	passive transistor ●		0,8	12,5 × 99 × 115

● One of the output relay contacts is common with either 0 V or Us connection of power supply (user defined option)  
 ●● One of the output relay contacts is common per 2-2 channels

The **DT13xx Intrinsically Safe NAMUR / Contact Isolators** enable a safe area load to be controlled by a proximity detector or switch located in a potentially explosive area of zone 0 or zone 1. The units galvanically isolate the input, the output and the power supply. The safe output may be relay contact or transistor. In the case of a transistor output the maximum signal transmission frequency is 3 kHz.

The devices are made in 1-, 2-, 4-channel versions. In all units a built-in phase-reverse control switch allows an alarm condition (output open) to be signalled for either state of the sensor. A line-fault detection opens the output in the event of short or open-circuit lines: intended for use primarily with proximity detectors. It can also be used with switches made to resemble them electrically by adding two resistors, or disabling by a switch if not required.

A version with an input current < 0.5 mA is also available for isolation of the output contact of gas-consumption meters. The supply voltage range is 19-29 VDC, thus the isolators are insensitive to the supply voltage change.

**Safety data:**

The connection terminals of the supply voltages 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

**Intrinsic safety data:**

Certification: BKI 14 ATEX 0012  
 Protection marking:  $\text{Ex}$  II (1) G [Ex ia Ga] IIC/IIB (-20 °C < Ta < +50 °C)  
 $\text{Ex}$  II (1) D [Ex ia Da] IIIC (-20 °C < Ta < +50 °C)

**Safety data:**

Type	Uo [V]	Io [mA]	Po [mW]	IIC		IIB	
				Co [uF]	Lo [mH]	Co [uF]	Lo [mH]
<b>DT13xx</b>	8.61	11.6	24.96	2	100	20	200

U<sub>m</sub>: 250 V<sub>eff</sub>

**Input parameters:**

In compliance with the standard EN 60947-5-6 (NAMUR)

No load voltage: 8.2 V  
 Short circuit current: 8.2 mA  
 Input resistance: 1000 ohm  
 Low-current input version, upon request:  
 No load voltage: 8.2 V  
 Short circuit current: 0.5 mA (max.)  
 Input resistance: 18 kohm

**Output parameters:**

Contacts: SPST or SPDT contact, see the table on the previous page  
 Contact rating: 250 VAC, 5 AAC / 30 VDC, 5 ADC  
 Transistor output: galvanically isolated passive switching transistor  
 Voltage: 30 VDC (max.)  
 Current: 40 mA (max.)  
 Frequency range: 0-3 kHz

**Galvanic isolation:**

Operating isolation voltage: 250 V<sub>eff</sub> (between the input, the output, and the supply voltage terminals)  
 Test voltage: 2500 VDC

**Power supply:**

Supply voltage: 19-29 VDC  
 Consumption: see the table on the previous page

**Ambient conditions:**

Operating temperature range: -20 - +50 °C  
 Relative humidity: 90% (max., non-condensing)  
 Place of installation: safe area, cabinet  
 Installation: vertical 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: plug-in screw terminal  
 Connection cable: 0.25-2.5 mm<sup>2</sup>  
 Dimensions: see the table on the previous page  
 Weight: 0.1-0.2 kg (depending on the type)  
 Protection: IP 20

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