Pressure Measurement

Pressure transmitters

Single-range transmitters for general applications

SITRANS P Compact for gauge and absolute pressure

Overview

The SITRANS P Compact pressure transmitter is designed for the special requirements of the food, pharmaceutical and biotechnology industries.

The use of high-grade materials guarantees compliance with hygiene regulations.

Particular value has been placed on a high surface quality. The system can be electropolished in addition.

A further important feature is the hygiene-based design of the process connection by means of various aseptic connections.

The completely welded stainless steel enclosure can be designed up to degree of protection IP67.

Using appropriate thermal decouplers, the SITRANS P Compact pressure transmitter can be used for process temperatures up to 200 °C (392 °F).

Benefits

- Measuring ranges from 0 to 160 mbar (0 to 2.32 psi) to 0 to 40 bar (0 to 580 psi)
- Linearity error including hysteresis < +0.2 % of the end value
- Piezo-resistive measurement system, vacuum-proof and overload-proof
- Hygiene-based design according to EHEDG, FDA and GMP recommendations
- Material and surface quality according to hygiene requirements
- Wetted parts made of stainless steel; completely welded
- Signal output 4 to 20 mA (0 to 20 mA as option)
- Stainless steel enclosure with degree of protection IP65 (IP67 as option)
- Process temperature up to 200 °C (392 °F)
- Explosion protection II 2G Ex [ib] IIC T6 to ATEX
- Easy and safe to clean

Application

The SITRANS P Compact pressure transmitter is designed for the special requirements of the food, pharmaceutical and biotechnology industries.

The use of high-grade materials guarantees compliance with hygiene regulations.

The SITRANS P Compact pressure transmitter is available in many versions. Exact adaptation of the pressure transmitter to conditions at the place of use is thus possible

Design

The electronics is potted to protect it against moisture, corrosive atmospheres and vibration.

Notes on operating the pressure transmitter

Compensation of internal atmospheric pressure

Compensation of the internal atmospheric pressure of the SITRANS P Compact pressure transmitters is performed as follows:

- in the plug versions by means of the screwed gland (IP65)
- in the field enclosures by means of an integral sintered filter (IP65) or a vented cable (IP67)
- in versions with cable outlet by means of a vented cable (IP67)

In the absolute pressure range there is no need for compensation with respect to atmospheric pressure.

Note: These degrees of protection are only achieved under the following conditions:

- if the pressure transmitter is installed correctly
- if the screwed glands are securely tightened
- if the cable diameters agree with the nominal diameters of the gaskets in the enclosure

Note: The integral EMC measures are only effective if the earth connection is made correctly.

CE marking

The CE marking of the pressure transmitter certifies compliance with the guidelines of the European Council (9/336/EC), the EMC law (13.11.1992), as well as the applicable generic standards.

Interference-free operation in systems and plants is achieved only if the specifications for shielding, earthing, cable routing and electrical isolation are observed during installation and assembly.

Hazardous areas

Note: Electrical equipment in hazardous areas must only be installed and operated by trained personnel.

Modifications to units and connections result in cancellation of the explosion protection and guarantee.

With intrinsically-safe circuits, make sure that equipotential bonding exists throughout the complete cabling inside and outside of the hazardous area. The limits specified in the ATEX approval must be observed.

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Function

The process pressure acts on a piezo-resistive semiconductor measuring bridge through a remote seal and a transmission liquid. The pressure transmitter converts the pressure values into a load-independent current.

A compensation network makes the output signal largely independent of the ambient temperature. As a result of a specially adapted remote seal connection with minimized volume, the influence of the process temperature on the output signal is greatly reduced compared to a conventional screw connection.

The pressure transmitters can be powered with a non-regulated DC voltage of 10 to 30 V. Output signals common to measuring technology are available.

Technical specifications

Pressure transmitters for food, pharmaceuticals and biotechnology	
Mode of operation	
Measuring principle	piezo-resistive
Input	
Measured variable	gauge or absolute pressure
Measuring range	0 ... 160 mbar (0 ... 2.32 psi) ... 0 ... 40 bar (0 ... 580 psi)
Output	
Output signal	
• 2-wire system	4 ... 20 mA
• Three-wire system	0 ... 20 mA
Measuring accuracy	Acc. to IEC 60770-1
Error in measurement at limit setting incl. hysteresis and reproducibility	≤ 0.2 % of upper range value
Adjustment accuracy	≤ ± 0.2 % of upper range value
Step response time	< 20 ms
Influence of ambient temperature	
On the enclosure	
• Zero point	< 0.2 %/10 K of upper range value
• Measuring span	< 0.2 %/10 K of upper range value
On the process connection (remote seals)	Zero error (depends on design)
• Flange remote seal	
- DN 25 / 1"	4.8 mbar/10 K (0.069 psi/10 K)
- DN 32 / 1¼"	2.3 mbar/10 K (0.033 psi/10 K)
- DN 40 / 1½"	1.6 mbar/10 K (0.023 psi/10 K)
- DN 50 / 2"	0.6 mbar/10 K (0.009 psi/10 K)
• Inline seal	
- DN 25 / 1"	9.5 mbar/10 K (0.14 psi/10 K)
- DN 32 / 1¼"	4.1 mbar/10 K (0.06 psi/10 K)
- DN 40 / 1½"	3.9 mbar/10 K (0.05 psi/10 K)
- DN 50 / 2"	3.9 mbar/10 K (0.05 psi/10 K)

The zero error specified for the process connection should be considered as a guideline for a standard design. We will produce a detailed system calculation on request. Systems with reduced remote seal errors are available on request.

