

Duct Temperature Sensor

Temperature sensor for duct / room mounting, Pt100
passiv Sensor in hazardous locations zones 1, 2 and 22

ATEX compliant

Type TFK-2G3D

APPLICATION

TFK-2G3D temperature sensors for measuring duct temperatures. In combination with EEx-i transducer Type EXL-IMU-1 with intrinsic safe circuit the sensor may be used in hazardous areas 1, 2 and 22. The passive potential free resistor output of Pt100 sensor is changed into an active signal of 0(2)... 10 V- and/or 0(4)... 20 mA. Applications area is non condense, aggressive air in living, work and office rooms as well as industrial areas.

TECHNICAL DATAS

Type	TFK-2G3D
Supply	30VDC by EEx-i transducer
Sensor	Pt100 DIN
Thermowell	Stainless steel / approx. 200mm / flange connection
Accuracy	Class B
Sensor current	< 1mA
Ambient temperature	-30...+60 °C
Storage temperature	-40...+70 °C
Connection	screw clamps 0,14 - 1,5 mm ²
Enclosure	Plastic, IP65 acc. to EN 60529
Dimension and weight	68 x 58 x 35 mm, approx. 150 g
Protection class	II2G EEx ia IIC T6, acc. to EN 50014 / EN 50020 II3D IP65 T85°C, acc. to EN 50281-1-1 simple apparatus
CE	94/9/EG (ATEX)
Includes in price	1 duct temperature sensor, Type TFK-2G3D incl. flange connection
Installation area	Hazardous locations in zone 1, 2 and 22

II2G EEx ia IIC T6
II3D IP65 T85 °C
Zone 1, 2, 22
acc. to ATEX



EEx-i CIRCUITS - TABLE 1

Operation values maximum at terminal

Voltage	Ui	30 VDC
Current	Ii	5 mA
Power	Pi	10 mW
Capacity	Ci	0 µF
Inductivity	Li	0 mH

The maximum values must not be exceeded!

Please check your external capacities and inductivities in acc. to the length of the cable and the methode of installation.

MONTING AND INSTALLATION

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

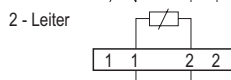
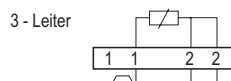
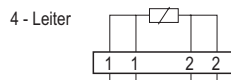
- Comply with the EMC directive
- Avoid parallel wiring of power cable this cause measurement errors.
- Recommendation: Use shielded cable. Connect shield at PLC or control room area, sensor side is open.
- Measuring Range
- permitted pressure, flow velocity
- choose fitting length and installation depth in such way that failures caused by heat abstraction keep small.
- Avoid Oscillations, Vibrations, Impacts,
- Tighten screws at flange consistently. Tight lateral safety screw to avoid sliding of the sensor shaft out of position.

RECOMMENDED TRANSDUCER

- Transducer Mfr. Schischek Type EXL-IMU-1.
- In combination with transducer EXL-IMU-1 is intrinsic safety proof for simple circuits given.
- Manufacture declaration zone 1, 2 and 22.

ELECTRICAL CONNECTION

Temperature Sensor TFK-2G3D

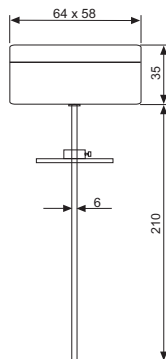


EXL-IMU-1

EEx-i Module EXL-IMU-1

Safe Area Ex-Area

DIMENSIONS



ATTENTION!

- For installation, use and maintenance the official standards and rules must be applied.
- The energy of intrinsically safe circuits are below the level to start an explosion in case of a spark..
- Intrinsic safe circuits must be installed with light blue coloured and separate from non intrinsic safe circuits.
- The sensor is passiv and potential free for use in hazardous locations in zone 1, 2 and 22.
- Pay attention to the max values for wiring , listed in table 1.
- Avoid electrostatic discharge.
- Only wet cleaning.
- After mounting the protection class IP65 acc. to EN 60529 must be fulfilled

Subject to change