

# SITRANS P measuring instruments for pressure

## Transmitters for food, pharmaceuticals and biotechnology

**SITRANS P Compact**  
for gage 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. It is therefore possible, for example, to guarantee roughness values down to  $R_a = 0.4 \mu\text{m}$  ( $1.57 \cdot 10^{-5}$  inch) in the wetted area (welded seam area  $R_a < 0.8 \mu\text{m}$  ( $3.15 \cdot 10^{-5}$  inch)). 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 housing 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 full-scale 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 housing with degree of protection IP65 (IP67 as option)
- Process temperature up to 200 °C (392 °F)
- Explosion protection II 2G EEx [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 housings 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 housing

**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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### SITRANS P Compact for gage and absolute pressure

#### 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 Gage or absolute pressure  
Measured range 0 ... 160 mbar (0 ... 2.32 psi)  
...  
0 ... 40 bar (0 ... 580 psi)

###### Output

Output signal  
• Two-wire system 4 ... 20 mA  
• Three-wire system 0 ... 20 mA

###### Measuring accuracy

Linearity error including hysteresis (reference point adjustment)  $\leq 0.2\%$  of full-scale value  
Adjustment accuracy  $\leq \pm 0.2\%$  of full-scale value  
Adjustment time < 20 ms

###### Influence of ambient temperature

On the enclosure  
• Zero < 0.2%/10 K of full-scale value  
• Measured span < 0.2%/10 K of full-scale value

On the process connection (remote seal) Zero error (depends on design)

- Flange remote seal
  - DN 25 / 1" 4.8 mbar/10 K (0.070 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)
- Clamp-on seal
  - DN 25 / 1" 9.5 mbar/10 K (0.138 psi/10 K)
  - DN 32 / 1¼" 4.1 mbar/10 K (0.060 psi/10 K)
  - DN 40 / 1½" 3.9 mbar/10 K (0.057 psi/10 K)
  - DN 50 / 2" 3.9 mbar/10 K (0.057 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.

#### Rated 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), depends on design
• 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.
- Interference immunity to	EN 50082 Part 2, issue March 1995 (industrial areas)

#### Design

Weight (without remote seal)	
• Field housing	≈ 460 g (≈ 1.01 lb)
• Housing with plug	≈ 200 g (≈ 0.44 lb)
Housing	
• Designs	<ul style="list-style-type: none"> <li>• Field housing IP65 or IP67, with screwed gland</li> <li>• Angled plug DIN 43650, IP65</li> <li>• Cable connection, IP67</li> <li>• Round plug connector M12, IP65</li> </ul>
• Material	Stainless steel, mat. No. 1.4404/1.4305
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 housing 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

#### Certificate and approvals

Classification according to pressure equipment directive (DRGL 97/23/EC)	For gases of fluid group 1 and liquids of fluid group 1; complies with the requirements of article 3, 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
- Identification	Ex II 2G EEx ib IIC T6