Operating conditions	
Installation conditions	
• Mounting position	Any, vertical as standard
Ambient conditions	
• Ambient temperature	-10 ... +70 °C (14 ... 158 °F)
• Storage temperature	-10 ... +90 °C (14 ... 194 °F)
• Process temperature	Max. 200 °C (392 °F), depending on design
Vacuum-resistant	0 mbar (0 psi) absolute at max. 50 °C. Higher process temperatures on request.
• Degree of protection (to EN 60529)	IP65, optional IP67
• Electromagnetic Compatibility	
- Emitted interference	To EN 50081 Part 1, issue 1993 (residential and industrial areas). The unit has no own emissions.
- Noise immunity to	EN 50082 Part 2, issue March 1995 (industrial areas)
Design	
Weight (without remote seal)	
• Field enclosure	≈ 460 G (≈ 1.01 (lb)
• Enclosure with plug	≈ 200 g (≈ 0.44 lb)
Enclosure	
• Designs	• Field enclosure IP65 or IP67, with screwed gland • Angled plug DIN 43650, IP65 • Cable connection, IP67 • Device plug M12, IP65
• Material	Stainless steel, mat. no. 1.4404/316L/1.4305
Material of union nut	Polyamide (with electrical connection using plug or cable)
	Electronics unit potted with silicone
	Internal ventilation for measuring ranges < 16 bar (< 232 psi), through enclosure thread or connection cable depending on design
Process connection	
• Versions	See ordering data
• Material of coupling	Stainless steel, mat. no. 1.4404/316L
Power supply	
Terminal voltage on transmitter	10 ... 30 V DC
Rated voltage	24 V DC
Certificates and approvals	
Classification according to pressure equipment directive (PED 2014/68/EU)	
• For 7MF8010-1... (with diaphragm seal)	For gases of fluid group 1 and liquids of fluid group 1; complies with requirements of article 4, paragraph 3 (sound engineering practice)
• For 7MF8010-2... (with inline seal)	For gases of fluid group 1 and liquids of fluid group 1; complies with the requirements of article 4, paragraph 1 (appendix 1); assigned to category III, conformity evaluation module H by the TÜV Nord
Explosion protection	
• Intrinsic safety "i"	TÜV 03 ATEX 2099 X
- Marking	Ex II 2G Ex ib IIC T6

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SITRANS P Compact for gauge and absolute pressure

Selection and Ordering data	Article No.	Ord. code
SITRANS P Compact pressure transmitters for pressure and absolute pressure with diaphragm flush at front ↗	**7MF8010-**	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2 % of upper range value Output 4 ... 20 mA	**1** ■■■■ - ■■■■	■■■
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.		
Diaphragm seal with quick-release clamp		
Milk pipe union to DIN 11851 with slotted union nut		
• DN 25	**AD**	
• DN 32	**AE**	
• DN 40	**AF**	
• DN 50	**AG**	
• DN 65	**AH**	
Milk pipe union to DIN 11851 with threaded socket		
• DN 25	**BD**	
• DN 32	**BE**	
• DN 40	**BF**	
• DN 50	**BG**	
• DN 65	**BH**	
Clamp connection to DIN 32676		
• DN 25	**CD**	
• DN 40	**CF**	
• DN 50	**CG**	
Clamp connection to ISO 2852		
• 1 inch	**DM**	
• 1½ inch	**DN**	
• 2 inch	**DP**	
• 2½ inch	**DQ**	
IDF standard with slotted union nut		
• 1 inch	**EM**	
• 1½ inch	**EN**	
• 2 inch	**EP**	
IDF standard with threaded socket		
• 1 inch	**FM**	
• 1½ inch	**FN**	
• 2 inch	**FP**	
SMS standard with slotted union nut		
• 1 inch	**GM**	
• 1½ inch	**GN**	
• 2 inch	**GP**	
SMS standard with threaded socket		
• 1 inch	**HM**	
• 1½ inch	**HN**	
• 2 inch	**HP**	
DRD flange, without welding-type flange		
• DN 50, PN 40	**JH**	
Varivent connection (Tuchenhagen)		
• D = 50, for Varivent enclosure DN 25 and 1 inch	**KF**	
• D = 68, for Varivent enclosure DN 40 ... DN 125 and 1½ ... 6 inch	**KL**	
Special version (add Order code and plain text)	**ZA**	**J1Y**
Filling liquid		
Food oil, FDA-listed	**3**	
Special version (add Order code and plain text)	**9**	**L1Y**
Output signal		
4 ... 20 mA	**1**	
Special version (add Order code and plain text)	**9**	**M1Y**

