GB

Operating instructions
Airflow monitor
SL010x
SL030x

11429299 / 00 12 / 2021

Contents

1 Preliminary note

You will find instructions, technical data, approvals and further information using the QR code on the unit / packaging or at www.ifm.com.

1.1 Symbols used

✓	Requirement
▶	Instructions
▷	Reaction, result
[...]	Designation of keys, buttons or indications
→	Cross-reference
	Important note Non-compliance may result in malfunction or interference.
	Information Supplementary note

2 Safety instructions

- The unit described is a subcomponent for integration into a system.
  - The system architect is responsible for the safety of the system.
  - The system architect undertakes to perform a risk assessment and to create documentation in accordance with legal and normative requirements to be provided to the operator and user of the system. This documentation must contain all necessary information and safety instructions for the operator, the user and, if applicable, for any service personnel authorised by the architect of the system.
- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.
- Only use the product for its intended purpose (→ Intended use).
- Only use the product for permissible media.
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, electrical connection, set-up, operation and maintenance of the product must be carried out by qualified personnel authorised by the machine operator.
- Protect units and cables against damage.

3 Intended use

The unit monitors airflows and switches a relay.

4 Function

- The unit detects flow based on the calorimetric measuring principle.
- The unit signals when a set airflow is reached by switching a relay and providing an LED signal:

Flow...	Output relay*	LED
above the set value	• Normally open: relay energises. • Normally closed: relay de-energises.	green
below the set value	• Normally open: relay de-energises. • Normally closed: relay energises.	red

*Information on the unit type (NO or NC) → Technical data at http://documentation.ifm.com.

5 Installation

▶ Drill a hole with a diameter of 24 mm in the pipe.

▶ Mount the unit using the supplied mounting clamp:

- Use the supplied seal for a hermetically sealed installation.
- The sensor head must protrude completely into the airflow and should be in the area of the highest flow velocity. Installation depth: min. 32 mm, max. 120 mm.

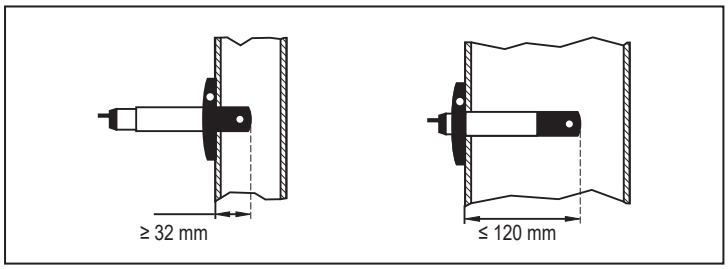


Fig. 1: Process connection, installation depth

▶ Align the unit in the airflow. The arrow on the cap must point in the direction of flow:

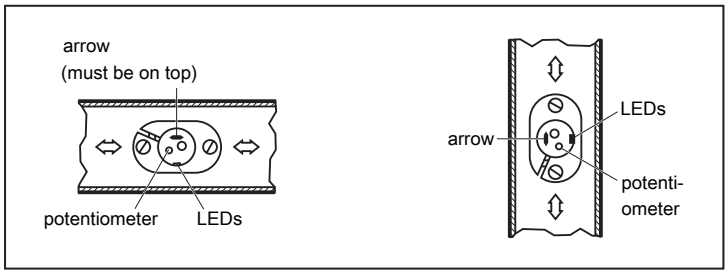
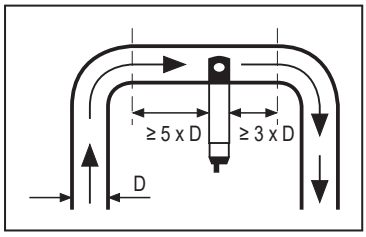


Fig. 2: Orientation



Structures in the pipe, bends, valves, reducing pieces and the like affect the function of the unit.

▶ Adhere to the distances between sensor and interference.

Fig. 3: Interference

6 Electrical connection

The unit must be connected by a qualified electrician.

▶ Observe the national and international regulations for the installation of electrical equipment.

The design of the unit complies with protection class II.

The unit complies with overvoltage category II.

The permissible potential difference between supply and output circuit is max. 300 V.

▶ For the output circuit take the same protective measures as for the supply circuit.

▶ Insert a miniature fuse according to IEC 60127-2 sheet 1 (≤ 5 A fast acting), if specified in the data sheet.

▶ Check the safe functioning of the unit after a short circuit.

▶ Observe the applicable standards.

▶ Disconnect power.

▶ Connect the unit as follows:

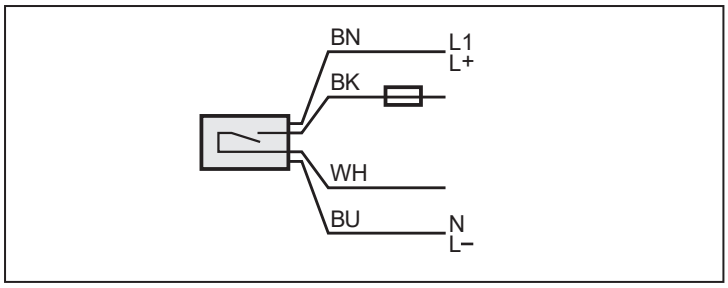


Fig. 4: Wiring diagram (colours to DIN EN 60947-5-2)

BK:	black	BN:	brown
BU:	blue	WH:	white

7 Settings

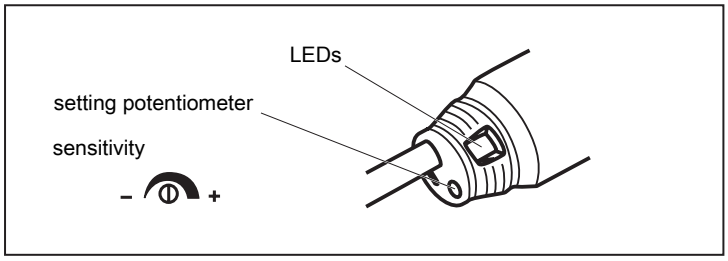


Fig. 5: Operating and display elements

Flow adjustment for setting the switching point:

▶ Switch on the power supply.

▶ Let the normal flow circulate in the installation and keep it constant.

▷ Both LEDs (red and green) are on. After approx. 60 s one LED goes out.

▶ Continue with step 1 or 2.

1. If the red LED is on:

▶ Turn the potentiometer slowly clockwise until the red LED goes out and the green LED comes on.

2. If the green LED is on:

▶ Turn the potentiometer slowly anti-clockwise until the green LED goes out and the red LED comes on.

▶ Turn the potentiometer slowly clockwise again until the red LED goes out and the green LED comes on.

If fluctuations which may result during operation shall be compensated for:

▶ When the green LED has come on, continue to turn the potentiometer clockwise.

8 Operation

After switching on the supply voltage, both LEDs come on for approx. 60 s, the output relay is energised (power-on delay time).

Then the unit is ready for operation.