

**Selection and Ordering data**

Order No.

**Pressure transmitters for absolute pressure from differential pressure series, SITRANS P DS III HART**

F) 7MF4333-

**Measuring cell filling      Measuring cell cleaning**

Silicone oil	normal	1
Inert liquid <sup>1)</sup>	Grease-free	3

**Measuring span**

8.3 ... 250 mbar a	(0.12 ... 3.63 psi a)	E)	D
43 ... 1300 mbar a	(0.62 ... 18.9 psi a)	E)	F
0.16 ... 5 bar a	(2.32 ... 72.5 psi a)	E)	G
1 ... 30 bar a	(14.5 ... 435 psi a)		H
5.3 ... 100 bar a	(76.9 ... 1450 psi a)		KE

**Wetted parts materials**

Seal diaphragm	Parts of measuring cell	
Stainless steel	Stainless steel	A
Hastelloy	Stainless steel	B
Hastelloy	Hastelloy	C
Tantalum	Tantalum	E
Monel	Monel	E)
Gold	Gold	L
Version for diaphragm seal <sup>2)3)4)</sup>		Y

**Process connection**

Female thread ¼-18 NPT with flange connection

- Sealing screw opposite process connection
  - Mounting thread 7/16-20 UNF to EN 61518
  - Mounting thread M10 to DIN 19213 (only for replacement requirement)
- Vent on side of process flange<sup>5)</sup>
  - Mounting thread 7/16-20 UNF to EN 61518
  - Mounting thread M10 to DIN 19213 (only for replacement requirement)

**Non-wetted parts materials**

process flange screws	Electronics housing	
Stainless steel	Die-cast aluminum	2
Stainless steel	Stainless steel precision casting <sup>6)</sup>	3

**Version**

- Standard versions
- International version, English label inscriptions, documentation in 5 languages on CD

**Explosion protection**

- None
- With ATEX, Type of protection:
  - "Intrinsic safety (EEx ia)"
  - "Explosion-proof (EEx d)"<sup>7)</sup>
  - "Intrinsic safety and flameproof enclosure (EEx ia + EEx d)"<sup>8)</sup>
  - "Ex nA/nL (Zone 2)"
  - "Intrinsic safety, explosion-proof enclosure and dust explosion protection (EEx ia+ EEx d + Zone 1D/2D)"<sup>8)</sup>
- With FM + CSA, Type of protection:
  - "Intrinsic Safe und Explosion Proof (is + xp)"<sup>7)</sup>

**Electrical connection / cable entry**

- Screwed gland Pg 13.5<sup>9)</sup>
- Screwed gland M20 x 1.5
- Screwed gland ½-14 NPT
- Han 7D plug (plastic housing) incl. mating connector<sup>9)</sup>
- M12 connectors (metal)<sup>10)</sup>

**Selection and Ordering data**

Order No.

**Pressure transmitters for absolute pressure from differential pressure series, SITRANS P DS III HART**

F) 7MF4333-

**Display**

- Without indicator
- Without visible digital indicator(digital indicator ▶ concealed, setting: mA)
- With visible digital indicator
- with customer-specific digital indicator (setting as specified, Order Code "Y21" or "Y22" required)

Power supply units see Chap. 8 "Supplementary Components".

Included in delivery of the device:

- Brief instructions (Leporello)
- CD-ROM with detailed documentation
- Sealing plug(s) or sealing screw(s) for the process flanges(s)

