



Attention!!

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).

Commissioning of FC55 V2 LCD and FC55 V2 M8

Installing and setting up the unit pay attention to the following points:

- Install the unit mechanically and electrically as described in this manual
- Turn on supply voltage; green LED enlightens; wait for the delay time being elapsed (time is shown on the display); yellow LED enlightens; turn on air flow
- Output current and –voltage are set automatically relative to the airflow
- For LCD-models: Set up the parameters suiting to your installation (refer to “programming the FC55 V2 LCD)
- Set potentiometer “Alarm Set” to work flow
- The relays-outputs 8/9 and the transistor output 7 are opened at work flow
- Turn of the work flow

work flow >= switching point signal output switched red LED right of blinking red LED of the LED-chain glows

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work flow < switching point signal output not switched red LED left of blinking red LED is darkened

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- Output signal drops, relays output releases
- Turn on work flow
- Air flow monitor is now operational

What to do if flow monitor does not operate properly:

Problem	Cause	Sollution
green LED darkened	wrong or wrongly connected suply voltage	check supply voltage
no recognition of flow	wrong or wrongly installed sensor	check sensor installation and sensor number
sensor show abnormal sensitivity	sensor is polluted	clean sensor (refer to "cleaning the sensor"!)

Accessories:

Reducers:

- Atr.-No.: 80399 – G1/2" to PG7
- Art.-No.: 80402 – M20x1.5 to PG7
- Art.-No.: 80403 – M15x1.5 to PG7

Plastic flange:

- Art.-No.: 79781 – 10mm

Airflow monitor

Manual Airflow monitor FC55 V2 + FC55 V2 M8



Our products correspond to the requirements of the European guidelines.

WEE Electrical and electronics of old devices 2002/96/EG
Of 01.08.2005

RoHS 2002/95/EG
of 01.07.2006



The FC55 V2 is a micro controller based airflow monitor which watches gaseous flows from 0.5m/s to 10/30m/s. It provides a 4-20mA as well as a 0-10V-DC output. Also it provides a 0-10V-DC output based on the temperature.

Technical Data:

Type	FC55 V2	FC55 V2 M8
Art. No.	81500V2	81500V2M8
supply voltage	24VDC	24VDC
supply voltage tolerance	+5%	+5%
surge category	II	II
supply voltage signal	green LED	green LED
power consumption	4VA	4VA
ambient temperature	-20..+60°C	-20..+60°C
flow voltage output	0..10V (Ra=10kOhm), linear	0..10V (Ra=10kOhm), linear
flow current output	4..20mA (Ra=0.2kOhm), linear	4..20mA (Ra=0.2kOhm), linear
flow temperature output	0..10V (Ra=10kOhm), linear	0..10V (Ra=10kOhm), linear
measurement error	+5% of measurement range	+5% of measurement range
relays output	break contact, opens at flow	break contact, opens at flow
function at flow	switch point set with potentiometer	switch point set with potentiometer
transistor output	open collector, isolator at flow	open collector, isolator at flow
reproduceability of measurement values	+2%	+2%
media temperature	-50..80°C	-25..+80°C, optional +250°C
temperature gradient	30K/min	30K/min
switch point	set by potentiometer	set by potentiometer
measurement range standard	0.1 .. 10m/s	0.1 .. 10m/s
measurement range max	0.1 .. 30m/s	0.1 .. 25m/s
volume flow max	49100m³/h	49100m³/h
volume flow max	49100l/min	49100l/min
sensor type	mounted	seperate
immersion depth*	approx. 130mm	approx. 130mm
process connection	M16x1.5; flange	M16x1.5; flange
sensor material	MS58, nickel plated	MS58, nickel plated
pressure resistance	10bar	10bar
protection class, case	IP65	IP65
protection calss, sensor	IP54	IP54
pollution class	II	II
electrical connection	9/10 clamp, max 1.5mm²	9/10 clamp, max 1.5mm²
case dimensions	L=56mm; W=84mm; H=82mm	L=56mm; W=84mm; H=82mm
compliance	-	-
Accessory	flange	flange

Reference terms and conditions: Inlet way > 10xDN, outlet way > 5DN laminar flow: ait at 0°C and 1.013bar.

Cable length with separate sensor is 2.5m.

*Different immersions depths are available (50/130/165mm). High temperature sensors (up to 350°C) are also available.

Terms of installation:

To avoid malfunction you need to follow these facts:

- the sensors tip need to be mounted in the middle of the duct
- the sensor elements need to be fully circulated around by the media
- the mark on the sensor needs to be exactly fronted to the flow
- in vertical tube the flow directions might be upwards
- maintain 5xD of free inlet way and 3xD of outlet way
- the sensor is to be mounted only with its hexagonal bolt
- the flow monitor is independent of its mounting position

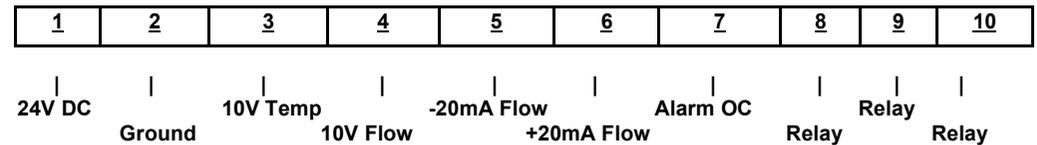
Attention:

Sensor and monitoring device are calibrated to each other! Change of one part leads to malfunction! The cable's length may not be changed. If you need longer or shorter cable lengths feel free to ask our consultant.

