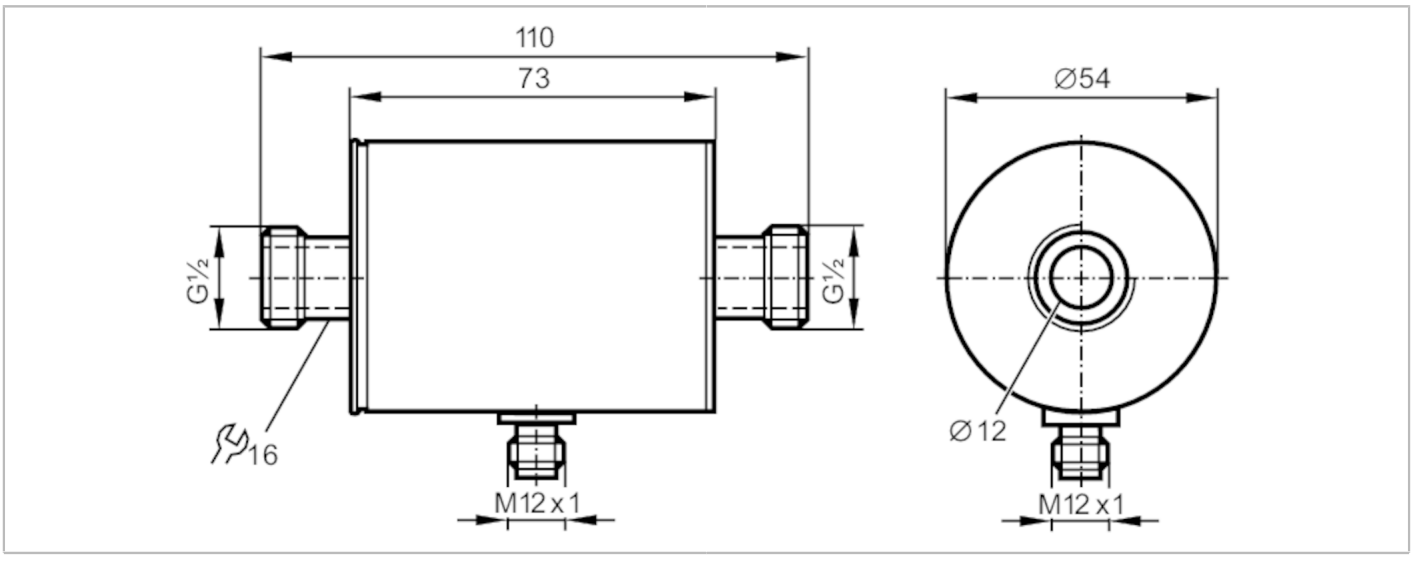
# SM6050

## Magnetic-inductive flow meter

SMR12GGX1OKG/US-100




| | | |
|---|---|---|
| **Product characteristics** | | |
| Number of inputs and outputs | | Number of analog outputs: 1 |
| Measuring range | [l/min] | 0.1...25 |
| Process connection | | threaded connection G 1/2 DN15 flat seal |
| **Application** | | |
| System | | gold-plated contacts |
| Application | | for industrial applications |
| Installation | | connection to pipe by means of an adapter |
| Media | | Conductive liquids; water; water-based media |
| Note on media | | conductivity: ≥ 20 µS/cm<br>viscosity: < 70 mm²/s (40 °C) |
| Medium temperature | [°C] | -10...70 |
| Pressure rating | [bar] | 16 |
| Pressure rating | [Mpa] | 1.6 |
| MAWP (for applications according to CRN) | [bar] | 17.7 |
| **Electrical data** | | |
| Operating voltage | [V] | 18...30 DC;  (to SELV/PELV) |
| Current consumption | [mA] | 95;  (24 V) |
| Min. insulation resistance | [MΩ] | 100;  (500 V DC) |
| Protection class | | III |
| Reverse polarity protection | | yes |
| Power-on delay time | [s] | 5 |
| **Inputs / outputs** | | |
| Number of inputs and outputs | | Number of analog outputs: 1 |

