

Electronic Flow Monitor for Air

KAL-L



- Measuring range 1 - 20 m/s air
- Accuracy: $\pm 10\%$ of reading
- $p_{\max}$: 8 bar; $t_{\max}$: 120 °C
- Relay-output
- No moving parts
- Negligible pressure loss



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Method of operation

The model KAL-L... electronic flow switch monitors air and gas flow. It is suited for securely monitoring flows with minimum pressure loss

Function

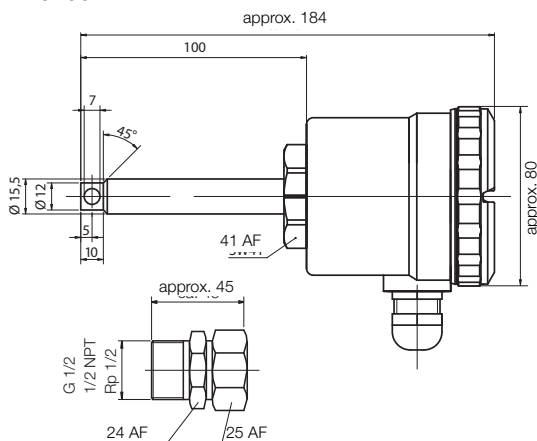
The operation of the electronic flow monitor KAL-L... is based on the proven calorimetric principle. A sensor is heated to a few degrees above the temperature of the flow medium. When the medium flows, the heat generated in the sensor is transferred to the medium, ie, the sensor is cooled. This cooling process is a measure of the flow velocity. A second sensor measures the medium temperature. The electronics compares the resistances of both sensors by means of a *Wheatstone bridge circuit*, and switches an output relay if the actual value drops below the set switching value.

Technical details

Power supply:	24 V _{AC/DC} -15 %, +10 %
Power consumption:	max. 4 VA
Ambient temperature:	-10 °C ... +60 °C
Temperature of medium:	-25 °C ... +120 °C
Max. pressure:	8 bar
Warm up time:	max. 30 s
Switching range:	1 ... 20 m/s (at 20 °C, 1 bar) (restricted span for other pressure and temperature conditions)
Switching accuracy:	±10 % of reading
Repeatability:	±1 % of reading
Temperature gradient:	30 K/min (at 8 m/s, 90 °C)
Response time:	1 ... 60 s adjustable
Flow rate indication:	8 digit LED bargraph

Dimensions

KAL-L8100 WK



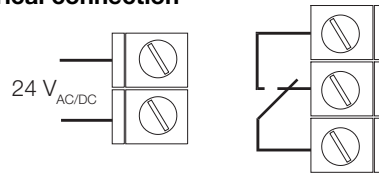
Technical details (continued)

Switch point adjustment:	with potentiometer
Output indicator:	two-colour LED
Switch output:	relay, floating changeover contact
Switch capacity:	max. 250 V _{AC} / 1000 VA / 4 A except for KAL-...ST: max. 24 V _{AC/DC} / 3 A
Protection:	IP 65
Case material:	glass-fibre-reinforced polyamide
Sensor material:	brass, nickel-plated

Fields of application

- Air conditioning systems
- Extraction plants
- Conveying plants

Electrical connection



Order details (Example: KAL-L81FL WK ST)

Connection	Order No.	Electr. connection/ cable connector
Smooth shaft D = 15 mm	KAL-L8100 WK	PG = cable connection M16x1,5 ST = connector M12x1 S4 = connector DIN 43650 N4 = 1/2" NPT for cable connection
Compression fitting G 1/2	KAL-L81G1 WK	
Compression fitting Rp 1/2	KAL-L81R1 WK	
Compression fitting 1/2" NPT	KAL-L81N1 WK	
with clamping flange acc. to DIN 43 743	KAL-L81FL WK	
M18x1.5	KAL-L0118 WK	

KAL-L0118 WK