Selection and Ordering data	Article No.	Ord. code
SITRANS P Compact pressure transmitters for pressure and absolute pressure with diaphragm flush at front	**7MF8010-**	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2 % of upper range value Output 4 ... 20 mA	**1** ■■■■ - ■■■■	■■■
Diaphragm seal with aseptic connection		
Aseptic screwed gland to DIN 11864-1, form A, with slotted union nut		
• 1 inch	**PM**	
• 1½ inch	**PN**	
• 2 inch	**PP**	
• 2½ inch	**PQ**	
Aseptic screwed gland to DIN 11864-1, form A with threaded socket		
• 1 inch	**QM**	
• 1½ inch	**QN**	
• 2 inch	**QP**	
• 2½ inch	**QQ**	
Aseptic screwed NEUMO with slotted union nut[1]		
• DN 25	**RD**	
• DN 32	**RE**	
• DN 40	**RF**	
• DN 50	**RG**	
Aseptic screwed NEUMO with threaded socket[1]		
• DN 25	**SD**	
• DN 32	**SE**	
• DN 40	**SF**	
• DN 50	**SG**	
Aseptic screwed NEUMO with clamp connection, form R[1]		
• DN 25	**TD**	
• DN 32	**TE**	
• DN 40	**TF**	
• DN 50	**TG**	
Aseptic screwed NEUMO with clamp connection, form V[1]		
• DN 25	**UD**	
• DN 32	**UE**	
• DN 40	**UF**	
• DN 50	**UG**	
Male thread DIN 3852 Form A		
• G½", min. meas. span 1.6 bar (23.2 psi)	**XA**	
• G¾", min. meas. span 1 bar (14.5 psi)	**XB**	
• G1", min. meas. span 0.4 bar (5.8 psi)	**XC**	
• G1½", min. meas. span 0.25 bar (3.63 psi)	**XD**	
• G2", min. meas. span 0.16 bar (2.32 psi)	**XE**	
Special version (add Order code and plain text)	**ZA**	**J1Y**
Filling liquid		
Food oil, FDA-listed	**3**	
Special version (add Order code and plain text)	**9**	**L1Y**
Output signal		
4 ... 20 mA	**1**	
Special version (add Order code and plain text)	**9**	**M1Y**

[1] Please specify as well:
Connections for pipes: R01, R02 or R03, see table "Further designs" on next page

Selection and Ordering data		Article No.	Ord. code
SITRANS P Compact pressure transmitters for pressure and absolute pressure with diaphragm flush at front		**7MF8010-**	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2 % of upper range value Output 4 ... 20 mA		**1** ■■■■ - ■■■■	■■■
Enclosure design (stainless steel mat. No. 1.4404/316L) / electr. connection			
Enclosure with angled plug to DIN 43650, IP65		**1**	
Enclosure with device plug M12, IP65, union nut made of polyamide		**2**	
Enclosure with device plug M12, IP65, union nut made of stainless steel		**3**	
Stainless steel field enclosure (small) with cable gland, IP65		**4**	
Stainless steel field enclosure (small) with cable gland, IP67 Internal ventilation for measuring ranges < 16 bar (< 232 psi)		**5**	
Measured range	**Overload pressure**		
0 ... 160 mbar (0 ... 2.32 psi)	1 bar (14.5 psi)	**BB**	
0 ... 250 mbar (0 ... 3.63 psi)	1 bar (14.5 psi)	**BC**	
0 ... 400 mbar (0 ... 5.8 psi)	3 bar (43.5 psi)	**BD**	
0 ... 600 mbar (0 ... 8.7 psi)	3 bar (43.5 psi)	**BE**	
0 ... 1 bar (0 ... 14.5 psi)	3 bar (43.5 psi)	**CA**	
0 ... 1.6 bar (0 ... 23.2 psi)	10 bar (145 psi)	**CB**	
0 ... 2.5 bar (0 ... 36.3 psi)	10 bar (145 psi)	**CC**	
0 ... 4 bar (0 ... 58 psi)	20 bar (290 psi)	**CD**	
0 ... 6 bar (0 ... 87 psi)	60 bar (870 psi)	**CE**	
0 ... 10 bar (0 ... 145 psi)	60 bar (870 psi)	**DA**	
0 ... 16 bar (0 ... 232 psi)	60 bar (870 psi)	**DB**	
0 ... 25 bar (0 ... 363 psi)	60 bar (870 psi)	**DC**	
0 ... 40 bar (0 ... 580 psi)	100 bar (1450 psi)	**DD**	
-160 ... 0 mbar (-2.32 ... 0 psi)	1 bar (14.5 psi)	**EB**	
-250 ... 0 bar (-3.73 ... 0 psi)	1 bar (14.5 psi)	**EC**	
-400 ... 0 bar (-5.8 ... 0 psi)	3 bar (43.5 psi)	**ED**	
-600 ... 0 bar (-8.7 ... 0 psi)	3 bar (43.5 psi)	**EE**	
-1 ... 0 bar (-14.5 ... 0 psi)	3 bar (43.5 psi)	**FA**	
-1 ... 0.6 bar (-14.5 ... 8.7 psi)	10 bar (145 psi)	**FB**	
-1 ... 1.5 bar (-14.5 ... 21.8 psi)	10 bar (145 psi)	**FC**	
-1 ... 3 bar (-14.5 ... 43.5 psi)	20 bar (290 psi)	**FD**	
-1 ... 5 bar (-14.5 ... 72.5 psi)	20 bar (290 psi)	**FE**	

