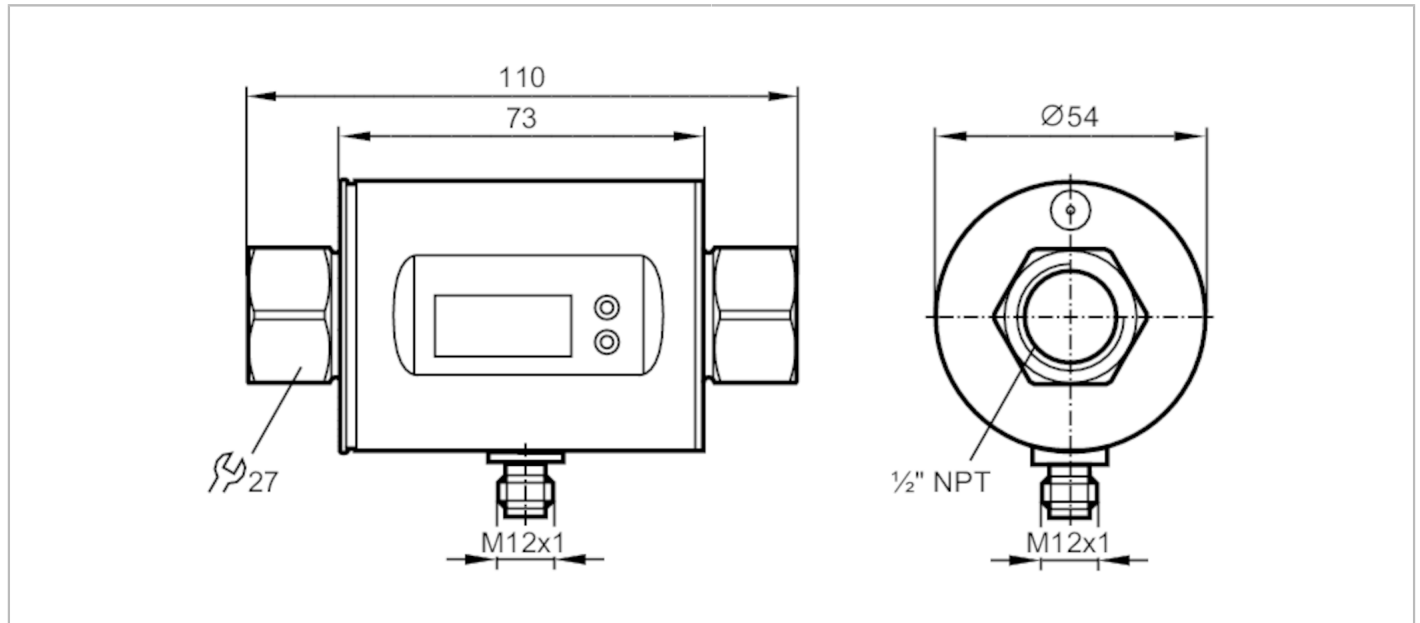


# SM6601



## Magnetic-inductive flow meter

SMN12GGXFRKG/US-100



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1	
Measuring range	1.5...396 gph	0.03...6.6 gpm
Process connection	threaded connection 1/2" NPT DN15	

### Application

Special feature	Gold-plated contacts	
Application	totaliser function; for industrial applications	
Media	conductive liquids; water; hydrous media	
Note on media	conductivity: $\geq 20 \mu\text{S/cm}$ viscosity: $< 70 \text{ mm}^2/\text{s}$ (40 °C)	
Medium temperature	[°F]	14...158
Pressure rating	[bar]	16
Pressure rating	[psi]	232
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 digital outputs: 2; Number of analogue outputs: 1	
------------------------------	---	--

### Inputs

Inputs	counter reset	
--------	---------------	--

# SM6601



## Magnetic-inductive flow meter

SMN12GGXFRKG/US-100

Outputs		
Total number of outputs	2	
Output signal	switching signal; analogue signal; pulse signal; IO-Link; (configurable)	
Electrical design	PNP/NPN	
Number of digital outputs	2	
Output function	normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC [V]	2	
Permanent current rating of switching output DC [mA]	200	
Number of analogue outputs	1	
Analogue current output [mA]	4...20; (scalable)	
Max. load [Ω]	500	
Analogue voltage output [V]	0...10; (scalable)	
Min. load resistance [Ω]	2000	
Pulse output	flow rate meter	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	
Measuring/setting range		
Measuring range	1.5...396 gph	0.03...6.6 gpm
Display range	-475.5...475.5 gph	-7.925...7.925 gpm
Resolution	0.5 gph	0.01 gpm
Set point SP	3.5...396.5 gph	0.06...6.6 gpm
Reset point rP	1.5...394 gph	0.03...6.57 gpm
Analogue start point ASP	0...318 gph	0...5.3 gpm
Analogue end point AEP	78...396 gph	1.3...6.6 gpm
In steps of	0.5 gph	0.01 gpm
Volumetric flow quantity monitoring		
Pulse value	0.01...30 000 000 gal	
Pulse length [s]	0,01...2	
Temperature monitoring		
Measuring range [°F]	-4...176	
Resolution [°F]	0.1	
Set point SP [°F]	-2.5...176	
Reset point rP [°F]	-3.5...175	
Analogue start point [°F]	-4...140.5	
Analogue end point [°F]	31.5...176	
In steps of [°F]	0.5	
Accuracy / deviations		
Flow monitoring		
Accuracy (in the measuring range)	± (0,8 % MW + 0,5 % MEW)	
Repeatability	± 0,2% MEW	

