

# Pressure Measurement

## Transmitters for general requirements

**SITRANS P DS III**  
 for gauge pressure

1

Selection and Ordering data		Article No.
<b>Pressure transmitter for gauge pressure, SITRANS P DS III with HART</b>		<b>7MF4033-</b>
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>	
Silicone oil	normal	▶ ◆ 1
Inert liquid <sup>1)</sup>	grease-free to cleanliness level 2	▶ ◆ 3
<b>Measuring span (min. ... max.)</b>		
0.01 ... 1 bar	(0.15 ... 14.5 psi)	▶ ◆ B
0.04 ... 4 bar	(0.58 ... 58 psi)	▶ ◆ C
0.16 ... 16 bar	(2.32 ... 232 psi)	▶ ◆ D
0.63 ... 63 bar	(9.14 ... 914 psi)	▶ ◆ E
1.6 ... 160 bar	(23.2 ... 2320 psi)	▶ ◆ F
4.0 ... 400 bar	(58.0 ... 5802 psi)	▶ ◆ G
7.0 ... 700 bar	(102.0 ... 10153 psi)	▶ ◆ J
<b>Wetted parts materials</b>		
Seal diaphragm	Process connection	
Stainless steel	Stainless steel	▶ ◆ A
Hastelloy	Stainless steel	B
Hastelloy	Hastelloy	C
Version as diaphragm seal <sup>2) 3) 4) 5)</sup>		Y
<b>Process connection</b>		
• Connection shank G $\frac{1}{2}$ B to EN 837-1		▶ ◆ 0
• Female thread $\frac{1}{2}$ -14 NPT		◆ 1
• Stainless steel oval flange with process connection (Oval flange has no female thread)		
- Mounting thread $\frac{7}{16}$ -20 UNF to IEC 61518		2
- Mounting thread M10 to DIN 19213		3
- Mounting thread M12 to DIN 19213		4
• Male thread M20 x 1.5		5
• Male thread $\frac{1}{2}$ -14 NPT		6
<b>Non-wetted parts materials</b>		
• Housing made of die-cast aluminium		▶ ◆ 0
• Housing stainless steel precision casting <sup>6)</sup>		3
<b>Version</b>		
• Standard versions		◆ 1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		▶ ◆ 2
<b>Explosion protection</b>		
• None		◆ A
• With ATEX, Type of protection:		
- "Intrinsic safety (Ex ia)"		◆ B
- "Explosion-proof (Ex d) <sup>7)</sup>		◆ D
- "Intrinsic safety and flameproof enclosure" (Ex ia + Ex d) <sup>8)</sup>		◆ P
- "Ex nA/ic (Zone 2) <sup>9)</sup>		◆ E
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia + Ex d + Zone 1D/2D) <sup>8)</sup>		▶ ◆ R
• FM + CSA intrinsic safe (is)		F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S
• With FM + CSA, Type of protection:		
- "Intrinsic Safe und Explosion Proof (is + xp) <sup>7)</sup>		◆ NC
<b>Electrical connection / cable entry</b>		
• Screwed gland Pg 13.5 (adapter) <sup>10)</sup>		A
• Screwed gland M20 x1 .5		▶ ◆ B
• Screwed gland $\frac{1}{2}$ -14 NPT		◆ C
• Han 7D plug (plastic housing) incl. mating connector <sup>10)</sup>		D
• M12 connectors (stainless steel) <sup>10)11)</sup>		F

Selection and Ordering data		Article No.
<b>Pressure transmitter for gauge pressure, SITRANS P DS III with HART</b>		<b>7MF4033-</b>
<b>Display</b>		
• Without display	◆	0
• Without visible display (display concealed, setting: mA)	▶ ◆	1
• With visible display, setting: mA	◆	6
• with customer-specific display (setting as specified, Order code "Y21" or "Y22" required)	◆	7
▶ Available ex stock		
◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.		
Power supply units see Chap. 7 "Supplementary Components".		
Included in delivery of the device:		
• Brief instructions (Leporello)		
• CD-ROM with detailed documentation		
1) For oxygen application, add Order code E10.		
2) 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 <u>total</u> combination is certified here.		
3) 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.		
4) The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF403-...Y-... and 7MF4900-1...-B		
5) The standard measuring cell filling of configurations with remote seals (Y) is silicone oil.		
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 Ex ia and blanking plug		
9) Configurations with HAN and M12 connectors are only available in Ex ic.		
10) Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".		
11) M12 delivered without cable socket		

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for gauge pressure

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Selection and Ordering data		Article No.
<b>Pressure transmitter for gauge pressure</b>		
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		<b>7 MF 4 0 3 4 -</b>
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		<b>7 MF 4 0 3 5 -</b>
<b>Measuring cell filling</b>		
Silicone oil	normal	1
Inert liquid <sup>1)</sup>	grease-free to cleanliness level 2	3
<b>Nominal measuring range</b>		
1 bar	(14.5 psi)	B
4 bar	(58 psi)	C
16 bar	(232 psi)	D
63 bar	(914 psi)	E
160 bar	(2320 psi)	F
400 bar	(5802 psi)	G
700 bar	(10153 psi)	J
<b>Wetted parts materials</b>		
Seal diaphragm	Process connection	
Stainless steel	Stainless steel	A
Hastelloy	Stainless steel	B
Hastelloy	Hastelloy	C
Version as diaphragm seal <sup>2) 3) 4) 5)</sup>		Y
<b>Process connection</b>		
• Connection shank G½B to EN 837-1		0
• Female thread ½-14 NPT		1
• Stainless steel oval flange with process connection (Oval flange has no female thread) <sup>6)</sup>		
- Mounting thread 7/16"-20 UNF to IEC 61518		2
- Mounting thread M10 to DIN 19213		3
- Mounting thread M12 to DIN 19213		4
• Male thread M20 x 1.5		5
• Male thread ½ -14 NPT		6
<b>Non-wetted parts materials</b>		
• Housing made of die-cast aluminium		0
• Housing stainless steel precision casting		3
<b>Version</b>		
• Standard versions		1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		2
<b>Explosion protection</b>		
• None		A
• With ATEX, Type of protection:		
- "Intrinsic safety (Ex ia)"		B
- "Explosion-proof (Ex d)" <sup>7)</sup>		D
- "Intrinsic safety and flameproof enclosure" (Ex ia + Ex d) <sup>8)</sup>		P
- "Ex nA/ic (Zone 2)" <sup>9)</sup>		E
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia + Ex d + Zone 1D/2D)" <sup>8)</sup> (not for DS III FF)		R
• FM + CSA intrinsic safe (is)		F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S
• With FM + CSA, Type of protection:		
- "Intrinsic Safe und Explosion Proof (is + xp)" <sup>7)</sup>		NC
<b>Electrical connection/cable entry</b>		
• Screwed gland M20 x 1.5		B
• Screwed gland ½-14 NPT		C
• M12 connectors (stainless steel) <sup>10) 11) 12)</sup>		F

Selection and Ordering data		Article No.
<b>Pressure transmitter for gauge pressure</b>		
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		<b>7 MF 4 0 3 4 -</b>
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		<b>7 MF 4 0 3 5 -</b>
<b>Display</b>		
• Without display		0
• Without visible display (display concealed, setting: bar)		1
• With visible display		6
• with customer-specific display (setting as specified, Order code "Y21" required)		7
Included in delivery of the device:		
• Brief instructions (Leporello)		
• CD-ROM with detailed documentation		
1) For oxygen application, add Order code E10.		
2) 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 <u>total</u> combination is certified here.		
3) 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.		
4) The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF403-...Y... and 7MF4900-1...-B		
5) The standard measuring cell filling of configurations with remote seals (Y) is silicone oil.		
6) M10 fastening thread: Max. span 160 bar (2320 psi) 7/16-20 UNF and M12 fastening thread: Max. span 400 bar (5802 psi)		
7) Without cable gland, with blanking plug.		
8) With enclosed cable gland Ex ia and blanking plug.		
9) Configurations with HAN and M12 connectors are only available in Ex ic.		
10) M12 delivered without cable socket		
11) Not available with protection type "Ex d" bestellbar (Options D, P, N and R)		
12) Not with protection types "Explosion-proof" and protection type „Ex nA“, „Intrinsic safe" and „Explosion proof".		

# Pressure Measurement

## Transmitters for general requirements

**SITRANS P DS III**  
**for gauge pressure**

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Selection and Ordering data	Order code		
<i>Further designs</i>	HART	PA	FF
Add "-Z" to Article No. and specify Order code.			
<b>Pressure transmitter with mounting bracket (1x fixing angle, 2 x nut, 2 x U-washer or 1 x bracket, 2 x nut, 2 x U-washer) made of:</b>			
• Steel	◆ A01	✓	✓
• Stainless steel	◆ A02	✓	✓
<b>Plug</b>			
• Han 7D (metal, gray)	A30	✓	
• Han 8U (instead of Han 7D)	A31	✓	
• Angled	A32	✓	
• Han 8D (metal, gray)	A33	✓	
<b>Cable sockets for M12 connectors (stainless steel)</b>	A50	✓	✓
<b>Rating plate inscription</b> (instead of German)			
• English	◆ B11	✓	✓
• French	◆ B12	✓	✓
• Spanish	◆ B13	✓	✓
• Italian	◆ B14	✓	✓
<b>English rating plate</b>	◆ B21	✓	✓
Pressure units in inH <sub>2</sub> O and/or psi			
<b>Quality inspection certificate (Five-step factory calibration) to IEC 60770-2<sup>1)</sup></b>	◆ C11	✓	✓
<b>Inspection certificate<sup>2)</sup></b>	◆ C12	✓	✓
Acc. to EN 10204-3.1			
<b>Factory certificate</b>	◆ C14	✓	✓
Acc. to EN 10204-2.2			
<b>Functional safety (SIL2)</b>	◆ C20	✓	
Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration			
<b>Functional safety (PROFIsafe) Certificate and PROFIsafe protocol</b>	C21 <sup>3)</sup>	✓	
<b>Functional safety (SIL2/3)</b>	◆ C23	✓	
Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration			
<b>Device passport Russia</b>	C99	✓	✓
(For price request please contact the technical support <a href="http://www.siemens.com/automation/support-request">www.siemens.com/automation/support-request</a> )			
<b>Setting of upper limit of output signal to 22.0 mA</b>	D05	✓	
<b>Manufacturer's declaration acc. to NACE (MR 0103-2012 and MR 0175-2009)</b>	D07	✓	✓
<b>Degree of protection IP65/IP68</b> (only for M20x1.5 and ½-14 NPT)	D12	✓	✓
<b>Supplied with oval flange</b> (1 item), PTFE packing and screws in thread of oval flange	D37	✓	✓
<b>Use in or on zone 1D/2D</b> (only together with type of protection "Intrinsic safety" (transmitter 7MF4...-.....-B.. Ex ia <sup>4)</sup> )	E01	✓	✓
<b>Oxygen application</b> (In the case of oxygen measurement and inert liquid max. 100 bar (1450 psi) at 60°C (140 °F))	E10	✓	✓
<b>Export approval Korea</b>	E11	✓	✓
<b>CRN approval Canada</b> (Canadian Registration Number)	E22	✓	✓
<b>Dual seal</b>	E24	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-B..)	E25 <sup>4)</sup>	✓	✓

Selection and Ordering data	Order code		
<i>Further designs</i>	HART	PA	FF
Add "-Z" to Article No. and specify Order code.			
<b>"Flameproof" explosion protection according to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-D..)	E26 <sup>4)</sup>	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia + Ex d) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-P..)	E28 <sup>4)</sup>	✓	✓
<b>Ex Approval IEC Ex (Ex ia)</b> (only for transmitter 7MF4...-.....-B..)	E45 <sup>4)</sup>	✓	✓
<b>Ex Approval IEC Ex (Ex id)</b> (only for transmitter 7MF4...-.....-D..)	E46 <sup>4)</sup>	✓	✓
<b>Explosion-proof "Intrinsic safety" to NEPSI (China)</b>	E55 <sup>4)</sup>	✓	✓
<b>Explosion protection "Explosion-proof" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-D..)	E56 <sup>4)</sup>	✓	✓
<b>Ex protection "Zone 2" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-E..)	E57 <sup>4)</sup>	✓	✓
<b>"Intrinsic safety" and "Explosion-proof" explosion protection acc. to Kosha (Korea)</b> (only for transmitter 7MF4...-.....-[B, D]..-Z + E11)	E70 <sup>4)</sup>	✓	✓
<b>Two coats of lacquer on casing and cover (PU on epoxy)</b>	G10	✓	✓
<b>Transient protector 6 kV (lightning protection)</b>	J01	✓	✓

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

<sup>1)</sup> 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.

<sup>2)</sup> 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.

<sup>3)</sup> Profisafe transmitters can only be operated with the S7 F Systems V6.1 configuration software in combination with S7-400H

<sup>4)</sup> Option does not include ATEX approval, but instead includes only the country-specific approval.

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for gauge pressure

1

Selection and Ordering data	Order code			
Additional data		HART	PA	FF
Please add '-Z' to Article 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	✓	✓ <sup>1)</sup>	
<b>Stainless steel tag plate and entry in device variable (measuring point description)</b> Max. 16 characters, specify in plain text: Y15: .....	◆ Y15	✓	✓	✓
<b>Measuring point text (entry in device variable)</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>2)</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		✓	✓
<b>Damping adjustment in seconds (0 ... 100 s)</b>	Y30	✓	✓	✓

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

Only Y01, Y15, Y16, Y17, Y21, Y22, Y25 and D05 can be factory preset

✓ = available

#### Ordering example

Item line: 7MF4033-1EA00-1AA7-Z  
B line: A01 + Y01 + Y21  
C line: Y01: 10 ... 20 bar (145 ... 290 psi)  
C line: Y21: bar (psi)

1) Measuring accuracies for PROFIBUS PA transmitters with Option Y01 are calculated in the same way as for HART devices.

