



Differential Pressure Controller

TM 169

The differential pressure transmitters of the TM 169 series are used to measure differential pressure, overpressure and vacuum. They provide 2 pressure ranges and 2 output signals, which are selectable using a jumper. For optimum adaptation to the pressure application, the transmitter can be switched between two pressure ranges. The factory setting is the sensitive range 1, which is selected by fitting a jumper. Removing the jumper activates the non-sensitive range 2. The output signal can be calibrated to zero by pressing the M key (pressure transmitter must be depressurised). As well as an analogue output signal, the differential pressure transmitter contains an adjustable transistor switching output with a maximum switching capacity of 35 VDC/100 mA.



Specifications

Service:	Air and non-corrosive gases
Accuracy:	$\leq \pm 1\%$ FS incl. linearity, hysteresis
Ambient Temperature:	0 - 50 °C
Storage Temperature:	-10 .. 70 °C
Stability, typ.	$\leq \pm 0,5\%$ to $\pm 2,5\%$ FS / year
Repeatability:	$\leq \pm 0,2\%$ FS
Position dependence:	$\leq \pm 0,02\%$ FS / g
Humidity:	0 ... 95 % rel, not condensed
Response time, switchable	100 ms or 1 s
Power supply:	24 VAC 24 VDC
Output signal:	0 - 10 V or 4-20 mA, 3-wire version 4-20 mA, 2-wire version
Switching output, only with 3-wire version:	Open-Collector, npn, 100 mA max, ≤ 35 VDC, adjustable with Poti
Load 4-20 mA:	20 - 500 Ohm
Protection:	IP 65
Process connection:	6 mm tubing
Electrical connection:	Screw terminal block for wires and strands up to 1,5 mm ²
Mounting:	with screws
Material housing:	ABS
Dimension enclosure:	81 x 83 x 60 mm
Weight:	approx. 175 g
Cable conduit:	M12 x 1,5 cable gland
Display, option:	red LED-display, 4-digit

Ranges

Model	Range	Over-pressure	Burst-pressure	Temperature error
TM 169-2	0-100/250 Pa	20 kPa	40 kPa	$\leq \pm 2,5\%$ v. EW
TM 169-3	0-250/500 Pa	20 kPa	40 kPa	$\leq \pm 2,5\%$ v. EW
TM 169-4	0-500/1000 Pa	20 kPa	40 kPa	$\leq \pm 1,5\%$ v. EW
TM 169-5	0-1/2,5 kPa	40 kPa	70 kPa	$\leq \pm 1\%$ v. EW
TM 169-7	0-5/10 kPa	60 kPa	120 kPa	$\leq \pm 1\%$ v. EW
TM 169-9	0-25/50 kPa	300 kPa	500 kPa	$\leq \pm 1\%$ v. EW
TM 169-B	0-100/250 kPa	1200 kPa	2000 kPa	$\leq \pm 1\%$ v. EW

All specifications are subject to change without notice



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Output signals

Signal

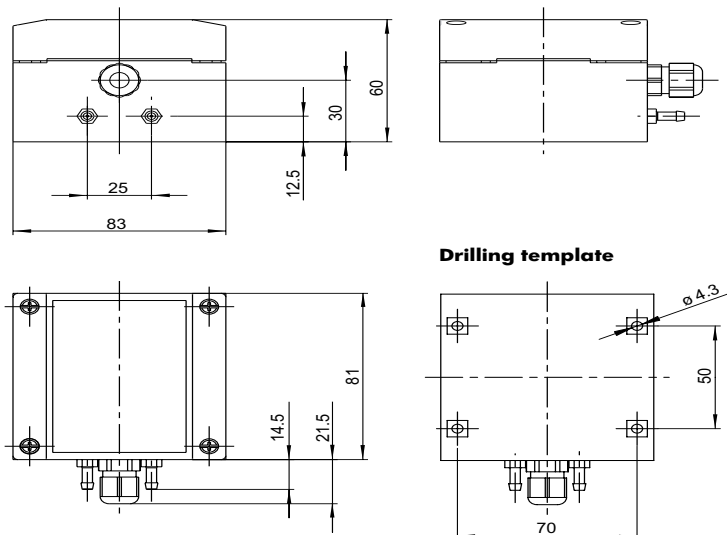
Suffix

- 0-10 VDC or 4-20 mA, 3-wire, with setpoint-1
- 4-20 mA, 2-wire without setpoint-2
- 4-20 mA or 0-10 VDC, 3-wire, mit Schaltausgang-3
- 0-10 VDC or 4-20 mA, 3-wire, without setpoint-7
- 4-20 mA or 0-10 VDC, 3-wire, without setpoint-D

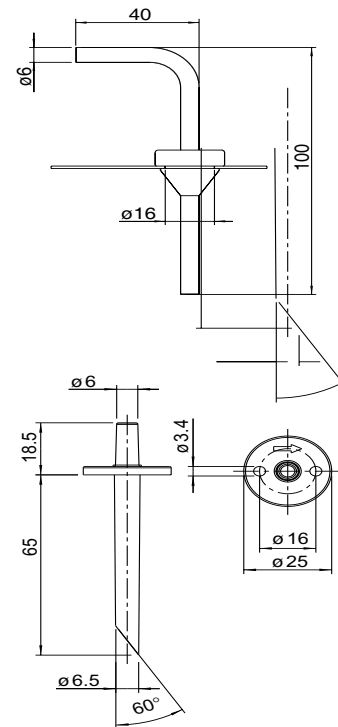
Option

- LED-Display-LED

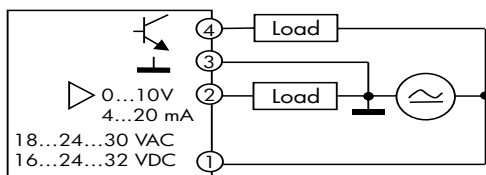
TM 169



TMK Climaset

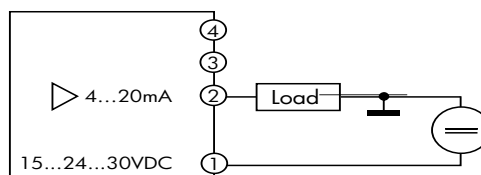


Wiring 3-wire version



4	SA	Switching output, npn
3	GO	Ground GND
2	Y	Output signal 0 ... 10 V / 4 ... 20 mA
1	G	Supply voltage 24 VAC/VDC

Wiring 2-wire version



4		
3		
2	Y	Output signal 4 ... 20 mA
1	G	Supply voltage 24 VDC

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