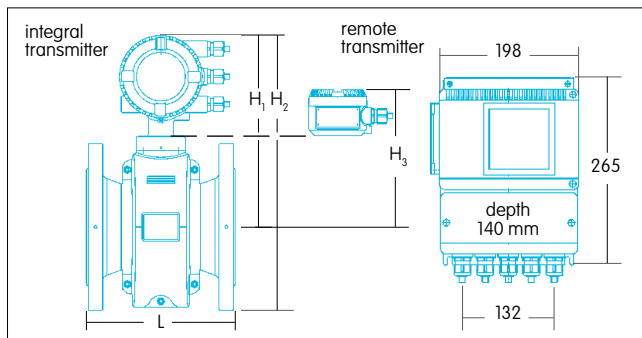


ProcessMaster Electromagnetic Flowmeter

Excellent precision for water operators and industry



- Remote or integral transmitter
- Nominal size DN 3 to DN 2000
- Universal installation
- Magnetic field frequency 25 Hz
- Graphical display
- Most modern memory technology
- Serially communication ports



Ordering number

| Connection cable | | | |
|----------------------------|---|----|---------|
| from sensor to transmitter | m | 10 | 0001058 |
| | m | 20 | 0001165 |
| 5 m cable incl. with meter | m | 30 | 0001164 |
| in remote version | m | 40 | 0001163 |
| | m | 50 | 0001162 |

Earthing

Earthing rings needed if installation in non metal pipes

Approvals

Pressure Equipment Directive compliant 97/23/EG

category III Fluid group I

| Electromagnetic flowmeter | | ProcessMaster | | (16) 40 | (16) 40 | (16) 40 | (16) 40 | 16 | (16) 40 | 16 |
|------------------------------------|-----------------------------------|-------------------|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Pressure rating | PN | bar | | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
| Nominal size / connection flange | DN | mm | | 2.4 | 5 | 9 | 14 | 24 | 36 | 56 |
| Nominal flow rate at 2 m/s | | m ³ /h | | | | | | | | |
| Ordering number | | | | | | | | | | |
| Integral transmitter | FEP311 | | | 0001197 | 0001198 | 0001199 | 0001200 | 0001201 | 0001202 | 0001203 |
| Remote transmitter | FEP381 u. FEP321 | | | 0001166 | 0001168 | 0001169 | 0001170 | 0001171 | 0001172 | 0001173 |
| Lining/electrodes material | | Teflon/Hastelloy | | | | | | | | |
| L | Length | mm | | 200 | 200 | 200 | 200 | 200 | 200 | 250 |
| H ₁ | Centerline height | mm | | 382 | 389 | 389 | 395 | 406 | 406 | 428 |
| H ₂ | Overall height | mm | | 464 | 481 | 481 | 492 | 514 | 514 | 550 |
| H ₃ | Centerline height sensor (remote) | mm | | 143 | 150 | 150 | 156 | 167 | 167 | 189 |
| Weight | integral/remote* | kg | | 9/7 | 11/9 | 11/9 | 13/11 | 17/15 | 20/18 | 29/27 |
| Performance characteristics | | | | | | | | | | |
| Maximum flowrate at 10 m/s | Q _{max} | m ³ /h | | 12 | 24 | 36 | 60 | 120 | 180 | 243 |
| Minimum flowrate 0.2 m/s | Q _{min} | m ³ /h | | 0.24 | 0.48 | 0.72 | 1.2 | 2.4 | 3.6 | 4.8 |
| Temperature | T _{max} | °C | | 130 | 130 | 130 | 130 | 130 | 130 | 130 |

* without transmitter

| Electromagnetic flowmeter | | ProcessMaster | | 16 | 16 | 16 | 10 | 16 | 10 | 16 | 10 |
|------------------------------------|-----------------------------------|-------------------|--|----------------|----------------|---------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Pressure rating | PN | bar | | 125 | 150 | 200 | 200 | 250 | 250 | 300 | 300 |
| Nominal size / connection flange | DN | mm | | 84 | 128 | 220 | 220 | 360 | 360 | 500 | 500 |
| Nominal flow rate at 2 m/s | | m ³ /h | | | | | | | | | |
| Ordering number | | | | | | | | | | | |
| Integral transmitter | FEP311 | | | 0001204 | 0001205 | 0001206 | 0001207 | 0001208 | 0001209 | 0001210 | 0001211 |
| Remote transmitter | FEP381 u. FEP321 | | | 0001174 | 0001175 | 0001176 | 0001177 | 0001178 | 0001179 | 0001180 | 0001181 |
| Lining/electrodes material | | Teflon/Hastelloy | | | | Ebonite (hard rubber)/Stainless steel | | | | | |
| L | Length | mm | | 250 | 300 | 350 | 350 | 450 | 450 | 500 | 500 |
| H ₁ | Centerline height | mm | | 438 | 485 | 526 | 526 | 540 | 540 | 563 | 563 |
| H ₂ | Overall height | mm | | 568 | 631 | 697 | 697 | 738 | 738 | 791 | 791 |
| H ₃ | Centerline height sensor (remote) | mm | | 199 | 246 | 286 | 286 | 301 | 301 | 324 | 324 |
| Weight | integral/remote* | kg | | 36/34 | 45/43 | 67/65 | 67/65 | 106/104 | 106/104 | 120/118 | 120/118 |
| Performance characteristics | | | | | | | | | | | |
| Maximum flowrate at 10 m/s | Q _{max} | m ³ /h | | 420 | 600 | 1,080 | 1,080 | 1,800 | 1,800 | 2,400 | 2,400 |
| Minimum flowrate 0.2 m/s | Q _{min} | m ³ /h | | 8.4 | 12 | 21.6 | 21.6 | 36 | 36 | 48 | 48 |
| Temperature | T _{max} | °C | | 130 | 130 | 90 | 90 | 90 | 90 | 90 | 90 |

* without transmitter

Sensor

| | | |
|--------------------------|------------------|-----------|
| Protection class | acc. to EN 60529 | IP67 |
| Housing | DN 3 ... 400 | aluminium |
| | DN 450 ... 2.000 | steel |
| Flange | | steel |
| Measurement error | % o.r. | ≤ 0.4 |
| Reproducibility | % o.r. | ≤ 0.1 |
| Minimum conductivity | µS/cm | > 5 |
| Magnetic field frequency | Hz | ≥ 25 |
| Response time | ms | ≥ 200 |
| - as step function | 0 ... 99 % | △ 5T |

Transmitter

| | | | |
|--------------------------------|------------------|---------------|-------------------------|
| Display (illuminated) | graphical | mm | 60 x 32 |
| Protection class | acc. to EN 60529 | | IP67 |
| Housing | | | aluminium |
| Wall-mounted unit | weight | kg | 4.5 |
| Current output (0/4 ... 20 mA) | active | | |
| | passive | (17 ... 300V) | |
| | burden | Ohm | < 650 |
| Pulse output (max. 5250 Hz) | active | | 19 ... 21V, max. 220 mA |
| | passive | | max. 30V, max. 220 mA |
| Communication | | | HART protocol |
| Output cutoff | 24V | external | optocoupler input |
| Meter reset | 24V | external | optocoupler input |
| Forward/backward flow | signal via | | optocoupler output |
| Empty pipe detection | signal via | | optocoupler output |
| Power supply | | V AC | 100 ... 230 |
| | optional | V DC | 24 |
| Power consumption | | VA | ≤ 20 |
| Ambient temperature | | °C | -20 ... +60 |

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Changes without notice
and facities excepted