- 1) For oxygen applications, add Order code E10.
- 2) Version 7MF4333-1DY... only up to max. span 200 mbar a (2.9 psi a).
- 3) When the manufacture's certificate (calibration certificate) has to be ordered for transmitters with diaphragm seals according to IEC 60770-2, it is recommended only to order this certificate exclusively with the diaphragm seals. The measuring accuracy of the total combination is certified here.
- 4) If the acceptance test certificate 3.1.is ordered for the transmitter with mounted diaphragm seals this certificate must also be ordered with the respective remote seals.
- 5) Not for span "5.3 ... 100 bar a (76.9 ... 1450 psi a)". Position of the top vent valve in the process flange (see dimensional drawing).
- 6) Not in conjunction with Electrical connection "Screwed gland Pg 13.5" and "Han7D plug".
- 7) Without cable gland, with blanking plug
- 8) With enclosed cable gland EEx ia and blanking plug
- 9) Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".
- 10) M12 delivered without cable socket

E) Combinations of the versions marked with E) are subject to the export regulations AL: 2B230, ECCN: N.

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

Selection and Ordering data		Order No.
<b>Pressure transmitter for absolute pressure from differential pressure series</b>		
SITRANS P DS III PA (PROFIBUS PA)	F)	7MF4334 -
SITRANS P DS III FF (FOUNDATION Fieldbus)	F)	7MF4335 -
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>	
Silicone oil	normal	1
Inert liquid <sup>1)</sup>	Grease-free	3
<b>Nominal measuring range</b>		
250 mbar a	(3.63 psi a)	E) D
1300 mbar a	(18.9 psi a)	E) F
5 bar a	(72.5 psi a)	E) G
30 bar a	(435 psi a)	H
100 bar a	(1450 psi a)	KE
<b>Wetted parts materials</b>		
Seal diaphragm	Parts of measuring cell	
Stainless steel	Stainless steel	A
Hastelloy	Stainless steel	B
Hastelloy	Hastelloy	C
Tantalum	Tantalum	E
Monel	Monel	E) H
Gold	Gold	L
Version as diaphragm seal <sup>2)3)4)</sup>		Y
<b>Process connection</b>		
Female thread 1/4-18 NPT with flange connection		
• Sealing screw opposite process connection		
- Mounting thread 7/16-20 UNF to EN 61518		
- Mounting thread M10 to DIN 19213 (only for replacement requirement)		
• Vent on side of process flange <sup>5)</sup>		
- Mounting thread 7/16-20 UNF to EN 61518		
- Mounting thread M10 to DIN 19213 (only for replacement requirement)		
<b>Non-wetted parts materials</b>		
process flange screws	Electronics housing	
Stainless steel	Die-cast aluminum	2
Stainless steel	Stainless steel precision casting	3
<b>Version</b>		
• Standard versions		
• International version, English label inscriptions, documentation in 5 languages on CD		
<b>Explosion protection</b>		
• None		
• With ATEX, Type of protection:		
- "Intrinsic safety (EEx ia)"		
- "Explosion-proof (EExd) <sup>6)</sup> "		
- "Intrinsic safety and flameproof enclosure" (EEx ia + EEx d) <sup>7)</sup>		
- "Ex nA/nL (Zone 2)"		
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (EEx ia + EEx d + Zone 1D/2D) <sup>7)</sup> (not for DS III FF)"		
• With FM + CSA, Type of protection:		
- "Intrinsic Safe und Explosion Proof (is + xp) <sup>6)</sup> "		
<b>Electrical connection / cable entry</b>		
• Screwed gland M20 x 1.5		
• Screwed gland 1/2-14 NPT		
• M12 connectors (metal) <sup>8)</sup>		

