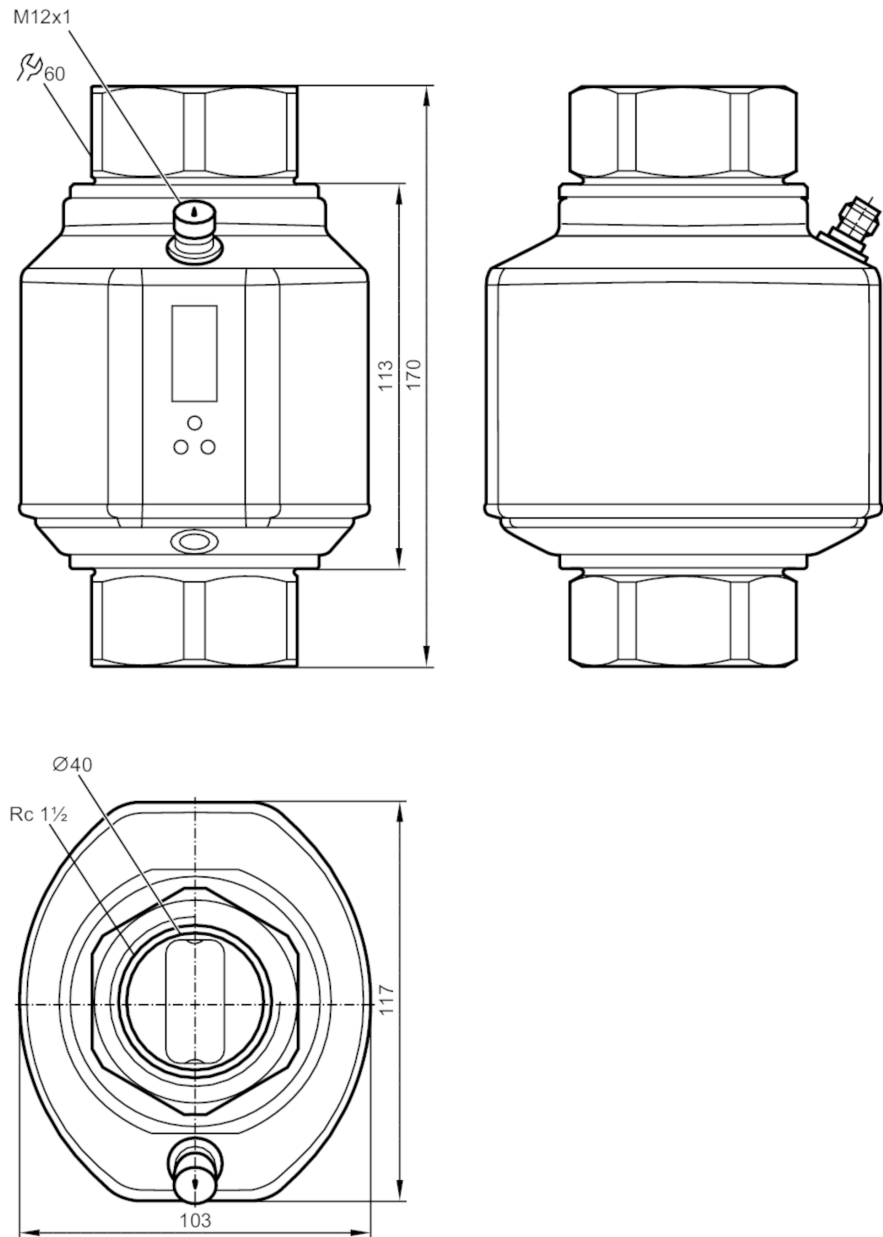


SM9404



Magnetic-inductive flow meter

SMK32XGX50KG/US-100



Product characteristics

Number of inputs and outputs	Number of analogue outputs: 2			
Measuring range	5...300 l/min	0.3...18 m³/h	80...4755 gph	1.3...79.3 gpm
Process connection	threaded connection Rc 1 1/2 internal thread DN40			

Application

Special feature	Gold-plated contacts
Application	empty pipe detection; 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)



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Medium temperature	-10...90 °C		14...194 °F	
Pressure rating	16 bar	232 psi	1.6 MPa	

Electrical data	
Operating voltage [V]	18...32 DC; (to SELV/PELV)
Current consumption [mA]	< 150
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 analogue outputs: 2

Outputs	
Total number of outputs	2
Output signal	analogue signal
Number of analogue outputs	2
Analogue current output [mA]	4...20; (≤ 22 mA; scalable)
Max. load [Ω]	500

Measuring/setting range				
Measuring range	5...300 l/min	0.3...18 m³/h	80...4755 gph	1.3...79.3 gpm
Display range	-360...360 l/min	-21.6...21.6 m³/h	-5705...5705 gph	-95.1...95.1 gpm
Resolution	0.5 l/min	0.02 m³/h	5 gph	0.1 gpm
Analogue start point ASP	0...240 l/min	0...14.4 m³/h	0...3800 gph	0...63.4 gpm
Analogue end point AEP	60...300 l/min	3.6...18 m³/h	955...4755 gph	15.9...79.3 gpm
Low flow cut-off LFC	< 15 l/min	< 0.9 m³/h	< 240 gph	< 4 gpm
In steps of	0.5 l/min	0.02 m³/h	5 gph	0.1 gpm
Measuring dynamics	1:60			

