

Features

- Device for absolute pressure and gauge pressure measurement in gases, steams or liquids
- Large selection of process connections: universal use
- Temperature range up to 130 °C (266 °F)
- Pressure range up to 400 bar (6000 psi)
- Easy commissioning without the need for an operating tool
- Configurable by **PACTware**TM
- Up to SIL2 acc. to IEC 61508

Function

The device is used for absolute pressure and gauge pressure measurement in gases, steams or liquids.

The device has a piezoresistive measuring cell and a metallic welded process isolating diaphragm.

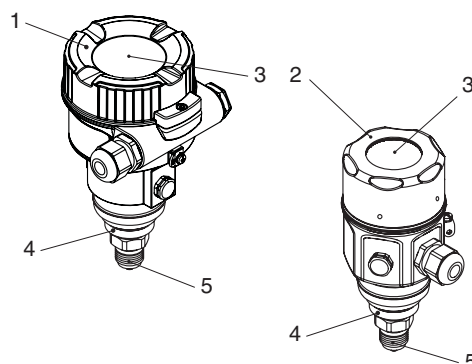
The operating pressure deflects the process isolating diaphragm. A fill fluid transfers the pressure to a resistance bridge (semiconductor technology). The pressure-dependent change in the bridge output voltage is measured and evaluated.

The data is transmitted to the control via analog signal, HART protocol or PROFIBUS PA.

The device is easily configured by the use of keypad or with the PACTware configuration software.

The device is designed modular and offers a variety of process connections, a replaceable display and a universal electronics.

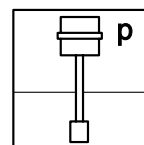
Assembly



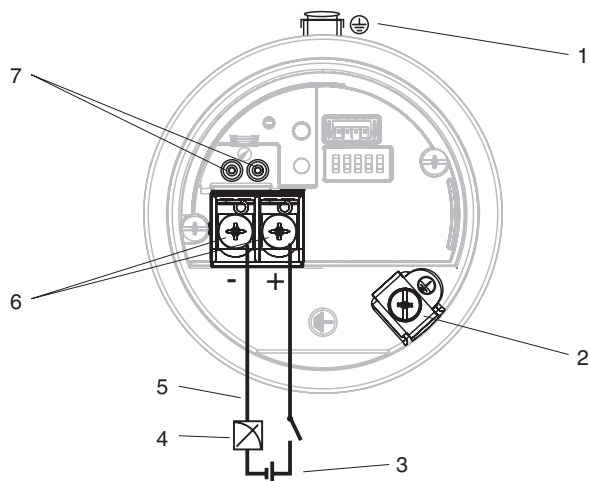
- 1 Aluminum housing
- 2 Stainless steel housing
- 3 Cover with viewing window
- 4 Metallic process isolating diaphragm
- 5 Process connection (thread)



SIL2



Connection



- 1 External grounding terminal
- 2 Internal grounding terminal
- 3 Supply voltage
- 4 4 mA to 20 mA for HART devices
- 5 For HART devices: With a handheld terminal, all the parameters can be configured anywhere along the bus line via menu operation.
- 6 Terminals
- 7 Test terminals for HART devices

Release date 2013-05-03 12:07 Date of issue 2013-05-03 t163049_eng.xml

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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General specifications	
Construction type	sensor: silicium sensor metall diaphragm
Order code	see technical informations (TI)
Supply	
Rated voltage	versions for safe area: 11.5 ... 45 V DC, 2-wire 11.5 ... 35 V DC, HART, 2-wire 9 ... 32 V DC, PROFIBUS PA version for hazardous area see safety information (SI)
Input	
Measured variable	absolute or relative pressure
Measurement range	0.4 ... 400 bar max. turn down: 20:1
Output	
Output signal	4 ... 20 mA , analog , 2-wire 4 ... 20 mA with superimposed digital communication protocol HART 6.0, 2-wire digital communication signal PROFIBUS PA (Profile 3.02)
Communication	4 ... 20 mA HART (standard) PROFIBUS PA (option)
Conformity	
Protection degree	IEC 60529:2001
Measurement accuracy	
Accuracy	reference accuracy: $\pm 0.15\%$ (standard), $\pm 0.075\%$ (platinum) The reference accuracy comprises the non-linearity according to limit point setting, hysteresis and non-reproducibility acc. to IEC 60770. The data refer to the calibrated span.
Long-term drift	up to $\pm 0.1\%$ of upper range limit (URL)/year
Operating conditions	
Process conditions	
Medium temperature	-40 ... 125 °C (-40 ... 257 °F) hygienic versions: -40 ... 130 °C (-40 ... 266 °F), 150 °C/1h (302 °F/1h)
Ambient conditions	
Ambient temperature	-40 ... 85 °C (-40 ... 185 °F) with display : -20 ... 70 °C (-4 ... 158 °F)
Mechanical specifications	
Protection degree	IP66, NEMA 4X IP68, NEMA 6P (24 hours in water 1.83 m (6 ft) deep) IP69K (with separate housing and FEP cable)
Connection	gland M20 thread M20, G1/2, NPT1/2 device plug M12 HAN7D Harting connector, angled valve connector acc. ISO 4400, cable 5 m
Material	materials in contact with process : 316L, Alloy C, rhodium>gold housing: - die-cast aluminum with protective powder-coating on polyester base, housing F31 - stainless steel AISI 316L (1.4404), housing F15 measuring cell seal: no, welded measuring cell
Process connection	threads ISO 228: G1/2, G1, G1-1/2, G2 threads ANSI: NPT1/2, NPT1, NPT1-1/2, NPT2 hygienic process connections: Clamp, Varivent, DRD, DIN 11851, DIN 11864, NEUMO, APV, uni adapter flanges: EN 1092-1: DN 25 ... DN 80, ANSI 16.5: 1 ... 4 in, JIS B2220
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	see safety information (SI)
International approvals	
FM approval	see safety information (SI)
CSA approval	see safety information (SI)
IECEX approval	see safety information (SI)
Certificates and approvals	
Drinking water approval	NSF61 approval
Overspill protection	see approvals (ZE)
Marine approval	German Lloyd (GL)
General information	
Supplementary documentation	technical informations (TI) operating instructions (BA, KA) safety information (SI) control drawings (ZD) approvals (ZE)

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Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .
Accessories	
Designation	see technical informations (TI)

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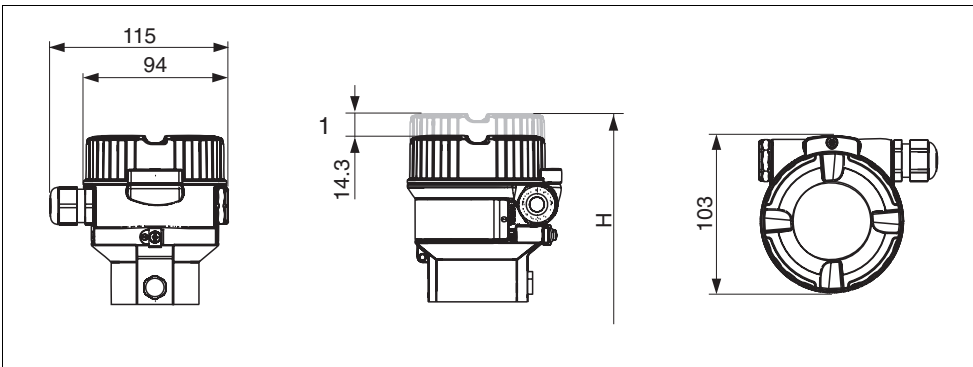
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Dimensions (excerpt)

Housing F31, aluminum (versions I, J)

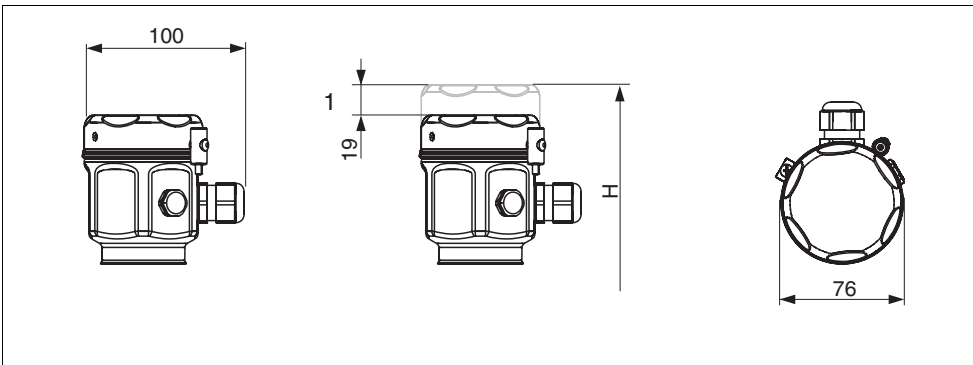
Dimensions in mm (in)



1 The cover with viewing window is 15 mm (0.59 in) higher than the cover without viewing window.

Housing F15, stainless steel (versions Q, R, S, hygienic)

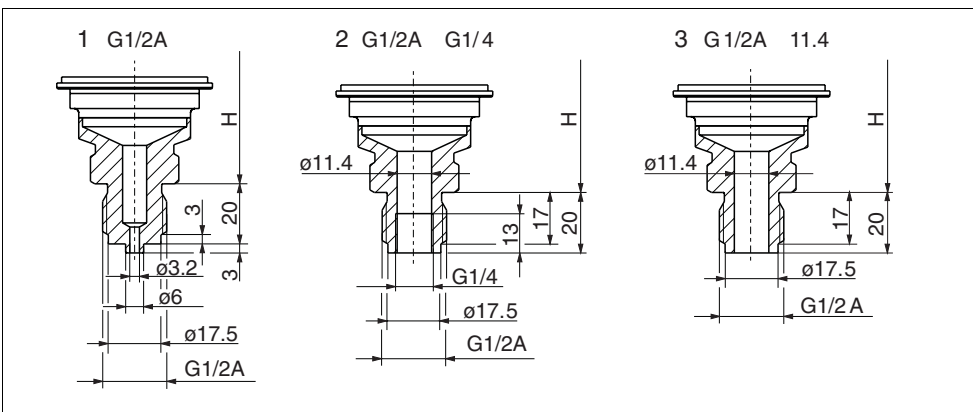
Dimensions in mm (in)



1 The cover with viewing window is 19 mm (0.75 in) higher than the cover without viewing window.

Process connections with thread, internal process isolating diaphragm

Dimensions in mm (in)



Process connections LHC-M51, thread ISO 228 and DIN

- 1 Thread ISO 228 G1/2A EN 837; material version G11: AISI 316L, version G1C: Alloy C276
- 2 Thread ISO 228 G1/2A, G1/4 (female); material version G14: AISI 316L, version G13: Alloy C276
- 3 Thread ISO 228 G1/2A hole 11.4 mm (0.45 in); material version G1M: AISI 316L, version G1N: Alloy C276

	F31 housing (I, J)	F15 housing (Q, R, S)
Height H	169 mm (6.65 in)	150 mm (5.91 in)

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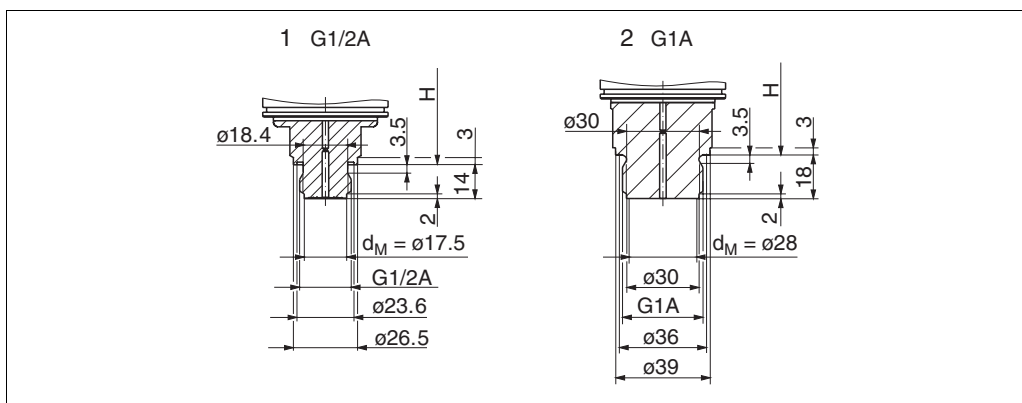
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Dimensions (excerpt)

Process connections with thread, flush-mounted process isolating diaphragm

Dimensions in mm (in)



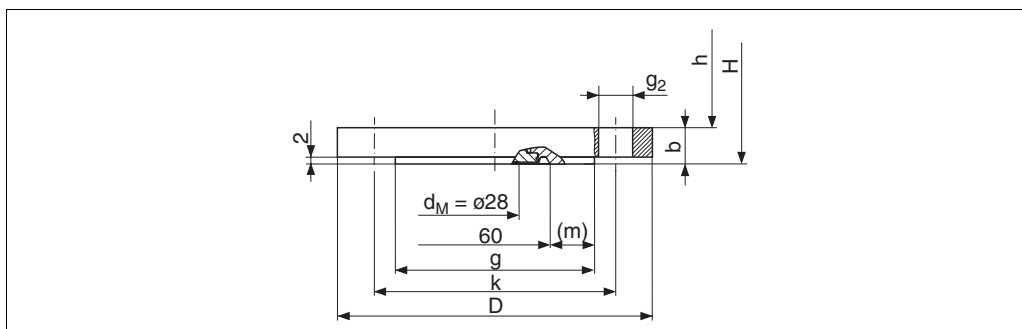
Process connections LHC-M51, thread ISO

- 1 Thread ISO 228 G1/2A DIN 3852 (Viton seal included); material version G1O: AISI 316L, version G1P: Alloy C276
- 2 Thread ISO 228 G1A (Viton seal included); material version G31: AISI 316L

Description	F31 housing (I, J)	F15 housing (Q, R, S)
G1/2	163 mm (6.42 in)	148 mm (5.83 in)
G1	167 mm (6.57 in)	152 mm (5.98 in)

Process connections with EN/DIN flanges, connection dimensions as per EN 1092-1/DIN 2527

Dimensions in mm (in)



Process connections PPC-M51, EN/DIN flange with raised face (flush-mounted process isolating diaphragm)

Version	Flange							Boltholes		
	Material	Nominal Diameter	Nominal pressure	Shape ¹	Diameter D [mm]	Thickness b [mm]	Raised face g [mm]	Quantity	Diameter g ₂ [mm]	Hole circle k [mm]
CNJ	AISI 316L	DN25	PN10-40	B1 (D)	115	18	68	4	14	85
CPJ	AISI 316L	DN32	PN10-40	B1 (D)	140	18	78	4	18	100
CQJ	AISI 316L	DN40	PN10-40	B1 (D)	150	18	88	4	18	110
CXJ	ECTFE	DN50	PN25/40	B1 (D)	150	20	102	4	18	125
CZJ	AISI 316L	DN80	PN10-40	B1 (D)	165	24	138	8	18	160

¹ Designation as per DIN 2527 in brackets

	F31 housing (I, J)	F15 housing (Q, R, S)
Height H	165 mm (6.5 in)	150 mm (5.91 in)



For further information see technical information.

Release date 2013-05-03 12:07 Date of issue 2013-05-03 11:63049_eng.xml