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Selection and Ordering data	Order No.	Ord. code	Selection and Ordering data	Order No.	Ord. code
<b>SITRANS P Compact pressure transmitters for pressure and absolute pressure with diaphragm flush at front</b> 2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2% of full-scale value Output 4 ... 20 mA	7MF8010-		<b>SITRANS P Compact pressure transmitters for pressure and absolute pressure with diaphragm flush at front</b> 2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2% of full-scale value Output 4 ... 20 mA	7MF8010-	
<b>Diaphragm seal with quick-release clamp</b> Milk pipe union to DIN 11851 with slotted union nut <ul style="list-style-type: none"> <li>• DN 25</li> <li>• DN 32</li> <li>• DN 40</li> <li>• DN 50</li> <li>• DN 65</li> </ul> Milk pipe union to DIN 11851 with threaded socket <ul style="list-style-type: none"> <li>• DN 25</li> <li>• DN 32</li> <li>• DN 40</li> <li>• DN 50</li> <li>• DN 65</li> </ul> Clamp connection to DIN 32676 <ul style="list-style-type: none"> <li>• DN 25</li> <li>• DN 40</li> <li>• DN 50</li> </ul> Clamp connection to ISO 2852 <ul style="list-style-type: none"> <li>• 1 inch</li> <li>• 1½ inch</li> <li>• 2 inch</li> <li>• 2½ inch</li> </ul> IDF standard with slotted union nut <ul style="list-style-type: none"> <li>• 1 inch</li> <li>• 1½ inch</li> <li>• 2 inch</li> </ul> IDF standard with threaded socket <ul style="list-style-type: none"> <li>• 1 inch</li> <li>• 1½ inch</li> <li>• 2 inch</li> </ul> SMS standard with slotted union nut <ul style="list-style-type: none"> <li>• 1 inch</li> <li>• 1½ inch</li> <li>• 2 inch</li> </ul> SMS standard with threaded socket <ul style="list-style-type: none"> <li>• 1 inch</li> <li>• 1½ inch</li> <li>• 2 inch</li> </ul> DRD flange, without welding-type flange <ul style="list-style-type: none"> <li>• DN 50, PN 40</li> </ul> Varivent connection (Tuchenhagen) <ul style="list-style-type: none"> <li>• D = 50, for Varivent housing DN 25 and 1 inch</li> <li>• D = 68, for Varivent housing DN 40 ... DN 125 and 1½ ... 6 inch</li> </ul> Special version (add Order code and plain text)	1 ■■■■ - ■■■■ ■■■■ AD AE AF AG AH BD BE BF BG BH CD CF CG DM DN DP DQ EM EN EP FM FN FP GM GN GP HM HN HP JH KF KL ZA	J 1 Y	<b>Diaphragm seal with aseptic connection</b> Aseptic screwed gland to DIN 11864-1, form A, with slotted union nut <ul style="list-style-type: none"> <li>• 1 inch</li> <li>• 1½ inch</li> <li>• 2 inch</li> <li>• 2½ inch</li> </ul> Aseptic screwed gland to DIN 11864-1, form A with threaded socket <ul style="list-style-type: none"> <li>• 1 inch</li> <li>• 1½ inch</li> <li>• 2 inch</li> <li>• 2½ inch</li> </ul> Aseptic screwed NEUMO with slotted union nut <sup>1)</sup> <ul style="list-style-type: none"> <li>• DN 25</li> <li>• DN 32</li> <li>• DN 40</li> <li>• DN 50</li> </ul> Aseptic screwed NEUMO with threaded socket <sup>1)</sup> <ul style="list-style-type: none"> <li>• DN 25</li> <li>• DN 32</li> <li>• DN 40</li> <li>• DN 50</li> </ul> Aseptic screwed NEUMO with clamp connection, form R <sup>1)</sup> <ul style="list-style-type: none"> <li>• DN 25</li> <li>• DN 32</li> <li>• DN 40</li> <li>• DN 50</li> </ul> Aseptic screwed NEUMO with clamp connection, form V <sup>1)</sup> <ul style="list-style-type: none"> <li>• DN 25</li> <li>• DN 32</li> <li>• DN 40</li> <li>• DN 50</li> </ul> Special version (add Order code and plain text)	1 ■■■■ - ■■■■ ■■■■ PM PN PP PQ QM QN QP QQ RD RE RF RG SD SE SF SG TD TE TF TG UD UE UF UG ZA	J 1 Y
<b>Filling liquid</b> Vegetable oil medicinal white oil Food oil, FDA-listed Special version (add Order code and plain text)	1 2 3 9	L 1 Y	<b>Filling liquid</b> Vegetable oil medicinal white oil Food oil, FDA-listed Special version (add Order code and plain text)	1 2 3 9	L 1 Y
<b>Output signal</b> 4 ... 20 mA Special version (add Order code and plain text)	1 9	M 1 Y	<b>Output signal</b> 4 ... 20 mA Special version (add Order code and plain text)	1 9	M 1 Y

<sup>1)</sup> Please specify as well:  
 Connections for pipes: R01, R02 or R03,  
 see table "Further designs" on next page