Selection and Ordering data		Order No.
<b>Pressure transmitter for absolute pressure from differential pressure series</b>		
SITRANS P DS III PA (PROFIBUS PA)	F)	7MF4334 -
SITRANS P DS III FF (FOUNDATION Fieldbus)	F)	7MF4335 -
<b>Display</b>		
• Without indicator		0
• Without visible digital indicator (digital indicator concealed, setting: mA)	▶	1
• With visible digital indicator		6
• With customer-specific digital indicator (setting as specified, Order Code "Y21" required)		7
Included in delivery of the device:		
• Brief instructions (Leporello)		
• CD-ROM with detailed documentation		
• Sealing plug(s) or sealing screw(s) for the process flanges(s)		
1) For oxygen application, add Order code E10.		
2) Version 7MF4334-1DY... only up to max. span 200 mbar a (2.9 psi a).		
3) When the manufacturer's certificate (calibration certificate) has to be ordered for transmitters with diaphragm seals according to IEC 60770-2, it is recommended only to order this certificate exclusively with the diaphragm seals. The measuring accuracy of the total combination is certified here.		
4) If the acceptance test certificate 3.1 is ordered for the transmitter with mounted diaphragm seals this certificate must also be ordered with the respective remote seals.		
5) Not for nominal measuring range 100 bar a (1450 psi a). Position of the top vent valve in the process flange (see dimensional drawing).		
6) Without cable gland, with blanking plug		
7) With enclosed cable gland EEx ia and blanking plug		
8) M12 delivered without cable socket		
E) Combinations of the versions marked with E) are subject to the export regulations AL: 2B230, ECCN: N.		
F) Subject to export regulations AL: 9I999, ECCN: N.		

Selection and Ordering data	Order code			
<b>Further designs</b> Add "-Z" to Order No. and specify Order Code.		HART	PA	FF
<b>Pressure transmitter with mounting bracket (2 shackles, 4 nuts, 4 U-plates, 1 angle) made of:</b>				
• Steel	A01	✓	✓	✓
• Stainless steel	A02	✓	✓	✓
<b>O-rings for process flanges</b> (instead of FPM (Viton))				
• PTFE (Teflon)	A20	✓	✓	✓
• FEP (with silicone core, approved for food)	A21	✓	✓	✓
• FPM (Kalrez, compound 4079)	A22	✓	✓	✓
• NBR (Buna N)	A23	✓	✓	✓
<b>plug</b>				
• Han 7D (metal, gray)	A30	✓		
• Han 8U (instead of Han 7D)	A31	✓		
• Angled	A32	✓		
• Han 8D (metal, gray)	A33	✓		
<b>Sealing screw</b> ¼-18 NPT, with valve in mat. of process flanges	A40	✓	✓	✓
<b>Cable sockets for M12 connectors (metal)</b>	A50	✓	✓	✓
<b>Rating plate inscription</b> (instead of German)				
• English	B11	✓	✓	✓
• French	B12	✓	✓	✓
• Spanish	B13	✓	✓	✓
• Italian	B14	✓	✓	✓
<b>English rating plate</b> Pressure units in inH <sub>2</sub> O and/or psi	B21	✓	✓	✓
<b>Quality inspection certificate (factory calibration) to IEC 60770-2<sup>1)</sup></b>	C11	✓	✓	✓
<b>Inspection certificate<sup>2)</sup></b> Acc. to EN 10204-3.1	C12	✓	✓	✓
<b>Factory certificate</b> Acc. to EN 10204-2.2	C14	✓	✓	✓
<b>"Functional safety (SIL2)" certificate</b>	C20	✓		
<b>PROFIsafe certificate and protocol</b>	C21		✓	
<b>"Functional safety (SIL2/3)" certificate</b>	C23	✓		
<b>Setting of upper limit of output signal to 22.0 mA</b>	D05	✓		
<b>Manufacturer's declaration acc. to NACE</b> (only together with seal diaphragm made of Hastelloy and stainless steel)	D07	✓	✓	✓
<b>Degree of protection IP68</b> (only for M20 x 1.5 and ½-14 NPT)	D12	✓	✓	✓
<b>Supplied with oval flange</b> (1 item), PTFE packing and screws in thread of process flange	D37	✓	✓	✓
<b>Use in or on zone 1D/2D</b> (only together with type of protection "Intrinsic safety (EEx ia)")	E01	✓	✓	✓
<b>Oxygen application</b> (In the case of oxygen measurement and inert liquid max. 120 bar a (1740 psi a) at 60°C (140 °F))	E10	✓	✓	✓
<b>Explosion-proof "Intrinsic safety" to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-B..)	E25	✓	✓	✓
<b>Ex Approval IEC Ex (EEx ia)</b> (only for transmitter 7MF4...-.....-B..)	E45	✓	✓	✓

