

Flow measurement

Flowmeter OFY 722

description

- industrial inductive flow meter with display unit
- innovative and compact connection head design
- measurement of different liquids in a variety of sectors
- various process connections
- high measurement accuracy and repeatability
- very simple and intuitive operation with control keys
- possibility of flow monitoring function (flow switch)
- 350° swivel display for comfortable reading
- a wide range of outputs for different control systems



OFY722...

technical specifications

| | |
|---|---|
| power supply | 230 VAC (50/60 Hz), 24 VAC/VDC with polarity reversal protection, 110VAC(60Hz) on request |
| input power | 4,6 VA |
| technical versions | electronics head fitted, remote version with cable maximum cable length 20m with separate execution (other lengths on request) |
| temperature range medium | compact design rubber all versions max. 80°C permanently PTFE max. 90°C permanently, CIP cleaning process possible separate version rubber (hard) max. 80°C permanently PTFE max. 150°C permanently PFA max. 130°C permanently (DN300...DN400) on request |
| diameter | DN 10 ... DN 400 (other diameters on request) |
| material lining | rubber (hard), rubber approved for potable water or PTFE or PFA (see Table 3) |
| electrode material | CrNi-stainless steel DIN 1.4571, Hastelloy C4, titanium, tantalum |
| sensor housing material | flange - stainless steel and structural steel with polyurethane coating sandwich construction - stainless steel |
| process connections | flange steel ST37 painted flange stainless steel 1.4306/304 L, 1.4404/316 L sandwich design threaded design |
| pressure | PN10, PN16, PN25, PN40 |
| min. conductivity of the measured fluid | 20 µS (at a lower conductivity, upon agreement with promesstec GmbH) |
| measuring range (Qmin/Qmax) | bidirectionally for 0,2 to 12 m/s (1/60); 0,12 to 12 m/s (1/100); 0,06 to 12 m/s (1/200) |
| accuracy | accuracy up to 0,5%, repeatability up to 0,2% |
| pressure loss | negligible |
| additional electrodes | grounding and detection electrodes for empty piping (DN 15 ÷ DN 400) |
| empty piping detection | DN 15 ÷ DN 400 |
| display unit | LCD 2 x 16 characters |
| control | 2 x external button (viewing values) 3 x internal button (viewing+parameter changing) |
| outputs | impulse/flow switch (max. 400 Hz), 4 + 20 mA, RS485 (M-BUS / Mod-Bus protocol) (impulse and current outputs are passive with a possibility of being powered from internal power supply of the meter) |
| max. ambient temperature | 55 °C (housing, electronic) |
| flow sensor degree of protection | IP65, IP67, IP68 |
| electronics degree of protection | IP67 |

typical application areas

- water and wastewater industry
- agriculture, biogas plants
- food industry, dairies, breweries
- pharmaceutical industry
- industrial applications such as heating circuits
- power station technology

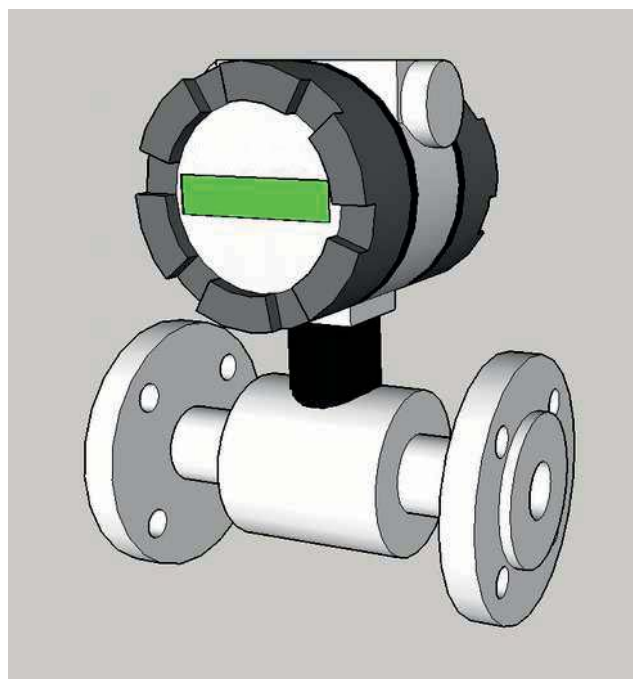
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instantaneous flow rate corresponding to flow velocity (table 1)