Selection and Ordering data		Article No.	Ord. code
SITRANS P Compact pressure transmitters for pressure and absolute pressure with diaphragm flush at front		**7MF8010-**	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2 % of upper range value Output 4 ... 20 mA		**1** ■■■■ - ■■■■	■■■
Measured range	**Overload pressure**		
(continued)			
-1 ... +9 bar (-14.5 ... +130.5 psi)	60 bar (870 psi)	**GA**	
-1 ... +15 bar (-14.5 ... +217.6 psi)	60 bar (870 psi)	**GB**	
0 ... 1 bar a (0 ... 14.5 psi a)	3 bar a (43.5 psi a)	**HA**	
0 ... 1.6 bar a (0 ... 23.2 psi a)	10 bar (145 psi)	**HB**	
0 ... 2.5 bar a (0 ... 36.3 psi a)	10 bar a (145 psi a)	**HC**	
0 ... 4 bar a (0 ... 58 psi a)	10 bar a (145 psi a)	**HD**	
0 ... 6 bar a (0 ... 87 psi a)	60 bar a (870 psi a)	**HE**	
0 ... 10 bar a (0 ... 145 psi a)	60 bar a (870 psi a)	**JA**	
Special version (add Order code and plain text)		**ZA**	**P1Y**
Explosion protection			
without		**1**	
with, to ATEX 100a, II 2 G, Ex ib IIC T6		**2**	
Further designs		Order code	
Please add "**-Z**" to Article No. and specify Order code			
Hygiene version Roughness of process connection: Foil R_a < 0.8 µm ($3.15 \cdot 10^{-8}$ inch); Welded seams R_a < 1.5 µm ($5.9 \cdot 10^{-8}$ inch)		**P01**	
Integral cooling element Process temperature max. 200 °C (392 °F) instead of 140 °C (284 °F)		**K01**	
Connections for pipe			
Pipes to DIN 11850		**R01**	
ISO pipes to DIN 2463		**R02**	
Pipes to O. D. Tubing "BS 4825 Part 1"		**R03**	
Certificates			
Quality test certificate, 5-point factory calibration (IEC 60770-2)		**C11**	
Inspection certificate to EN 10204-3.1		**C12**	
Use of FDA-listed remote seal filling liquids certified by factory certificate according to EN 10204-2.2		**C17**	
Roughness depth measurement R_a certified by tactory certificate according to EN 10204-3.1		**C18**	
Certification to EHEDG for inline seals with aseptic screwed gland to DIN 11864		**C19**	

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SITRANS P Compact for gauge and absolute pressure

Selection and Ordering data	Article No.	Ord. code
SITRANS P Compact pressure transmitters for pressure and absolute pressure with inline seal ↗	**7MF8010-**	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2 % of upper range value Output 4 ... 20 mA	**2** ■■■■ - ■■■■	■■■
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.		
Inline seal (screwed gland at both ends) with quick-release clamps		
Milk pipe union to DIN 11851 with threaded socket		
• DN 25	**AD**	
• DN 32	**AE**	
• DN 40	**AF**	
• DN 50	**AG**	
• DN 65	**AH**	
Clamp connection to DIN 32676		
• DN 25	**CD**	
• DN 32	**CE**	
• DN 40	**CF**	
• DN 50	**CG**	
• DN 65	**CH**	
Clamp connection to ISO 2852[1]		
• 1 inch	**DM**	
• 1½ inch	**DN**	
• 2 inch	**DP**	
• 2½ inch	**DQ**	
Special version (add Order code and plain text)	**ZA**	**J1Y**
Filling liquid		
Food oil, FDA-listed	**3**	
Special version (add Order code and plain text)	**9**	**L1Y**
Output signal		
4 ... 20 mA	**1**	
Special version (add Order code and plain text)	**9**	**M1Y**

[1] Please note the internal diameter of the pipe. Please specify pipe classes (see "Further designs")

Selection and Ordering data	Article No.	Ord. code
SITRANS P Compact pressure transmitters for pressure and absolute pressure with inline seal	**7MF8010-**	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2 % of upper range value Output 4 ... 20 mA	**2** ■■■■ - ■■■■	■■■
Inline seal with aseptic connection		
Aseptic screwed gland to DIN 11864-1, form A with threaded socket		
• 1 inch	**QM**	
• 1½ inch	**QN**	
• 2 inch	**QP**	
Aseptic screwed NEUMO with threaded socket[1]		
• DN 25	**SD**	
• DN 32	**SE**	
• DN 40	**SF**	
• DN 50	**SG**	
• DN 65	**SH**	
Aseptic screwed NEUMO with clamp connection, form R[1]		
• DN 25	**TD**	
• DN 32	**TE**	
• DN 40	**TF**	
• DN 50	**TG**	
Aseptic screwed gland SÜDMO with threaded socket W 501 [1]		
• 1 inch	**VM**	
• 1½ inch	**VN**	
• 2 inch	**VP**	
Aseptic screwed gland SÜDMO with clamp connection W 601 [1]		
• 1 inch	**WM**	
• 1½ inch	**WN**	
• 2 inch	**WP**	
Special version (add Order code and plain text)	**ZA**	**J1Y**
Filling liquid		
Food oil, FDA-listed	**3**	
Medicinal white oil	**2**	
Special version (add Order code and plain text)	**9**	**L1Y**
Output signal		
4 ... 20 mA	**1**	
Special version (add Order code and plain text)	**9**	**M1Y**