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Selection and Ordering data		Order No.	Ord. code	Selection and Ordering data		Order No.	Ord. code
<b>SITRANS P Compact pressure transmitters for pressure and absolute pressure with diaphragm flush at front</b>		7MF8010-		<b>SITRANS P Compact pressure transmitters for pressure and absolute pressure with diaphragm flush at front</b>		7MF8010-	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2% of full-scale value Output 4 ... 20 mA		1		2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2% of full-scale value Output 4 ... 20 mA		1	
<b>Housing design (stainless steel mat. No. 1.4404/316L) / electr. connection</b>				<b>Measured range      Overload pressure</b>			
Housing with angled plug to DIN 43650, IP65		1		(continued)			
Housing with round plug M12, IP65, union nut made of polyamide		2		-1 ... 9 bar g (-14.5 ... 130.5 psi g)	30 bar g (435 psi g)		GA
Housing with round plug M12, IP65, union nut made of stainless steel		3		-1 ... 15 bar g (-14.5 ... 217.6 psi g)	50 bar g (725 psi g)		GB
Stainless steel field housing (small) with cable gland, IP65		4		0 ... 1 bar a (0 ... 14.5 psi a)	10 bar a (145 psi a)	F)	HA
Stainless steel field housing (small) with cable gland, IP67 Internal ventilation for measuring ranges < 10 bar (< 145 psi)		5		0 ... 1.6 bar a (0 ... 23.2 psi a)	10 bar a (145 psi a)	F)	HB
<b>Measured range</b>	<b>Overload pressure</b>			0 ... 2.5 bar a (0 ... 36.3 psi a)	16 bar a (232 psi a)	F)	HC
0 ... 160 mbar g (0 ... 2.32 psi g)	2 bar g (29 psi g)	BB		0 ... 4 bar a (0 ... 58 psi a)	16 bar a (232 psi a)	F)	HD
0 ... 250 mbar g (0 ... 3.63 psi g)	2 bar g (29 psi g)	BC		0 ... 6 bar a (0 ... 87 psi a)	30 bar a (435 psi a)	F)	HE
0 ... 400 mbar g (0 ... 5.8 psi g)	6 bar g (87 psi g)	BD		0 ... 10 bar a (0 ... 145 psi a)	30 bar a (435 psi a)	F)	JA
0 ... 600 mbar g (0 ... 8.7 psi g)	6 bar g (87 psi g)	BE		Special version (add Order code and plain text)		F)	ZA    P 1 Y
0 ... 1 bar g (0 ... 14.5 psi g)	10 bar g (145 psi g)	CA		<b>Explosion protection</b>			1
0 ... 1.6 bar g (0 ... 23.2 psi g)	10 bar g (145 psi g)	CB		without			2
0 ... 2.5 bar g (0 ... 36.3 psi g)	16 bar g (232 psi g)	CC		with, to ATEX 100a, II 2 G, EEx ib IIC T6			
0 ... 4 bar g (0 ... 58 psi g)	16 bar g (232 psi g)	CD		<b>Further designs</b>		<b>Order code</b>	
0 ... 6 bar g (0 ... 87 psi g)	30 bar g (435 psi g)	CE		Please add "-Z" to Order No. and specify Order code			
0 ... 10 bar g (0 ... 145 psi g)	30 bar g (435 psi g)	DA		<b>Hygiene version</b>		<b>P01</b>	
0 ... 16 bar g (0 ... 232 psi g)	50 bar g (725 psi g)	DB		Roughness of process connection: Foil $R_a < 0.8 \mu\text{m}$ ( $3.15 \cdot 10^{-8}$ inch); Welded seams $R_a < 1.5 \mu\text{m}$ ( $5.9 \cdot 10^{-8}$ inch)			
0 ... 25 bar g (0 ... 363 psi g)	50 bar g (725 psi g)	DC		<b>Integral cooling element</b>		<b>K01</b>	
0 ... 40 bar g (0 ... 580 psi g)	70 bar g (1015 psi g)	DD		Process temperature max. 200 °C (392 °F) instead of 140 °C (284 °F)			
-160 ... 0 mbar g (-2.32 ... 0 psi g)	2 bar g (29 psi g)	EB		<b>Connections for pipe</b>		<b>R01</b>	
-250 ... 0 bar g (-3.73 ... 0 psi g)	2 bar g (29 psi g)	EC		Pipes to DIN 11850		<b>R02</b>	
-400 ... 0 bar g (-5.8 ... 0 psi g)	6 bar g (87 psi g)	ED		ISO pipes to DIN 2463		<b>R03</b>	
-600 ... 0 bar g (-8.7 ... 0 psi g)	6 bar g (87 psi g)	EE		Pipes to O. D. Tubing "BS 4825 Part 1"			
-1 ... 0 bar g (-14.5 ... 0 psi g)	10 bar g (145 psi g)	FA		<b>Certificates</b>		<b>C11</b>	
-1 ... 0.6 bar g (-14.5 ... 8.7 psi g)	10 bar g (145 psi g)	FB		Quality inspection certificate (Factory calibration) to IEC 60770-2		<b>C12</b>	
-1 ... 1.5 bar g (-14.5 ... 21.8 psi g)	16 bar g (232 psi g)	FC		Acceptance test certificate to EN 10204-3.1		<b>C17</b>	
-1 ... 3 bar g (-14.5 ... 43.5 psi g)	16 bar g (232 psi g)	FD		Use of FDA-listed remote seal filling liquids certified by factory certificate to EN 10204-2.2		<b>C18</b>	
-1 ... 5 bar g (-14.5 ... 72.5 psi g)	30 bar g (435 psi g)	FE		Roughness depth measurement $R_a$ certified by factory certificate to EN 10204-3.1		<b>C19</b>	
				Certification to EHEDG for clamp-on seals with aseptic screwed gland to DIN 11864			
				F) Subject to export regulations AL: 9I999, ECCN: N.			

