

PH4004

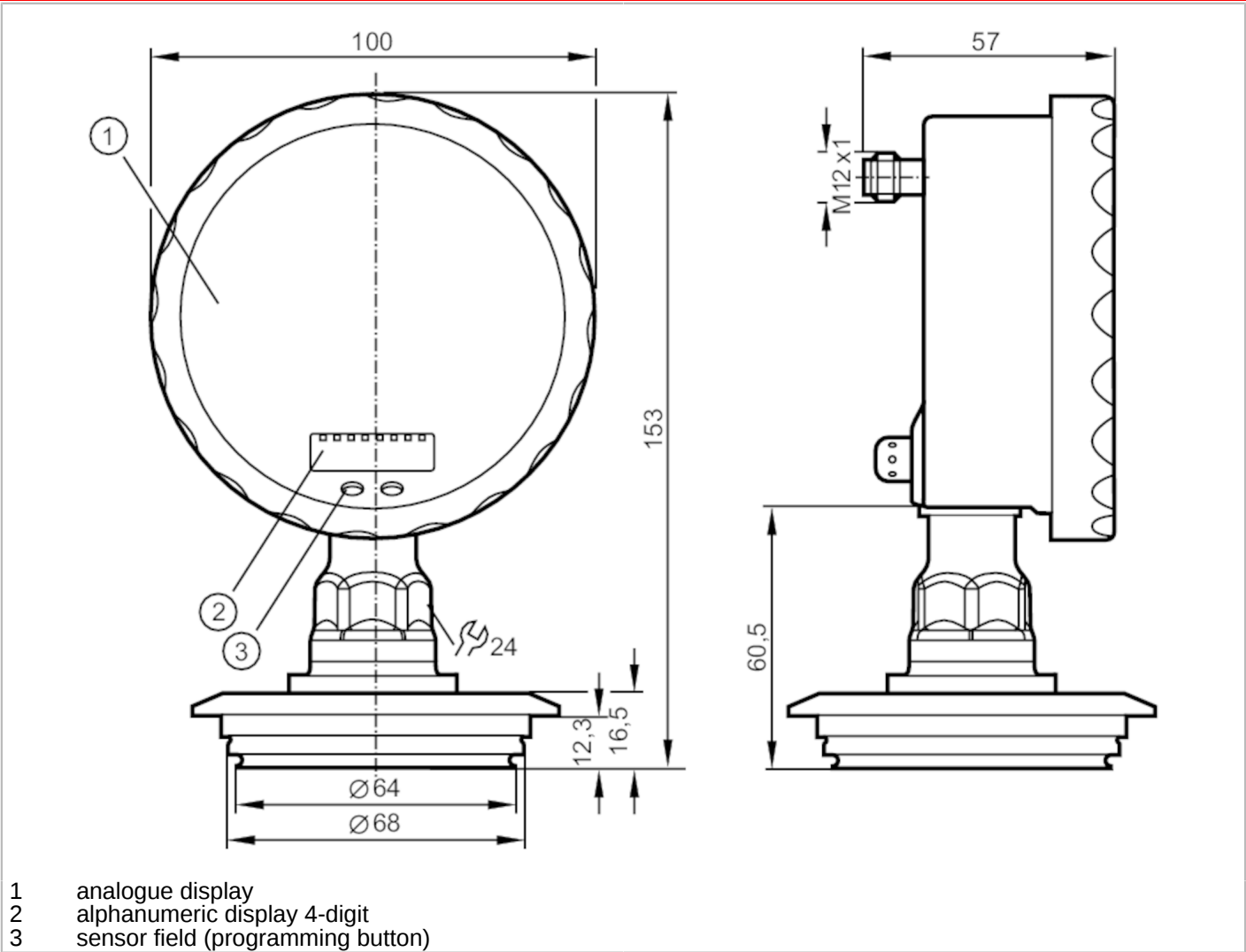


Flush pressure sensor with analogue display

PH-010-REA01-MFRKG/US/ /P

Status Archive

PG2794 + E33222



Application		
Application	suitable for all standard CIP and SIP processes; hygienic systems	
Media	viscous media and liquids with suspended particles; liquids and gases	
Medium temperature [°C]	-25...125; (145 max. 1h)	
Pressure rating	50 bar	725 psi
Min. bursting pressure	150 bar	2175 psi
Type of pressure	relative pressure	