Selection and Ordering data	Order code			
<b>Further designs</b> Add "-Z" to Order No. and specify Order Code.		HART	PA	FF
<b>Ex Approval IEC Ex (EEx id)</b> (only for transmitter 7MF4...-.....-D..)	E46	✓	✓	✓
<b>Explosion-proof "Intrinsic safety" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-B..)	E55	✓	✓	✓
<b>Explosion protection "Explosion-proof" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-D..)	E56	✓	✓	✓
<b>Explosion-proof "Zone 2" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-E..)	E57	✓	✓	✓
<b>Two coats of lacquer on casing and cover (PU on epoxy)</b>	G10	✓	✓	✓
<b>Interchanging of process connection side</b>	H01	✓	✓	✓
<b>Vent on side for gas measurements</b>	H02	✓	✓	✓
<b>Process flange</b>				
• Hastelloy	K01 <sup>F)</sup>	✓	✓	✓
• Monel	K02 <sup>F)</sup>	✓	✓	✓
• Stainless steel with PVDF insert max. PN 10 (MWP 145 psi), max. temperature of medium 90 °C (194 °F) For ½-14 NPT inner process connection on the side in the middle of the process flange, vent valve not possible	K04 <sup>F)</sup>	✓	✓	✓

Selection and Ordering data	Order code		
<i>Additional data</i>	HART	PA	FF
Please add "-Z" to Order No. and specify Order code(s) and plain text.			
<b>Measuring range to be set</b> Specify in plain text (max. 5 characters): Y01: ... up to ... mbar, bar, kPa, MPa, psi	Y01	✓	
<b>Stainless steel tag plate (measuring point description)</b> Max. 16 characters, specify in plain text: Y15: .....	Y15	✓	✓
<b>Measuring point text</b> Max. 27 characters, specify in plain text: Y16: .....	Y16	✓	✓
<b>Entry of HART address (TAG)</b> Max. 8 characters, specify in plain text: Y17: .....	Y17	✓	
<b>Setting of pressure indication in pressure units</b> Specify in plain text (standard setting: bar): Y21: mbar, bar, kPa, MPa, psi, ... Note: The following pressure units can be selected: bar, mbar, mm H <sub>2</sub> O <sup>+</sup> , inH <sub>2</sub> O <sup>+</sup> , ftH <sub>2</sub> O <sup>+</sup> , mmHG, inHG, psi, Pa, kPa, MPa, g/cm <sup>2</sup> , kg/cm <sup>2</sup> , Torr, ATM or % ) ref. temperature 20 °C	Y21	✓	✓
<b>Setting of pressure indication in non-pressure units<sup>3)</sup></b> Specify in plain text: Y22: ..... up to ..... l/min, m <sup>3</sup> /h, m, USgpm, ... (specification of measuring range in pressure units "Y01" is essential, unit with max. 5 characters)	Y22 + Y01	✓	
<b>Preset bus address</b> possible between 1 and 126 Specify in plain text: Y25: .....	Y25		✓

Factory mounting of valve manifolds, see accessories.

Only "Y01", "Y21", "Y22", "Y25" and "D05" can be factory preset

✓ = available

1) When the manufacturer's certificate (calibration certificate) has to be ordered for transmitters with diaphragm seals according to IEC 60770-2, it is recommended only to order this certificate exclusively with the diaphragm seals. The measuring accuracy of the total combination is certified here.

2) If the acceptance test certificate 3.1 is ordered for the transmitter with mounted diaphragm seals this certificate must also be ordered with the respective remote seals.

3) Preset values can only be changed over SIMATIC PDM.