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Selection and Ordering data	Order No.	Ord. code	Selection and Ordering data	Order No.	Ord. code
<b>SITRANS P Compact pressure transmitters for pressure and absolute pressure with clamp-on remote seal</b>	7MF8010 -		<b>SITRANS P Compact pressure transmitters for pressure and absolute pressure with clamp-on remote seal</b>	7MF8010 -	
2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2% of full-scale value Output 4 ... 20 mA	2		2-wire system Process temperature up to 140 °C (284 °F) Accuracy: 0.2% of full-scale value Output 4 ... 20 mA	2	
<b>Clamp-on remote seal (screwed gland at both ends) with quick-release clamps</b> Milk pipe union to DIN 11851 with threaded socket			<b>Clamp-on seal with aseptic connection</b> Aseptic screwed gland to DIN 11864-1, form A with threaded socket		
• DN 25	AD		• 1 inch	QM	
• DN 32	AE		• 1½ inch	QN	
• DN 40	AF		• 2 inch	QP	
• DN 50	AG		Aseptic screwed NEUMO with threaded socket <sup>1)</sup>		
• DN 65	AH		• DN 25	SD	
Clamp connection to DIN 32676			• DN 32	SE	
• DN 25	CD		• DN 40	SF	
• DN 32	CE		• DN 50	SG	
• DN 40	CF		• DN 65	SH	
• DN 50	CG		Aseptic screwed NEUMO with clamp connection, form R <sup>1)</sup>		
• DN 65	CH		• DN 25	TD	
Clamp connection to ISO 2852 <sup>1)</sup>			• DN 32	TE	
• 1 inch	DM		• DN 40	TF	
• 1½ inch	DN		• DN 50	TG	
• 2 inch	DP		Aseptic screwed gland SÜDMO with threaded socket W 501		
• 2½ inch	DQ		• 1 inch	VM	
Special version (add Order code and plain text)	ZA	J 1 Y	• 1½ inch	VN	
<b>Filling liquid</b>			• 2 inch	VP	
Vegetable oil	1		Aseptic screwed gland SÜDMO with clamp connection W 601		
Medicinal white oil	2		• 1 inch	WM	
Food oil, FDA-listed	3		• 1½ inch	WN	
Special version (add Order code and plain text)	9	L 1 Y	• 2 inch	WP	
<b>Output signal</b>			Special version (add Order code and plain text)	ZA	J 1 Y
4 ... 20 mA	1		<b>Filling liquid</b>		
Special version (add Order code and plain text)	9	M 1 Y	Vegetable oil	1	
			medicinal white oil	2	
			Food oil, FDA-listed	3	
			Special version (add Order code and plain text)	9	L 1 Y
			<b>Output signal</b>		
			4 ... 20 mA	1	
			Special version (add Order code and plain text)	9	M 1 Y