| diameter nominal (mm) | Qmin (m3/h) Qmin /Qmax | | | Qmax(m3/h) – (12 m/s) |
|-----------------------|------------------------|---------------------|---------------------|-----------------------------|
| | 1/60 (0.2 m/s) | 1/100 (0.12 m/s) | 1/200 (0.06 m/s) | |
| DN 6 | upon request | | | |
| DN 8 | upon request | | | |
| DN 10 | 0,06 | 0,034 | - | 3,4 |
| DN 15 | 0,13 | 0,076 | - | 7,6 |
| DN 20 | 0,24 | 0,142 | - | 14,2 |
| DN 25 | 0,35 | 0,21 | 0,105 | 21 |
| DN 32 | 0,6 | 0,34 | 0,17 | 34 |
| DN 40 | 0,9 | 0,54 | 0,27 | 54 |
| DN 50 | 1,4 | 0,84 | 0,42 | 84 |
| DN 65 | 2,4 | 1,44 | 0,72 | 144 |
| DN 80 | 3,6 | 2,2 | 1,1 | 220 |
| DN 100 | 5,6 | 3,4 | 1,7 | 340 |
| DN 125 | 8,9 | 5,34 | 2,67 | 534 |
| DN 150 | 13 | 7,6 | 3,8 | 760 |
| DN 200 | 23 | 13,5 | 6,75 | 1350 |
| DN 250 | 35 | 21,1 | - | 2115 |
| DN 300 | 51 | 30 | - | 3050 |
| DN 350 | 70 | 41 | - | 4150 |
| DN 400 | 90 | 54 | - | 5426 |

3D-view



updated 01/2018

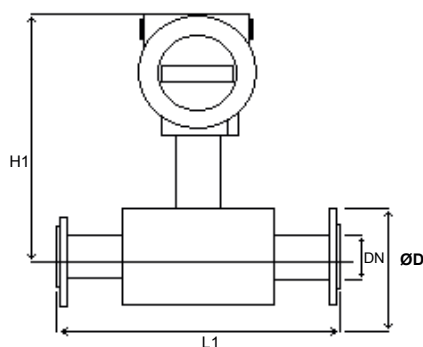
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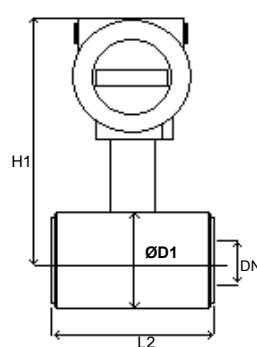
dimensions (table 2)

| connecti- on (mm) | constructional length (mm) | | | outside diameter (mm) | | | total height (mm) | | | |
|----------------------|----------------------------|----------|--------------|-----------------------|---------------------|-------------|---------------------|----------------|---------------------|------------------|
| | | | | flange | | sensor body | | compact design | | separated design |
| | flange | sandwich | threaded | flange | flange/ sandwich | threaded | flange/ sandwich | threaded | flange/ sandwich | threaded |
| DN | L1 | L2 | L3 | D | D1 | D2 | H1 | H2 | H3 | H4 |
| 6 | u. r. | | | | | | | | | |
| 8 | u. r. | | | | | | | | | |
| 10 | - | 90 | 193 (3/8") | - | 51 | - | 173 | - | 86 | - |
| 15 | 200 | 90 | 196 (1/2") | 95 | 51 | 70 | 173 | 177 | 86 | 90 |
| 20 | 200 | 90 | 206 (3/4") | 105 | 61 | 80 | 173 | 182 | 86 | 95 |
| 25 | 200 | 90 | 206 (1") | 115 | 71 | 90 | 178 | 187 | 91 | 100 |
| 32 | 200 | 90 | 233 (1 1/4") | 135 | 82 | 100 | 183 | 192 | 96 | 105 |
| 40 | 200 | 110 | 256 (1 1/2") | 145 | 92 | 116 | 188 | 200 | 101 | 113 |
| 50 | 200 | 110 | 261 (2") | 160 | 107 | 136 | 196 | 210 | 109 | 123 |
| 65 | 200 | 130 | - | 180 | 127 | 151 | 206 | 218 | 119 | 131 |
| 80 | 200 | 130 | - | 195 | 142 | 177 | 213 | 231 | 126 | 144 |
| 100 | 250 | 200 | - | 215 | 168 | - | 226 | - | 139 | - |
| 125 | 250 | 200 | - | 245 | 194 | - | 239 | - | 152 | - |
| 150 | 300 | 200 | - | 280 | 224 | - | 254 | - | 167 | - |
| 200 | 350 | 200 | - | 335 | 284 | - | 284 | - | 197 | - |
| 250 | 450 | - | - | 405 | - | - | 327/- | - | 240/- | - |
| 300 | 500 | - | - | 440 | - | - | 352/- | - | 265/- | - |
| 350 | 550 | - | - | 500 | - | - | 382/- | - | 295/- | - |
| 400 | 600 | - | - | 565 | - | - | 412/- | - | 325/- | - |