# SM6601



## Magnetic-inductive flow meter

SMN12GGXFRKG/US-100

Temperature monitoring		
Accuracy	[K]	± 2,5 (Q > 0,26 gpm)
<b>Response times</b>		
Flow monitoring		
Response time	[s]	0.15; (dAP = 0, T19)
Delay time programmable dS, dr	[s]	0...50
Damping process value dAP	[s]	0...5
Temperature monitoring		
Dynamic response T05 / T09	[s]	T09 = 20 (Q > 0,26 gpm)
<b>Software / programming</b>		
Parameter setting options	Flow monitoring; quantity meter; Preset counter; Temperature monitoring; hysteresis / window; normally open / normally closed; switching logic; current/voltage/pulse output; start-up delay; display can be deactivated; Display unit	
<b>Interfaces</b>		
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 type	A	
Process data analogue	3	
Process data binary	2	
Min. process cycle time	[ms]	5
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	default	570
<b>Operating conditions</b>		
Ambient temperature	[°F]	14...140
Storage temperature	[°F]	-13...176
Protection		IP 67
<b>Tests / approvals</b>		
EMC	DIN EN 60947-5-9	
Shock resistance	DIN EN 68000-2-27	20 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	5 g (10...2000 Hz)
MTTF	[years]	145
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
<b>Mechanical data</b>		
Weight	[g]	593.5
Materials	stainless steel (316L/1.4404); PBT-GF20; PC; FKM; TPE	
Materials (wetted parts)	stainless steel (316L/1.4404); PEEK; FKM	
Process connection	threaded connection 1/2" NPT DN15	

# SM6601



## Magnetic-inductive flow meter

SMN12GGXFRKG/US-100

Displays / operating elements		
Display	Display unit	6 x LED, green (gpm, gph, gal, °F, 10 <sup>3</sup> , 1000 x 10 <sup>3</sup> )
	switching status	2 x LED, yellow
	measured values	alphanumeric display, 4-digit
	programming	alphanumeric display, 4-digit

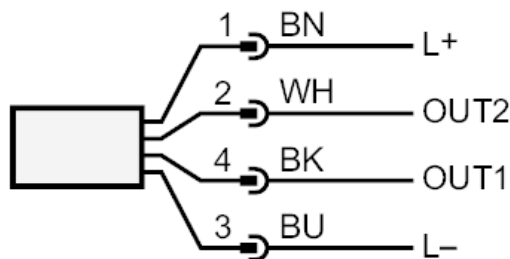
Remarks	
Remarks	MW = measured value MEW = Final value of the measuring range
Pack quantity	1 pcs.

### Electrical connection

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



### Connection



- OUT1: colours to DIN EN 60947-5-2  
switching output volumetric flow quantity monitoring  
Pulse output quantity meter  
signal output Preset counter  
IO-Link
- OUT2: switching output volumetric flow quantity monitoring  
switching output Temperature monitoring  
analogue output volumetric flow quantity monitoring  
analogue output Temperature monitoring  
input counter reset  
Core colours :
- BK = black  
BN = brown  
BU = blue  
WH = white

# SM6601

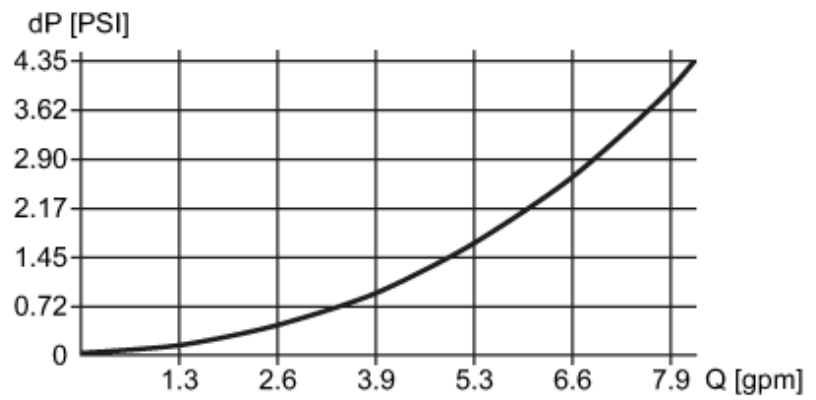


## Magnetic-inductive flow meter

SMN12GGXFRKG/US-100

### Diagrams and graphs

Pressure loss



dP Pressure loss

Q volumetric flow quantity