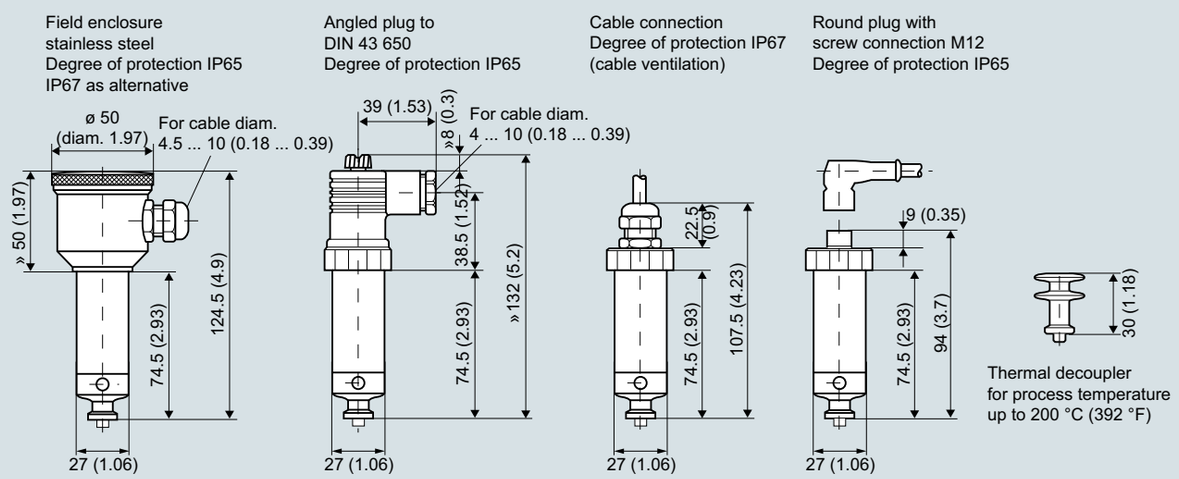
[1] Please specify as well:
Connections for pipes: R01, R02 or R03, see table "Further designs" on next page

Selection and Ordering data		Article No.	Ord. code
SITRANS P Compact pressure transmitters for pressure and absolute pressure with inline seal		**7MF8010-**	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2 % of upper range value Output 4 ... 20 mA		**2** ■■■ - ■■■	■■■
Enclosure design (stainless steel mat. No. 1.4404/316L) / electr. connection			
Enclosure with angled plug to DIN 43650, IP65, union nut made of polyamide		**1**	
Enclosure with device plug M12, IP65, union nut made of polyamide		**2**	
Enclosure with device plug M12, IP65, union nut made of stainless steel		**3**	
Stainless steel field enclosure (small) with cable gland, IP65		**4**	
Stainless steel field enclosure (small) with cable gland, IP67 Internal ventilation for measuring ranges < 16 bar (< 232 psi)		**5**	
Measured range	**Overload pressure**		
0 ... 160 mbar (0 ... 2.32 psi)	1 bar (14.5 psi)	**BB**	
0 ... 250 mbar (0 ... 3.63 psi)	1 bar (14.5 psi)	**BC**	
0 ... 400 mbar (0 ... 5.8 psi)	3 bar (43.5 psi)	**BD**	
0 ... 600 mbar (0 ... 8.7 psi)	3 bar (43.5 psi)	**BE**	
0 ... 1 bar (0 ... 14.5 psi)	3 bar (43.5 psi)	**CA**	
0 ... 1.6 bar (0 ... 23.2 psi)	10 bar (145 psi)	**CB**	
0 ... 2.5 bar (0 ... 36.3 psi)	10 bar (145 psi)	**CC**	
0 ... 4 bar (0 ... 58 psi)	20 bar (290 psi)	**CD**	
0 ... 6 bar (0 ... 87 psi)	60 bar (870 psi)	**CE**	
0 ... 10 bar (0 ... 145 psi)	60 bar (870 psi)	**DA**	
0 ... 16 bar (0 ... 232 psi)	60 bar (870 psi)	**DB**	
0 ... 25 bar (0 ... 363 psi)	60 bar (870 psi)	**DC**	
0 ... 40 bar (0 ... 580 psi)	100 bar (1450 psi)	**DD**	
-160 ... 0 mbar (-2.32 ... 0 psi)	1 bar (14.5 psi)	**EB**	
-250 ... 0 bar (-3.73 ... 0 psi)	1 bar (14.5 psi)	**EC**	
-400 ... 0 bar (-5.8 ... 0 psi)	3 bar (43.5 psi)	**ED**	
-600 ... 0 bar (-8.7 ... 0 psi)	3 bar (43.5 psi)	**EE**	
-1 ... 0 bar (-14.5 ... 0 psi)	3 bar (43.5 psi)	**FA**	
-1 ... 0.6 bar (-14.5 ... 8.7 psi)	10 bar (145 psi)	**FB**	
-1 ... 1.5 bar (-14.5 ... 21.8 psi)	10 bar (145 psi)	**FC**	
-1 ... 3 bar (-14.5 ... 43.5 psi)	20 bar (290 psi)	**FD**	
-1 ... 5 bar (-14.5 ... 72.5 psi)	20 bar (290 psi)	**FE**	

