

## SL20F001

Air flow sensors

### Power-up bypass

The air flow monitors have a built-in switch-on bypass that takes effect after the operating voltage is applied. During the bypass period, the switching output is in the "flow present" status. The time response is linked to the response sensitivity. If a low response threshold below the nominal flow velocity is selected, the switch-on bypass time is increased. This time is reduced if the response threshold is high.

### Response and reaction times

The response times for flow activation and flow failure refer to the nominal response speed. If a low response threshold is set (high sensitivity), the response time for flow activation is shortened and the time for flow failure is longer. With a high response threshold (low sensitivity), the response time for flow activation is prolonged and that for flow failure is shortened.

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

### function display

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

Turning the potentiometer clockwise (20 revolutions) increases the response threshold. If there is no flow, it should be possible to light up the green LED by turning the potentiometer to the left.

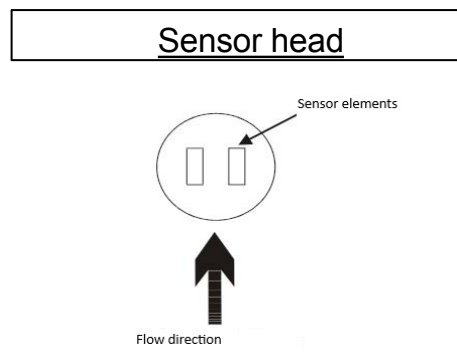
**Caution! The potentiometer is located on the rear (of the unit) behind a plastic cover screw, which must be removed before setting!**

### installation

Install the sensor using the enclosed mounting clips so that the medium flows between the sensors (see diagram), or use the AS000006 accessory flange.

**Tip: Note the position of the connection cable in relation to the sensors; this can serve as a reference point when the device is installed.**

Avoid deposits on the sensor, as these will impair its function.

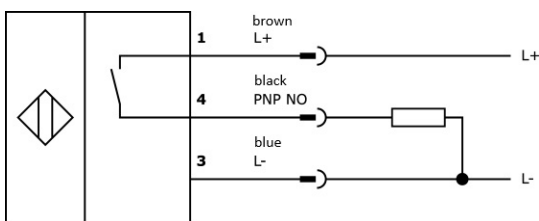


**start-up**

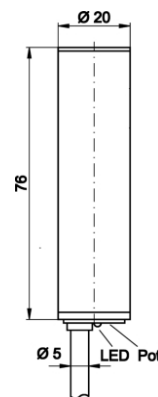
Only perform the calibration when the flow velocity and medium temperature are stable.

1. Place the sensor in the flow path and apply the supply voltage. After switching on, the light emitting diode must light up green for at least 5 seconds.
2. After approx. 20 seconds, turn the potentiometer to the right until the red LED turns on.
3. Now turn the potentiometer back ½ revolution to the left. The green LED will light up. If the flow fails, the LED must switch to red after the reaction time has elapsed. When the flow resumes fully, the LED must light up green. You can simulate a flow failure by quickly pulling the sensor out of the flow channel.

**Electrical connection**



**Dimension sketch**



**technical data**

measuring range	0.5 ... 15 m/s
Nominal flow	2 m/s
Measuring principle	Calorimetric
operating voltage	24V DC ± 20%
Current consumption (without load)	70mA
switching output	PNP, no
Output current (max. load)	200mA
Short-circuit protection	Yes
Reverse polarity protection	Yes
Voltage drop (max. load)	2V
power-on time	20 ... 40s
Response time (typical)	2
temperature gradient	200K/min
Display	Green/red LED
ambient temperature	-20 to +70°C
Degree of protection (EN 60529)	IP67
Housing material	Plastic (PBT)
connection	2 m silicone cable, 3 x 0.34 mm <sup>2</sup>

Note: The connection cable complies with the following standards: IEC 61034-2 (Low Smoke)  
IEC 60754-1 (halogen-free)  
IEC 60332-1-2 (Flame Retardant)

**Safety instructions:**

Before start-up, please ensure that all safety instructions listed in the product documentation have been observed!  
The application of these products is prohibited if it has a direct impact on personal safety.