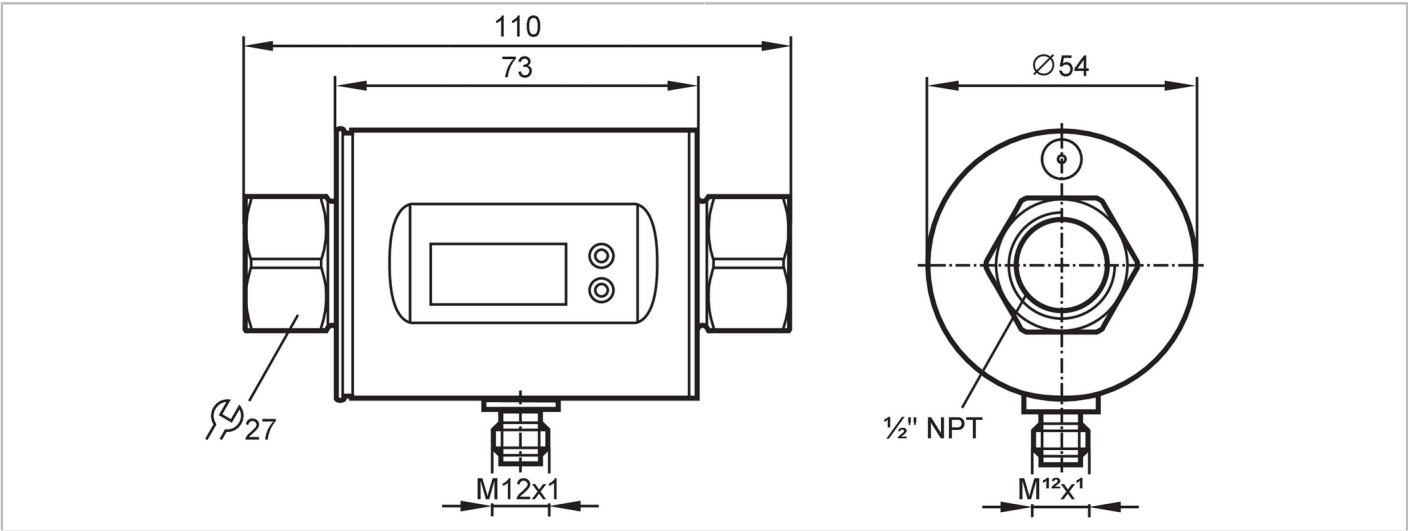


# SM6604



## Magnetic-inductive flow meter

SMN12GGX50KG/US-100



### Product characteristics

|                              |                                                   |                |
|------------------------------|---------------------------------------------------|----------------|
| Number of inputs and outputs | Number of analog outputs: 2                       |                |
| Measuring range              | 0.1...25 l/min                                    | 0.03...6.6 gpm |
| Process connection           | threaded connection 1/2" NPT Internal thread DN15 |                |

### Application

|                                          |                                                                                           |          |
|------------------------------------------|-------------------------------------------------------------------------------------------|----------|
| Special feature                          | gold-plated contacts                                                                      |          |
| Application                              | for industrial applications                                                               |          |
| Media                                    | Conductive liquids; water; water-based media                                              |          |
| Note on media                            | conductivity: $\geq 20 \mu\text{S/cm}$<br>viscosity: $< 70 \text{ mm}^2/\text{s}$ (40 °C) |          |
| Medium temperature [°C]                  | -10...70                                                                                  |          |
| Pressure rating                          | 16 bar                                                                                    | 1.6 MPa  |
| MAWP (for applications according to CRN) | 15.3 bar                                                                                  | 1.53 MPa |

### 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                          |  |
| Measuring principle         | magnetic-inductive         |  |

### Inputs / outputs

|                              |                             |
|------------------------------|-----------------------------|
| Number of inputs and outputs | Number of analog outputs: 2 |
|------------------------------|-----------------------------|

### Outputs

|                            |                    |
|----------------------------|--------------------|
| Total number of outputs    | 2                  |
| Output signal              | analog signal      |
| Number of analog outputs   | 2                  |
| Analog current output [mA] | 4...20; (scalable) |
| Max. load [ $\Omega$ ]     | 500                |