Selection and Ordering data		Article No.	Ord. code
SITRANS P Compact pressure transmitters for pressure and absolute pressure with inline seal		**7MF8010-**	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2 % of upper range value Output 4 ... 20 mA		**2** ■■■ - ■■■	■■■
Measured range (continued)	**Overload pressure**		
-1 ... 9 bar (-14.5 ... 130.5 psi)	60 bar (870 psi)	**GA**	
-1 ... 15 bar (-14.5 ... 217.6 psi)	60 bar (870 psi)	**GB**	
0 ... 1 bar a (0 ... 14.5 psi a)	3 bar a (43.5 psi a)	**HA**	
0 ... 1.6 bar a (0 ... 23.2 psi a)	10 bar (145 psi)	**HB**	
0 ... 2.5 bar a (0 ... 36.3 psi a)	10 bar a (145 psi a)	**HC**	
0 ... 4 bar a (0 ... 58 psi a)	10 bar a (145 psi a)	**HD**	
0 ... 6 bar a (0 ... 87 psi a)	60 bar a (870 psi a)	**HE**	
0 ... 10 bar a (0 ... 145 psi a)	60 bar a (870 psi a)	**JA**	
Special version (add Order code and plain text)		**ZA**	**P1Y**
Explosion protection			
without		**1**	
with, to ATEX 100a, II 2 G, Ex ib IIC T6		**2**	
Further designs		Order code	
Please add "**-Z**" to Article No. and specify Order code			
Hygiene version Roughness of process connection: Foil R_a < 0.8 µm ($3.15 \cdot 10^{-8}$ inch); Welded seams R_a < 1.5 µm ($5.9 \cdot 10^{-8}$ inch)		**P01**	
Integral cooling element Process temperature max. 200 °C (392 °F) instead of 140 °C (284 °F)		**K01**	
Connections for pipe			
Pipes to DIN 11850		**R01**	
ISO pipes to ISO 2463		**R02**	
Pipes to O. D. Tubing "BS 4825 Part 1"		**R03**	
Certificates			
Quality test certificate, 5-point factory calibration (IEC 60770-2)		**C11**	
Inspection certificate to EN 10204-3.1		**C12**	
Use of FDA-listed remote seal filling liquids certified by factory certificate according to EN 10204-2.2		**C17**	
Roughness depth measurement R_a certified by tactory certificate according to EN 10204-3.1		**C18**	
Certification to EHEDG for inline seals with aseptic screwed gland to DIN 11864		**C19**	

Dimensional drawings

Enclosure

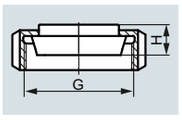


SITRANS P Compact, dimenclosureensions in mm (inch)

Process connections

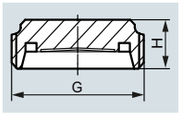
Diaphragm seal with quick-release clamp

Milk pipe union to DIN 11851 with slotted union nut



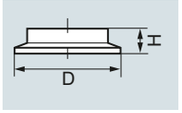
DN	PN	H mm (inch)	G
25	40	24 (0.95)	Rd. 52 x 1/6"
32	40	24 (0.95)	Rd. 58 x 1/6"
40	40	24 (0.95)	Rd. 65 x 1/6"
50	25	25.1 (0.99)	Rd. 78 x 1/6"
65	25	28.6 (1.13)	Rd. 95 x 1/6"

Milk pipe union to DIN 11851 with threaded socket



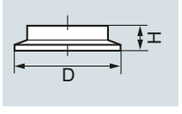
DN	PN	H mm (inch)	G
25	40	-	Rd. 52 x 1/6"
32	40	20 (0.79)	Rd. 58 x 1/6"
40	40	20 (0.79)	Rd. 65 x 1/6"
50	25	20 (0.79)	Rd. 78 x 1/6"
65	25	22 (0.87)	Rd. 95 x 1/6"

Clamp connection to DIN 32676



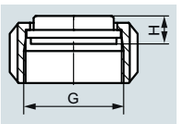
DN	PN	H mm (inch)	D mm (inch)
25	16	14 (0.55)	50.5 (2)
40	16	14 (0.55)	50.5 (2)
50	16	14 (0.55)	64 (2.52)

