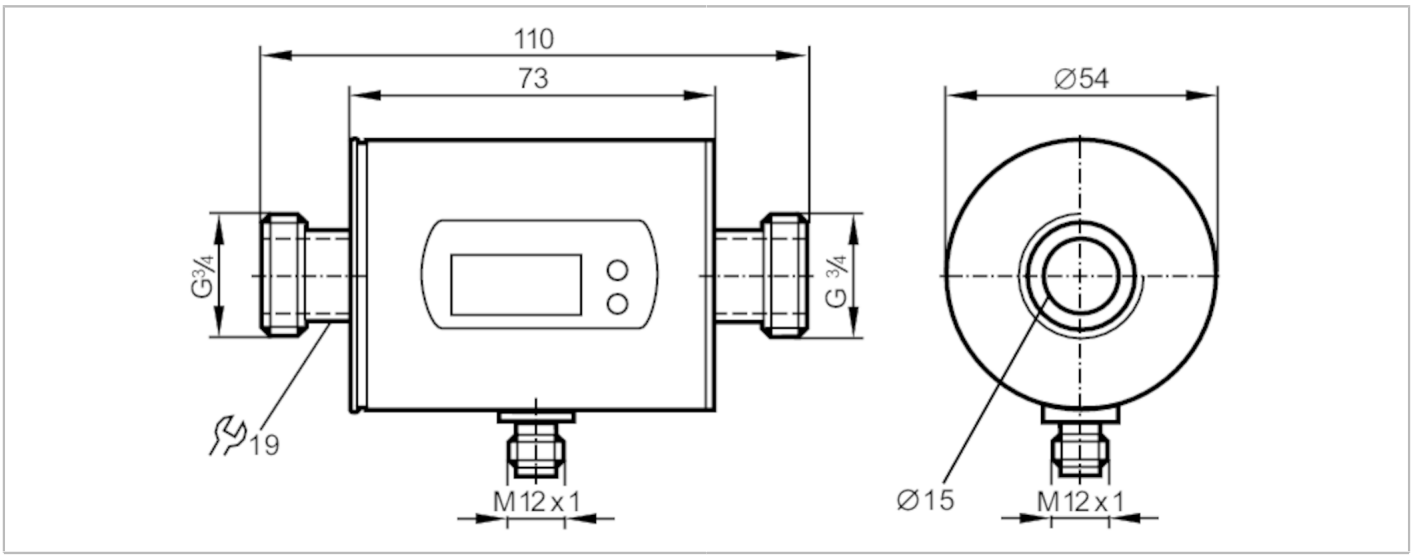
# SM7004

## Magnetic-inductive flow meter

SMR34GGX50KG/US100




CE PA CRN cULus LISTED EC 1935/2004 UKCA

| | | | |
|---|---|---|---|
| **Product characteristics** | | | |
| Number of inputs and outputs | | Number of analogue outputs: 2 | |
| Measuring range | | 0.2...50 l/min | 0.02...13.22 gpm |
| Process connection | | threaded connection G 3/4 DN20 flat seal | |
| **Application** | | | |
| Special feature | | Gold-plated contacts | |
| Application | | for industrial applications | |
| Installation | | connection to pipe by means of an adapter | |
| Media | | conductive liquids; water; hydrous media | |
| Note on media | | conductivity: ≥ 20 µS/cm | |
| | | 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] | 11.2 | |
| **Electrical data** | | | |
| Operating voltage | [V] | 20...30 DC; (to SELV/PELV) | |
| Current consumption | [mA] | 120; (24 V) | |
| Protection class | | III | |
| Reverse polarity protection | | yes | |
| Power-on delay time | [s] | 5 | |
| **Inputs / outputs** | | | |
| Number of inputs and outputs | | Number of analogue outputs: 2 | |
| **Outputs** | | | |
| Total number of outputs | | 2 | |
| Output signal | | analogue signal | |
| Number of analogue outputs | | 2 | |