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

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for gauge/absolute pressure, with front-flush diaphragm

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Selection and Ordering data		Article No.
<b>Pressure transmitter for gauge and absolute pressure, front-flush diaphragm, SITRANS P DS III HART</b>		<b>7MF4133-</b>
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>	
Silicone oil	normal	1
Inert liquid	grease-free to cleanliness level 2	3
FDA compliant fill fluid		
• Neobee oil	normal	4
<b>Measuring span (min. ... max.)</b>		
0.01 ... 1 bar	(0.15 ... 14.5 psi)	B
0.04 ... 4 bar	(0.58 ... 58 psi)	C
0.16 ... 16 bar	(2.32 ... 232 psi)	D
0.63 ... 63 bar	(9.14 ... 914 psi)	E
13 ... 1300 mbar a <sup>1)</sup>	(0.62 ... 18.85 psia) <sup>1)</sup>	S
0.05 ... 5 bar a <sup>1)</sup>	(0.7 ... 72.5 psia) <sup>1)</sup>	T
0.3 ... 30 bar a <sup>1)</sup>	(4.35 ... 435 psia) <sup>1)</sup>	U
<b>Wetted parts materials</b>		
Seal diaphragm	Connection shank	
Stainless steel	Stainless steel	A
Hastelloy <sup>2)</sup>	Stainless steel	B
<b>Process connection</b>		
• Flange version with Order code M., N., R. or Q..		7
<b>Non-wetted parts materials</b>		
• Housing made of die-cast aluminium		0
• Housing stainless steel precision casting		3
<b>Version</b>		
• Standard versions		1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		2
<b>Explosion protection</b>		
• None		A
• With ATEX, Type of protection:		
- "Intrinsic safety (Ex ia)"		B
- "Explosion-proof (Ex d)" <sup>3)</sup>		D
- „Ex nA/ic (Zone 2)" <sup>4)</sup>		E
• FM + CSA intrinsic safe (is)		F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S
• With FM + CSA, Type of protection:		
- "Intrinsic Safe und Explosion Proof (is + xp)" <sup>3)</sup>		NC
<b>Electrical connection/cable entry</b>		
• Inner thread M20 x 1.5		B
• Female thread ½-14 NPT		C
• M12 connectors (stainless steel) <sup>5) 6) 7)</sup>		F
<b>Display</b>		
• Without display		0
• Without visible display (display concealed, setting: mA)		1
• with visible display, setting: mA		6
• with customer-specific display (setting as specified, Order code "Y21" or "Y22" required)		7

Power supply units see Chap. 7 "Supplementary Components".

Included in delivery of the device:

- Brief instructions (Leporello)
- CD-ROM with detailed documentation

- 1) Not with temperature decoupler P00 and P10, not for process connections R02, R04, R10 and R11, and can only be ordered in conjunction with silicone oil.
- 2) Only available for flanges with options M., N. and Q..
- 3) Without cable gland, with blanking plug
- 4) Bei Konfiguration mit Stecker HAN und M12 ist nur Zündschutzart Ex ic möglich.
- 5) M12 delivered without cable socket
- 6) Not available with protection type „Ex d“ (options D and N)
- 7) Not with protection types "Explosion-proof" and "Ex nA", „Intrinsic safe" and „Explosion proof“.

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for gauge/absolute pressure, with front-flush diaphragm

Selection and Ordering data		Article No.
<b>Pressure transmitter P for gauge and absolute pressure, front-flush diaphragm:</b>		
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		7MF4134-
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		7MF4135-
		■ ■ ■ ■ - ■ ■ ■ ■
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>	
Silicone oil	normal	1
Inert liquid	grease-free to cleanliness level 2	3
FDA compliant fill fluid		
• Neobee oil	normal	4
<b>Nominal measuring range</b>		
1 bar	(14.5 psi)	B
4 bar	(58 psi)	C
16 bar	(232 psi)	D
63 bar	(914 psi)	E
1300 mbar a <sup>1)</sup>	(18.85 psia) <sup>1)</sup>	S
5 bar a <sup>1)</sup>	(72.5 psia) <sup>1)</sup>	T
30 bar a <sup>1)</sup>	(435 psia) <sup>1)</sup>	U
<b>Wetted parts materials</b>		
<b>Seal diaphragm</b>	<b>Connection shank</b>	
Stainless steel	Stainless steel	A
Hastelloy <sup>2)</sup>	Stainless steel	B
<b>Process connection</b>		
• Flange version with Order code M.., N.., R.. or Q..		7
<b>Non-wetted parts materials</b>		
• Housing made of die-cast aluminium		0
• Housing stainless steel precision casting		3
<b>Version</b>		
• Standard versions		1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		2
<b>Explosion protection</b>		
• None		A
• With ATEX, Type of protection:		
- "Intrinsic safety (Ex ia)"		B
- "Explosion-proof (Ex d)" <sup>3)</sup>		D
• FM + CSA intrinsic safe (is)		F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S
• With FM + CSA, Type of protection:		
- "Intrinsic Safe und Explosion Proof (is + xp)" <sup>3)</sup> (Available soon)		NC
<b>Electrical connection/cable entry</b>		
• Screwed gland M20 x 1.5		B
• Screwed gland ½-14 NPT		C
• Han 7D plug (plastic housing) incl. mating connector <sup>4)</sup>		D
• M12 connectors (stainless steel) <sup>5) 6) 7)</sup>		F

Selection and Ordering data		Article No.
<b>Pressure transmitter P for gauge and absolute pressure, front-flush diaphragm:</b>		
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		7MF4134-
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		7MF4135-
		■ ■ ■ ■ - ■ ■ ■ ■
<b>Display</b>		
• Without display		0
• Without visible display (display concealed, setting: bar)		1
• With visible display		6
• With customer-specific display (setting as specified, Order code "Y21" required)		7
Included in delivery of the device:		
• Brief instructions (Leporello)		
• CD-ROM with detailed documentation		
1) Not with temperature decoupler P00 and P10, not for process connections R01, R02, R04, R10 and R11, and can only be ordered in conjunction with silicone oil.		
2) Only available for flanges with options M.., N.. and Q..		
3) Without cable gland, with blanking plug		
4) Not in conjunction with types of protection "Explosion-proof" and "Ex ic", "Intrinsic safety" and "Explosion-proof".		
5) M12 delivered without cable socket		
6) Not available with protection type „Ex d“ (optionen D and N)		
7) Not with protection types "Explosion-proof" and "Ex nA", „Intrinsic safe“ and „Explosion proof“.		

# Pressure Measurement

## Transmitters for general requirements

SITRANS P DS III for gauge/absolute pressure, with front-flush diaphragm

1

Selection and Ordering data	Order code		
<i>Further designs</i> Add "-Z" to Article No. and specify Order code.	HART	PA	FF
<b>Plug</b> • Angled • Han 8D (metal, gray)	A32 A33	✓ ✓	
<b>Cable sockets for M12 connectors (stainless steel)</b>	A50	✓	✓
<b>Rating plate inscription</b> (instead of German) • English • French • Spanish • Italian	B11 B12 B13 B14	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓
<b>English rating plate</b> Pressure units in inH <sub>2</sub> O and/or psi	B21	✓	✓
<b>Quality inspection certificate (Five-step factory calibration) to IEC 60770-2</b>	C11	✓	✓
<b>Inspection certificate</b> Acc. to EN 10204-3.1	C12	✓	✓
<b>Factory certificate</b> Acc. to EN 10204-2.2	C14	✓	✓
<b>Functional safety (SIL2)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	C20	✓	
<b>Functional safety (PROFIsafe) Certificate and PROFIsafe protocol</b>	C21 <sup>1)</sup>		✓
<b>Functional safety (SIL2/3)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	C23	✓	
<b>Device passport Russia</b> (For price request please contact the technical support www.siemens.com/automation/support-request.)	C99	✓	✓
<b>Setting of upper limit of output signal to 22.0 mA</b>	D05	✓	
<b>Degree of protection IP65/IP68</b> (only for M20x1.5 and ½-14 NPT)	D12	✓	✓
<b>Oxygen application</b> (In the case of oxygen measurement and inert liquid max. 100 bar (1450 psi) at 60°C (140 °F))	E10	✓	✓
<b>Export approval Korea</b>	E11	✓	✓
<b>CRN approval Canada</b> (Canadian Registration Number)	E22	✓	✓
<b>Dual seal</b>	E24	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-B..)	E25 <sup>2)</sup>	✓	✓
<b>"Flameproof" explosion protection according to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-D..)	E26 <sup>2)</sup>	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia + Ex d) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-P..)	E28 <sup>2)</sup>	✓	✓
<b>Ex Approval IEC Ex (Ex ia)</b> (only for transmitter 7MF4...-.....-B..)	E45 <sup>2)</sup>	✓	✓
<b>Ex Approval IEC Ex (Ex id)</b> (only for transmitter 7MF4...-.....-D..)	E46 <sup>2)</sup>	✓	✓
<b>"Intrinsic safety" and "Explosion-proof" explosion protection acc. to Kosha (Korea)</b> (only for transmitter 7MF4...-.....-[B, D]..-Z + E11)	E70 <sup>2)</sup>	✓	✓

Selection and Ordering data	Order code		
<i>Further designs</i> Add "-Z" to Article No. and specify Order code.	HART	PA	FF
<b>Two coats of lacquer on casing and cover (PU on epoxy)</b>	G10	✓	✓
<b>Transient protector 6 kV (lightning protection)</b>	J01	✓	✓
<b>Flanges to EN 1092-1, Form b1</b> • DN 25, PN 40 <sup>3)</sup> • DN 25, PN 100 <sup>3)</sup> • DN 40, PN 40 • DN 40, PN 100 • DN 50, PN 16 • DN 50, PN 40 • DN 80, PN 16 • DN 80, PN 40	M11 M21 M13 M23 M04 M14 M06 M16	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
<b>Flanges to ASME B16.5</b> • Stainless steel flange 1" class 150 <sup>3)</sup> • Stainless steel flange 1½" class 150 • Stainless steel flange 2" class 150 • Stainless steel flange 3" class 150 • Stainless steel flange 4" class 150 • Stainless steel flange 1" class 300 <sup>3)</sup> • Stainless steel flange 1½" class 300 • Stainless steel flange 2" class 300 • Stainless steel flange 3" class 300 • Stainless steel flange 4" class 300	M40 M41 M42 M43 M44 M45 M46 M47 M48 M49	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
<b>Threaded connector to DIN 3852-2, form A, thread to ISO 228<sup>4)</sup></b> • G ¼"-A, front-flush • G 1"-A, front-flush • G 2"-A, front-flush	R01 R02 R04	✓ ✓ ✓	✓ ✓ ✓
<b>Tank connection<sup>5)</sup></b> Sealing is included in delivery • TG 52/50, PN 40 • TG 52/150, PN 40	R10 R11	✓ ✓	✓ ✓
<b>Sanitary process connection according DIN 11851 (Dairy connection with slotted union nut)</b> • DN 50, PN 25 • DN 80, PN 25	N04 N06	✓ ✓	✓ ✓
<b>Tri-Clamp connection according DIN 32676/ISO 2852</b> • DN 50/2", PN 16 • DN 65/3", PN 10	N14 N15	✓ ✓	✓ ✓
<b>Varivent connection</b> Certified to EHEDG • Type N = 68 for Varivent housing DN 40 ... 125 und 1½" ... 6", PN 40	N28	✓	✓
<b>Temperature decoupler up to 200 °C<sup>6)</sup></b> for version with front-flush diaphragm	P00	✓	✓
<b>Temperature decoupler up to 250 °C</b> Measuring cell filling: High-temperature oil, only in conjunction with measuring cell filling silicone oil	P10	✓	✓
<b>Bio-Control sanitary process connection</b> Certified to EHEDG • DN 50, PN 16 • DN 65, PN 16	Q53 Q54	✓ ✓	✓ ✓
<b>Sanitary process connection to DRD</b> • DN 50, PN 40	M32	✓	✓
<b>SMS socket with union nut</b> • 2" • 2½" • 3"	M67 M68 M69	✓ ✓ ✓	✓ ✓ ✓

# Pressure Measurement

## Transmitters for general requirements

SITRANS P DS III for gauge/absolute pressure, with front-flush diaphragm

1

Selection and Ordering data	Order code			
<b>Further designs</b> Add "-Z" to Article No. and specify Order code.		<b>HART</b>	<b>PA</b>	<b>FF</b>
<b>SMS threaded socket</b>				
• 2"	M73	✓	✓	✓
• 2½"	M74	✓	✓	✓
• 3"	M75	✓	✓	✓
<b>IDF socket with union nut ISO 2853</b>				
• 2"	M82	✓	✓	✓
• 2½"	M83	✓	✓	✓
• 3"	M84	✓	✓	✓
<b>IDF threaded socket ISO 2853</b>				
• 2"	M92	✓	✓	✓
• 2½"	M93	✓	✓	✓
• 3"	M94	✓	✓	✓
<b>Sanitary process connection to NEUMO Bio-Connect screw connection</b> Certified to EHEDG				
• DN 50, PN 16	Q05	✓	✓	✓
• DN 65, PN 16	Q06	✓	✓	✓
• DN 80, PN 16	Q07	✓	✓	✓
• DN 100, PN 16	Q08	✓	✓	✓
• DN 2", PN 16	Q13	✓	✓	✓
• DN 2½", PN 16	Q14	✓	✓	✓
• DN 3", PN 16	Q15	✓	✓	✓
• DN 4", PN 16	Q16	✓	✓	✓
<b>Sanitary process connection to NEUMO Bio-Connect flange connection</b> Certified to EHEDG				
• DN 50, PN 16	Q23	✓	✓	✓
• DN 65, PN 16	Q24	✓	✓	✓
• DN 80, PN 16	Q25	✓	✓	✓
• DN 100, PN 16	Q26	✓	✓	✓
• DN 2", PN 16	Q31	✓	✓	✓
• DN 2½", PN 16	Q32	✓	✓	✓
• DN 3", PN 16	Q33	✓	✓	✓
• DN 4", PN 16	Q34	✓	✓	✓
<b>Sanitary process connection to NEUMO Bio-Connect clamp connection</b> Certified to EHEDG				
• DN 50, PN 16	Q39	✓	✓	✓
• DN 65, PN 10	Q40	✓	✓	✓
• DN 80, PN 10	Q41	✓	✓	✓
• DN 100, PN 10	Q42	✓	✓	✓
• DN 2½", PN 16	Q48	✓	✓	✓
• DN 3", PN 10	Q49	✓	✓	✓
• DN 4", PN 10	Q50	✓	✓	✓
<b>Sanitary process connection to NEUMO Bio-Connect S flange connection</b> Certified to EHEDG				
• DN 50, PN 16	Q63	✓	✓	✓
• DN 65, PN 10	Q64	✓	✓	✓
• DN 80, PN 10	Q65	✓	✓	✓
• DN 100, PN 10	Q66	✓	✓	✓
• DN 2", PN 16	Q72	✓	✓	✓
• DN 2½", PN 10	Q73	✓	✓	✓
• DN 3", PN 10	Q74	✓	✓	✓
• DN 4", PN 10	Q75	✓	✓	✓