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Electrical data		
Operating voltage	[V]	18...32 DC
Current consumption	[mA]	70; (24 V)
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	6
Integrated watchdog		yes
Outputs		
Total number of outputs		2
Output signal		switching signal; analogue signal; (configurable)
Electrical design		PNP/NPN
Number of digital outputs		1
Output function		normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	250
Switching frequency DC	[Hz]	50
Number of analogue outputs		1
Analogue current output	[mA]	4...20, invertible; (scalable)
Max. load	[Ω]	(U _b - 10 V) / 20 mA
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes
Measuring/setting range		
Measuring range	-1...10 bar	-14.5...145 psi
Set point SP	-0.98...16 bar	-14.2...232 psi
Reset point rP	-1...15.98 bar	-14.5...231.8 psi
Analogue start point	-1...13.5 bar	-14.5...195.7 psi
Analogue end point	[bar]	1.5...16
In steps of	0.01 bar	0.1 psi
Accuracy / deviations		
Switch point accuracy	< ± 0,2; (Turn down 1:1)	
	[% of the span]	
Repeatability	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)	
	[% of the span]	
Characteristics deviation	< ± 0,2; (Turn down 1:1 linearity, incl. hysteresis and repeatability limit value setting to DIN 16086)	
	[% of the span]	
Linearity deviation	< ± 0,15; (Turn down 1:1)	
	[% of the span]	
Hysteresis deviation	< ± 0,15; (Turn down 1:1)	
	[% of the span]	
Long-term stability	< ± 0,1; (Turn down 1:1; per year)	



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	[% of the span]	
Temperature coefficient zero point		$< \pm 0,05$; (0...70 °C)
	[% of the span / 10 K]	
Temperature coefficient span		$< \pm 0,15$; (0...70 °C)
	[% of the span / 10 K]	

Response times		
Response time	[ms]	< 10
Damping for the switching output dAP	[s]	0.01...30
Damping for the analogue output dAA	[s]	0.01...30
Step response time analogue output	[ms]	25

Operating conditions		
Ambient temperature	[°C]	-25...80
Storage temperature	[°C]	-40...100
Protection		IP 67; IP 69K

Tests / approvals		
EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-5 Surge	0,5/1 kV
	EN 61000-4-6 HF conducted	10 V
Shock resistance	DIN IEC 68-2-27	50 g (11 ms)
Vibration resistance	DIN IEC 68-2-6	20 g (10...2000 Hz)

Mechanical data		
Weight	[g]	1020.2
Materials	stainless steel (1.4404 / 316L); PA; FKM; PTFE; viewing glass: laminated safety glass 4 mm	
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); PTFE; stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4	
Min. pressure cycles	100 million	
Process connection	Varivent Form N, DN40 (1,5"), D = 68; Form N	

Displays / operating elements		
Display	Display unit	2 x LED, green
	switching status	LED, yellow
	switch points	LED ring
	function display	alphanumeric display, 4-digit
	measured values	analogue display, 0...350° rotatable, pointer not visible when unit disconnected
	measured values	alphanumeric display, 4-digit
Extended display range (max.)	16 bar	232 psi

Remarks		
Remarks	characteristics deviation in the extended display range: 1.5 % of the span	
	switch point accuracy in the extended display range: 1.5 % of the span	
Notes	discontinued article	
Pack quantity	1 pcs.	



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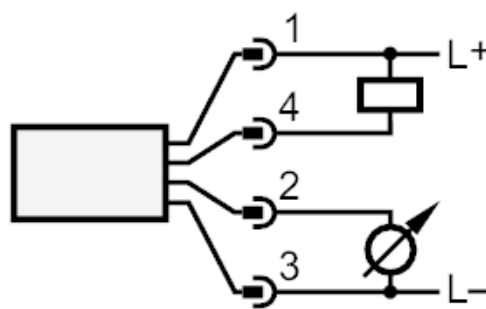
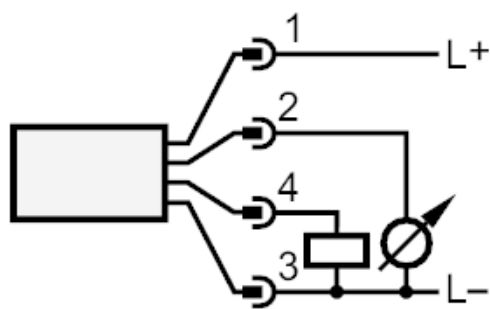
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Electrical connection

Connector: 1 x M12; Contacts: gold-plated



Connection



OUT1 switching output
OUT2 analogue output

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