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| | | | |
|---|---|---|---|
| Analogue current output | [mA] | 4...20; (scalable) | |
| Max. load | [Ω] | 500 | |
| Overload protection | | yes | |
| **Measuring/setting range** | | | |
| Measuring range | | 0.2...50 l/min | 0.02...13.22 gpm |
| Display range | | -60...60 l/min | -15.86...15.86 gpm |
| Resolution | | 0.1 l/min | 0.02 gpm |
| Analogue start point ASP | | 0...40 l/min | 0...10.58 gpm |
| Analogue end point AEP | | 10...50 l/min | 2.64...13.22 gpm |
| In steps of | | 0.1 l/min | 0.02 gpm |
| Temperature monitoring | | | |
| Measuring range | [°C] | -20...80 | |
| Resolution | [°C] | 0.2 | |
| Analogue start point | [°C] | -20...60 | |
| Analogue end point | [°C] | 0...80 | |
| In steps of | [°C] | 0.2 | |
| **Accuracy / deviations** | | | |
| Flow monitoring | | | |
| Accuracy (in the measuring range) | | ± (2 % MW + 0,5 % MEW) | |
| Repeatability | | ± 0,2% MEW | |
| Temperature monitoring | | | |
| Accuracy | [K] | ± 2,5 (Q > 1 l/min) | |
| **Response times** | | | |
| Flow monitoring | | | |
| Response time | [s] | 0.15;  (dAP = 0, T19) | |
| Damping process value dAP | [s] | 0...3 | |
| Temperature monitoring | | | |
| Dynamic response T05 / T09 | [s] | T09 = 20 (Q > 1 l/min) | |
| **Operating conditions** | | | |
| Ambient temperature | [°C] | -10...60 | |
| Storage temperature | [°C] | -25...80 | |
| Protection | | IP 67 | |
| **Tests / approvals** | | | |
| EMC | | DIN EN 60947-5-9 | 500 V withstand voltage (V DC) |
| CPA approval | | model number | 008MI |
| | | accuracy class | - |
| | | maximum allowable error | ± 2,5 % FS |
| | | Q (min) | 0,01 m³/h |
| | | Q (t) | - |
| | | Q (max) | 3 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] | 175 | |
| Pressure Equipment Directive | | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request | |

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| Mechanical data | | |
|---|---|---|
| Weight [g] | 521.2 | |
| Materials | stainless steel (1.4404 / 316L); PBT-GF20; PC; FKM; TPE | |
| Materials (wetted parts) | stainless steel (1.4404 / 316L); PEEK; FKM | |
| Process connection | threaded connection G 3/4 DN20 flat seal | |

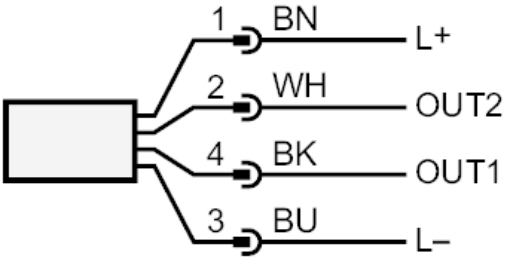
| Displays / operating elements | | |
|---|---|---|
| Display | Display unit | 6 x LED, green (l/min, m³/h, gpm, gph, °C, °F) |
| | measured values | alphanumeric display, 4-digit |
| | programming | alphanumeric display, 4-digit |
| Display unit | l/min; m³/h; gpm; gph; °C; °F | |

| 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

### Connection




colours to DIN EN 60947-5-2
OUT1: analogue output Temperature monitoring
OUT2: analogue output volumetric flow quantity monitoring
Core colours :
BK = black
BN = brown
BU = blue
WH = white

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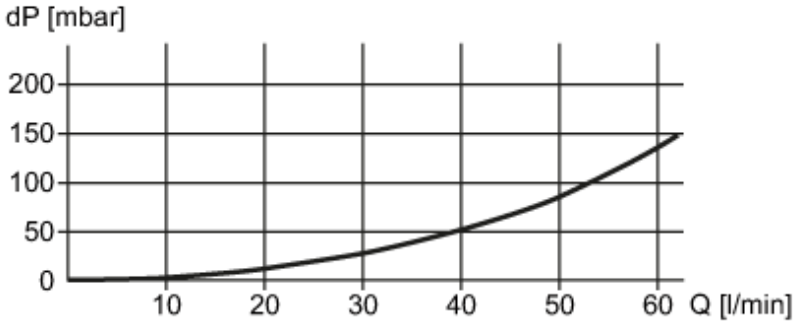
## Diagrams and graphs

Pressure loss




dP Pressure loss

Q volumetric flow quantity