

- Suitable for mechanical and natural ventilation
- Linear output signal
- Converts air speed into a 4-20 mA or a 0-10V DC signal
- Fully electronic registration of airflow speed
- Compensates for air temperature changes
- Temperature output signal 0-10V
- Telescopic sensor
- Multi fuse protection
- Made with non-corrosive material
- AC or DC power supply



Application

TVI-35 is an airflow transducer with a wide application range. It may be used for control, monitoring and regulation of air flow speed in fresh air and ventilation systems etc.

- Measurement of airflow speed via PC/PLC/CTS systems
- As transducer for regulating flow speed

Product Program Function

TVI-35 measures airflow speed according to the thermal principle, based on the fact that the cooling effect of air increases with air speed. This cooling effect is measured and converted to a 4-20mA or 0-10V DC signal corresponding to an airflow speed. The μ -processor based electronic system ensures that the output signal is linear and that corrections are made if the temperature changes. If a standard analogue instrument is connected, the temperature and the airflow speed can be read remotely. A second 0-10V DC output is provided as a measurement of the air temperature (range 0-50°C) and this can be used instead of the normal duct temperature sensor.

Ordering Specifications:

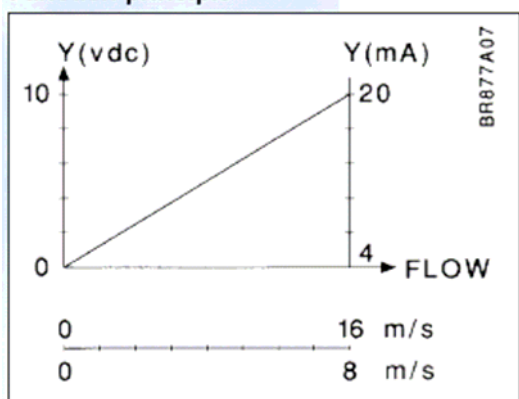
TVI-35-2

Air flow transducer for mechanical ventilation

TVI-35-4

Air flow transducer for natural ventilation

Function principle



Output signal

Technical data, TVI-35-2, 35-4

Airflow speed..... 0-1, 0-20, 0-8, 0-16 m/s
 Output signal (flow)..... 4-20 mA ($R_L < 500 \Omega$)
 0-10V (max. 5 mA)
 Output signal (temp.)..... 0-10V (max. 5 mA)
 Temperature range..... 0-50°C
 Air temperature range..... -10/+60°C
 Ambient temperature..... -20/+50°C
 AC voltage supply..... 24V AC \pm (120 mA)
 DC voltage supply..... 16-30V DC (80 mA)
 Absolute accuracy..... $\pm 5\%$
 Min. accuracy..... ± 0.4 m/sec.
 (temp range 0-50°C and
 airspeed range 0.5 m/sec - 16 m/sec)
 Rise time..... 20 sec.
 Time constant..... 5 sec.
 Insertion depth on channel..... 50-185 mm
 Housing..... IP 54
 Dimensions (H x W x D)..... 80 x 80 x 55 mm

Setting / Indication

TVI-35-2 is set to 0-8 m/s airflow speed. If jumper SW1 is removed, the airflow speed is 0-16 m/s.

TVI-35-4 is set to 0-1 m/s airflow speed. If jumper SW1 is removed, the airflow speed is 0-2 m/s.

Mounting

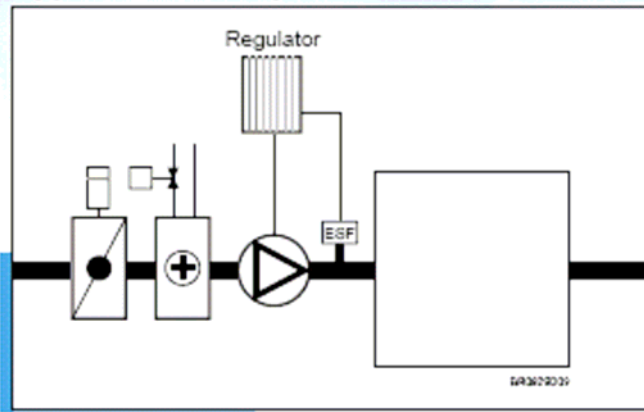
TVI-35 must be mounted in such a way that the airflow passes the gap on the sensor tip. The transducer can be mounted in air ducts with a diameter or channel width of 100-370 mm.

In order to ensure optimum operating conditions the TVI-35 sensor tip must be placed in the middle of the duct.

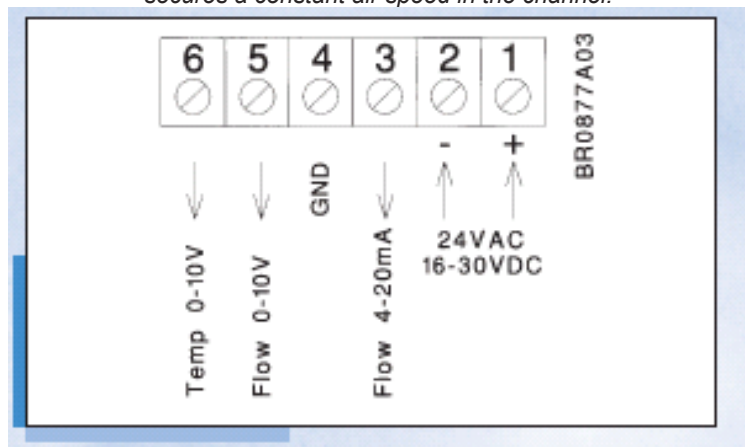
To avoid duct cavitation which will adversely affect the sensor, the TVI-35 should be placed at least 6 duct diameters in front of an obstruction or bend in the ducting, and not closer than 3 duct diameters behind an obstruction.

Via the speed controller of the ventilator the TVI secures a constant air speed in the channel.

Application example



Via the speed controller of the ventilator the TVI-35 secures a constant air speed in the channel.



TVI-35-2

Dimensions