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|---|---|---|
| **Outputs** | | |
| Total number of outputs | | 1 |
| Output signal | | analog signal; IO-Link; (configurable) |
| Permanent current rating of switching output DC | [mA] | 250 |
| Number of analog outputs | | 1 |
| Analog current output | [mA] | 4...20 |
| Max. load | [Ω] | 500 |
| Overload protection | | yes |
| **Measuring/setting range** | | |
| Measuring range | [l/min] | 0.1...25 |
| **Accuracy / deviations** | | |
| Flow monitoring | | |
| Accuracy (in the measuring range) | | ± (0,8 % MW + 0,5 % MEW) |
| Repeatability | | ± 0,2% MEW |
| **Reaction times** | | |
| Flow monitoring | | |
| Response time | [s] | 0.15; (dAP = 0, T19) |
| Temperature monitoring | | |
| Dynamic response T05 / T09 | [s] | T09 = 20 (Q > 1 l/min) |
| **Interfaces** | | |
| Communication interface | | IO-Link |
| Transmission type | | COM2 (38,4 kBaud) |
| IO-Link revision | | 1.1 |
| SDCI standard | | IEC 61131-9 |
| Profiles | | Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis |
| SIO mode | | yes |
| Required master port class | | A |
| Process data analog | | 2 |
| Min. process cycle time | [ms] | 3 |
| Supported DeviceIDs | | Type of operation: default; DeviceID: 571 |
| **Operating conditions** | | |
| Ambient temperature | [°C] | -10...60 |
| Storage temperature | [°C] | -25...80 |
| Protection | | IP 67 |

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| Tests / approvals | | | |
|---|---|---|---|
| EMC | | DIN EN 60947-5-9 | |
| CPA approval | | model number | 001MI |
| | | accuracy class | - |
| | | maximum allowable error | ± 1,5 % FS |
| | | Q (min) | 0,005 m³/h |
| | | Q (t) | - |
| | | Q (max) | 1,5 m³/h |
| Shock resistance | | DIN IEC 68-2-27 | 20 g (11 ms) |
| Vibration resistance | | DIN IEC 68-2-6 | 5 g (10...2000 Hz) |
| MTTF | [years] | 167 | |
| Pressure equipment directive | | sound engineering practice; can be used for group 2 fluids; group 1 fluids on request | |

| Mechanical data | | |
|---|---|---|
| Weight | [g] | 480.6 |
| Material | | stainless steel (1.4404 / 316L); PBT-GF20; FKM; TPE |
| Materials (wetted parts) | | stainless steel (1.4404 / 316L); PEEK; FKM |
| Process connection | | threaded connection G 1/2 DN15 flat seal |

| Remarks | |
|---|---|
| Remarks | MW = Measured value |
| | MEW = Final value of the measuring range |
| Pack quantity | 1 pcs. |

## Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated

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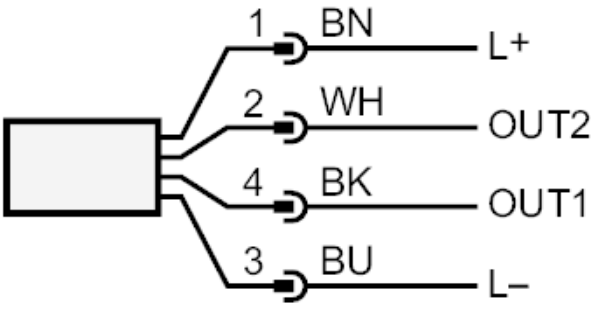
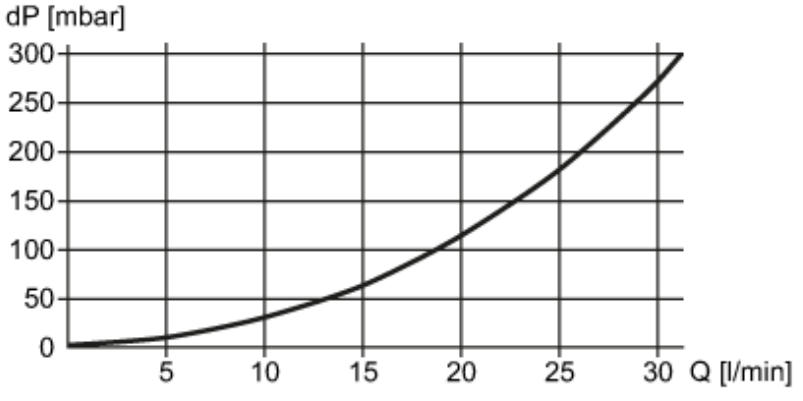
## Connection




| | |
|---|---|
| | Colors to DIN EN 60947-5-2 |
| OUT1: | IO-Link |
| OUT2: | analog output |
| | Core colors : |
| BN = | brown |
| WH = | white |
| BK = | black |
| BU = | blue |

## Diagrams and graphs

Pressure loss




dP Pressure loss

Q volumetric flow quantity