<sup>1)</sup> Please note the internal diameter of the pipe. Please specify pipe classes (see "Further designs")

<sup>1)</sup> Please specify as well:  
Connections for pipes: R01, R02 or R03,  
see table "Further designs" on next page

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Order No. Ord. code

#### SITRANS P Compact pressure transmitters for pressure and absolute pressure with clamp-on remote seal

7MF8010 -

2-wire system  
Process temperature up to 140 °C (284 °F)  
Accuracy: 0.2% of full-scale value  
Output 4 ... 20 mA

2

#### Housing design (stainless steel mat. No. 1.4404/316L) / electr. connection

Housing with angled plug to DIN 43650, IP65, union nut made of polyamide  
Housing with round plug M12, IP65, union nut made of polyamide  
Housing with round plug M12, IP65, union nut made of stainless steel  
Stainless steel field housing (small) with cable gland, IP65  
Stainless steel field housing (small) with cable gland, IP67  
Internal ventilation for measuring ranges < 10 bar (< 145 psi)

1

2

3

4

5

#### Measured range Overload pressure

0 ... 160 mbar g (0 ... 2.32 psi g)	2 bar g (29 psi g)	BB
0 ... 250 mbar g (0 ... 3.63 psi g)	2 bar g (29 psi g)	BC
0 ... 400 mbar g (0 ... 5.8 psi g)	6 bar g (87 psi g)	BD
0 ... 600 mbar g (0 ... 8.7 psi g)	6 bar g (87 psi g)	BE
0 ... 1 bar g (0 ... 14.5 psi g)	10 bar g (145 psi g)	CA
0 ... 1.6 bar g (0 ... 23.2 psi g)	10 bar g (145 psi g)	CB
0 ... 2.5 bar g (0 ... 36.3 psi g)	16 bar g (232 psi g)	CC
0 ... 4 bar g (0 ... 58 psi g)	16 bar g (232 psi g)	CD
0 ... 6 bar g (0 ... 87 psi g)	30 bar g (435 psi g)	CE
0 ... 10 bar g (0 ... 145 psi g)	30 bar g (435 psi g)	DA
0 ... 16 bar g (0 ... 232 psi g)	50 bar g (725 psi g)	DB
0 ... 25 bar g (0 ... 363 psi g)	50 bar g (725 psi g)	DC
0 ... 40 bar g (0 ... 580 psi g)	70 bar g (1015 psi g)	DD
-160 ... 0 mbar g (-2.32 ... 0 psi g)	2 bar g (29 psi g)	EB
-250 ... 0 bar g (-3.73 ... 0 psi g)	2 bar g (29 psi g)	EC
-400 ... 0 bar g (-5.8 ... 0 psi g)	6 bar g (87 psi g)	ED
-600 ... 0 bar g (-8.7 ... 0 psi g)	6 bar g (87 psi g)	EE
-1 ... 0 bar g (-14.5 ... 0 psi g)	10 bar g (145 psi g)	FA
-1 ... 0.6 bar g (-14.5 ... 8.7 psi g)	10 bar g (145 psi g)	FB
-1 ... 1.5 bar g (-14.5 ... 21.8 psi g)	16 bar g (232 psi g)	FC
-1 ... 3 bar g (-14.5 ... 43.5 psi g)	16 bar g (232 psi g)	FD
-1 ... 5 bar g (-14.5 ... 72.5 psi g)	30 bar g (435 psi g)	FE

