

FC 40 airflow monitor

In this device sensor and monitor are a compact unit. The measuring probe is also used for mounting. The advantages are the application where a switch-gear or other technical equipment has to be mounted in a small room or where no room is planned for example additional mounting.

The device includes a start-up delay of 60sec. And a temperature compensation. The run down of the start-up time is shown by an LED.

The device is used for controlling of:

- Air / Air conditioning
- Ventilators
- Damper register

- **Media Gas -10..+80°C**
- **Compact unit**
- **Design prooft RWTÜV**



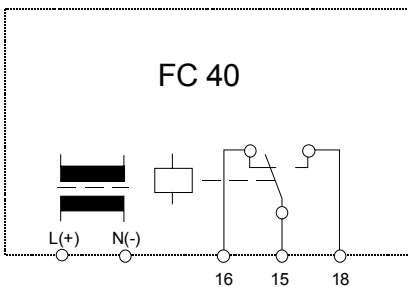
Type	FC 40	FC 40
Operating voltage	24 V AC/DC	230 V/AC
Voltage tolerance	±10%	±10%
Overvoltage category	II	II
Signal display, voltage	Green LED	Green LED
Power consumption, max.	2 VA	4 VA
Ambient temperature, unit	-20..+60°C	-20..+60°C
Signal output airflow	Relay, 1change-over contact	Relay, 1change-over contact
Current and contact load capacity	250 VAC, 6 A, 1.5 kVA	250 VAC, 6 A, 1.5 kVA
Switching function at airflow	Relay energised when airflow is present	relay energised when airflow is present
Signal display at airflow	Yellow LED	Yellow LED
Start-up bypass	60 s (activated by jumper)	60 s (activated by jumper)
Display of start-up bypass	Yellow LED	Yellow LED
Media temperature range	-10..+80°C	-10..+80°C
Temperature gradient	15 K/min	15 K/min
Switching point	Adjustable with potentiometer	Adjustable with potentiometer
Measuring range	0.1 – 30 m/s	0.1 – 30 m/s
Sensor	Integrated	Integrated
Immersion depth	130 mm	130 mm
Process connection	PG7, Mounting flange	PG7, Mounting flange
Sensor material	MS58, Nickel-plated	MS58, Nickel-plated
Pressure resistance	10 bar	10 bar
Connection	5 Terminals, 2.5 mm ²	5 Terminals, 2.5 mm ²
Type of protection, housing	IP54 (IP65)	IP54 (IP65)
Type of protection, sensor	IP67	IP67
Contamination class	2	2
Housing dimensions	L=56 mm, W=84 mm, H=80 mm	L=56 mm, B=84 mm, H=80 mm
Certification symbols	○, ○	○, ○
Accessory	Mounting flange	Mounting flange



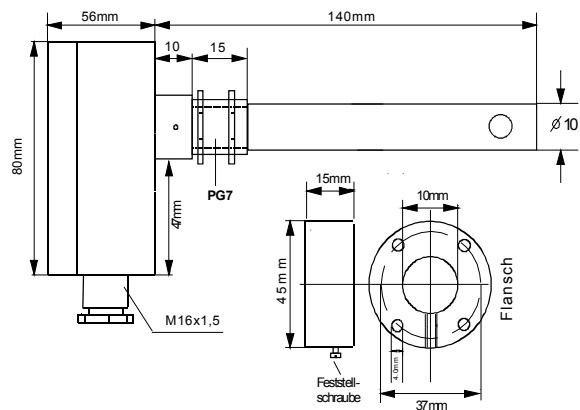
The **FC 40** airflow monitor has been tested by the RWTÜV. It meets international standard **DIN EN 61010-1:1994-03** and **EN 61010-1 A2:1998-11**.

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Wiring diagramm:



Dimensions:



Installation Conditions FC 40

To avoid malfunctions, the following points should be observed.

- The tip of the sensor should be as close as possible to the center of the pipe. The transverse hole in the shaft of the sensor **must be within the full flow** of the gaseous medium.
- In Installation where there is **low turbulence**, if possible.
- The marking is intended as an assembly aid.
- In case of vertical pipes, the direction of flow should be upwards.
- maintain a free inlet distance of **5xD upstream** of the sensor and **3xD outlet distance downstream** of the sensor.
- The flow controller can be installed in any position.

Connection and commissioning must be performed by properly authorized and qualified personnel!
Connection to mains supply (L, N) must be made by means of a protected isolating switch with the usual fuses. As a matter of principle, the General VDE Regulations must be complied with (VDE 0100, VDE 0113, VDE 0160). If the potential-free contact is connected to an extra-low safety voltage, sufficient insulation must be provided for the connecting cables up to the terminal, since otherwise the double insulation to the mains voltage side may be impaired. The current load capacity of the potential-free contact is limited to 6 A.



Commissioning of FC 40

Start-up bypass

Jumper set	= start-up bypass active for approx. 60 sec. Yellow LED „Time“ is on
Jumper not set	= start-up bypass inactive

Connection and commissioning must be performed by properly authorized and qualified personnel!

When commissioning and adjusting the devices, the following procedure is recommended:

- Install and connect the flow controller in accordance with installation instructions and conditions.
- Set jumper for start-up bypass, if required.
- Set trimmer „Sensitivity“ to minimum sensitivity (left limit stop).
- Connect mains voltage. The green LED lights up. If the jumper has been set, the start-up bypass procedure will be executed (approx. 60 sec.).
- Set nominal rate of flow.
- Slowly turn trimmer „Sensitivity“ clockwise until the yellow LED lights up and the signal output switches. In order to avoid erroneous switching at low changes of flow, turn the potentiometer slightly past the switching point.
- To check the function of the flow controller, reduce or stop the flow.
- The yellow LED will go off (output relay at FC 40 is released).