Temperature monitoring		
Measuring range	-20...80 °C	-4...176 °F
Display range	-40...100 °C	-40...212 °F
Resolution	0.2 °C	0.5 °F
Analogue start point	-20...60 °C	-4...140 °F
Analogue end point	0...80 °C	32...176 °F
In steps of	0.2 °C	0.5 °F

Accuracy / deviations

Flow monitoring	
Accuracy (in the measuring range)	$\pm (0,8 \% \text{ MW} + 0,5 \% \text{ MEW})$
Repeatability	$\pm 0,2\% \text{ MEW}$

Temperature monitoring	
Temperature drift	$\pm 0,0333 \text{ °C / K; } \pm 0,0599 \text{ °F / K}$
Accuracy [K]	$\pm 1 (25 \text{ °C; } Q > 15 \text{ l/min}) / \pm 1 (77 \text{ °F; } Q > 4 \text{ gpm})$

Response times

Flow monitoring	
Response time [s]	0.35; (dAP = 0)
Damping process value dAP [s]	0...5

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Temperature monitoring				
Dynamic response T05 / T09		[s]	T09 = 3 (Q > 15 l/min) / T09 = 3 (Q > 4 gpm)	
Software / programming				
Parameter setting options		display can be deactivated; Display unit; empty pipe detection		
Operating conditions				
Ambient temperature		-10...60 °C	14...140 °F	
Storage temperature		-25...80 °C	-13...176 °F	
Protection		IP 65; IP 67		
Tests / approvals				
EMC		DIN EN 60947-5-9		
CPA approval		model number		003MI
		accuracy class		-
		maximum allowable error		± 1,5 % FS
		Q (min)		0,3 m³/h
		Q (t)		-
		Q (max)		18 m³/h
		Medium temperature		-10...70 °C
		Medium temperature		14...158 °F
Shock resistance		DIN EN 60068-2-27		20 g (11 ms)
Vibration resistance		DIN EN 60068-2-6		5 g (10...2000 Hz)
MTTF		[years]	85	
UL approval		UL Approval no.		I009
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request		
Mechanical data				
Weight		[g]	2741.5	
Housing		rectangular		
Dimensions		[mm]	170 x 103 x 117	
Materials		stainless steel (316L/1.4404); stainless steel (316Ti/1.4571); PEI; FKM; PBT-GF20; TPE-U		
Materials (wetted parts)		stainless steel (316L/1.4404); stainless steel (316Ti/1.4571); PEEK; FKM		
Process connection		threaded connection Rc 1 1/2 internal thread DN40		
Displays / operating elements				
Display		Display unit		6 x LED, green (l/min, m³/h, gpm, gph, °C, °F
		function display		1 x LED, yellow (10³)
		measured values		alphanumeric display, 4-digit
		programming		alphanumeric display, 4-digit
Display unit		l/min; m³/h; gpm; gph; °C; °F		
Accessories				
Items supplied		Label		
Remarks				
Remarks		MW = measured value		
		MEW = Final value of the measuring range		
Pack quantity		1 pcs.		

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Electrical connection

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



Connection



OUT1: colours to DIN EN 60947-5-2
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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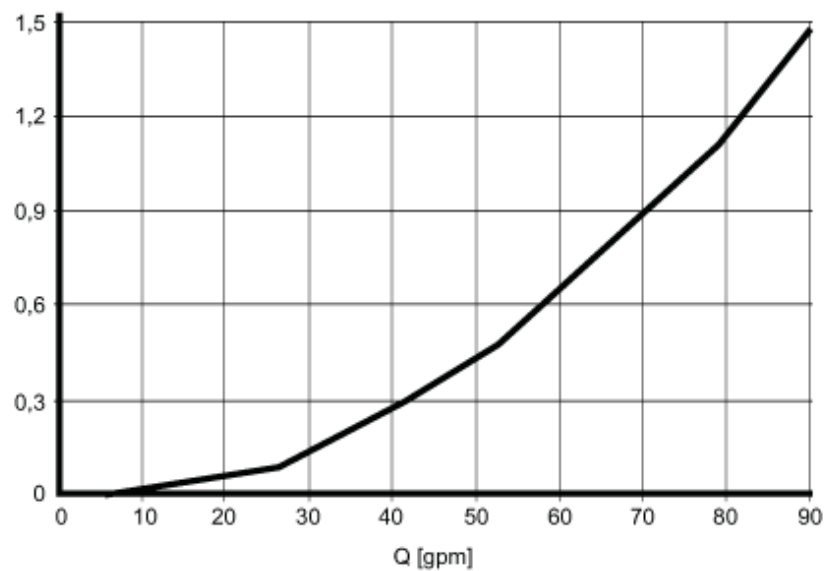
Diagrams and graphs

Pressure loss

dP [mbar] DN50



dP [psi]



dP Pressure loss

Q volumetric flow quantity