Clamp connection to ISO 2852



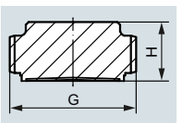
DN	PN	H mm (inch)	D mm (inch)
1"	16	14 (0.55)	50.5 (2)
1½"	16	12 (0.47)	50.5 (2)
2"	16	14 (0.55)	64 (2.52)
2½"	16	14 (0.55)	77.5 (3.05)

IDF standard with slotted union nut



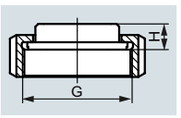
DN	PN	H mm (inch)	G inch (IDF thread)
1"	40	21 (0.83)	1"
1½"	40	13.5 (0.53)	1½"
2"	25	15 (0.59)	2"

IDF standard with threaded socket



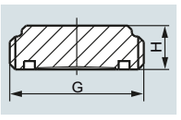
DN	PN	H mm (inch)	G inch (IDF thread)
1"	40	21 (0.83)	1"
1½"	40	13.5 (0.53)	1½"
2"	25	15 (0.59)	2"

SMS standard with slotted union nut



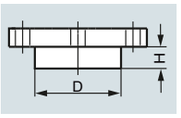
DN	PN	H mm (inch)	G
1"	40	16 (0.63)	Rd 40 x 1.6"
1½"	40	16 (0.63)	Rd 60 x 1.6"
2"	25	16 (0.63)	Rd 70 x 1.6"

SMS standard with threaded socket



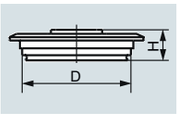
DN	PN	H mm (inch)	G
1"	40	16 (0.63)	Rd 40 x 1.6"
1½"	40	20 (0.79)	Rd 60 x 1.6"
2"	25	20 (0.79)	Rd 70 x 1.6"

DRD flange, without welding-type flange



DN	PN	H mm (inch)	D mm (inch)
50	40	16.7 (0.66)	65.5 (2.58)

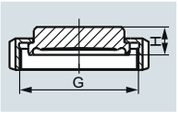
Varivent connection



DN	PN	H mm (inch)	D mm (inch)
25	25	19 (0.75)	50 (1.97)
40 ... 125	25/10	19 (0.75)	68 (2.68)

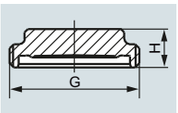
Diaphragm seal with aseptic connection

Aseptic screwed gland to DIN 11864-1, form A, with slotted union nut



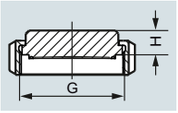
DN	PN	H mm (inch)	G
1"	40	20 (0.79)	Rd 52 x 1/6"
1½"	40	20 (0.79)	Rd 58 x 1/6"
2"	25	20 (0.79)	Rd 65 x 1/6"
2½"	25	20 (0.79)	Rd 78 x 1/6"

Aseptic screwed gland to DIN 11864-1, form A, with threaded socket



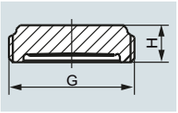
DN	PN	H mm (inch)	G
1"	40	15 (0.59)	Rd 52 x 1/6"
1½"	40	15 (0.59)	Rd 58 x 1/6"
2"	25	15 (0.59)	Rd 65 x 1/6"
2½"	25	15 (0.59)	Rd 78 x 1/6"

Aseptic screwed NEUMO BioConnect with slotted union nut



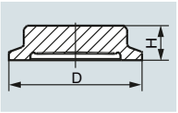
DN	PN	H mm (inch)	G
25	16	15 (0.59)	M 42 x 2
32	16	15 (0.59)	M 52 x 2
40	16	15 (0.59)	M 56 x 2
50	16	15 (0.59)	M 68 x 2

Aseptic screwed NEUMO BioConnect with threaded socket



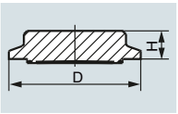
DN	PN	H mm (inch)	G
25	16	20 (0.79)	M 42 x 2
32	16	20 (0.79)	M 52 x 2
40	16	20 (0.79)	M 56 x 2
50	16	20 (0.79)	M 68 x 2

Aseptic screwed NEUMO BioConnect with clamp connection, form R



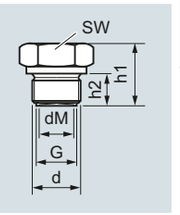
DN	PN	H mm (inch)	D mm (inch)
25	40	20 (0.79)	50.5 (2)
32	40	20 (0.79)	50.5 (2)
40	40	20 (0.79)	64 (2.52)
50	25	20 (0.79)	77.4 (3.05)

Aseptic screwed NEUMO BioConnect with clamp connection, form V



DN	PN	H mm (inch)	D mm (inch)
25	40	15 (0.59)	50.5 (2)
32	40	15 (0.59)	50.5 (2)
40	40	15 (0.59)	64 (2.52)
50	25	15 (0.59)	77.4 (3.05)