BB

BC

BD

BE

CA

CB

CC

CD

CE

DA

DB

DC

DD

EB

EC

ED

EE

FA

FB

FC

FD

FE

#### Selection and Ordering data

Order No. Ord. code

#### SITRANS P Compact pressure transmitters for pressure and absolute pressure with clamp-on remote seal

7MF8010 -

2-wire system  
Process temperature up to 140 °C (284 °F)  
Accuracy: 0.2% of full-scale value  
Output 4 ... 20 mA

2

#### Measured range Overload pressure (continued)

-1 ... 9 bar g (-14.5 ... 130.5 psi g)	30 bar g (435 psi g)		GA
-1 ... 15 bar g (-14.5 ... 217.6 psi g)	50 bar g (725 psi g)		GB
0 ... 1 bar a (0 ... 14.5 psi a)	10 bar a (145 psi a)	F)	HA
0 ... 1.6 bar a (0 ... 23.2 psi a)	10 bar a (145 psi a)	F)	HB
0 ... 2.5 bar a (0 ... 36.3 psi a)	16 bar a (232 psi a)	F)	HC
0 ... 4 bar a (0 ... 58 psi a)	16 bar a (232 psi a)	F)	HD
0 ... 6 bar a (0 ... 87 psi a)	30 bar a (435 psi a)	F)	HE
0 ... 10 bar a (0 ... 145 psi a)	30 bar a (435 psi a)	F)	JA
Special version (add Order code and plain text)		F)	ZA P 1 Y

GA

GB

HA

HB

HC

HD

HE

JA

ZA

P 1 Y

#### Explosion protection

without  
with, to ATEX 100a, II 2 G, EEx ib IIC T6

1

2

#### Further designs

Please add "-Z" to Order No. and specify Order code

Order code

#### Hygiene version

Roughness of process connection:  
Foil  $R_a < 0.8 \mu\text{m}$  ( $3.15 \cdot 10^{-8}$  inch);  
Welded seams  $R_a < 1.5 \mu\text{m}$  ( $5.9 \cdot 10^{-8}$  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  
ISO pipes to ISO 2463  
Pipes to O. D. Tubing "BS 4825 Part 1"

R01

R02

R03

#### Certificates

Quality inspection certificate (Factory calibration) to IEC 60770-2

C11

Acceptance test certificate to EN 10204-3.1

C12

Use of FDA-listed remote seal filling liquids certified by factory certificate to EN 10204-2.2

C17

Roughness depth measurement  $R_a$  certified by factory certificate to EN 10204-3.1

C18

Certification to EHEDG for clamp-on seals with aseptic screwed gland to DIN 11864

C19

F) Subject to export regulations AL: 91999, ECCN: N.

