

Air Direction Relay

**Air direction relay with contact output
binary sensor in hazardous locations zonen 1 and 2**

**Type WFBK-2G
ATEX compliant**

APPLICATION

WFBK-2G is suitable for monitoring of the air or non aggressive gases in air ducts. In combination with Ex-i switch Type EXL-IRU-1 or ExBin-A/RedBin-A with intrinsic safe circuit the sensors may be used in hazardous areas zones 1 and 2. Application area: In supply and exhaust air of ventilators or heater coils.

TECHNICAL DATAS

Type	WFBK-2G
Contact	dust tight single potential free microswitch
Supply	see Table 1
Switch interval	≥ 1 m/s
Ambient temperature	-20...+50 °C
Storage temperature	-40...+80 °C
Measuring medium	gaseous, pressureless, not aggressive
Enclosure	Plastic, PA reinforced, IP65
Dimensions	108 x 72 x 70 mm
Plate	Steel, zinc-plated
Vane	Stainless steel, V2A (1.4301)
Protection class	simple apparatus acc. to EN 60079-11
CE	94/9/EC (ATEX)
Included in price	1 Air direction relay Type WFBK-2G
Installation area	Zone 1, 2 with switching module Type EXL-IRU-1 or ExBin-A/RedBin-A

**suitable for
Zone 1 and 2
acc. to ATEX**



MOUNTING AND INSTALLATION

The flowswitch should be installed in vertical position to a horizontal pipe. Put the provided gasket on the device fixing base to pipe.

The flow switch is factory calibrated to the minimum switch-off value. A higher value can be selected by turning the adjustment screw to the right. Due to the risk of fracture at higher air speed than 5 m/s the vane must be cut off on the side where marked. As a result of this, however, the minimum switch-off value will increase from 1 m/s to 2.5 m/s. Steadying zones should be provided for a length of 5 time the diameter before and after the location of installation.

FUNCTION

Connect the 1 - 2 contacts. These contacts will open when the value drops below the set level in the event of a flow decrease. The contacts 1 - 3 close at the same time and can be used as a signal contact.

min. cut-in value	2,5 m/s
min. cut-out value	1,0 m/s
max. cut-in value	9,2 m/s
max. cut-out value	8,0 m/s

Ex-i CIRCUIT - 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	13,5 VDC
Current	Io	23 mA
Power	Po	76 mW
Capacity	Ci	0 µF
Inductivity	Li	0 mH

The maximum values must not be exceeded!

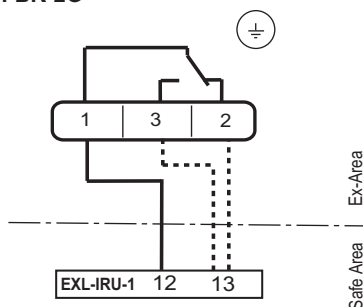
Please check your external capacities and inductivities in acc. to the length of the cable and the methode of installation

RECOMMENDED MODULE

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

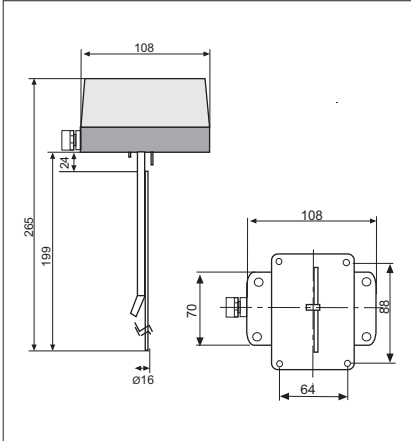
ELECTRICAL CONNECTION

**Air direction Relay
WFBK-2G**



Ex-i Module EXL-IRU-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.

Subject to change