

pressure ■ differential pressure ■ air volume ■ probe, sensor for transducer TR.Ex

Picture



Highlights

- ATEX / IECEx Approval for gases and dusts Zone 0, 1, 2, 20, 21, 22
- Measured values also in zone 0/20
- Easy assembly
- Quick, safe installation
- Cable length from sensor to sensor up to 100 m
- On chip pressure sensor, temperature compensated and calibrated
- Measured variables traceable to national standards, calibratable
- Highest corrosion resistance
- LED status indicator green / red
- Zero point adjustment via menu navigation

Types	Pressure range	accuracy max. / typ.	Max. pressure	min. pressure span	tube diameter
IY.Ex-P-0100	± 100 Pa	± 1,50 % / 0,80 %	300 mbar	30 Pa	6 mm
IY.Ex-P-0250	± 250 Pa	± 1,50 % / 0,80 %	300 mbar	75 Pa	6 mm
IY.Ex-P-0600	± 600 Pa	± 1,00 % / 0,50 %	300 mbar	180 Pa	6 mm
IY.Ex-P-1000	± 1000 Pa	± 0,75 % / 0,40 %	300 mbar	300 Pa	6 mm
IY.Ex-P-2500	± 2500 Pa	± 0,75 % / 0,40 %	400 mbar	750 Pa	6 mm

Others on request

Technical data

Pressure range	See types
Electrical connection	M12 connection incl. 1 m cable
Accuracy	See diagramm 1
Tube connection	Ø 6 mm
Humidity	0 ... 100 %RH without condensation
Temperature range	-40 ... +70 °C
Storage temperature	-40 ... +70 °C
Mounting position	Any recommended vertically
Housing material	Plastic and stainless steel
Seals	EPDM
Dimension L x B x H	95 x 66 x 45 mm
Weight	100 g
Sensor socket	M12 5 pole shielded brass plated
Cable	M12 5 pole shielded, PUR, halogene free
Maintenance	free
MTTF sensor chip	4.611.965 h
Approvals	ATEX EPS 14 ATEX 1 789 X
Explosion proof	IECEx IECEx EPS 14.0101X
Marking	II1/2G Ex ia IIC T6/T5/T4 II1/2D Ex ia IIIC T130 °C
IP protection	IP66 IEC 529
Quality Standard	ISO9001, ISO14001, ATEX, IECEx, VDA6.1

Application

A basic unit TR.Ex and various sensors of the IY.Ex series solve a wide range of measurement tasks. The sensors stand for multifunctionality, highest accuracy and easy mounting.

The following sensors are available

- Low pressure sensors for differential pressure and volumetric air flow measurement
- Special sensors on request

Examples include:

Pressure clean room technology
Overpressure / negative pressure sluices
filter monitoring

Volume flow technical ventilation, compliance with air exchange rates

Furthermore, the buttons allow on-site commissioning and the LCD display is used as a local measuring value display. The integrated terminal box in the explosion protection type Ex e ensures a direct electrical connection in the Ex zone.

The modular design of the electronics and mounting bracket ensures easy, safe assembly and commissioning.

Options such as different sensor cables for difficult installation conditions complete the product portfolio. Calibration of the measuring chain is made possible by the design of the device in the simplest way.

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Function

The physical quantity is recorded in the sensors of the series IY.Ex. The measured value is processed digitally. The transmission to the transmitter TR.Ex is carried out by a patented protocol, which allows the sensors to be easily exchanged and opened for future sensors.

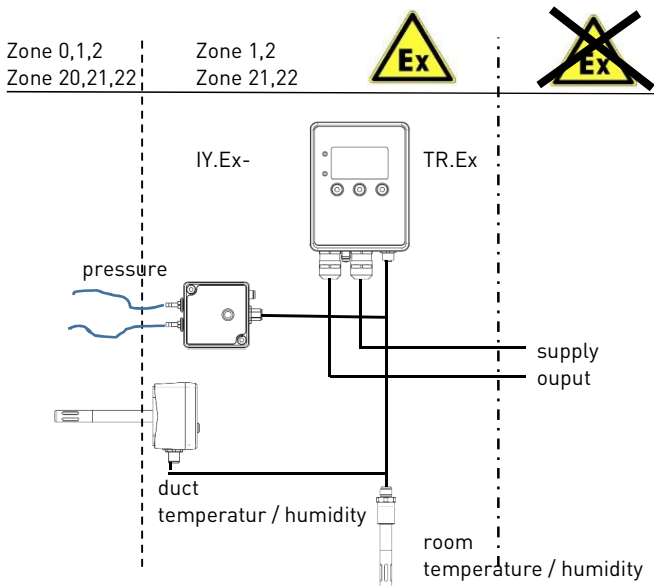
The robust, interference-free signal from the sensor to the transmitter allows transmission of up to 100 m even in harsh industrial environments.

This signal is converted into freely scalable analogue outputs in the TR.Ex converter. Voltage and current outputs can be selected by means of the software menu.

Explosionsschutz

ATTENTION!

- Install in accordance with the manufacturer's specifications and standards
- The sensor circuit may be inserted into Zone 0/20 (II 1G).
- The devices may only be used in measuring media against which the process-contacting materials are resistant.



Safety Notes

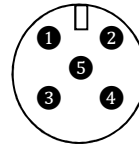
- Installation, electrical connection, maintenance and commissioning may only be carried out by specially trained personnel.
- Avoid excessive mechanical and improper stress.

Electrical connection

The electrical connection of the sensor to the transmitter is made by M12 connector.

intrinsically safe circuit
 $U_i \geq 4.6 \text{ V}$
 $I_i \geq 107 \text{ mA}$
 $P_i \geq 428 \text{ mW}$

internal capacity
 $C_o \leq 1.034 \mu\text{F}$
 internal inductance
 $L_o \leq 0 \mu\text{H}$



Accuracy

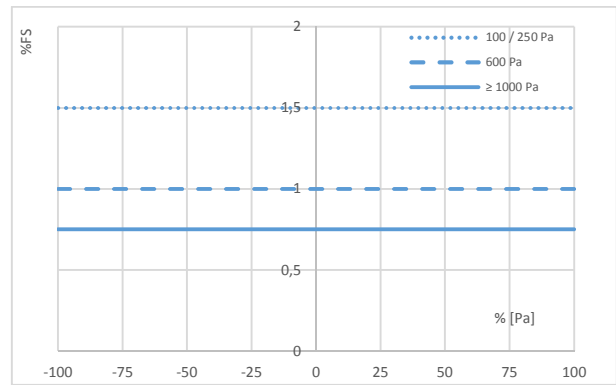
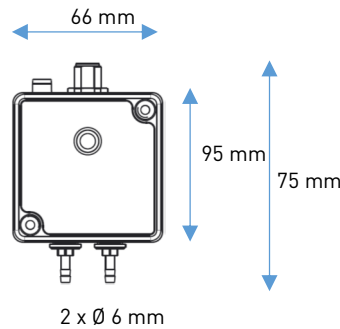


Diagramm 1

Dimensions



Accessories Spare Parts

M12-5P-PUR-1m	1 m M12 cable 5 pole shielded
M12-5P-PUR-5m	5 m M12 cable 5 pole shielded
M12-5P-PUR-10m	10 m M12 cable 5 pole shielded

Others on request