Selection and Ordering data	Order code			
<b>Further designs</b> Add "-Z" to Article No. and specify Order code.		<b>HART</b>	<b>PA</b>	<b>FF</b>
<b>Aseptic threaded socket to DIN 11864-1 Form A</b> approved according to EHEDG				
• DN 50, PN 25	N33	✓	✓	✓
• DN 65, PN 25	N34	✓	✓	✓
• DN 80, PN 25	N35	✓	✓	✓
• DN 100, PN 25	N36	✓	✓	✓
<b>Aseptic flange with notch to DIN 11864-2 Form A</b> approved according to EHEDG				
• DN 50, PN 16	N43	✓	✓	✓
• DN 65, PN 16	N44	✓	✓	✓
• DN 80, PN 16	N45	✓	✓	✓
• DN 100, PN 16	N46	✓	✓	✓
<b>Aseptic flange with groove to DIN 11864-2 Form A</b> approved according to EHEDG				
• DN 50, PN 16	N43 + P11	✓	✓	✓
• DN 65, PN 16	N44 + P11	✓	✓	✓
• DN 80, PN 16	N45 + P11	✓	✓	✓
• DN 100, PN 16	N46 + P11	✓	✓	✓
<b>Aseptic clamp with groove to DIN 11864-3 Form A</b> approved according to EHEDG				
• DN 50, PN 25	N53	✓	✓	✓
• DN 65, PN 25	N54	✓	✓	✓
• DN 80, PN 16	N55	✓	✓	✓
• DN 100, PN 16	N56	✓	✓	✓

- Profisafe transmitters can only be operated with the S7 F Systems V6.1 configuration software in combination with S7-400H.
- Option does not include ATEX approval, but instead includes only the country-specific approval.
- Special seal in Viton included in the scope of delivery
- Lower measuring limit -100 mbar (1.45 psi).
- The weldable socket can be ordered under accessories.
- The maximum permissible temperatures of the medium depend on the respective cell fillings.



# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for gauge/absolute pressure, with front-flush diaphragm

1

Selection and Ordering data	Order code			
Additional data		HART	PA	FF
Please add <b>"-Z"</b> to Article 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	<b>Y01</b>	✓	✓ <sup>1)</sup>	
<b>Stainless steel tag plate and entry in device variable (measuring point description)</b> Max. 16 characters, specify in plain text: Y15: .....	<b>Y15</b>	✓	✓	✓
<b>Measuring point text (entry in device variable)</b> Max. 27 characters, specify in plain text: Y16: .....	<b>Y16</b>	✓	✓	✓
<b>Entry of HART address (TAG)</b> Max. 8 characters, specify in plain text: Y17: .....	<b>Y17</b>	✓		
<b>Setting of pressure indicator 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 % <sup>*)</sup> ref. temperature 20 °C	<b>Y21</b>	✓	✓	✓
<b>Setting of pressure indication in non-pressure units<sup>2)</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)	<b>Y22 + Y01</b>	✓		
<b>Preset bus address</b> possible between 1 and 126 Specify in plain text: Y25: .....	<b>Y25</b>		✓	✓
<b>Damping adjustment in seconds (0 ... 100 s)</b>	<b>Y30</b>	✓	✓	✓

Only Y01, Y15, Y16, Y17, Y21, Y22, Y25 and D05 can be factory preset

✓ = available

#### ordering example

Item line: 7MF4133-1DB20-1AB7-Z  
 B line: A22 + Y01 + Y21  
 C line: Y01: 1 ... 10 bar (14.5 ... 145 psi)  
 C line: Y21: bar (psi)

<sup>1)</sup> Measuring accuracies for PROFIBUS PA transmitters with Option Y01 are calculated in the same way as for HART devices.

<sup>2)</sup> Preset values can only be changed over SIMATIC PDM.

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for absolute pressure (from gauge pressure series)

1

Selection and Ordering data		Article No.
<b>Pressure transmitters for absolute pressure from gauge pressure series</b> <b>SITRANS P DS III with HART</b>		<b>7MF4233-</b>
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>	
Silicone oil	normal	1
Inert liquid <sup>1)</sup>	grease-free to cleanliness level 2	3
<b>Measuring span (min. ... max.)</b>		
8.3 ... 250 mbar a	(0.12 ... 3.62 psia)	D
43 ... 1300 mbar a	(0.62 ... 18.85 psia)	F
0.16 ... 5 bar a	(2.32 ... 72.5 psia)	G
1 ... 30 bar a	(14.5 ... 435 psia)	H
<b>Wetted parts materials</b>		
Seal diaphragm	Process connection	
Stainless steel	Stainless steel	A
Hastelloy	Stainless steel	B
Hastelloy	Hastelloy	C
Version for diaphragm seal <sup>2) 3) 4) 5) 6)</sup>		Y
<b>Process connection</b>		
• Connection shank G $\frac{1}{2}$ B to EN 837-1		0
• Female thread $\frac{1}{2}$ -14 NPT		1
• Stainless steel oval flange with process connection (Oval flange has no female thread)		
- Mounting thread $\frac{7}{16}$ -20 UNF to EN 61518		2
- Mounting thread M10 to DIN 19213		3
- Mounting thread M12 to DIN 19213		4
• Male thread M20 x 1.5		5
• Male thread $\frac{1}{2}$ -14 NPT		6
<b>Non-wetted parts materials</b>		
• Housing made of die-cast aluminium		0
• Housing stainless steel precision casting <sup>7)</sup>		3
<b>Version</b>		
• Standard versions		1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		2
<b>Explosion protection</b>		
• None		A
• With ATEX, Type of protection:		
- "Intrinsic safety (Ex ia)"		B
- "Explosion-proof (Ex d) <sup>8)</sup>		D
- "Intrinsic safety and flameproof enclosure" (Ex ia + Ex d) <sup>9)</sup>		P
- "Ex nA/ic (Zone 2) <sup>10)</sup>		E
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia+ Ex d + Zone 1D/2D) <sup>9)</sup>		R
• FM + CSA intrinsic safe (is)		F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S
• With FM + CSA, Type of protection:		
- "Intrinsic Safe und Explosion Proof (is + xp) <sup>8)</sup>		NC
<b>Electrical connection/cable entry</b>		
• Screwed gland Pg 13.5 <sup>11)</sup>		A
• Screwed gland M20x1.5		B
• Screwed gland $\frac{1}{2}$ -14 NPT		C
• Han 7D plug (plastic housing) incl. mating connector <sup>11)</sup>		D
• M12 connectors (stainless steel) <sup>12) 13) 14)</sup>		F

Selection and Ordering data		Article No.
<b>Pressure transmitters for absolute pressure from gauge pressure series</b> <b>SITRANS P DS III with HART</b>		<b>7MF4233-</b>
<b>Display</b>		
• Without display		0
• Without visible display (display concealed, setting: mA)		1
• With visible display		6
• with customer-specific display (setting as specified, Order code "Y21" or "Y22" required)		7
<p>• We can offer shorter delivery times for configurations designated with the Quick Ship Symbol . For details see page 9/5 in the appendix.</p>		
<p>Power supply units see Chap. 7 "Supplementary Components".</p>		
<p>Included in delivery of the device:</p> <ul style="list-style-type: none"> <li>• Brief instructions (Leporello)</li> <li>• CD-ROM with detailed documentation</li> </ul>		
<p><sup>1)</sup> For oxygen application, add Order code E10.</p> <p><sup>2)</sup> Version 7MF4233-1DY... only up to max. span 200 mbar a (80 inH<sub>2</sub>O a).</p> <p><sup>3)</sup> 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. 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.</p> <p><sup>4)</sup> 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.</p> <p><sup>5)</sup> The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF423-...Y... and 7MF4900-1...-B</p> <p><sup>6)</sup> The standard measuring cell filling for configurations with remote seals (Y) is silicone oil.</p> <p><sup>7)</sup> Not in conjunction with Electrical connection "Screwed gland Pg 13.5" and "Han7D plug".</p> <p><sup>8)</sup> Without cable gland, with blanking plug.</p> <p><sup>9)</sup> With enclosed cable gland Ex ia and blanking plug.</p> <p><sup>10)</sup> Configurations with HAN and M12 connectors are only available in Ex ic.</p> <p><sup>11)</sup> Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".</p> <p><sup>12)</sup> M12 delivered without cable socket</p> <p><sup>13)</sup> Not available with protection type "Ex d" (optiones D, P, N and R)</p> <p><sup>14)</sup> Not with protection types „Explosion-proof“ and „Ex nA“, „Intrinsic safe“ and „Explosion proof“.</p>		

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for absolute pressure (from gauge pressure series)

1

Selection and Ordering data		Article No.	Selection and Ordering data		Article No.
<b>Pressure transmitters for absolute pressure from gauge pressure series</b>			<b>Pressure transmitters for absolute pressure from gauge pressure series</b>		
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		7 MF 4 2 3 4 -	<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		7 MF 4 2 3 4 -
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		7 MF 4 2 3 5 -	<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		7 MF 4 2 3 5 -
<b>Measuring cell filling</b>			<b>Display</b>		
Silicone oil	normal	1	• Without display	0	
Inert liquid <sup>1)</sup>	grease-free to cleanliness level 2	3	• Without visible display (display concealed, setting: bar)	1	
			• With visible display	6	
			• with customer-specific display (setting as specified, Order code "Y21" or "Y22" required)	7	
<b>Nominal measuring range</b>			Included in delivery of the device:		
250 mbar a	(3.62 psia)	D	• Brief instructions (Leporello)		
1300 mbar a	(18.85 psia)	F	• CD-ROM with detailed documentation		
5 bar a	(72.5 psia)	G	1) For oxygen application, add Order code E10.		
30 bar a	(435 psia)	H	2) Version 7MF4233-1DY... only up to max. span 200 mbar a (2.9 psia).		
<b>Wetted parts materials</b>			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 <u>total</u> combination is certified here.		
Seal diaphragm	Process connection		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.		
Stainless steel	Stainless steel	A	5) The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF423-..Y..-... and 7MF4900-1...-B		
Hastelloy	Stainless steel	B	6) The standard measuring cell filling for configurations with remote seals (Y) is silicone oil.		
Hastelloy	Hastelloy	C	7) Without cable gland, with blanking plug.		
Version as diaphragm seal <sup>2) 3) 4) 5) 6)</sup>		Y	8) With enclosed cable gland Ex ia and blanking plug.		
<b>Process connection</b>			9) Configurations with HAN and M12 connectors are only available in Ex ic.		
• Connection shank G½B to EN 837-1		0	10) M12 delivered without cable socket		
• Female thread ½-14 NPT		1	11) Not with protection types „Explosion-proof“ and „Ex nA“, „Intrinsic safe“ and „Explosion proof“.		
• Stainless steel oval flange with process connection (Oval flange has no female thread)					
- Mounting thread 7/16-20 UNF to IEC 61518		2			
- Mounting thread M10 to DIN 19213		3			
- Mounting thread M12 to DIN 19213		4			
• Male thread M20 x 1.5		5			
• Male thread ½-14 NPT		6			
<b>Non-wetted parts materials</b>					
• Housing made of die-cast aluminium		0			
• Housing stainless steel precision casting		3			
<b>Version</b>					
• Standard versions		1			
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		2			
<b>Explosion protection</b>					
• None		A			
• With ATEX, Type of protection:					
- "Intrinsic safety (Ex ia)"		B			
- "Explosion-proof (Ex d)" <sup>7)</sup>		D			
- "Intrinsic safety and flameproof enclosure" (Ex ia + Ex d) <sup>8)</sup>		P			
- "Ex nA/ic (Zone 2)" <sup>9)</sup>		E			
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia + Ex d + Zone 1D/2D) <sup>8)</sup> (not for DS III FF)		R			
• FM + CSA intrinsic safe (is)		F			
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S			
• With FM + CSA, Type of protection:					
- "Intrinsic Safe und Explosion Proof (is + xp)" <sup>7)</sup>		NC			
<b>Electrical connection/cable entry</b>					
• Screwed gland M20 x 1.5		B			
• Screwed gland ½-14 NPT		C			
• M12 connectors (stainless steel) <sup>10) 11)</sup>		F			

# Pressure Measurement

## Transmitters for general requirements

SITRANS P DS III for absolute pressure  
(from gauge pressure series)

1

Selection and Ordering data	Order code		
Further designs	HART	PA	FF
Add <b>"-Z"</b> to Article No. and specify Order code.			
<b>Pressure transmitter with mounting bracket (1x fixing angle, 2 x nut, 2 x U-washer or 1 x bracket, 2 x nut, 2 x U-washer) made of:</b>			
• Steel	◆ A01	✓	✓
• Stainless steel	◆ A02	✓	✓
<b>Plug</b>			
• Han 7D (metal, gray)	A30	✓	
• Han 8U (instead of Han 7D)	A31	✓	
• Angled	A32	✓	
• Han 8D (metal, gray)	A33	✓	
<b>Cable sockets for M12 connectors (stainless steel)</b>	A50	✓	✓
<b>Rating plate inscription</b> (instead of German)			
• English	◆ B11	✓	✓
• French	◆ B12	✓	✓
• Spanish	◆ B13	✓	✓
• Italian	◆ B14	✓	✓
<b>English rating plate</b>	◆ B21	✓	✓
Pressure units in inH <sub>2</sub> O and/or psi			
<b>Quality inspection certificate (Five-step factory calibration) to IEC 60770-2<sup>1)</sup></b>	◆ C11	✓	✓
<b>Inspection certificate<sup>2)</sup></b>	◆ C12	✓	✓
Acc. to EN 10204-3.1			
<b>Factory certificate</b>	◆ C14	✓	✓
Acc. to EN 10204-2.2			
<b>Functional safety (SIL2)</b>	◆ C20	✓	
Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration			
<b>Functional safety (PROFIsafe) Certificate and PROFIsafe protocol</b>	C21 <sup>3)</sup>		✓
<b>Functional safety (SIL2/3)</b>	◆ C23	✓	
Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration			
<b>Device passport Russia</b>	C99	✓	✓
(For price request please contact the technical support <a href="http://www.siemens.com/automation/support-request">www.siemens.com/automation/support-request</a> )			
<b>Setting of upper limit of output signal to 22.0 mA</b>	D05	✓	
<b>Manufacturer's declaration acc. to NACE (MR 0103-2012 and MR 0175-2009)</b>	D07	✓	✓
<b>Degree of protection IP65/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 oval flange	D37	✓	✓