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|                                   |                                                                                       |                                |
|-----------------------------------|---------------------------------------------------------------------------------------|--------------------------------|
| Overload protection               | yes                                                                                   |                                |
| Measuring/setting range           |                                                                                       |                                |
| Measuring range                   | 0.1...25 l/min                                                                        | 0.03...6.6 gpm                 |
| Display range                     | -30...30 l/min                                                                        | -7.92...7.92 gpm               |
| Resolution                        | 0.05 l/min                                                                            | 0.01 gpm                       |
| Analog start point ASP            | 0...20 l/min                                                                          | 0...5.28 gpm                   |
| Analog end point AEP              | 5...25 l/min                                                                          | 1.32...6.6 gpm                 |
| In steps of                       | 0.02 l/min                                                                            | 0.01 gpm                       |
| Temperature monitoring            |                                                                                       |                                |
| Measuring range                   | [°C]                                                                                  | -20...80                       |
| Resolution                        | [°C]                                                                                  | 0.2                            |
| Analog start point                | [°C]                                                                                  | -20...60                       |
| Analog 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)            |
| Reaction 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)                                                                               | 0,005 m³/h                     |
|                                   | Q (t)                                                                                 | -                              |
|                                   | Q (max)                                                                               | 1,5 m³/h                       |
| Shock resistance                  | DIN EN 60068-2-27                                                                     | 20 g (11 ms)                   |
| Vibration resistance              | DIN EN 68000-2-6                                                                      | 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]  | 523.15                                                  |
| Housing                  |      | tubular                                                 |
| Inlet pipe length        |      | 3 x DN                                                  |
| Outlet pipe length       |      | 1 x DN                                                  |
| Dimensions               | [mm] | Ø 54 / L = 110                                          |
| Material                 |      | stainless steel (1.4404 / 316L); PBT-GF20; PC; FKM; TPE |
| Materials (wetted parts) |      | stainless steel (1.4404 / 316L); PEEK; FKM              |
| Process connection       |      | threaded connection 1/2" NPT Internal thread DN15       |

| 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                  |

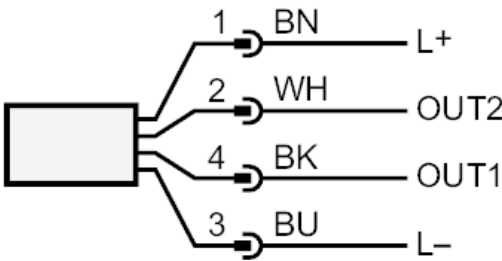
| Remarks       |  |                                          |
|---------------|--|------------------------------------------|
| Remarks       |  | MW = Measured value                      |
|               |  | MEW = Final value of the measuring range |
| Pack quantity |  | 1 pcs.                 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

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



OUT1: analog output Temperature monitoring  
OUT2: analog output Volumetric flow quantity monitoring  
Core colors :  
BK = black  
BN = brown  
BU = blue  
WH = white

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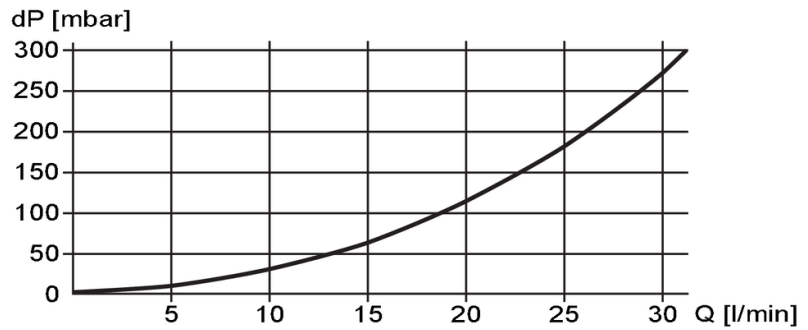


## Magnetic-inductive flow meter

SMN12GGX50KG/US-100

### Diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity