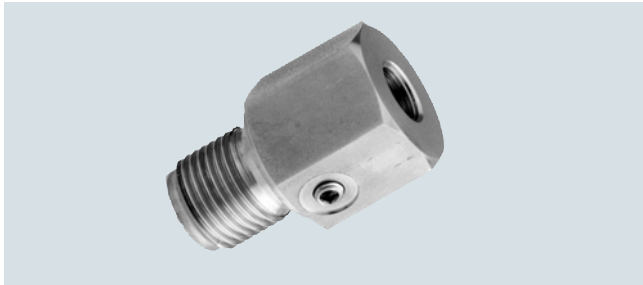


Pressure Measurement

Remote seals for pressure transmitters
SITRANS P300, P DS III, P410, P500

Miniature diaphragm seals

Overview



Miniature diaphragm seals

The miniature diaphragm seals are available for the following SITRANS P pressure transmitter series for pressure:

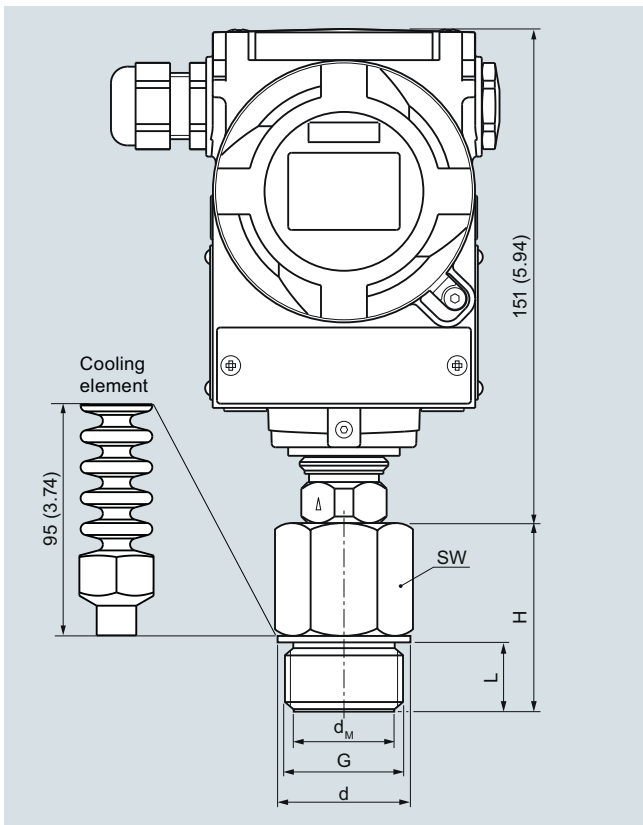
- P300, DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus

Suitable for high pressures, contaminated, fibrous and viscous media in the chemical, paper, food and drink industries.

Design

- Flush-mounted diaphragm
- No dead spaces
- Fixed threaded stems

Dimensional drawings



Miniature diaphragm seal, dimensions in mm (inch)

G	Ø d _M		SW		Ø d		L		H	
	mm	(inch)	mm	(inch)	mm	(inch)	mm	(inch)	mm	(inch)
G1B	25	(0.98)	41	(1.61)	39	(1.53)	28	(1.1)	56	(2.21)
G1½B	40	(1.57)	55	(2.17)	60	(2.36)	30	(1.18)	50	(1.97)
G2B	50	(1.97)	60	(2.36)	70	(2.76)	30	(1.18)	63	(2.48)

G	Ø d _M		SW		L		H	
	mm	(inch)	mm	(inch)	mm	(inch)	mm	(inch)
1"-NPT	27	(1.06)	41	(1.61)	25	(0.98)	40	(1.57)
1½"-NPT	34	(1.34)	55	(2.17)	26	(1.02)	45	(1.77)
2"-NPT	46	(1.81)	65	(2.56)	26	(1.02)	45	(1.77)

d_M: Effective diaphragm diameter

Technical specifications

Miniature diaphragm seals

Span with	
• G1B and 1"-NPT	> 6 bar (> 87 psi)
• G1½B and 1½"-NPT	> 2 bar (> 29 psi)
• G2B and 2"-NPT	> 600 mbar (> 8.7 psi)
Filling liquid	Silicone oil M5 or food oil (FDA listed)
Material	
• Main body	Stainl. steel mat No. 1.4404/ 316L or Hastelloy C276, mat No. 2.4819
• Diaphragm	Stainl. steel mat No. 1.4404 / 316L or Hastelloy C276, mat. No. 2.4819
Maximum pressure	100% of nominal pressure of pressure transmitter, up to maximum of PN 400 (5802 psi) (depending on the seal used)
Temperature of use	Same as pressure transmitter
Temperature range of medium	Same as pressure transmitter
Max. recommended process temperature	150 °C (302 °F)
Weight	
• G1B and 1"-NPT	Approx. 0.3 kg (approx. 0.66 lb)
• G1½B and 1½"-NPT	Approx. 0.5 kg (approx. 1.10 lb)
• G2B and 2"-NPT	Approx. 0.8 kg (approx. 1.76 lb)
Certificate and approvals	
Classification according to pressure equipment directive (DGRL 2014/68/EU)	For gases of fluid group 1 and liquids of fluid group 1; complies with requirements of article 4, paragraph 3 (sound engineering practice)

Pressure Measurement
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Miniature diaphragm seals

1

Selection and Ordering data		Article No.	Ord. code	Selection and Ordering data		Order code
Miniature diaphragm seals directly fitted to SITRANS P pressure transmitters for pressure; type, 7MF2033-...; 7MF403-... and 7MF423-... together with Order code "V01" (vacuum-proof design) and 7MF802-... ¹⁾ ; must be ordered separately Material: Stainless steel, mat. No. 1.4404/316L Nominal pressure, see "Pressure transmitters" ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.		7MF4960-		Further designs Please add "-Z" to Article No. and specify Order code.		
Process connection <ul style="list-style-type: none"> G1B G1½B G2B 1" - NPT 1½" - NPT 2" - NPT Other version, add Order code and plain text: Process connection: ...		C D E K L M Z		Remote seal nameplate Attached out of stainless steel, contains MLFB and order number of the remote seal		B20
Material Remote seal enclosure Wetted parts materials Stainless steel mat. No. 1.4404/316L Stainless steel mat. No. 1.4404/316L Hastelloy C276 Hastelloy C276 Stainless steel mat. No. 1.4404/316L Other version Add Order code and plain text: Wetted parts materials		A J Z		Quality Inspection Certificate (5-point characteristic curve test) according to IEC 60770-2 Inspection certificate to EN 10204, section 3.1 2.2 Certificate of FDA approval of fill oil Only in conjunction with "Food-grade oil" fill liquid (FDA listed)" Functional safety certificate ("SIL 2") to IEC 61508 (Only in conjunction with the Order code "C20" in the case of SITRANS P DSIII transmitter) Functional safety certificate ("SIL 2/3") to IEC 61508 (Only in conjunction with the Order code "C23" in the case of SITRANS P DSIII transmitter)		C11 C12 C17 C20 C23
Wetted parts materials <ul style="list-style-type: none"> Stainless steel 316L Other version, add Order code and plain text: Wetted parts materials: ...		A Z		Certification acc. to NACE MR-0175 Includes acceptance test certificate 3.1 according to EN 10204 (only for wetted parts made of stainless steel 1.4404/316L and Hastelloy C276) Certification acc. to NACE MR-0103 Includes acceptance test certificate 3.1 according to EN 10204 (only for wetted parts made of stainless steel 1.4404/316L and Hastelloy C276)		D07 D08
Filling liquid <ul style="list-style-type: none"> Silicone oil M5 Food oil (FDA listed) Other version, add Order code and plain text: Filling liquid: ...			1 7 9	Cooling element max. medium temperature 300 °C, observe the maximum permissible media temperature of the filling liquid. Negative pressure service for use in low-pressure range for transmitters for • gauge and absolute pressure from the pressure series Extended negative pressure service for use in low-pressure range for transmitters for • gauge and absolute pressure from the pressure series		R22 V01 V51

¹⁾ With 7MF802-... and the measuring cells Q, S, T and U also order the vacuum-tight version.