Selection and Ordering data	Order code		
Further designs	HART	PA	FF
Add <b>"-Z"</b> to Article No. and specify Order code.			
<b>Use in or on zone 1D/2D</b> (only together with type of protection "Intrinsic safety" (transmitter 7MF4...-.....-B.. Ex ia")	E01	✓	✓
<b>Oxygen application</b> (In the case of oxygen measurement and inert liquid max. 100 bar (1450 psi) at 60°C (140 °F))	E10	✓	✓
<b>Export approval Korea</b>	E11	✓	✓
<b>CRN approval Canada</b> (Canadian Registration Number)	E22	✓	✓
<b>Dual seal</b>	E24	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-B..)	E25 <sup>4)</sup>	✓	✓
<b>"Flameproof" explosion protection according to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-D..)	E26 <sup>4)</sup>	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia + Ex d) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-P..)	E28 <sup>4)</sup>	✓	✓
<b>Ex Approval IEC Ex (Ex ia)</b> (only for transmitter 7MF4...-.....-B..)	E45 <sup>4)</sup>	✓	✓
<b>Ex Approval IEC Ex (Ex id)</b> (only for transmitter 7MF4...-.....-D..)	E46 <sup>4)</sup>	✓	✓
<b>Explosion-proof "Intrinsic safety" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-B..)	E55 <sup>4)</sup>	✓	✓
<b>Explosion protection "Explosion-proof" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-D..)	E56 <sup>4)</sup>	✓	✓
<b>Explosion-proof "Zone 2" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-E..)	E57 <sup>4)</sup>	✓	✓
<b>"Intrinsic safety" and "Explosion-proof" explosion protection acc. to Kosha (Korea)</b> (only for transmitter 7MF4...-.....-[B, D]..-Z + E11)	E70 <sup>4)</sup>	✓	✓
<b>Two coats of lacquer on casing and cover (PU on epoxy)</b>	G10	✓	✓
<b>Transient protector 6 kV (lightning protection)</b>	J01	✓	✓

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

<sup>1)</sup> 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.

<sup>2)</sup> 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.

<sup>3)</sup> Profisafe transmitters can only be operated with the S7 F Systems V6.1 configuration software in combination with S7-400H

<sup>4)</sup> Option does not include ATEX approval, but instead includes only the country-specific approval.

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for absolute pressure (from gauge pressure series)

1

Selection and Ordering data	Order code			
Additional data		HART	PA	FF
Please add <b>"-Z"</b> to Article 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	✓	✓ <sup>1)</sup>	
<b>Stainless steel tag plate and entry in device variable (measuring point description)</b> Max. 16 characters, specify in plain text: Y15: .....	◆ Y15	✓	✓	✓
<b>Measuring point text (entry in device variable)</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>2)</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		✓	✓
<b>Damping adjustment in seconds (0 ... 100 s)</b>	Y30	✓	✓	✓

- ◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

Factory mounting of valve manifolds, see accessories.

Only Y01, Y15, Y16, Y17, Y21, Y22, Y25 and D05 can be factory preset

✓ = available

<sup>1)</sup> Measuring accuracies for PROFIBUS PA transmitters with Option Y01 are calculated in the same way as for HART devices.

<sup>2)</sup> Preset values can only be changed over SIMATIC PDM.

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for absolute pressure (from differential pressure series)

1

Selection and Ordering data		Article No.
<b>Pressure transmitters for absolute pressure from differential pressure series, SITRANS P DS III with HART</b>		<b>7MF4333 -</b>
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>	
Silicone oil	normal	1
Inert liquid <sup>1)</sup>	grease-free to cleanliness level 2	3
<b>Measuring span (min. ... max.)</b>		
8.3 ... 250 mbar a	(0.12 ... 3.62 psia)	D
43 ... 1300 mbar a	(0.62 ... 18.85 psia)	F
0.16 ... 5 bar a	(2.32 ... 72.5 psia)	G
1 ... 30 bar a	(14.5 ... 435 psia)	H
5.3 ... 100 bar a	(76.9 ... 1450 psia)	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	H
Gold	Gold	L
Version for diaphragm sea <sup>2) 3) 4) 5) 6)</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		2
- Mounting thread M10 to DIN 19213 (only for replacement requirement)		0
• Vent on side of process flange <sup>7)</sup>		
- Mounting thread 7/16-20 UNF to EN 61518		6
- Mounting thread M10 to DIN 19213 (only for replacement requirement)		4
<b>Non-wetted parts materials</b>		
process flange screws	Electronics housing	
Stainless steel	Die-cast aluminum	2
Stainless steel	Stainless steel precision casting <sup>8)</sup>	3
<b>Version</b>		
• Standard versions		1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		2
<b>Explosion protection</b>		
• None		A
• With ATEX, Type of protection:		
- "Intrinsic safety (Ex ia)"		B
- "Explosion-proof (Ex d)" <sup>9)</sup>		D
- "Intrinsic safety and flameproof enclosure" (Ex ia + Ex d)" <sup>10)</sup>		P
- "Ex nA/ic (Zone 2)" <sup>11)</sup>		E
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia+ Ex d + Zone 1D/2D)" <sup>10)</sup>		R
• FM + CSA intrinsic safe (is)		F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S
• With FM + CSA, Type of protection:		
- "Intrinsic Safe und Explosion Proof (is + xp)" <sup>9)</sup>		NC
<b>Electrical connection/cable entry</b>		
• Screwed gland Pg 13.5 <sup>12)</sup>		A
• Screwed gland M20 x 1.5		B
• Screwed gland 1/2-14 NPT		C
• Han 7D plug (plastic housing) incl. mating connector <sup>12)</sup>		D
• M12 connectors (stainless steel) <sup>12) 13)</sup>		F

Selection and Ordering data		Article No.
<b>Pressure transmitters for absolute pressure from differential pressure series, SITRANS P DS III with HART</b>		<b>7MF4333 -</b>
<b>Display</b>		
• Without display		0
• Without visible display (display concealed, setting: mA)		1
• With visible display		6
• with customer-specific display (setting as specified, Order code "Y21" or "Y22" required)		7
Power supply units see Chap. 7 "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 psia).		
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 <u>total</u> 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) The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF433-..Y.-... and 7MF4900-1...-B		
6) The standard measuring cell filling for configurations with remote seals (Y) is silicone oil.		
7) Not for span "5.3 ... 100 bar a (76.9 ... 1450 psia)". Position of the top vent valve in the process flange (see dimensional drawing).		
8) Not in conjunction with Electrical connection "Screwed gland Pg 13.5" and "Han7D plug".		
9) Without cable gland, with blanking plug		
10) With enclosed cable gland Ex ia and blanking plug		
11) Configurations with HAN and M12 connectors are only available in Ex ic.		
12) Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".		
13) M12 delivered without cable socket		

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for absolute pressure (from differential pressure series)

1

Selection and Ordering data		Article No.	Selection and Ordering data		Article No.
<b>Pressure transmitter for absolute pressure from differential pressure series</b>			<b>Pressure transmitter for absolute pressure from differential pressure series</b>		
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		7 MF 4 3 3 4 -	<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		7 MF 4 3 3 4 -
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		7 MF 4 3 3 5 -	<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		7 MF 4 3 3 5 -
		■ ■ ■ ■ ■ - ■ ■ ■ ■ ■			■ ■ ■ ■ ■ - ■ ■ ■ ■ ■
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>		<b>Display</b>		
Silicone oil	normal	1	• Without display		0
Inert liquid <sup>1)</sup>	grease-free to cleanliness level 2	3	• Without visible display (display concealed, setting: bar)		1
			• With visible display		6
			• With customer-specific display (setting as specified, Order code "Y21" required)		7
<b>Nominal measuring range</b>			Included in delivery of the device:		
250 mbar a	(3.62 psia)	D	• Brief instructions (Leporello)		
1300 mbar a	(18.85 psia)	F	• CD-ROM with detailed documentation		
5 bar a	(72.5 psia)	G	• Sealing plug(s) or sealing screw(s) for the process flanges(s)		
30 bar a	(435 psia)	H			
100 bar a	(1450 psia)	KE			
<b>Wetted parts materials</b>			1) For oxygen application, add Order code E10.		
Seal diaphragm	Parts of measuring cell		2) Version 7MF4334-1DY... only up to max. span 200 mbar a (80 inH <sub>2</sub> O a).		
Stainless steel	Stainless steel	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 <u>total</u> combination is certified here.		
Hastelloy	Stainless steel	B	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.		
Hastelloy	Hastelloy	C	5) The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF433-..Y.-... und 7MF4900-1...-B		
Tantalum	Tantalum	E	6) The standard measuring cell filling for configurations with remote seals (Y) is silicone oil.		
Monel	Monel	H	7) Not for nominal measuring range 100 bar a (1450 psia). Position of the top vent valve in the process flange (see dimensional drawing).		
Gold	Gold	L	8) Without cable gland, with blanking plug		
Version as diaphragm seal <sup>2) 3) 4) 5) 6)</sup>		Y	9) With enclosed cable gland Ex ia and blanking plug		
<b>Process connection</b>			10) Configurations with HAN and M12 connectors are only available in Ex ic.		
Female thread 1/4-18 NPT with flange connection			11) M12 delivered without cable socket		
• Sealing screw opposite process connection			12) Not available with protection type „Ex d“ (options D, P, N and R)		
- Mounting thread 7/16-20 UNF to IEC 61518		2	13) Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".		
- Mounting thread M10 to DIN 19213 (only for replacement requirement)		0			
• Vent on side of process flange <sup>7)</sup>					
- Mounting thread 7/16-20 UNF to IEC 61518		6			
- Mounting thread M10 to DIN 19213 (only for replacement requirement)		4			
<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		1			
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		2			
<b>Explosion protection</b>					
• None		A			
• With ATEX, Type of protection:					
- "Intrinsic safety (Ex ia)*"		B			
- "Explosion-proof (Ex d) <sup>8)</sup> "		D			
- "Intrinsic safety and flameproof enclosure" (Ex ia + Ex d) <sup>9)</sup>		P			
- "Ex nA/ic (Zone 2) <sup>10)</sup> "		E			
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia + Ex d + Zone 1D/2D) <sup>9)</sup> (not for DS III FF)		R			
• FM + CSA intrinsic safe (is)		F			
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S			
• With FM + CSA, Type of protection:					
- "Intrinsic Safe und Explosion Proof (is + xp) <sup>8)</sup> "		NC			
<b>Electrical connection/cable entry</b>					
• Screwed gland M20 x 1.5		B			
• Screwed gland 1/2-14 NPT		C			
• M12 connectors (stainless steel) <sup>11) 12) 13)</sup>		F			

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for absolute pressure (from differential pressure series)

1

Selection and Ordering data	Order code		
<b>Further designs</b> Add "-Z" to Article No. and specify Order code.	<b>HART</b>	<b>PA</b>	<b>FF</b>
<b>Pressure transmitter with mounting bracket (1x fixing angle, 2 x nut, 2 x U-washer or 1 x bracket, 2 x nut, 2 x U-washer) made of:</b>			
• Steel	<b>A01</b>	✓	✓
• Stainless steel	<b>A02</b>	✓	✓
<b>O-rings for process flanges</b> (instead of FPM (Viton))			
• PTFE (Teflon)	<b>A20</b>	✓	✓
• FEP (with silicone core, approved for food)	<b>A21</b>	✓	✓
• FFPM (Kalrez, compound 4079)	<b>A22</b>	✓	✓
• NBR (Buna N)	<b>A23</b>	✓	✓
<b>plug</b>			
• Han 7D (metal, gray)	<b>A30</b>	✓	
• Han 8U (instead of Han 7D)	<b>A31</b>	✓	
• Angled	<b>A32</b>	✓	
• Han 8D (metal, gray)	<b>A33</b>	✓	
<b>Sealing screw</b> ¼-18 NPT, with valve in mat. of process flanges	<b>A40</b>	✓	✓
<b>Cable sockets for M12 connectors (stainless steel)</b>	<b>A50</b>	✓	✓
<b>Rating plate inscription</b> (instead of German)			
• English	<b>B11</b>	✓	✓
• French	<b>B12</b>	✓	✓
• Spanish	<b>B13</b>	✓	✓
• Italian	<b>B14</b>	✓	✓
<b>English rating plate</b> Pressure units in inH <sub>2</sub> O and/or psi	<b>B21</b>	✓	✓
<b>Quality inspection certificate (Five-step factory calibration) to IEC 60770-2<sup>1)</sup></b>	<b>C11</b>	✓	✓
<b>Inspection certificate<sup>2)</sup></b> Acc. to EN 10204-3.1	<b>C12</b>	✓	✓
<b>Factory certificate</b> Acc. to EN 10204-2.2	<b>C14</b>	✓	✓
<b>Functional safety (SIL2)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	<b>C20</b>	✓	
<b>Functional safety (PROFIsafe) Certificate and PROFIsafe protocol</b>	<b>C21<sup>3)</sup></b>		✓
<b>Functional safety (SIL2/3)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	<b>C23</b>	✓	
<b>Device passport Russia</b> (For price request please contact the technical support <a href="http://www.siemens.com/automation/support-request">www.siemens.com/automation/support-request</a> )	<b>C99</b>	✓	✓
<b>Setting of upper limit of output signal to 22.0 mA</b>	<b>D05</b>	✓	
<b>Manufacturer's declaration acc. to NACE (MR 0103-2012 and MR 0175-2009)</b> (only together with seal diaphragm made of Hastelloy and stainless steel)	<b>D07</b>	✓	✓
<b>Degree of protection IP65/IP68</b> (only for M20 x 1.5 and ½-14 NPT)	<b>D12</b>	✓	✓
<b>Supplied with oval flange</b> (1 item), PTFE packing and screws in thread of process flange	<b>D37</b>	✓	✓