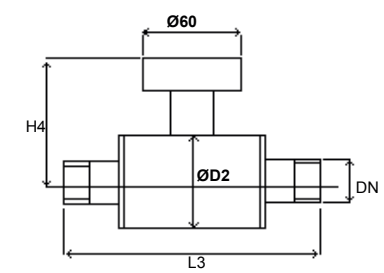
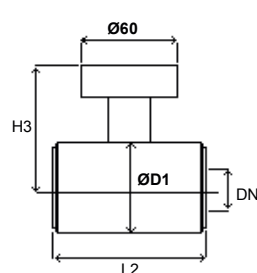
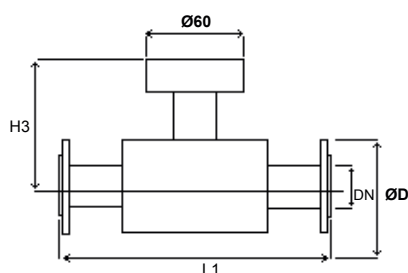
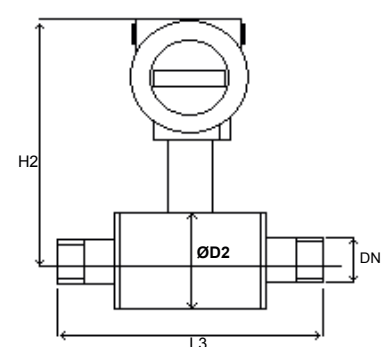
flange design



sandwich design



threaded design



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diameter and linings (others on request) (table 3)

| connection (mm) | flange | | sandwich | | threaded | |
|--------------------|-------------------|------|------------------|------|------------------|------|
| | rubber (hard)) | PTFE | rubber (hard) | PTFE | rubber (hard) | PTFE |
| DN | | | | | | |
| 6 | upon request | | | | | |
| 8 | upon request | | | | | |
| 10 | - | - | - | X | - | - |
| 15 | - | X | - | X | - | X |
| 20 | - | X | - | X | - | X |
| 25 | X | X | X | X | X | X |
| 32 | X | X | X | X | X | X |
| 40 | X | X | X | X | X | X |
| 50 | X | X | X | X | - | - |
| 65 | X | X | X | X | - | - |
| 80 | X | X | X | X | - | - |
| 100 | X | X | X | X | - | - |
| 125 | X | X | X | X | - | - |
| 150 | X | X | X | X | - | - |
| 200 | X | X | X | X | - | - |
| 250 | X | - | - | - | - | - |
| 300 | X | - | - | - | - | - |
| 350 | X | - | - | - | - | - |
| 400 | X | - | - | - | - | - |

explanation

.....: the standard is not possible, please inquire
 X.....: design possible

pressure levels and diameters (table 4)

| pressure level | diameter |
|-------------------|-----------------------------------|
| PN10 | DN350....DN400, others on request |
| PN16 | DN250...DN300, others on request |
| PN25 | DN10...DN200, others on request |
| PN40 | others on request |
| special solutions | others on request |

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order code OFY 722...

order example: OFY 722-80-DN25-B11-C3-D4-E1-F1-G2-H1-I1

connection heads

- 80 compact design, electronic and display panel in the head
- 8503 decentralised version with 3 m cable between evaluation and transducer
- 8505 decentralised version with 5 m cable between evaluation and transducer
- 8510 decentralised version with 10 m cable between evaluation and transducer
- 8515 decentralised version with 15 m cable between evaluation and transducer
- 8520 decentralised version with 20 m cable between evaluation and transducer

diameter

-DN XX DN10....400 possible for example DN25 = diameter 25 mm = 1" (possibilities see table 2)

process connection

- B10 flange steel ST37 painted
- B11 flange stainless steel 1.4306/304 L
- B12 flange stainless steel 1.4404/316 L
- B20 sandwich design
- B30 threaded design

transducer pressure area

- C1 PN10
- C2 PN16
- C3 PN25
- C4 PN40

sensor lining (table 3)

- D1 hard rubber
- D3 rubber potable water approved (material)
- D4 PTFE

material electrodes

- E1 stainless steel 316Ti
- E2 Hastelloy C4
- E3 titan
- E4 tantalum

sensor protection category

- F1 protection category IP65
- F2 protection category IP67
- F3 protection category IP68

output signal

- G2 4...20 mA, pulse, switching contact
- G4 4...20 mA, pulse, switching contact, RS485 MOD-Bus RTU and M-Bus protocol can be parameterized

power supply

- H1 230 VAC
- H2 24 VAC/VDC

measuring range (information see table)

- I1 1/60 (standard version)
- I2 1/100
- I3 1/200