

Product Information

Sensors and Instrumentation

Flow Meter TZ1-...GK



- Large analog display
- Monitor and display
- Simple adjustment by means of drag indicator
- Insensitive to dirt
- Short installation length

Characteristics

The volume flow raises a disc unit (fitted with a magnet) out from a valve seat against a spring force. The magnet actuates the display movement by means of a magnetic coupling.

Technical data

Switch	optionally micro switch	
Nominal width	DN 15..50	
Process connection	female thread G 1/2..G 2	
Metering range	2..250 l/min	for details see table "Ranges"
Q_{max.}	to 250 l/min	
Tolerance	±3 % of full scale value	
Pressure resistance	PN 100 bar	
Medium temperature	-20..+90 °C	
Ambient temperature	-20..+70 °C	
Media	water (oils, gases and aggressive media available on request)	
Wiring	changeover no. 0.342	
Switching voltage	max. 250 V AC	
Switching current	max. 5 A	
Protection class	2 - safety insulation	
Ingress protection	IP 65	
Electrical connection	plug DIN 43650-A / ISO 4400	
Materials medium-contact	1.4305, 1.4571, 1.4310, NBR, hard ferrite PTFE-coated	
Non-medium-contact materials	CW614N chromed, steel chromed, acrylic, FKM	
Weight	see table "Dimensions and weights"	

Installation location	Standard: horizontal inwards flow; display downwards not recommended; other installation positions are possible; the installation position affects the switching point and display range.
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Ranges

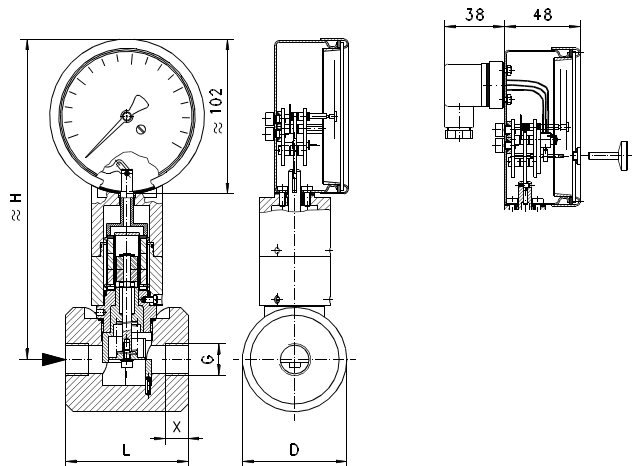
Details in the table correspond to horizontal inwards flow with increasing flow rate.

G	Nominal width	Metering range l/min H ₂ O	Q _{max.} recommended	Type
G 1/2	DN 15	2 - 6	8	TZ1-015GK006
		4 - 20	20	TZ1-015GK020
G 3/4	DN 20	5 - 40	40	TZ1-020GK020
				TZ1-020GK040
G 1	DN 25	10 - 60	60	TZ1-025GK060
G 1 1/4	DN 32	10 - 100	100	TZ1-032GK100
G 1 1/2	DN 40	10 - 150	150	TZ1-040GK150
G 2	DN 50	20 - 250	250	TZ1-050GK250

Special ranges are available

Dimensions and weights

G	Types	H	L	D	X	Weight kg
G 1/2	TZ1-015GK	210	80	68	15	2.9
G 3/4	TZ1-020GK				16	2.8
G 1	TZ1-025GK				18	2.7
G 1 1/4	TZ1-032GK		95	78	24	3.4
G 1 1/2	TZ1-040GK	223	105	88	25	3.7
G 2	TZ1-050GK	225	120	102	27	5.1



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Handling and operation

Note

- Include straight calming section of 5 x DN in inlet and outlet
- Include a filter if the media are dirty (use magnetic filter for ferritic components).
- It must be ensured that the values given for voltage, current, and power are not exceeded.
- When switched on, a load must be connected in series.
- The electrical details apply to ohmic loads. Capacitive and inductive loads must be operated using a protective circuit.

Adjustment

The micro switch (optional) is adjusted by means of the knurled adjusting screw provided. The screw allows the drag indicator to be set to the desired switching value. The value displayed corresponds to a switching point for a decreasing flow rate.



Ordering code

TZ1 1. 2. 3. **G** 4. **K** 5.

○=Option

1. Additional devices		see „Additional devices for TZ1“
-	only analog display	
M-	with integrated micro switch	
P-	○ with potentiometer	
M2-	○ with 2 x normally open (n.o.)	
M3-	○ with 2 x normally closed (n.c.)	
2. Nominal width		
015	DN 15 - G 1/2	
020	DN 20 - G 3/4	
025	DN 25 - G 1	
032	DN 32 - G 1 1/4	
040	DN 40 - G 1 1/2	
050	DN 50 - G 2	
3. Process connection		
G	female thread	
4. Connection material		
K	stainless steel	
5. Metering range H ₂ O for horizontal inwards flow		
006	2 - 6 l/min	●
020	4 - 20 l/min	● ●
040	5 - 40 l/min	●
060	10 - 60 l/min	●
100	10 - 100 l/min	●
150	10 - 150 l/min	●
250	20 - 250 l/min	●

Options

- Gold contact micro switch 125 V AC / 30 V DC, 100 mA
- Special Harting plug
- Metering ranges for oil or gas
- Special values

Ordering information

- Specify direction of flow, medium, and metering range.
- For oils. State viscosity, temperature and designation (e.g. ISO VG 68) (enquire about metering range).
- For gases, state pressure (relative or absolute), temperature and medium (e.g. air) (request metering range)

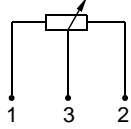
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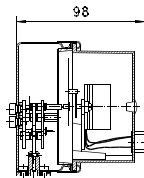
Additional Devices for TZ1

TZ1P - 10 kOhm potentiometer

Technical data

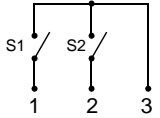
Switch/sensor	potentiometer
Wiring	no. 0.269
	
Switching voltage	max. 50 V DC
Switching current	max. 100 mA
Switching capacity	max. 1.5 W
Protection class	2 - safety insulation
Additional Tolerance	±3 %
resistance tolerance	±1 %
Linearity tolerance	±0,3 %
Ingress protection	IP 60
Electrical connection	plug Hirschmann G 4
Additional Weight	0.3 kg

Dimensions

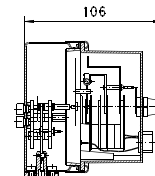


TZ1M2 - 2-pole normally open (n.o.)

Technical data

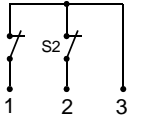
Switch/sensor	micro switch
Wiring	2 x normally open (n.o.) no. 0.268
	
Switching voltage	max. 250 V AC
Switching current	max. 0.6 A
Switching capacity	max. 50 VA
Protection class	2 -safety insulation
Ingress protection	IP 60
Electrical connection	plug Hirschmann G 4
Additional Weight	0.3 kg

Dimensions



TZ1M3 - 2-pole normally closed (n.c.)

Technical data

Switch/sensor	Micro switch
Wiring	2 x normally closed (n.c.) wiring 0.285
	
Switching voltage	max. 250 V AC
Switching current	max. 0.6 A
Switching capacity	max. 50 VA
Protection class	2 -safety insulation
Ingress protection	IP 60
Electrical connection	plug Hirschmann G 4
Additional Weight	0.3 kg

Dimensions

