

Intrinsically Safe Differential Pressure Meters / Transmitters

Product features

- Measuring of the pressure-differences of gases
- 8 measurement ranges between 0-5000 Pa
- Medium temperature: up to 60 °C
- 4-20 mA two-wire transmitter
- Intrinsically safe
- LCD display
- IP 65 protection



The **DT7000 / DT7001 Intrinsically Safe Differential Pressure Transmitters** are suitable for measurement differential pressure of dry non corrosive gases in even the most hazardous plant areas (zone 1, zone 2).

The instruments provide a 4-20 mA current signal, proportional to the pressure connected to their pressure ports.

The DT7000 presents the measured pressure values on an LCD display too, while the instrument DT7001 is a version without display.

Eight different measurement ranges are available from 0-50 Pa up to 0-5000 Pa, but user defined measuring ranges are also available. The temperature of the measured medium may vary between -20 °C and +60 °C.

The pressure to be measured can be connected to the transmitter via pneumatic tube 2 × Ø4 mm inner diameter.


The die-cast Aluminium housing has IP 65 protection.

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 15 ATEX 0037 X
 Protection marking:  II 1/2 G EEx ia IIC T4

Ui [V]	Ii [mA]	Pi [W]	Ci [nF]	Li [uH]
28	100	0.7	37	506

Input parameters:

Input signal: pressure
 Ranges: see the table below

RANGES*	
[Pa]	
0-50	0-500
0-100	0-1000
0-250	0-2000
0-300	0-5000

*Special ranges that differ from the above are also available upon request.

Overdrive capacity: 150%

Output parameters:

Output signal: DC current, proportional to the measured pressure
 Range: 4-20 mA
 Accuracy: 0.25 % (typically)
 Temperature-coefficient: 500 ppm / °C
 Supply-voltage effect: no
 Response time: 0.5 ms (10-90%)

Display:

Display: 3.5 digits, + or – sign, decimal point
 Display unit: LCD, 12.7 mm with character height

Power supply:

Loop power supply voltage: 12-28 VDC

Ambient conditions:

Operating temperature range: see the table below

Type	Ambient temperature	Medium temperature
DT7000, DT7001	-20 °C <Ta< 60 °C	-20 °C <Tp< 70 °C

Relative humidity: 90% (max., non-condensing)
 Place of installation: potentially explosive area

Electromagnetic compatibility (EMC):

accordance with the standard EN 61326

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

Data in general:

Housing: die-cast aluminium, KO36 steel connection
 Process connection: 2 × Ø4 mm pneumatic tube
 Electrical connection: 3-pole connector DIN43650 / IP 65
 Connection cable: 0.25-1.5 mm²
 Dimensions: 127 × 85 × 58 mm (width × height × depth)
 Weight: DT7000: 0.45 kg
 DT7001: 0.4 kg
 Protection: IP 65

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