Selection and Ordering data	Order code		
<b>Further designs</b> Add "-Z" to Article No. and specify Order code.	<b>HART</b>	<b>PA</b>	<b>FF</b>
<b>Use in or on zone 1D/2D</b> (only together with type of protection "Intrinsic safety" (transmitter 7MF4...-.....-B.. Ex ia"))	<b>E01</b>	✓	✓
<b>Oxygen application</b> (In the case of oxygen measurement and inert liquid max. 100 bar (1450 psi) at 60°C (140 °F))	<b>E10</b>	✓	✓
<b>Export approval Korea</b>	<b>E11</b>	✓	✓
<b>CRN approval Canada</b> (Canadian Registration Number)	<b>E22</b>	✓	✓
<b>Dual seal</b>	<b>E24</b>	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-B..)	<b>E25<sup>4)</sup></b>	✓	✓
<b>"Flameproof" explosion protection according to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-D..)	<b>E26<sup>4)</sup></b>	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia + Ex d) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-P..)	<b>E28<sup>4)</sup></b>	✓	✓
<b>Ex Approval IEC Ex (Ex ia)</b> (only for transmitter 7MF4...-.....-B..)	<b>E45<sup>4)</sup></b>	✓	✓
<b>Ex Approval IEC Ex (Ex id)</b> (only for transmitter 7MF4...-.....-D..)	<b>E46<sup>4)</sup></b>	✓	✓
<b>Explosion-proof "Intrinsic safety" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-B..)	<b>E55<sup>4)</sup></b>	✓	✓
<b>Explosion protection "Explosion-proof" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-D..)	<b>E56<sup>4)</sup></b>	✓	✓
<b>Explosion-proof "Zone 2" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-E..)	<b>E57<sup>4)</sup></b>	✓	✓
<b>"Intrinsic safety" and "Explosion-proof" explosion protection acc. to Kosha (Korea)</b> (only for transmitter 7MF4...-.....-[B, D]..-Z + E11)	<b>E70<sup>4)</sup></b>	✓	✓
<b>Two coats of lacquer on casing and cover (PU on epoxy)</b>	<b>G10</b>	✓	✓
<b>Interchanging of process connection side</b>	<b>H01</b>	✓	✓
<b>Vent on side for gas measurements</b>	<b>H02</b>	✓	✓
<b>Transient protector 6 kV (lightning protection)</b>	<b>J01</b>	✓	✓
<b>Process flange</b>			
• Hastelloy	<b>K01</b>	✓	✓
• Monel	<b>K02</b>	✓	✓
• Stainless steel with PVDF insert max. PN 10 (MAWP 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	<b>K04</b>	✓	✓

<sup>1)</sup> 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.

<sup>2)</sup> 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.

<sup>3)</sup> Profisafe transmitters can only be operated with the S7 F Systems V6.1 configuration software in combination with S7-400H

<sup>4)</sup> Option does not include ATEX approval, but instead includes only the country-specific approval.



# Pressure Measurement

## Transmitters for general requirements

SITRANS P DS III for absolute pressure  
(from differential pressure series)

1

Selection and Ordering data	Order code			
Additional data		HART	PA	FF
Please add <b>"-Z"</b> to Article 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	✓	✓ <sup>1)</sup>	
<b>Stainless steel tag plate and entry in device variable (measuring point description)</b> Max. 16 characters, specify in plain text: Y15: .....	Y15	✓	✓	✓
<b>Measuring point text (entry in device variable)</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>1)</sup> , inH <sub>2</sub> O <sup>1)</sup> , ftH <sub>2</sub> O <sup>1)</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>2)</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		✓	✓
<b>Damping adjustment in seconds (0 ... 100 s)</b>	Y30	✓	✓	✓

Factory mounting of valve manifolds, see accessories.

Only Y01, Y15, Y16, Y17, Y21, Y22, Y25 and D05 can be factory preset

✓ = available

<sup>1)</sup> Measuring accuracies for PROFIBUS PA transmitters with Option Y01 are calculated in the same way as for HART devices.

<sup>2)</sup> Preset values can only be changed over SIMATIC PDM.

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for differential pressure and flow

1

Selection and Ordering data		Article No.
<b>SITRANS P DS III with HART pressure transmitters for differential pressure and flow, PN 32/160 (MAWP 464/2320 psi)</b>		<b>7MF4433-</b>
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>	
Silicone oil	normal	▶◆ 1
Inert liquid <sup>1)</sup>	grease-free to cleanliness level 2	▶◆ 3
<b>Measuring span (min. ... max.)</b>		
PN 32 (MAWP 464 psi)		
1 ... 20 mbar <sup>2)</sup>	(0.4015 ... 8.03 inH <sub>2</sub> O)	▶◆ B
PN 160 (MAWP 2320 psi)		
1 ... 60 mbar	(0.4015 ... 24.09 inH <sub>2</sub> O)	▶◆ C
2.5 ... 250 mbar	(1.004 ... 100.4 inH <sub>2</sub> O)	▶◆ D
6 ... 600 mbar	(2.409 ... 240.9 inH <sub>2</sub> O)	▶◆ E
16 ... 1600 mbar	(6.424 ... 642.4 inH <sub>2</sub> O)	▶◆ F
50 ... 5000 mbar	(20.08 ... 2008 inH <sub>2</sub> O)	▶◆ G
0,3 ... 30 bar	(4.35 ... 435 psi)	▶◆ H
<b>Wetted parts materials</b>		
(stainless steel process flanges)		
Seal diaphragm	Parts of measuring cell	
Stainless steel	Stainless steel	▶◆ A
Hastelloy	Stainless steel	B
Hastelloy	Hastelloy	C
Tantalum <sup>3)</sup>	Tantalum	E
Monel <sup>3)</sup>	Monel	H
Gold <sup>3)</sup>	Gold	L
Version for diaphragm seal <sup>4) 5) 6) 7)</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 IEC 61518	▶◆	2
- Mounting thread M10 to DIN 19213 (only for replacement requirement)	◆	0
• Vent on side of process flange <sup>2)</sup>		
- Mounting thread 7/16-20 UNF to IEC 61518	▶◆	6
- Mounting thread M10 to DIN 19213 (only for replacement requirement)	◆	4
<b>Non-wetted parts materials</b>		
process flange screws Electronics housing		
Stainless steel	Die-cast aluminum	▶◆ 2
Stainless steel	Stainless steel precision casting <sup>8)</sup>	▶◆ 3
<b>Version</b>		
• Standard versions	◆	1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)	▶◆	2
<b>Explosion protection</b>		
• None	◆	A
• With ATEX, Type of protection:		
- "Intrinsic safety (Ex ia)"	◆	B
- "Explosion-proof (Ex d) <sup>9)</sup>	◆	D
- "Intrinsic safety and flameproof enclosure (Ex ia + Ex d) <sup>10)</sup>	◆	P
- "Ex nA/ic (Zone 2) <sup>11)</sup>	◆	E
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia + Ex d + Zone 1D/2D) <sup>10)</sup>	▶◆	R
• FM + CSA intrinsic safe (is)	◆	F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)	◆	S
• With FM + CSA, Type of protection:		
- "Intrinsic Safe und Explosion Proof (is + xp) <sup>9)</sup>	◆	NC

Selection and Ordering data		Article No.
<b>SITRANS P DS III with HART pressure transmitters for differential pressure and flow, PN 32/160 (MAWP 464/2320 psi)</b>		<b>7MF4433-</b>
<b>Electrical connection/cable entry</b>		
• Screwed gland Pg 13.5 <sup>12)</sup>	▶◆	A
• Screwed gland M20 x 1.5	▶◆	B
• Screwed gland 1/2-14 NPT	◆	C
• Han 7D plug (plastic housing) incl. mating connector <sup>12)13)</sup>	◆	D
• M12 connectors (stainless steel) <sup>12) 14)</sup>	◆	F
<b>Display</b>		
• Without display	◆	0
• Without visible display (display concealed, setting: mA)	▶◆	1
• With visible display	◆	6
• with customer-specific display (setting as specified, Order code "Y21" or "Y22" required)	◆	7
▶ Available ex stock		
◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.		
Power supply units see Chap. 7 "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 application, add Order code E10.		
2) Not suitable for connection of remote seal. Position of the top vent valve in the process flange (see dimensional drawing).		
3) Not in conjunction with max. span 20 and 60 mbar (8.03 und 24.09 inH <sub>2</sub> O))		
4) 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.		
5) 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.		
6) The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF443-...Y... and 7MF4900-1...-B		
7) The standard measuring cell filling for configurations with remote seals (Y) is silicone oil.		
8) Not in conjunction with Electrical connection "Screwed gland Pg 13.5" and "Han7D plug".		
9) Without cable gland, with blanking plug		
10) With enclosed cable gland Ex ia and blanking plug		
11) Configurations with HAN and M12 connectors are only available in Ex ic.		
12) Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".		
13) Permissible only for crimp-contact of conductor cross-section 1 mm <sup>2</sup>		
14) M12 delivered without cable socket. Not available with protection type "Explosion-proof".		

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for differential pressure and flow

1

Selection and Ordering data		Article No.
<b>Pressure transmitters for differential pressure and flow PN 32/160 (MAWP 464/2320 psi)</b>		
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		7 MF 4 4 3 4 -
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		7 MF 4 4 3 5 -
<b>Measuring cell filling</b>		
Silicone oil	normal	1
Inert liquid <sup>1)</sup>	grease-free to cleanliness level 2	3
<b>Nominal measuring range</b>		
PN 32 (MAWP 464 psi)		
20 mbar <sup>2)</sup>	(8.03 inH <sub>2</sub> O)	B
PN 160 (MAWP 2320 psi)		
60 mbar	(24.09 inH <sub>2</sub> O)	C
250 mbar	(100.4 inH <sub>2</sub> O)	D
600 mbar	(240.9 inH <sub>2</sub> O)	E
1600 mbar	(642.4 inH <sub>2</sub> O)	F
5 bar	(2008 inH <sub>2</sub> O)	G
30 bar	(435 psi)	H
<b>Wetted parts materials</b>		
(stainless steel process flanges)		
Seal diaphragm	Parts of measuring cell	
Stainless steel	Stainless steel	A
Hastelloy	Stainless steel	B
Hastelloy	Hastelloy	C
Tantalum <sup>3)</sup>	Tantalum	E
Monel <sup>3)</sup>	Monel	H
Gold <sup>3)</sup>	Gold	L
Version as diaphragm seal <sup>4) 5) 6) 7)</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 IEC 61518		2
- Mounting thread M10 to DIN 19213 (only for replacement requirement)		0
• Venting on side of process flanges <sup>2)</sup>		
- Mounting thread 7/16-20 UNF to IEC 61518		6
- Mounting thread M10 to DIN 19213 (only for replacement requirement)		4
<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		1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		2
<b>Explosion protection</b>		
• None		A
• With ATEX, Type of protection:		
- "Intrinsic safety (Ex ia)"		B
- "Explosion-proof (Ex d)" <sup>8)</sup>		D
- "Intrinsic safety and flameproof enclosure (Ex ia + Ex d)" <sup>9)</sup>		P
- "Ex nA/ic (Zone 2)" <sup>10)</sup>		E
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia + Ex d + Zone 1D/2D)" <sup>9)</sup> (not for DS III FF)		R
• FM + CSA intrinsic safe (is)		F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S
• With FM + CSA, Type of protection:		
- "Intrinsic Safe und Explosion Proof (is + xp)" <sup>6)</sup>		NC

Selection and Ordering data		Article No.
<b>Pressure transmitters for differential pressure and flow PN 32/160 (MAWP 464/2320 psi)</b>		
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>		7 MF 4 4 3 4 -
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>		7 MF 4 4 3 5 -
<b>Electrical connection/cable entry</b>		
• Screwed gland M20 x 1.5		B
• Screwed gland 1/2-14 NPT		C
• M12 connectors (stainless steel) <sup>11) 12) 13)</sup>		F
<b>Display</b>		
• Without display		0
• Without visible display (display concealed, setting: bar)		1
• With visible display		6
• With customer-specific display (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)		
<sup>1)</sup> For oxygen application, add Order code E10. <sup>2)</sup> Not suitable for connection of remote seal. Position of the top vent valve in the process flange (see dimensional drawing). <sup>3)</sup> Not in conjunction with max. span 20 and 60 mbar (8.03 und 24.09 inH <sub>2</sub> O)) <sup>4)</sup> 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 <u>total</u> combination is certified here. <sup>5)</sup> 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. <sup>6)</sup> The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF443-...Y... und 7MF4900-1...-B <sup>7)</sup> The standard measuring cell filling for configurations with remote seals (Y) is silicone oil. <sup>8)</sup> Without cable gland, with blanking plug. <sup>9)</sup> With enclosed cable gland Ex ia and blanking plug. <sup>10)</sup> Configurations with HAN and M12 connectors are only available in Ex ic. <sup>11)</sup> M12 delivered without cable socket <sup>12)</sup> Not available with protection type „Ex d“ (options D, P, N and R) <sup>13)</sup> Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".		