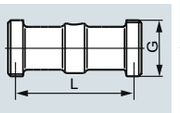
Male thread DIN 3852, form A



G	d mm (inch)	d_M mm (inch)	h_1 mm (inch)	h_2 mm (inch)	SW mm (inch)
G½A	26 (1.02)	17.5 (0.69)	27 (1.06)	14 (0.55)	27 (1.06)
G¾A	32 (1.26)	22.6 (0.89)	31 (1.22)	16 (0.63)	32 (1.26)
G1A	39 (1.54)	27 (1.06)	33 (1.30)	18 (0.71)	51 (2.01)
G1½A	55 (2.17)	40 (1.57)	40 (1.57)	22 (0.87)	55 (2.17)
G2A	68 (2.68)	51 (2.00)	42 (1.65)	24 (0.94)	70 (2.76)

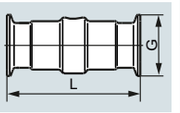
Inline seal (screwed gland at both ends) with quick-release clamps

Milk pipe union to DIN 11851 with threaded socket



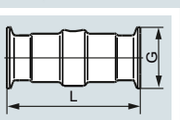
DN	PN	L mm (inch)	G
25	40	110 (4.33)	Rd 52 x 1/6"
32	40	110 (4.33)	Rd 58 x 1/6"
40	40	110 (4.33)	Rd 65 x 1/6"
50	25	110 (4.33)	Rd 78 x 1/6"
65	25	110 (4.33)	Rd 95 x 1/6"

Clamp connection to DIN 32676



DN	PN	L mm (inch)	D mm (inch)
25	16	110 (4.33)	50.5 (2)
32	16	110 (4.33)	50.5 (2)
40	16	110 (4.33)	50.5 (2)
50	16	110 (4.33)	64 (2.52)
65	10	110 (4.33)	91 (3.58)

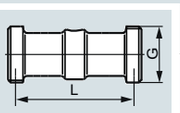
Clamp connection to ISO 2852



DN	PN	L mm (inch)	D mm (inch)
1"	16	110 (4.33)	50.5 (2)
1½"	16	110 (4.33)	50.5 (2)
2"	16	110 (4.33)	64 (2.52)
2½"	16	110 (4.33)	91 (3.58)

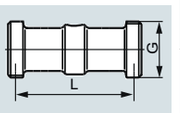
Inline seal with aseptic connection

Aseptic screwed gland to DIN 11864-1, form A, with threaded socket



DN	PN	L mm (inch)	G
1"	40	110 (4.33)	Rd 52 x 1/6"
1½"	40	110 (4.33)	Rd 65 x 1/6"
2"	25	110 (4.33)	Rd 78 x 1/6"

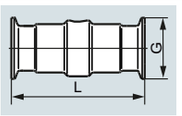
Aseptic screwed NEUMO BioConnect with threaded socket



DN	PN	L mm (inch)	G
25	16	110 (4.33)	M 42 x 2
32	16	110 (4.33)	M 52 x 2
40	16	110 (4.33)	M 56 x 2
50	16	110 (4.33)	M 68 x 2
65	16	110 (4.33)	M 90 x 3

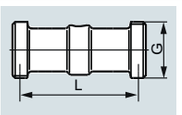
SITRANS P Compact for gauge and absolute pressure

Aseptic screwed NEUMO BioConnect with clamp connection, form R



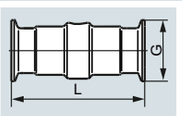
DN	PN	L mm (inch)	D mm (inch)
25	16	110 (4.33)	50.4 (2)
32	16	110 (4.33)	50.4 (2)
40	16	110 (4.33)	64 (2.52)
50	16	110 (4.33)	77.4 (3.05)

Aseptic screwed gland SÜDMO with threaded socket W 501



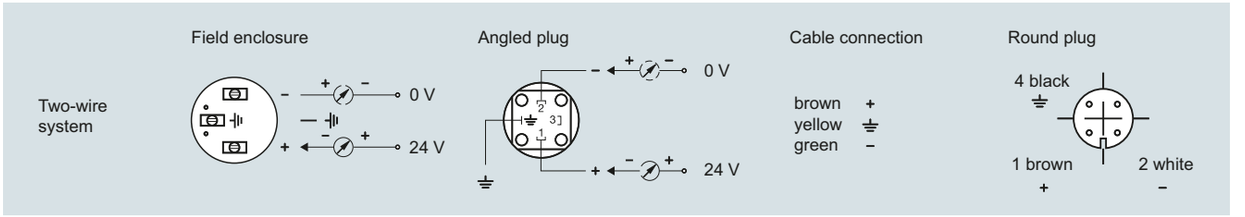
DN	PN	L mm (inch)	G
1"	25	110 (4.33)	Rd 44 x 1/6"
1½"	25	110 (4.33)	Rd 58 x 1/6"
2"	20	110 (4.33)	Rd 78 x 1/6"

Aseptic screwed gland SÜDMO with threaded socket W 601



DN	PN	L mm (inch)	D mm (inch)
1"	16	110 (4.33)	50.5 (2)
1½"	16	110 (4.33)	64 (2.52)
2"	16	110 (4.33)	77.5 (3.05)

Schematics



SITRANS P Compact, connection diagram

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