

**Room hygrostat with contact output
binary sensor in hazardous locations zones 1, 2**

ATEX compliant

Type FBR-2G

APPLICATION

FBR-2G is suitable for monitoring of relative humidity in non aggressive areas. In combination with EEx-i switch Type EXL-IRU-1 with intrinsic safe circuit the sensors may be used in hazardous areas zones 1 and 2.

TECHNICAL DATAS

Type	FBR-2G
Supply	by EXL-IRU-1
Contact	dust encapsulated single potential free switch
Ambient temperature	-10...+65 °C
Storage temperature	-20...+80 °C
Humidity	35...95 %r.H., non condensing
Accuracy	3 %r.H.
Temperaturcoefficient	-0,2 %r.H./K at 20°C
Response time	at V = 2 m/s, 120 s
Air speed	15 m/s
Enclosure	Plastic, ABS, IP20 (EN60529)
Dimension	115 x 70 x 35 mm
Protection class	II2G EEx ia IIC T6, acc. to EN50014 / EN50020 simple apparatus
CE	94/9/EC (ATEX)
Included in price	1 room hygrostat Type FBR-2G
Installation area	Zone 1 and 2 with switching module Type EXL-IRU-1

**II2G EEx ia IIC T6
Zone 1, 2
acc. to ATEX**



EEx-i CIRCUIT - TABLE 1

Operation values maximum at terminal

Voltage	Ui	15 VDC
Current	Ii	50 mA
Power	Pi	100 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

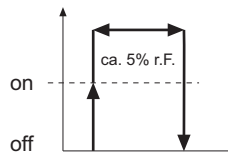
MOUNTING AND INSTALLATION

The ideal value can be select with a switch under the cover. The unit might be wall mounted far from heat sources and freely accessible for air convection at the height of approx. 1,5 m.

ELEKTRICAL CONNECTION

FX = relative humidity (actual value)
FW = selceted ideal humidity (ideal value)

Terminals 1-4 at FX > FW
Terminals 1-2 at FX < FW

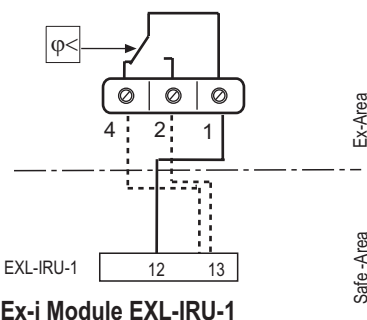


RECOMMENDED MODULE

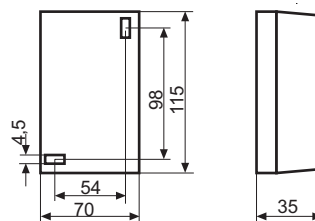
- Switching module Mfr. Schischek Type EXL-IRU-1.
- In combination with transducer EXL-IRU-1 is intrinsic safety proof for simple circuits given.
- Manufacturer declaration zone 1 and 2.

ELECTRICAL CONNECTIONS

**Room hygrostat
FBR-2G**



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.