



ExPro-AT Duct temperature sensors

Pt100 passive IP66 sensors for hazardous locations zones 1, 2 and 21, 22.

Compact. Easy installation. Universal. Cost effective. Safe.

Sensors:

ExPro - AT - ...

Subject to change!

Type	Probe element	Length	Temperature range*	Permitted for zones	Connectable to transducers
ExPro-AT - 100	Pt 100	100 mm	-40...150 °C	1, 2, 21, 22	ExCos-A, RedCos-A, EXL-IMU-1
ExPro-AT - 150	Pt 100	150 mm	-40...150 °C	1, 2, 21, 22	ExCos-A, RedCos-A, EXL-IMU-1
ExPro-AT - 200	Pt 100	200 mm	-40...150 °C	1, 2, 21, 22	ExCos-A, RedCos-A, EXL-IMU-1

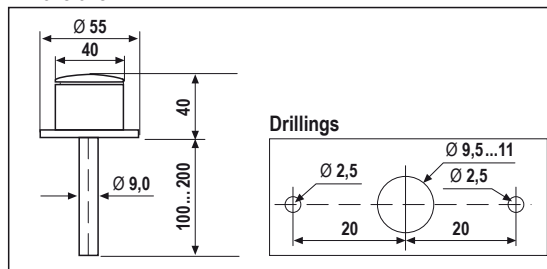
* see notes for installation

Application

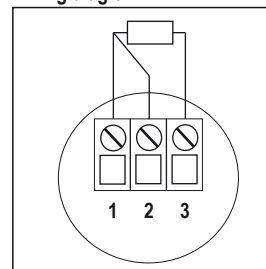
Sensor



Dimensions in mm



Wiring diagram



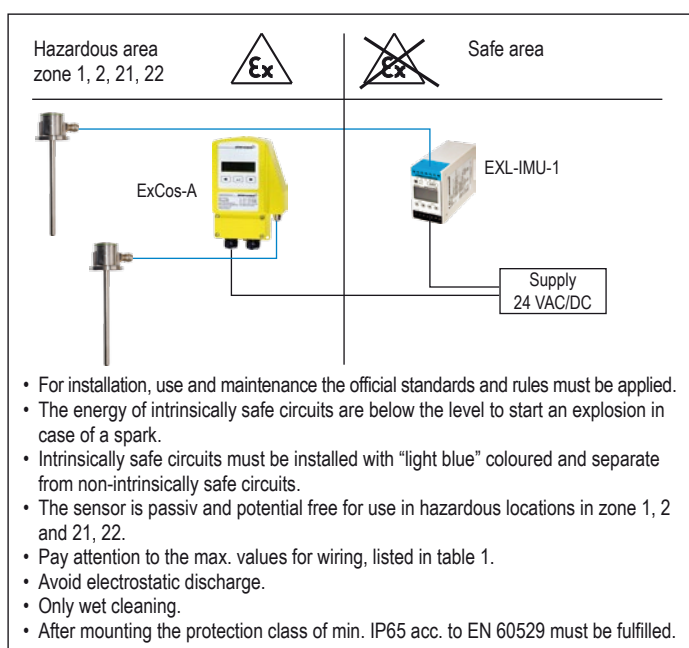
Description

Temperature sensors for measuring duct temperatures. In combination with Ex-i transducer type ExCos-A or EXL-IMU-1 with intrinsically safe circuit the sensor may be used in hazardous areas 1, 2 and 21, 22. The passive potential free resistor output of the sensor is changed into an active signal of 0(2)...10 VDC and/or 0(4)...20 mA. Application area is non condensed, aggressive air in living, work and office rooms as well as industrial areas.

Approvals

ATEX directive	PTB 10 ATEX 2014, directive 94/9/EC (ATEX)
Certified for gas	II2G Ex ia IIC T6 Zone 1, 2
Certified for dust	II2D Ex tD iaD A21 IP66 T80°C Zone 21, 22
EMC	2004/108/EC
Housing protection	IP66 – EN 60529

Electrical connection



Technical data

Supply	via Ex-i transducer (intrinsic safety circuit) (max. values see table below)
Sensor element	Pt100 DIN, 3 wire connection
Accuracy	Class B
Measuring range	-40...+150 °C
Storage temperature	-40...+70 °C
Connection	screw clamps 0,14...1,5 mm ²
Dimension and weight	Ø 55 x 40 x L mm, ca. 150 g
Ambient temperature	Ta: -40...+70 °C at T6 Ta: -40...+85 °C at T5 Ta: -40...+110 °C at T4
Humidity	0...95 % rH, non condensing
Materials	Thermowell V2A 1.4301, L = 100, 150, 200 mm Housing V4A, 1.4581 Cover brass nickel-plated Gasket cover FPM, to duct EPDM no use of silicone, PVC and halogene
Cable entry	M12 x 1,5 II2GD Ex-e brass plated Ø = 4-6 mm
Maintenance	free, annual function control is recommended
Delivery	1 duct temperature sensor, type ExPro-AT...
Installation area	Sensor in Ex-areas zones 1, 2, 21, 22

Mounting and installation

Notes to installation. The installation must comply with relevant directives and standards. Particularly with regard to:

- Comply with the EMC directive.
- Avoid parallel wiring of power cable. This causes measurement errors.
- Recommendation: Use shielded cable. Connect shield at PLC or control room area, sensor side is open.
- Consider permitted measuring range, pressure and flow velocity.
- Choose fitting length and installation depth in such way that failures caused by heat abstraction keep small and the maximum ambient temperature are not reached.
- Avoid oscillations, vibrations and impacts.
- Tighten screws at flange consistently.

Intrinsic safety values

Table 1

Ui	30 V	Ci	negligible small
Ii	10 mA	Li	negligible small
Pi	50 mW		

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