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for differential pressure and flow

1

Selection and Ordering data	Order code			
<b>Further designs</b> Add "-Z" to Article No. and specify Order code.		HART	PA	FF
<b>Pressure transmitter with mounting bracket (1x fixing angle, 2 x nut, 2 x U-washer or 1 x bracket, 2 x nut, 2 x U-washer) 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 screws (2 unit(s))</b> 1/4-18 NPT, with valve in mat. of process flanges	◆ A40	✓	✓	✓
<b>Cable sockets for M12 connectors (stainless steel)</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 (Five-step factory calibration) to IEC 60770-2<sup>1)</sup></b>	◆ C11	✓	✓	✓
<b>Inspection certificate<sup>2)</sup> to EN 10204-3.1</b>	◆ C12	✓	✓	✓
<b>Factory certificate to EN 10204-2.2</b>	◆ C14	✓	✓	✓
<b>Functional safety (SIL2)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	◆ C20	✓		
<b>Functional safety (PROFIsafe) Certificate and PROFIsafe protocol</b>	C21 <sup>5)</sup>		✓	
<b>Functional safety (SIL2/3)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	◆ C23	✓		
<b>Device passport Russia</b> (For price request please contact the technical support <a href="http://www.siemens.com/automation/support-request">www.siemens.com/automation/support-request</a> )	C99	✓	✓	✓
<b>Setting of upper limit of output signal to 22.0 mA</b>	D05	✓		
<b>Manufacturer's declaration acc. to NACE (MR 0103-2012 and MR 0175-2009)</b> (only together with seal diaphragm made of Hastelloy and stainless steel)	D07	✓	✓	✓
<b>Degree of protection IP65/IP68</b> (only for M20 x 1.5 and 1/2-14 NPT)	D12	✓	✓	✓
<b>Process flange screws made of Monel</b> (max. nominal pressure PN20)	D34	✓	✓	✓
<b>Supplied with oval flange set</b> (2 items), PTFE packings and screws in thread of process flanges	D37	✓	✓	✓

Selection and Ordering data	Order code			
<b>Further designs</b> Add "-Z" to Article No. and specify Order code.		HART	PA	FF
<b>Use in or on zone 1D/2D</b> (only together with type of protection "Intrinsic safety" (transmitter 7MF4...-.....-B.. Ex ia <sup>4)</sup> )	E01	✓	✓	✓
<b>TÜV approval to AD/TRD</b> (only together with type of protection "Intrinsic safety (Ex ia <sup>4)</sup> ")	E06	✓		
<b>Overfilling safety device for flammable and non-flammable liquids</b> (max. PN 32 (MAWP 464 psi), basic device with type of protection "Intrinsic safety (Ex ia <sup>4)</sup> ", to WHG and VbF, not together with measuring cell filling "inert liquid")	E08	✓		
<b>Oxygen application</b> (In the case of oxygen measurement and inert liquid max. 100 bar (1450 psi) at 60°C (140 °F))	E10	✓	✓	✓
<b>Export approval Korea</b>	E11	✓	✓	✓
<b>CRN approval Canada</b> (Canadian Registration Number)	E22	✓	✓	✓
<b>Dual seal</b>	E24	✓	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-B..)	E25 <sup>4)</sup>	✓	✓	✓
<b>"Flameproof" explosion protection according to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-D..)	E26 <sup>4)</sup>	✓	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia + Ex d) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-P..)	E28 <sup>4)</sup>	✓	✓	
<b>Ex Approval IEC Ex (Ex ia)</b> (only for transmitter 7MF4...-.....-B..)	E45 <sup>4)</sup>	✓	✓	✓
<b>Ex Approval IEC Ex (Ex id)</b> (only for transmitter 7MF4...-.....-D..)	E46 <sup>4)</sup>	✓	✓	✓
<b>Explosion-proof "Intrinsic safety" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-B..)	E55 <sup>4)</sup>	✓	✓	✓
<b>Explosion protection "Explosion-proof" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-D..)	E56 <sup>4)</sup>	✓	✓	✓
<b>Explosion-proof "Zone 2" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-E..)	E57 <sup>4)</sup>	✓	✓	✓
<b>"Intrinsic safety" and "Explosion-proof" explosion protection acc. to Koshu (Korea)</b> (only for transmitter 7MF4...-.....-[B, D]..-Z + E11)	E70 <sup>4)</sup>	✓	✓	✓
<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>Stainless steel process flanges for vertical differential pressure lines</b> (not together with K01, K02 and K04) <sup>3)</sup>	H03	✓	✓	✓

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

# Pressure Measurement Transmitters for general requirements

## SITRANS P DS III for differential pressure and flow

1

Selection and Ordering data	Order code		
<i>Further designs</i>	HART	PA	FF
Add "-Z" to Article No. and specify Order code.			
<b>Process flange</b>			
• Hastelloy	K01	✓	✓
• Monel	K02	✓	✓
• Stainless steel with PVDF insert max. PN 10 (MAWP 145 psi), max. temperature of medium 90 °C (194 °F)	K04	✓	✓

For ½-14 NPT inner process connection on the side in the middle of the process flange, vent valve not possible

Factory mounting of valve manifolds, see accessories.

Supplementary electronics for 4-wire connection, see accessories.

✓ = available

- 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.
- 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.
- Not suitable for connection of remote seal
- Option does not include ATEX approval, but instead includes only the country-specific approval.
- Profisafe transmitters can only be operated with the S7 F Systems V6.1 configuration software in combination with S7-400H

Selection and Ordering data	Order code		
<i>Additional data</i>	HART	PA	FF
Please add "-Z" to Article No. and specify Order code(s) and plain text.			
<b>Measuring range to be set</b>			
Specify in plain text:			
• in the case of linear characteristic curve (max. 5 characters): Y01: ... up to ... mbar, bar, kPa, MPa, psi	Y01	✓	✓ <sup>1)</sup>
• in the case of square rooted characteristic (max. 5 characters): Y02: ... up to ... mbar, bar, kPa, MPa, psi	Y02	✓	
<b>Stainless steel tag plate and entry in device variable (measuring point description)</b>	Y15	✓	✓
Max. 16 characters, specify in plain text: Y15: .....			
<b>Measuring point text (entry in device variable)</b>	Y16	✓	✓
Max. 27 char., specify in plain text: Y16: .....			
<b>Entry of HART address (TAG)</b>	Y17	✓	
Max. 8 char., specify in plain text: Y17: .....			
<b>Setting of pressure indicator in pressure units</b>	Y21	✓	✓
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			
<b>Setting of pressure indicator in non-pressure units<sup>2)</sup></b>	Y22 <sup>3)</sup> + Y01 or Y02	✓	
Specify in plain text: Y22: ..... up to ..... l/min, m <sup>3</sup> /h, m, USgpm, ... (specification of measuring range in pressure units "Y01" or "Y02" is essential, unit with max. 5 characters)			
<b>Preset bus address</b>	Y25		✓
possible between 1 and 126 Specify in plain text: Y25: .....		✓	✓
<b>Damping adjustment in seconds (0 ... 100 s)</b>	Y30	✓	✓

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

Factory mounting of valve manifolds, see accessories.

Only Y01, Y15, Y16, Y17, Y21, Y22, Y25 und D05 can be factory preset

✓ = available

- Measuring accuracies for PROFIBUS PA transmitters with Option Y01 are calculated in the same way as for HART devices.
- Preset values can only be changed over SIMATIC PDM.
- Not in conjunction with over-filling safety device for flammable and non-flammable liquids (Order code "E08")

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for differential pressure and flow

1

Selection and Ordering data		Article No.
<b>SITRANS P DS III with HART pressure transmitters for differential pressure and flow, PN 420 (MAWP 6092 psi)</b>		<b>7MF4533-</b>
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>	
Silicone oil	normal	1
<b>Measuring span (min. ... max.)</b>		
2.5 ... 250 mbar	(1.004 ... 100.4 inH <sub>2</sub> O)	D
6 ... 600 mbar	(2.409 ... 240.9 inH <sub>2</sub> O)	E
16 ... 1600 mbar	(6.424 ... 642.4 inH <sub>2</sub> O)	F
50 ... 5000 mbar	(20.08 ... 2008 inH <sub>2</sub> O)	G
0.3 ... 30 bar	(4.35 ... 435 psi)	H
<b>Wetted parts materials</b> (stainless steel process flanges)		
Seal diaphragm	Parts of measuring cell	
Stainless steel	Stainless steel	A
Hastelloy	Stainless steel	B
Gold <sup>1)</sup>	Gold	L
Ausführung als Membrandruckmittler <sup>2) 3) 4) 5)</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 IEC 61518		3
- Mounting thread M12 to DIN 19213 (only for replacement requirement)		1
• Venting on side of process flanges, location of vent valve at top of process flanges (see dimensional drawing)		
- Mounting thread 7/16"-20 UNF to IEC 61518		7
- Mounting thread M12 to DIN 19213 (only for replacement requirement)		5
<b>Non-wetted parts materials</b>		
<b>process flange screws</b>	Electronics housing	
Stainless steel	Die-cast aluminum	2
Stainless steel	Stainless steel precision casting <sup>6)</sup>	3
<b>Version</b>		
• Standard versions		1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)		2
<b>Explosion protection</b>		
• None		A
• With ATEX, Type of protection:		
- "Intrinsic safety (Ex ia)"		B
- "Explosion-proof (Ex d) <sup>7)</sup>		D
- "Intrinsic safety and flameproof enclosure (Ex ia + Ex d) <sup>8)</sup>		P
- "Ex nA/ic (Zone 2) <sup>9)</sup>		E
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia+ Ex d + Zone 1D/2D) <sup>8)</sup>		R
• FM + CSA intrinsic safe (is)		F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)		S
• With FM + CSA, Type of protection:		
- "Intrinsic safety and explosion-proof (is + xp) <sup>7)</sup> , max PN 360		NC
<b>Electrical connection/cable entry</b>		
• Screwed gland Pg 13.5 <sup>10)</sup>		A
• Screwed gland M20x1.5		B
• Screwed gland 1/2-14 NPT		C
• Han 7D plug (plastic housing) incl. mating connector <sup>10) 11)</sup>		D
• M12 connectors (stainless steel) <sup>12) 13) 14)</sup>		F

Selection and Ordering data		Article No.
<b>SITRANS P DS III with HART pressure transmitters for differential pressure and flow, PN 420 (MAWP 6092 psi)</b>		<b>7MF4533-</b>
<b>Display</b>		
• Without display		0
• Without visible display (display concealed, setting: mA)		1
• With visible display		6
• with customer-specific display (setting as specified, Order code "Y21" or "Y22" required)		7
Power supply units see Chap. 7 "Supplementary Components".		
Scope of delivery: Pressure transmitter as ordered (Instruction Manual is extra ordering item)		
1) Not in conjunction with max. span 600 mbar (240.9 inH <sub>2</sub> O)		
2) 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 <u>total</u> combination is certified here.		
3) 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.		
4) The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF453-...Y...-... und 7MF4900-1...-B		
5) The standard measuring cell filling for configurations with remote seals (Y) is silicone oil.		
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 Ex ia and blanking plug		
9) Configurations with HAN and M12 connectors are only available in Ex ic.		
10) Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".		
11) Permissible only for crimp-contact of conductor cross-section 1 mm <sup>2</sup>		
12) M12 delivered without cable socket		
13) Not available with protection type „Ex d“ (options D, P, N and R)		
14) Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".		

# Pressure Measurement

## Transmitters for general requirements

**SITRANS P DS III**  
 for differential pressure and flow

1

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
<b>Pressure transmitters for differential pressure and flow, PN 420 (MAWP 6092 psi)</b>		<b>Pressure transmitters for differential pressure and flow, PN 420 (MAWP 6092 psi)</b>	
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>	7 MF 4 5 3 4 -	<b>SITRANS P DS III with PROFIBUS PA (PA)</b>	7 MF 4 5 3 4 -
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>	7 MF 4 5 3 5 -	<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>	7 MF 4 5 3 5 -
	1 ■■■■ - ■■■■		1 ■■■■ - ■■■■
<b>Nominal measuring range</b>		<b>Display</b>	
250 mbar (100.4 inH <sub>2</sub> O)	D	• Without (display hidden)	0
600 mbar (240.9 inH <sub>2</sub> O)	E	• Without visible display (display concealed, setting: bar)	1
1600 mbar (642.4 inH <sub>2</sub> O)	F	• With visible display	6
5 bar (2008 inH <sub>2</sub> O)	G	• With customer-specific display (setting as specified, Order code "Y21" required)	7
30 bar (435 psi)	H		
<b>Wetted parts materials</b> (stainless steel process flanges)		Included in delivery of the device:	
Seal diaphragm      Parts of measuring cell		• Brief instructions (Leporello)	
Stainless steel      Stainless steel	A	• CD-ROM with detailed documentation	
Hastelloy            Stainless steel	B	• Sealing plug(s) or sealing screw(s) for the process flanges(s)	
Gold <sup>1)</sup> Gold	L		
Ausführung als Membrandruckmittler <sup>2) 3) 4) 5)</sup>	Y	1) Not in conjunction with max. span 600 mbar (240.9 inH <sub>2</sub> O)	
<b>Process connection</b>		2) 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 <u>total</u> combination is certified here.	
Female thread 1/4-18 NPT with flange connection		3) 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.	
• Sealing screw opposite process connection		4) The diaphragm seal is to be specified with a separate order number and must be included with the transmitter order number, for example 7MF453-...Y-... und 7MF4900-1-...-B	
- Mounting thread 7/16-20 UNF to IEC 61518	3	5) The standard measuring cell filling for configurations with remote seals (Y) is silicone oil.	
- Mounting thread M12 to DIN 19213 (only for replacement requirement)	1	6) Without cable gland, with blanking plug.	
• Venting on side of process flanges, location of vent valve at top of process flanges (see dimensional drawing).		7) With enclosed cable gland Ex ia and blanking plug.	
- Mounting thread 7/16-20 UNF to IEC 61518	7	8) Configurations with HAN and M12 connectors are only available in Ex ic.	
- Mounting thread M12 to DIN 19213 (only for replacement requirement)	5	9) M12 delivered without cable socket	
<b>Non-wetted parts materials</b>		<sup>10)</sup> Not available with protection type „Ex d“ (options D, P, N and R)	
Process flange screws      Electronics housing		<sup>11)</sup> Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".	
Stainless steel            Die-cast aluminum	2		
Stainless steel            Stainless steel precision casting	3		
<b>Version</b>			
• Standard versions	1		
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)	2		
<b>Explosion protection</b>			
• None	A		
• With ATEX, Type of protection:			
- "Intrinsic safety (Ex ia)"	B		
- "Explosion-proof (Ex d)" <sup>6)</sup>	D		
- "Intrinsic safety and flameproof enclosure" (Ex ia + Ex d) <sup>7)</sup>	P		
- "Ex nA/ic (Zone 2)" <sup>8)</sup>	E		
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia + Ex d + Zone 1D/2D)" <sup>7)</sup> (not for DS III FF)	R		
• FM + CSA intrinsic safe (is)	F		
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)	S		
• With FM + CSA, Type of protection:			
- "Intrinsic safety and explosion-proof (is + xp)" <sup>6)</sup> , max PN 360	NC		
<b>Electrical connection/cable entry</b>			
• Screwed gland M20 x 1.5	B		
• Screwed gland 1/2-14 NPT	C		
• M12 connectors (stainless steel) <sup>9) 10) 11)</sup>	F		

