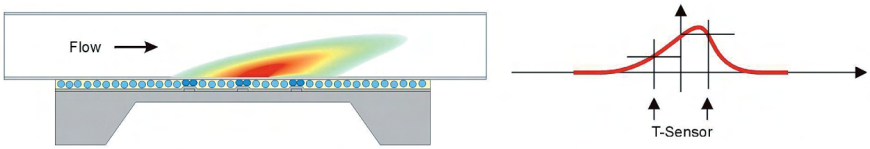
FLOW SENSORS FOR CLEANROOMS

ENERGY EFFICIENCY AND SAFETY

Flow sensors from SCHMIDT Technology accurately control the air volume environment in cleanrooms. The volume of air required to control a cleanroom's atmospheric pressure accounts for a significant portion of an air conditioning system's energy consumption. Practical experience shows that the energy consumption of the ventilators alone comprises 57% of the overall costs. The greatest energy saving potential derived from this information is based on being able to adjust the air volume according to process requirements.

To do this, the air overpressure must be decreased to a value that's as close to the minimum standard requirements as possible, then adjusted or maintained using the smallest possible amount of supplied air; that is, with the lowest possible RLT system ventilator output.



The flow sensors SS 20.400 by SCHMIDT Technology can be used to determine the flow direction using the parallel connection of both semiconductors and the information regarding the warmer one.

Reserve and Additional Safety

In addition to pressure measurement, a flow measurement unit — installed in a suitable 50 mm diameter wall opening — enables the so-called overflow to be measured; that is, the air flowing out of the cleanroom owing to prevailing overpressure. The measuring ranges of modern flow sensors, such as SCHMIDT Technology's SS 20.400 by, start at flow velocities of (WN) of 0.05 m/s. This value is far below the differential pressure of 0.01 Pa and, therefore, below the capacities of a differential pressure sensor.

For installation of an additional flow sensor, it is sufficient to create a small opening of approx. 50 millimeters, as shown here, above the access door.

Thus, a flow sensor detects overflow even at very small differential pressures. Furthermore, SCHMIDT Technology's SS 20.400 flow sensors are capable of measuring bidirectional airflows, including the possible detection of reverse flows. The use of modern flow sensors significantly improves the functional safety of cleanrooms and their energy efficiency.

SCHMIDT® Technology

Simply a question of better measurement

SCHMIDT® Flow Sensors

Just to make sure!

SCHMIDT® Flow Sensors will reliably register the predefined air flows required by different standards as well as provide energy-efficient measurement of overflow from clean room to clean room.

This is especially relevant for the safety of personnel and for quality assurance. Perfectly suitable for users and manufacturers of cleanrooms and pharmaceutical equipment with high quality demands.

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