

**Product Information****TZ1-008..080GR****Flow Meter TZ1-...GR**

- 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 piston out from a valve seat against a spring force. The piston actuates the display movement by means of a magnetic coupling.

**Technical data**

<b>Switch</b>	optionally micro switch	
<b>Nominal width</b>	DN 8..80	
<b>Process connection</b>	female thread G 1/4..G 3	
<b>Metering range</b>	2..600 l/min	for details see table "Ranges"
<b>Q<sub>max.</sub></b>	to 600 l/min	
<b>Tolerance</b>	±3 % of full scale value	
<b>Pressure resistance</b>	G 1/4..G 1/2 - PN 100 bar	
	G 3/4..G 1 - PN 25 bar	
	G 1 1/4... - PN 16 bar	
	G 3	
<b>Medium temperature</b>	-20..+90 °C	
<b>Ambient temperature</b>	-20..+70 °C	
<b>Media</b>	water (oils and gases available on request)	
<b>Wiring</b>	changeover no. 0.342	
<b>Switching voltage</b>	max. 250 V AC	
<b>Switching current</b>	max. 5 A	
<b>Protection class</b>	2 - safety insulation	
<b>Ingress protection</b>	IP 65	
<b>Connection</b>	plug DIN 43650-A / ISO 4400	
<b>Materials medium-contact</b>	Rg 5 / Rg 6 nickelled, CW614N, 1.4310, NBR, hard ferrite	
<b>Non-medium-contact materials</b>	CW614N chromed, steel chromed, Acrylic, NBR	
<b>Weight</b>	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.

**Ranges**

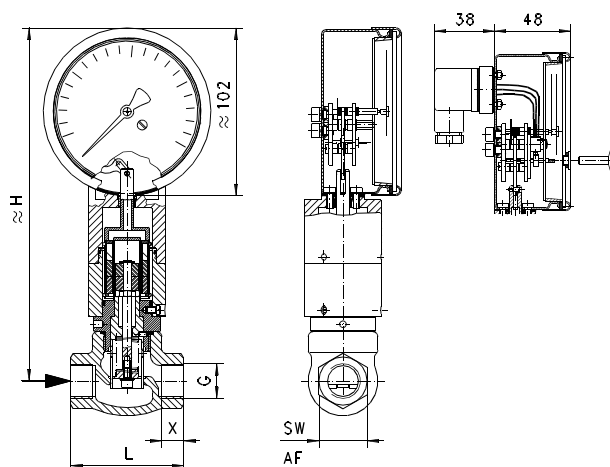
Details in the table correspond to horizontal inwards flow with increasing flow rate.

G	Nominal width	Metering range l/min H <sub>2</sub> O	Q <sub>max.</sub> recommended	Type
G 1/4	DN 8	2 - 6	8	TZ1-008GR006
		3 - 12	12	TZ1-008GR012
G 3/8	DN 10	2 - 6	10	TZ1-010GR006
		3 - 12	12	TZ1-010GR012
G 1/2	DN 15	2 - 6	20	TZ1-015GR006
		4 - 20		TZ1-015GR020
G 3/4	DN 20		40	TZ1-020GR020
		10 - 40		TZ1-020GR040
G 1	DN 25	10 - 60	60	TZ1-025GR060
G 1 1/4	DN 32	10 - 100	100	TZ1-032GR100
G 1 1/2	DN 40	10 - 150	150	TZ1-040GR150
G 2	DN 50	20 - 250	250	TZ1-050GR250
G 2 1/2	DN 65	30 - 400	400	TZ1-065GR400
G 3	DN 80	30 - 600	600	TZ1-080GR600

Special ranges are available

**Dimensions and weights**

G	Types	H	L	SW	X	Weight kg
G 1/4	TZ1-008GR	212	68	29	12	1.6
	G 3/8 TZ1-010GR					
	G 1/2 TZ1-015GR					
G 3/4	TZ1-020GR	213	73	32	11	1.7
G 1	TZ1-025GR	216	87	41	12	2.0
G 1 1/4	TZ1-032GR	226	98	52	13	2.6
G 1 1/2	TZ1-040GR	228	113	59	14	3.1
G 2	TZ1-050GR	236	137	72	17	6.4
G 2 1/2	TZ1-065GR	268	160	85	26	7.5
					23	8.7
G 3	TZ1-080GR		148	100		



**Product Information**

**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. **R** 5.

○=Option

1. Additional devices	
-	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.)
see „Additional devices for TZ1“	
2. Nominal width	
008	DN 8 - G 1/4
010	DN 10 - G 3/8
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
065	DN 65 - G 2 1/2
080	DN 80 - G 3
3. Process connection	
G	female thread
4. Connection material	
R	red bronze
5. Metering range H <sub>2</sub> O for horizontal inwards flow	
006	2 - 6 l/min
012	3 - 12 l/min
020	4 - 20 l/min
040	10 - 40 l/min
060	10 - 60 l/min
100	10 - 100 l/min
150	10 - 150 l/min
250	20 - 250 l/min
400	30 - 400 l/min
600	30 - 600 l/min

**Options**

- Gold contact micro switch
  - min: 5 V DC, 1 mA
  - max: 125 V AC, 30 V DC, 1 A
- 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)