

**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<br>G 3/4..G 1 - PN 25 bar<br>G 1 1/4..G 3 - PN 16 bar |                                |
| <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"  |                                |

|                              |   |
|------------------------------|---|
| <b>Installation location</b> | Standard: horizontal inwards flow; display downwards not recommended; other installation positions are possible; the installation position affects the switching point and display range. |
|------------------------------|---|

**Ranges**

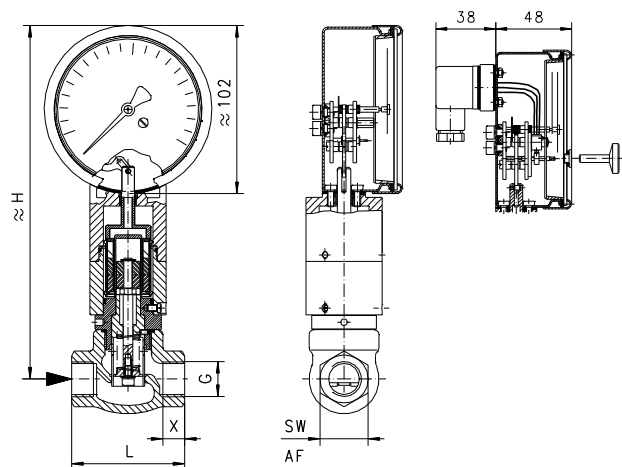
Details in the table correspond to horizontal inwards flow with increasing flow rate.

| 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         | 10 - 40                               | 40                            | TZ1-020GR020 |
|         |               |                                       |                               | 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 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 3     | TZ1-080GR       | 268 | 148 | 100 | 23 | 8.7       |



**Product Information**

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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. **R** 5.

○=Option

| 1. Additional devices  |                                 |   |   |   |
|--|---------------------------------|---|---|---|
| -  | only analog display             |   |   |   |
| M-   | with integrated micro switch    |   |   |   |
| M2- ○  | with 2 x normally open (n.o.)   |   |   |   |
| M3- ○  | with 2 x normally closed (n.c.) |   |   |   |
| Please 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                     |   |   |   |
| 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                  |   |   | • |
| 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
- 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).