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for differential pressure and flow

1

Selection and Ordering data	Order code		
<i>Further designs</i>	HART	PA	FF
Add "-Z" to Article No. and specify Order code.			
<b>Pressure transmitter with mounting bracket (1x fixing angle, 2 x nut, 2 x U-washer or 1 x bracket, 2 x nut, 2 x U-washer) 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	✓	✓
• FFFM (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 screws (2 unit(s))</b> ¼-18 NPT, with valve in mat. of process flanges	A40	✓	✓
<b>Cable sockets for M12 conn. (stainless steel)</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 (Five-step factory calibration) to IEC 60770-2</b>	C11	✓	✓
<b>Inspection certificate</b> Acc. to EN 10204-3.1	C12	✓	✓
<b>Factory certificate</b> Acc. to EN 10204-2.2	C14	✓	✓
<b>Functional safety (SIL2)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	C20	✓	
<b>Functional safety (PROFIsafe) Certificate and PROFIsafe protocol</b>	C21 <sup>1)</sup>		✓
<b>Functional safety (SIL2/3)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	C23	✓	
<b>Device passport Russia</b> (For price request please contact the technical support <a href="http://www.siemens.com/automation/support-request">www.siemens.com/automation/support-request</a> )	C99	✓	✓
<b>Setting of upper limit of output signal to 22.0 mA</b>	D05	✓	
<b>Manufacturer's declaration acc. to NACE (MR 0103-2012 and MR 0175-2009)</b> (only together with seal diaphragm made of Hastelloy and stainless steel)	D07	✓	✓
<b>Degree of protection IP65/IP68</b> (only for M20 x 1.5 and ½-14 NPT)	D12	✓	✓
<b>Nom. press. rating PN 500 (MAWP 7250 psi)</b> (Only for measuring cell 600 mbar ... 30 bar (240 inH <sub>2</sub> O ... 435 psi), SIL- und Ex-options not possible) <sup>2)</sup>	D56	✓	

Selection and Ordering data	Order code		
<i>Further designs</i>	HART	PA	FF
Add "-Z" to Article No. and specify Order code.			
<b>Use in or on zone 1D/2D</b> (only together with type of protection "Intrinsic safety" (transmitter 7MF4...-.....-B.. Ex ia)*)	E01	✓	✓
<b>Export approval Korea</b>	E11	✓	✓
<b>Dual seal</b>	E24	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-B..)	E25 <sup>3)</sup>	✓	✓
<b>"Flameproof" explosion protection according to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-D..)	E26 <sup>3)</sup>	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia + Ex d) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-P..)	E28 <sup>3)</sup>	✓	✓
<b>Ex Approval IEC Ex (Ex ia)</b> (only for transmitter 7MF4...-.....-B..)	E45 <sup>3)</sup>	✓	✓
<b>Ex Approval IEC Ex (Ex id)</b> (only for transmitter 7MF4...-.....-D..)	E46 <sup>3)</sup>	✓	✓
<b>Explosion-proof "Intrinsic safety" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-B..)	E55 <sup>3)</sup>	✓	✓
<b>Ex prot. "Explosion-proof" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-D..)	E56 <sup>3)</sup>	✓	✓
<b>Explosion-proof "Zone 2" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-E..)	E57 <sup>3)</sup>	✓	✓
<b>"Intrinsic safety" and "Explosion-proof" explosion protection acc. to Kosha (Korea)</b> (only for transmitter 7MF4...-.....-[B, D]...-Z + E11)	E70 <sup>3)</sup>	✓	✓
<b>Two coats of lacquer on casing and cover (PU on epoxy)</b>	G10	✓	✓
<b>Interchanging of process connection side</b>	H01	✓	✓
<b>Stainless steel process flanges for vertical differential pressure lines</b>	H03	✓	✓
<b>Transient protector 6 kV (lightning protection)</b>	J01	✓	✓

1) Profisafe transmitters can only be operated with the S7 F Systems V6.1 configuration software in combination with S7-400H

2) Tested according to IEC 61010. Only for measuring materials of the group of fluids 2 in accordance with PED permissible. Not for use with dangerous media suitable.

3) Option does not include ATEX approval, but instead includes only the country-specific approval.



# Pressure Measurement Transmitters for general requirements

SITRANS P DS III  
for differential pressure and flow

Selection and Ordering data	Order code		
Additional data	HART	PA	FF
Please add <b>"-Z"</b> to Article No. and specify Order code(s) and plain text.			
<b>Measuring range to be set</b> Specify in plain text: • in the case of linear characteristic curve (max. 5 characters): Y01: ... up to ... mbar, bar, kPa, MPa, psi • in the case of square rooted characteristic (max. 5 characters): Y02: ... up to ... mbar, bar, kPa, MPa, psi	Y01 Y02	✓ ✓	✓ <sup>1)</sup> ✓
<b>Stainless steel tag plate and entry in device variable (measuring point description)</b> Max. 16 characters, specify in plain text: Y15: .....	Y15	✓	✓
<b>Measuring point text (entry in device variable)</b> Max. 27 char., specify in plain text: Y16: .....	Y16	✓	✓
<b>Entry of HART address (TAG)</b> Max. 8 char., 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>1)</sup> , inH <sub>2</sub> O <sup>1)</sup> , ftH <sub>2</sub> O <sup>1)</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>2)</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" or "Y02" is essential, unit with max. 5 characters)	Y22 + Y01 or Y02	✓	
<b>Preset bus address</b> possible between 1 and 126 Specify in plain text: Y25: .....	Y25		✓
<b>Damping adjustment in seconds (0 ... 100 s)</b> Factory mounting of valve manifolds, see accessories. Only Y01, Y15, Y16, Y17, Y21, Y22, Y25 and D05 can be factory preset. ✓ = available	Y30	✓	✓

1) Measuring accuracies for PROFIBUS PA transmitters with Option Y01 are calculated in the same way as for HART devices.  
2) Preset values can only be changed over SIMATIC PDM.

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for level

1

#### Selection and Ordering data

Article No.

#### Pressure transmitter for level, SITRANS P DS III with HART

7MF4633-

#### Measuring cell filling

Silicone oil

#### Measuring cell cleaning

normal

1

#### Measuring span (min. ... max.)

25 ... 250 mbar (10 ... 100 inH<sub>2</sub>O)

D

25 ... 600 mbar (10 ... 240 inH<sub>2</sub>O)

E

53 ... 1600 mbar (21 ... 642 inH<sub>2</sub>O)

F

0.16 ... 5 bar (64.3 ... 2000 inH<sub>2</sub>O)

G

#### Process connection of low-pressure side

Female thread 1/4-18 NPT with flange connection

• Mounting thread 7/16-20 UNF to IEC 61518

• Mounting thread M10 to DIN 19213  
(only for replacement requirement)

2

0

#### Non-wetted parts materials

process flange screws Electronics housing

Stainless steel Die-cast aluminum

2

Stainless steel Stainless steel precision  
casting<sup>1)</sup>

3

#### Version

• Standard versions

1

• International version, English label inscriptions,  
documentation in 5 languages on CD  
(no Order code selectable)

2

#### Explosion protection

• None

A

• With ATEX, Type of protection:

- "Intrinsic safety (Ex ia)"

B

- "Explosion-proof (Ex d)<sup>2)</sup>"

D

- "Intrinsic safety and flameproof enclosure"  
(Ex ia + Ex d)<sup>3)</sup>

P

- "Ex nA/ic (Zone 2)<sup>4)</sup>"

E

- "Intrinsic safety, explosion-proof enclosure and  
dust explosion protection (Ex ia+ Ex d +  
Zone 1D/2D)<sup>3)</sup>"

R

• FM + CSA intrinsic safe (is)

F

• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)

S

• With FM + CSA, Type of protection:

- "Intrinsic Safe und Explosion Proof (is + xp)<sup>1)</sup>"

NC

#### Electrical connection/cable entry

• Screwed gland Pg 13.5<sup>5)</sup>

A

• Screwed gland M20x1.5

B

• Screwed gland 1/2-14 NPT

C

• Han 7D plug (plastic housing) incl. mating  
connector<sup>5)</sup>

D

• M12 connectors (stainless steel)<sup>5) 6) 7)</sup>

F

#### Display

• Without display

0

• Without visible display  
(display concealed, setting: mA)

1

• With visible display

6

• With customer-specific display (setting as  
specified, Order code "Y21" or "Y22" required)

7

#### Ordering information

1st order item: Pressure transmitter 7MF4633-...

2nd order item: Mounting flange 7MF4912-3...

#### ordering example

Item line 1: 7MF4633-1EY20-1AA1-Z

B line: Y01

C line: Y01: 80 to 143 mbar (1.16 to 2.1 psi)

Item line 2: 7MF4912-3GE01

Power supply units see Chap. 7 "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) Not in conjunction with electrical connection "Screwed gland Pg 13.5" and "Han7D plug".

2) Without cable gland, with blanking plug.

3) With enclosed cable gland Ex ia and blanking plug.

4) Configurations with HAN and M12 connectors are only available in Ex nL.

5) Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".

6) M12 delivered without cable socket

7) Not available with protection type „Ex d“ (optiones D, P, N and R)

# Pressure Measurement

## Transmitters for general requirements

**SITRANS P DS III**  
 for level

1

Selection and Ordering data	Article No.
<b>Pressure transmitters for level</b>	
<b>SITRANS P DS III with PROFIBUS PA (PA)</b>	7MF4634-
<b>SITRANS P DS III with FOUNDATION Fieldbus (FF)</b>	7MF4635-
	1 Y - - - -
<b>Nominal measuring range</b>	
250 mbar (100 inH <sub>2</sub> O)	D
600 mbar (240 inH <sub>2</sub> O)	E
1600 mbar (642 inH <sub>2</sub> O)	F
5 bar (2000 inH <sub>2</sub> O)	G
<b>Process connection of low-pressure side</b>	
Female thread 1/4-18 NPT with flange connection	
• Mounting thread 7/16-20 UNF to IEC 61518	2
• Mounting thread M10 to DIN 19213 (only for replacement requirement)	0
<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	1
• International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable)	2
<b>Explosion protection</b>	
• None	A
• With ATEX, Type of protection:	
- "Intrinsic safety (Ex ia)" <sup>1)</sup>	B
- "Explosion-proof (Ex d)" <sup>1)</sup>	D
- "Intrinsic safety and flameproof enclosure" (Ex ia + Ex d) <sup>2)</sup>	P
- "Ex nA/IC (Zone 2)" <sup>3)</sup>	E
- "Intrinsic safety, explosion-proof enclosure and dust explosion protection (Ex ia + Ex d + Zone 1D/2D) <sup>2)</sup> (not for DS III FF)	R
• FM + CSA intrinsic safe (is)	F
• FM + CSA (is + ep) + Ex ia + Ex d (ATEX)	S
• With FM + CSA, Type of protection:	
- "Intrinsic Safe und Explosion Proof (is + xp)" <sup>1)</sup>	NC
<b>Electrical connection/cable entry</b>	
• Screwed gland M20 x 1.5	B
• Screwed gland 1/2-14 NPT	C
• M12 connectors (stainless steel) <sup>4) 5)</sup>	F
<b>Display</b>	
• Without display	0
• Without visible display (display concealed, setting: bar)	1
• With visible display	6
• With customer-specific display (setting as specified, Order code "Y21" required)	7

**Ordering information**

 1st order item: Pressure transmitter 7MF4634-...  
 2nd order item: Mounting flange 7MF4912-...

**ordering example**

 Item line 1: 7MF4634-1EY20-1AA1  
 Item line 2: 7MF4912-3GE01

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) Without cable gland, with blanking plug.
- 2) With enclosed cable gland Ex ia and blanking plug.
- 3) Configurations with HAN and M12 connectors are only available in Ex nL.
- 4) M12 delivered without cable socket
- 5) Not in conjunction with types of protection "Explosion-proof" and "Ex nA", "Intrinsic safety" and "Explosion-proof".

