

Inductive proximity switch for ventilator < 20000 m³/h

Inductive proximity switch with contact output binary sensor in hazardous locations zones 1, 2 **ATEX compliant** **NBW-K-2G**

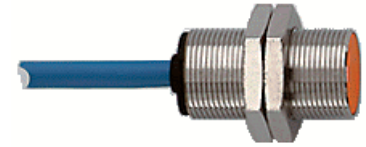
APPLICATION

The sensor provide information for the plc. Sensors supply the necessary signals on positions, end stops, levels or serve as pulse transmitters for counting jobs or for monitoring rotational speed. Inductive sensors detect all metals without contact and is maintenance-free, high switching frequencies and switching accuracies as well as high protection against vibration and humidity. 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

Supply	by EXL-IRU-1
Real switch distance	5 mm +/- 10 %
Switch drift	+/-10 %
Hysteresis	1 ... 15 %
Switch frequency	720 Hz
Correction factor	stainless steel = 1 / V2A = 0,7 / Ms approx. 0,5 / Al approx.a. 0,4 / Cu approx. 0,3
Ambient temperature	-20...+70 °C
Storage temperatur	-20...+80 °C
Housing	brass, nickel-plated, thread M18x1, IP68
Wires	PVC 2 m , 2x0,5 mm ² , brown (+), blue (-)
Certificate	PTB 01 ATEX 2191
Protection class	II2G EEx ia IIC T6, acc. to EN 50014/ EN 50020
CE	94/9/EC (ATEX)
Included in price	1 inductive proximity switch + bracket + tensioning belt
Installation area	Zone 1, 2 with switching module Type EXL-IRU-1

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

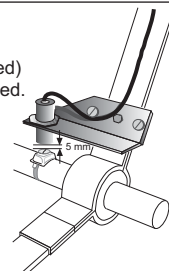


MOUNTING AND INSTALLATION

The sensor should only be mounted, connected and set up by qualified staff. The following has to be observed for trouble-free operation: The sensing face and the clearances should be free of deposits and foreign bodies, especially when mounted with the sensing face up. Units with high RFI (e.g. walkie-talkies) should not be operated in the immediate vicinity of the proximity switch. The distance between sensor and contact should be ≤ 5 mm.

FUNCTION

- Rotation controll
- The time delay is for the starting of the fan.
 - If the fan rotates less than 150 min⁻¹, the module indicates failure (contact closed)
 - For bigger fans (> 20.000 m³/h) our special mounting bracket set should be used.
 - Note the polarity of sensors (+/-)
- Wire brown (+) = terminal 11, blue (-) = terminal 12
- Contact
- Note the polarity of sensors (+/-)
- Wire brown (+) =terminal 13, blue (-) = terminal 12



EEx-i CIRCUIT - TABLE 1

Operation values maximum at terminal

Voltage	Ui	15 VDC
Current	Ii	50 mA
Power	Pi	120 mW
Capacity	Ci	145 nF
Inductivity	Li	45 µH

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

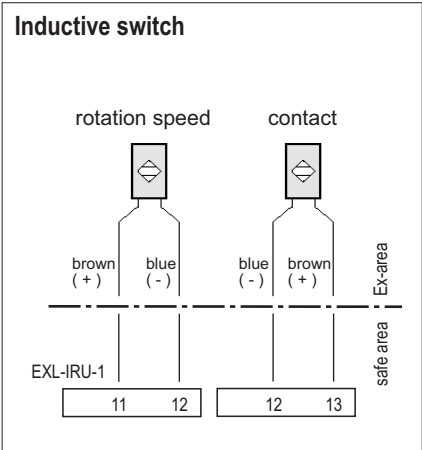
RECOMMENDED MODULE

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

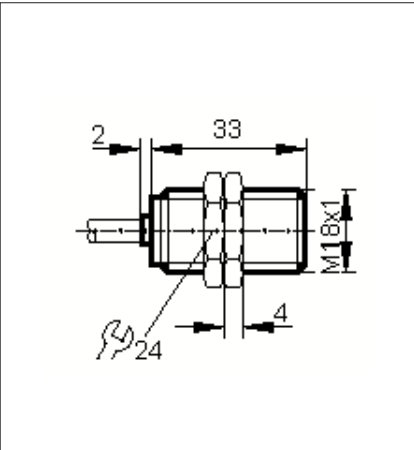
MAINTENANCE

The operation of proximity switches is maintenance-free.

ELECTRICAL CONNECTIONS



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.
- Metallic parts must be connected to potential by suitable Mounting.
- The unit is not suitable for installation in walls which separate zone 0 from zone 1.