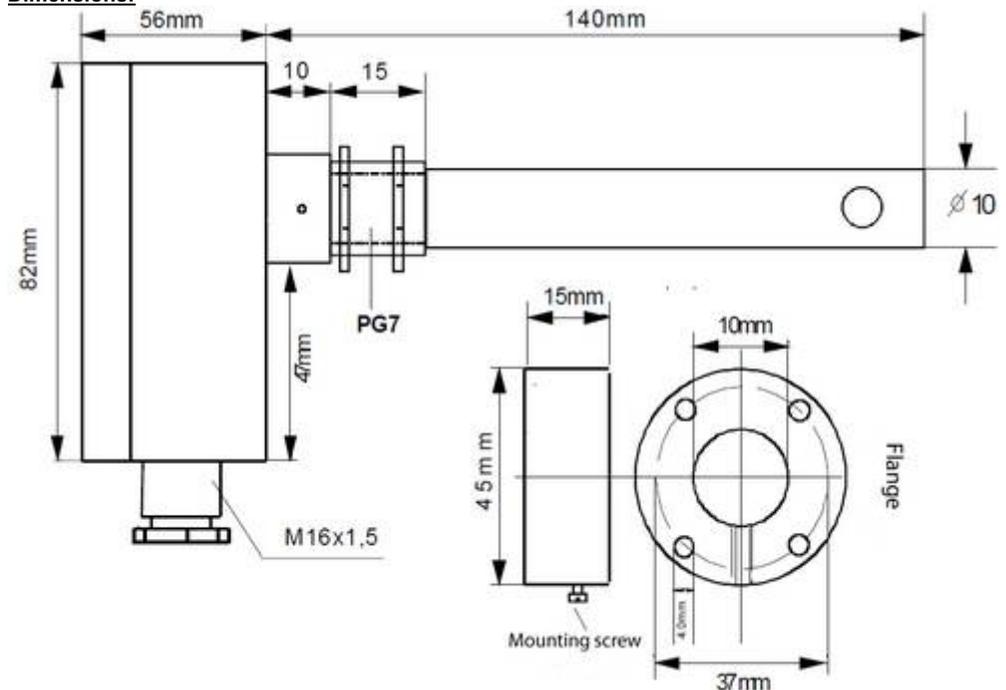
Cleaning the sensor:

The airflow sensor contains a sensor element which is sensitivity to mechanical loading and which must not be touched with hard and pointed objects. Any cleaning that may be necessary is possible in water (also with addition of detergents). Let the unit drip off and dry renewed start-up.

Electrical connection:



Dimensions:

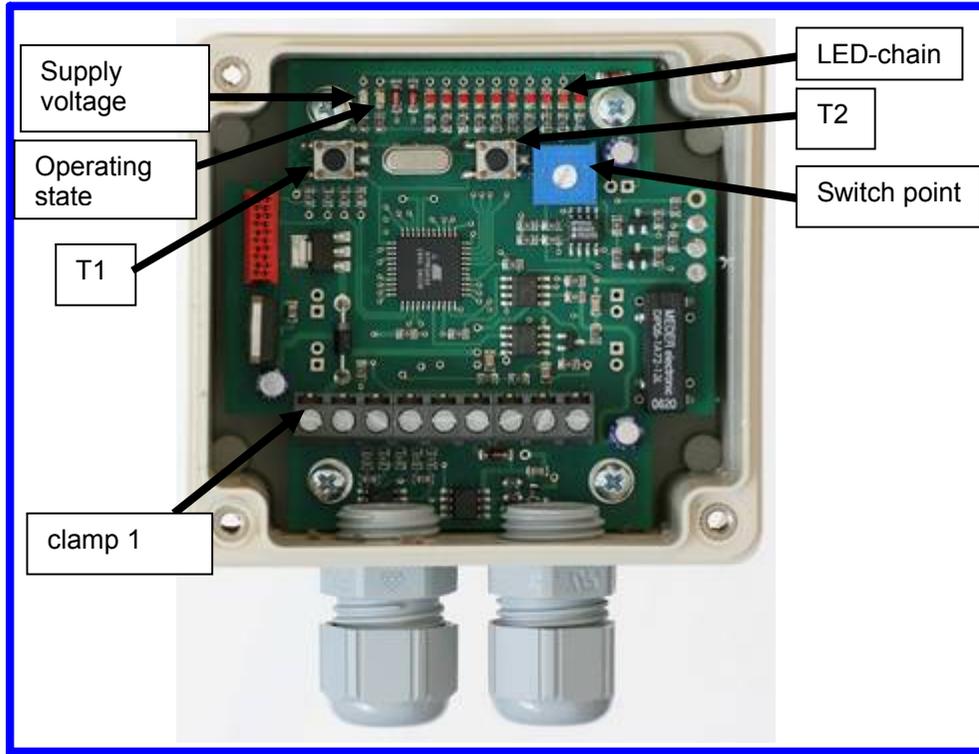


Intended usage:

The FC55 V2 (LCD) is to be used for monitoring of gaseous media at flows/volumes within its provided technical characteristics. Its application areas are e.g. climate- and cooling installations, machines and equipments for filter monitoring, frlo monitoring in clean rooms, monitoring of supply air (heating register), monitoring of volume flows,...

Setting up a FC55 V2 LCD:

The LED-chain shows the actual flow relatively to the maximum flow (e.g.: max. flow=10m/s, 3 LEDs enlightend, means 30% respectively 3m/s). If the most right LED blinks the flow is above the maximum flow. The switch point is set by the potentiometer. The set switch point is shown by a blinking LED in the LED-chain.



Signal outputs:

The output relays provides an opener/closer (depending on model) or a potential free change-over-contact. The switch point of the transistor output is set with potentiometer analogically to the relay output. Following analogue outputs are provided as well:

output	dependence
0..10VDC	temperature
0..10VDC	flow
4..20mA	flow