SCHISCHEK
EXPLOSIONPROOF

Humidity Sensor

Humidity sensor with resistor output siganl 0... 1kOhm
passive sensor in hazardous locations zones 1, 2

Type FFR-2G
ATEX compliant

APPLICATION

FFR-2G Humidity sensor with resistance output for determining relative humidity in rooms . In combination with Ex-i transducer Type EXL-IMU-1 with intrinsic safe circuit the sensors may be used in hazardous areas zones 1, 2. The passive resistance output of the sensor is changed into an active signal of 0(2)... 10 V- or 0(4)... 20 mA.

suitable for
Zone 1, 2
acc. to ATEX

CE Ex

TECHNICAL DATAS

Type	**FFR-2G**
Supply	by Ex-i transducer
Sensor	0...1000Ω, 2(3) wire, resistor linear
Accuracy	>40 % r.F. = ± 2,5 % r.F. <40 % r.F. = ± 3,5 % r.F.
Measure-, work range	0...100% r.F. , 30...100 % r.F.
Ambient temperature	0...+50 °C
Storage temperature	-20...+60 °C
Permitted flow velocity	15 m/s
Measuring medium	gaseous, pressureless, not aggressive
Connection	Screw clamps 0,5 mm²
Enclosure	Plastic, IP 20, for wall and flush monting
Dimension and weight	115 x 70 x 43 mm, approx. 200 g
Protection class	simple apparatus acc. to EN 60079-11
CE	94/9/EC (ATEX)
Included in price	1 room humidity sensor FFR-2G
Installation area	Hazardous locations in zone 1, 2 with transducer Type EXL-IMU-1

Ex-i CIRCUITS - TABLE 1

Operation values maximum at terminal
Simple apparatus suitable for Zone 1, 2
Only for connecting to intrinsically safe circuits with max values

Voltage	Uo	9 VDC
Current	Io	5 mA
Power	Po	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.

MOUNTING AND INSTALLATION

Notes to mechanical 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 cause measurement errors.
- Recommendation: Use shielded cable. Connect shield at PLC or control room area, sensor side is open.

Best measuring effect will achieved when air flow vertical through the device. Measuring points beside doors, windows, heating sources or air blower can be irritate the results.

MAINTENANCE

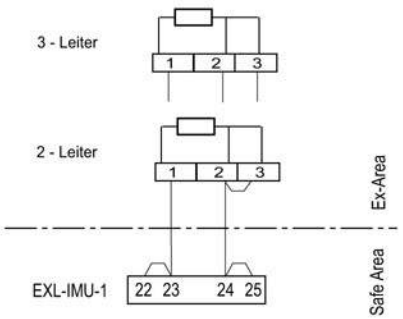
In clean air, the measuring element is maintenance-free. Aggressive and solvent containing agents as per their type and concentration may cause faulty measurements.
Water repellent protective film forming deposits on the sensor, resin aerosoles, lacquer aerosoles, smoke deposits etc. are harmful to almost all types of humidity sensors.
The water resistance of the sensors makes it possible to clean them with water, solvents should not be used. Due to long term sensor stability, no re-calibration is necessary. No warranty will be guaranteed if inner parts of the device have been handled.

RECOMMENDED TRANSDUCER

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

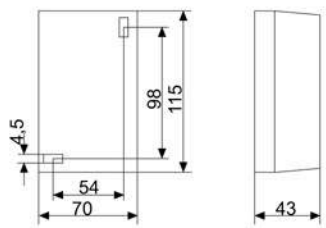
ELECTRICAL CONNECTION

Humidity Sensor FFR-2G



Ex-i Module EXL-IMU-1

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.
- Pay attention to the max values for wiring, listed in table 1.
- Avoid electrostatic discharge.
- Only wet cleaning.

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