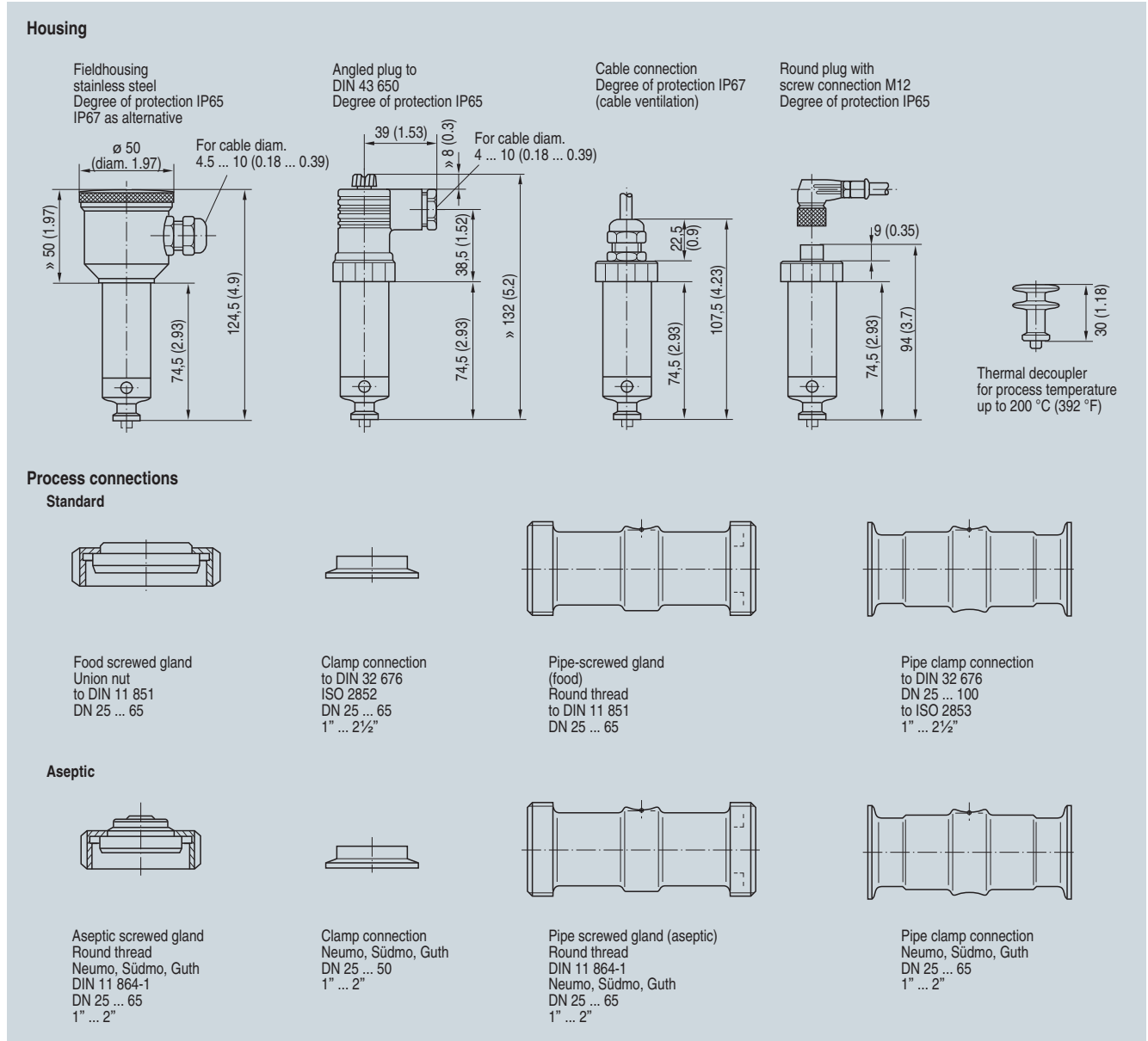
# SITRANS P measuring instruments for pressure

## Transmitters for food, pharmaceuticals and biotechnology

### SITRANS P Compact for gage and absolute pressure

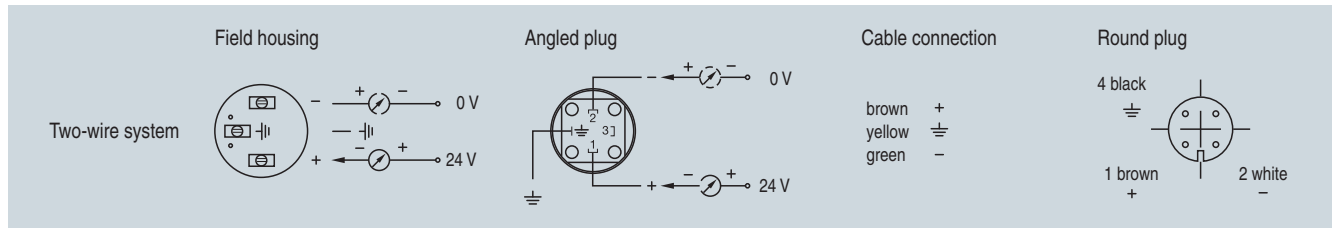
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#### Dimensional drawings



SITRANS P, dimensions in mm (inch)

#### Schematics



SITRANS P Compact, connection diagram