manual

air-flow sensors
SL180100 / SL200100 / SL220100

Operating instructions

Switch-on bridging

The airflow monitors have an integrated switch-on bridging, which acts after the operating voltage has been applied. During the bridging time, the switching output is in the state „flow present“.
The response time is simoultaneously coupled to the response sensitivity. If a low response threshold below the nominal flow rate is selected, the time for the switch-on bridging is increased. With a high response threshold this time is shortened.

Response and reaction times

The response times of the start of flow and the flow failure are based on the nominal response speed.
If a low response threshold is set (high sensitivity), the response time for the start of flow is shortened and the time for the flow failure becomes longer. If a high response threshold is set (low sensitivity), the response time for the start of flow is extended, whereas the time for the flow failure is reduced.

The reaction times are also influenced by the real flow and temperature conditions. The specified technical data always refer to the nominal flow velocity.

Status display

Flow above the set switching point, relay energized: LED green
Flow below the set switchig point , relay de-energized: LED red

By turnig the potentiometer clockwise (20 turns), the response threshold increases. If there is no flow, it must be possible by turning the potentiometer to the left, to lighten the green LED.

Attention! The potentiometer is located on the back of the unit behind a plastic cover screw. This screw must be removed before adjustment!

Mounting

Install the sensor with the enclosed clamps so ein, in a way that the medium flows between the probes (see drawing), or use the accessory flange AS000006.

Tip: Note the position of the connection cable in comparison to the probes. It can serve as a reference point for the installed device.

Avoid deposits on the sensor, otherwise the function will be impaired.

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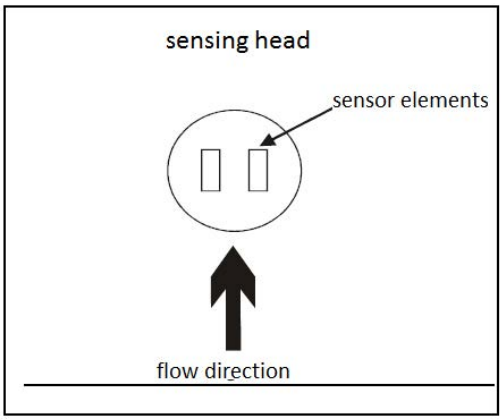


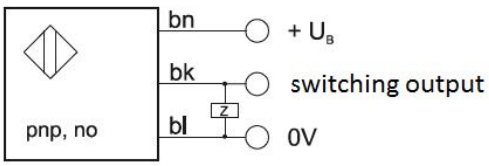
Start-up

Don't start the alignment before the flow velocity and the medium temperature are stable.

1. Place the probe in the flow path and apply the supply voltage. After switching on, the light-emitting diode must be green for at least 5 seconds.
2. After 20 seconds, turn the potentiometer clockwise, until the LED turns red.
3. Now turn the potentiometer half a turn to the left. The green LED lights up. In case of a flow failure, the LED must turn to red after the reaction time has expired. If the flow starts again to its full extend, the LED must light up green. You can simulate the flow failure by quickly pulling the probe out of the flow channel.

Electrical connection

DC – device



bn=brown, bk=black, bl=blue

Technical data

article-no.	design	voltage	switching current max.	output	length	housing	connection
SL180100	M18x1	24V DC	200mA	pnp, no	80	nickel-pl.brass	cable
SL200100	20rund	24V DC	200mA	pnp, no	76	plastic	cable
SL220100	M22x1	24V DC	200mA	pnp, no	76	nickel-pl.brass	cable
AS000006	20round	accessories	flange	for SL20		plastic	

nominal flow	2m/s
adjustment range (detection range)	0.5 ... 15m/s
power-on time	20 ... 40s
switch-on time	approx. 2s
switch-off time	approx. 2s
temperature range	-20 ... +70℃

Never use these devices in applications where the safety of a person depends on their functionality!

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