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for level

1

Selection and Ordering data	Order code			
<b>Further designs</b>		<b>HART</b>	<b>PA</b>	<b>FF</b>
Add "-Z" to Article No. and specify Order code.				
<b>O-rings for process flanges on low-pressure side</b> (instead of FPM (Viton))				
• PTFE (Teflon)	<b>A20</b>	✓	✓	✓
• FEP (with silicone core, approved for food)	<b>A21</b>	✓	✓	✓
• FFPM (Kalrez, compound 4079)	<b>A22</b>	✓	✓	✓
• NBR (Buna N)	<b>A23</b>	✓	✓	✓
<b>Plug</b>				
• Han 7D (metal, gray)	<b>A30</b>	✓		
• Han 8U (instead of Han 7D)	<b>A31</b>	✓		
• Angled	<b>A32</b>	✓		
• Han 8D (metal, gray)	<b>A33</b>	✓		
<b>Sealing screw</b> ¼-18 NPT, with valve in mat. of process flanges	<b>A40</b>	✓	✓	✓
<b>Cable sockets for M12 connectors (stainless steel)</b>	<b>A50</b>	✓	✓	✓
<b>Rating plate inscription</b> (instead of German)				
• English	<b>B11</b>	✓	✓	✓
• French	<b>B12</b>	✓	✓	✓
• Spanish	<b>B13</b>	✓	✓	✓
• Italian	<b>B14</b>	✓	✓	✓
<b>English rating plate</b> Pressure units in inH <sub>2</sub> O and/or psi	<b>B21</b>	✓	✓	✓
<b>Quality inspection certificate (Five-step factory calibration) to IEC 60770-2</b>	<b>C11</b>	✓	✓	✓
<b>Inspection certificate</b> Acc. to EN 10204-3.1	<b>C12</b>	✓	✓	✓
<b>Factory certificate</b> Acc. to EN 10204-2.2	<b>C14</b>	✓	✓	✓
<b>Functional safety (SIL2)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	<b>C20</b>	✓		
<b>Functional safety (PROFIsafe) Certificate and PROFIsafe protocol</b>	<b>C21<sup>1)</sup></b>		✓	
<b>Functional safety (SIL2/3)</b> Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	<b>C23</b>	✓		
<b>Device passport Russia</b> (For price request please contact the technical support <a href="http://www.siemens.com/automation/support-request">www.siemens.com/automation/support-request</a> )	<b>C99</b>	✓	✓	✓
<b>Setting of upper limit of output signal to 22.0 mA</b>	<b>D05</b>	✓		
<b>Degree of protection IP65/IP68</b> (only for M20x1.5 and ½-14 NPT)	<b>D12</b>	✓	✓	✓
<b>Supplied with oval flange</b> (1 item), PTFE packing and screws in thread of process flange	<b>D37</b>	✓	✓	✓

Selection and Ordering data	Order code			
<b>Further designs</b>		<b>HART</b>	<b>PA</b>	<b>FF</b>
Add "-Z" to Article No. and specify Order code.				
<b>Use on zone 1D / 2D</b> (only together with type of protection "Intrinsic safety" (transmitter 7MF4...-.....-B.. Ex ia)")	<b>E01</b>	✓	✓	✓
<b>Overfilling safety device for flammable and non-flammable liquids</b> (max. PN 32 (MAWP 464 psi), basic device with type of protection "Intrinsic safety (Ex ia)", to WHG and VbF, not together with measuring cell filling "inert liquid")	<b>E08</b>	✓		
<b>Export approval Korea</b>	<b>E11</b>	✓	✓	✓
<b>CRN approval Canada</b> (Canadian Registration Number)	<b>E22</b>	✓	✓	✓
<b>Dual seal</b>	<b>E24</b>	✓	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-B..)	<b>E25<sup>2)</sup></b>	✓	✓	✓
<b>"Flameproof" explosion protection according to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-D..)	<b>E26<sup>2)</sup></b>	✓	✓	✓
<b>Explosion-proof "Intrinsic safety" (Ex ia + Ex d) to INMETRO (Brazil)</b> (only for transmitter 7MF4...-.....-P..)	<b>E28<sup>2)</sup></b>	✓	✓	
<b>Ex Approval IEC Ex (Ex ia)</b> (only for transmitter 7MF4...-.....-B..)	<b>E45<sup>2)</sup></b>	✓	✓	✓
<b>Ex Approval IEC Ex (Ex id)</b> (only for transmitter 7MF4...-.....-D..)	<b>E46<sup>2)</sup></b>	✓	✓	✓
<b>Explosion-proof "Intrinsic safety" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-B..)	<b>E55<sup>2)</sup></b>	✓	✓	✓
<b>Explosion protection "Explosion-proof" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-D..)	<b>E56<sup>2)</sup></b>	✓	✓	✓
<b>Ex protection "Zone 2" to NEPSI (China)</b> (only for transmitter 7MF4...-.....-E..)	<b>E57<sup>2)</sup></b>	✓	✓	✓
<b>"Intrinsic safety" and "Explosion-proof" explosion protection acc. to Kosha (Korea)</b> (only for transmitter 7MF4...-.....-[B, D]..-Z + E11)	<b>E70<sup>2)</sup></b>	✓	✓	✓
<b>Two coats of lacquer on casing and cover (PU on epoxy)</b>	<b>G10</b>	✓	✓	✓
<b>Replacement of process connection side</b>	<b>H01</b>	✓	✓	✓
<b>Transient protector 6 kV (lightning protection)</b>	<b>J01</b>	✓	✓	✓

<sup>1)</sup> Profisafe transmitters can only be operated with the S7 F Systems V6.1 configuration software in combination with S7-400H

<sup>2)</sup> Option beinhaltet keine ATEX-Zulassung, sondern nur die landesspezifische Zulassung.

# Pressure Measurement

## Transmitters for general requirements

SITRANS P DS III  
for level

1

Selection and Ordering data	Order code		
	HART	PA	FF
<b>Additional data</b>			
Please add <b>'-Z'</b> to Article 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	<b>Y01</b>	✓	✓ <sup>1)</sup>
<b>Stainless steel tag plate and entry in device variable (measuring point description)</b> Max. 16 characters, specify in plain text: Y15: .....	<b>Y15</b>	✓	✓
<b>Measuring point text (entry in device variable)</b> Max. 27 characters, specify in plain text: Y16: .....	<b>Y16</b>	✓	✓
<b>Entry of HART address (TAG)</b> Max. 8 characters, specify in plain text: Y17: .....	<b>Y17</b>	✓	
<b>Setting of pressure indicator 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>1)</sup> , inH <sub>2</sub> O <sup>1)</sup> , ftH <sub>2</sub> O <sup>1)</sup> , mmHG, inHG, psi, Pa, kPa, MPa, g/cm <sup>2</sup> , kg/cm <sup>2</sup> , Torr, ATM or % <sup>1)</sup> ref. temperature 20 °C	<b>Y21</b>	✓	✓
<b>Setting of pressure indicator in non-pressure units<sup>2)</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 <b>'Y01'</b> is essential, unit with max. 5 characters)	<b>Y22<sup>3)</sup> + Y01</b>	✓	
<b>Preset bus address</b> possible between 1 and 126 Specify in plain text: Y25: .....	<b>Y25</b>		✓
<b>Damping adjustment in seconds (0 ... 100 s)</b>	<b>Y30</b>	✓	✓

Only Y01, Y15, Y16, Y17, Y21, Y22, Y25 and D05 can be factory preset

✓ = available

<sup>1)</sup> Measuring accuracies for PROFIBUS PA transmitters with Option Y01 are calculated in the same way as for HART devices.

<sup>2)</sup> Preset values can only be changed over SIMATIC PDM.

<sup>3)</sup> Not in conjunction with over-filling safety device for flammable and non-flammable liquids (Order code 'E08')

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III for level

1

Selection and Ordering data		Article No.	Ord. code	Selection and Ordering data			Order code		
<b>Mounting flange</b>		7 MF 4 9 1 2 -		<b>Further designs</b>		<b>HART</b>	<b>PA</b>	<b>FF</b>	
Directly mounted on the SITRANS P pressure transmitter (converter part) for level, for DS III series		3		Add "-Z" to Article No. and specify Order code.					
<b>Connection to EN 1092-1</b>				<b>Spark arrester</b>	<b>A01</b>	✓	✓	✓	
<b>Nominal diameter</b>	<b>Nominal pressure</b>			For mounting on zone 0 (incl. documentation)					
DN 50	PN 40	A		<b>Remote seal nameplate</b>	<b>B20</b>	✓	✓	✓	
	PN 100	B		attached out of stainless steel, contains Article No. and order number of the remote seal supplier					
DN 80	PN 40	D		<b>2.2 Certificate for oil-free and grease-free cleaning</b>	<b>C10</b>	✓	✓	✓	
DN 100	PN 16	G		For inert filling liquid, <u>not for operation with oxygen</u> , Option E10 cannot be selected.					
	PN 40	H		<b>Quality inspection certificate (Five-step factory calibration) to IEC 60770-2</b>	<b>C11</b>	✓	✓	✓	
<b>Connection to ASME B16.5</b>				<b>Inspection certificate</b>	<b>C12</b>	✓	✓	✓	
<b>Nominal diameter</b>	<b>Nominal pressure</b>			Acc. to EN 10204-3.1					
2 inch	class 150	L		<b>2.2 Certificate of FDA approval of fill oil</b>	<b>C17</b>	✓	✓	✓	
	class 300	M		Only in conjunction with filling liquid "Food oil" (FDA listed)"					
	class 400/600	N		<b>"Functional safety (SIL2)" certificate to IEC 61508</b>	<b>C20</b>	✓	✓		
	class 900/1500	P		(only for conjunction with the Order code "C20" in the case of SITRANS P DS III transmitter)					
3 inch	Class 150	Q		<b>"Functional safety (SIL2/3)" certificate to IEC 61508</b>	<b>C23</b>	✓	✓		
	Class 300	R		(only for conjunction with the Order code "C23" in the case of SITRANS P DS III transmitter)					
4 inch	Class 150	T		<b>Certification acc. to NACE MR-0175</b>	<b>D07</b>	✓	✓	✓	
	Class 300	U		Includes acceptance test certificate 3.1 acc. to EN 10204 (only for wetted parts made of stainless steel 1.4404/316L and Hastelloy C276)					
Other version, add Order code and plain text: Nominal diameter: ...; Nominal press.: ...		Z	J 1 Y	<b>Certification acc. to NACE MR-0103</b>	<b>D08</b>	✓	✓	✓	
<b>Wetted parts materials</b>				Includes acceptance test certificate 3.1 acc. to EN 10204 (only for wetted parts made of stainless steel 1.4404/316L and Hastelloy C276)					
• Stainless steel 316L		A		<b>Epoxy painting</b>	<b>E15</b>	✓	✓	✓	
- Coated with PFA		D		Not possible with vacuum-proof design					
- Coated with PTFE		E		Color: transparent, coverage: front and rear of the remote seal, capillary(ies) or connecting tube, process connection of the transmitter. With transmitters 7MF40... and 7MF42... only possible with process connection G½/B according to EN837-1.					
• Coated with ECTFE <sup>1)</sup>		F		<b>Sealing surface B1 or ASME B16.5 RF 125 ... 250 AA</b>	<b>J12</b>	✓	✓	✓	
• Monel 400, mat. no. 2.4360		G		instead of sealing surface B2 or RF SF (only for wetted parts made of Hastelloy C276 (2.4819), tantalum and Duplex 2205 (1.4462) and for nominal sizes 2", 3", DN 50 and DN 80)					
• Hastelloy C276, mat. no. 2.4819		J		<b>Sealing surface groove, EN 1092-1, form D</b>	<b>J14</b>	✓	✓	✓	
• Hastelloy C4, mat. no. 2.4610		K		instead of sealing surface B1 (only for wetted parts made of stainless steel 316L)					
• Tantalum		U		<b>Sealing surface RJF (groove) ASME B16.5</b>	<b>J24</b>	✓	✓	✓	
• Duplex 2205, mat. no. 1.4462		Q		instead of sealing surface ASME B16.5 RF 125 ... 250 AA (only for wetted parts made of stainless steel 316L)					
• Duplex 2205, mat. no. 1.4462, incl. main body		R		<b>Elongated pipe, 150 mm instead of 100 mm,</b>	<b>R15</b>	✓	✓	✓	
• Stainless steel 316L, gold plated, thickness approx. 25 µm		S 0		max. medium temperature 250 °C, observe the maximum permissible media temperature of the filling liquid.					
<b>Tube length</b>				<b>Elongated pipe, 200 mm instead of 100 mm,</b>	<b>R20</b>	✓	✓	✓	
• None		0		max. medium temperature 300 °C, observe the maximum permissible media temperature of the filling liquid.					
• 50 mm (1.97 inch)		1		<b>Vacuum-proof design</b>	<b>V04</b>	✓	✓	✓	
• 100 mm (3.94 inch)		2		(for use in low-pressure range)					
• 150 mm (5.90 inch)		3		Note: suffix "Y01" required with press. transm.					
• 200 mm (7.87 inch)		4		✓ = available					
Other version: add Order code and plain text: material of parts in contact with medium: ....., tubus length: .....		Z 8	K 1 Y						
<b>Filling liquid</b>									
• Silicone oil M5		1							
• Silicone oil M50		2							
• High-temperature oil		3							
• Halocarbon oil (for O <sub>2</sub> -measurement)		4							
• Glycerin/water <sup>2)</sup>		6							
• Food oil (FDA-listed)		7							
Other version, add Order code and plain text: filling liquid: ...		9	M 1 Y						
1) For vacuum on request									
2) Not suitable for use in low-pressure range									

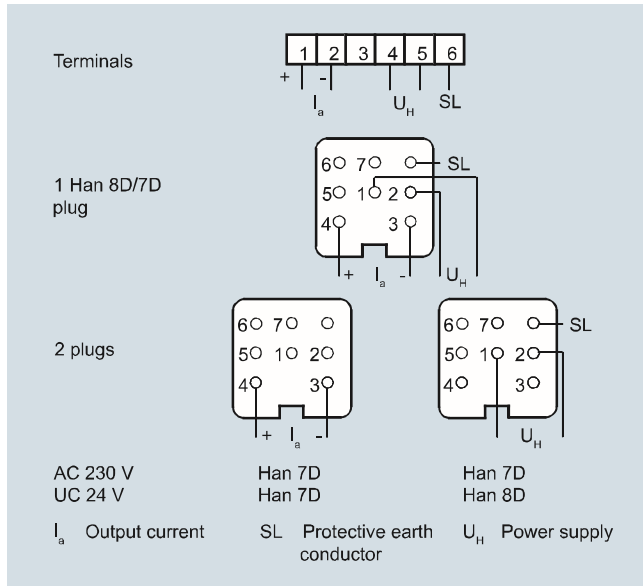
# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III Supplementary electronics for 4-wire connection

1

#### Schematics



Supplementary electronics for 4-wire connection, connection diagram

#### Selection and Ordering data

Order code

Supplementary electronics for 4-wire connection		V
Article No. of the transmitter <b>7MF4.33-.....-AB</b> , add "-Z" and Order code.		
<b>Power supply</b>	<b>Electrical connection</b>	
24 V AC/DC	Terminals; 2 Pg screwed glands, to left	1
	2 Han 7D/Han 8U plugs incl. mating connector, to left	3
	1 Han 7D plug incl. mating connector, angled	5
	Terminals; 1 Pg screwed gland, downwards	6
	1 Han 8U plug incl. mating connector, downwards (observe arrangement of plug and differential pressure line)	9
230 V AC	Terminals; 2 Pg screwed glands, to left	7
	2 Han 7D plugs incl. mating connector, to left	8
<b>Output current</b>		
0 ... 20 mA		0
4 ... 20 mA		1
<b>Accessories</b>		
<b>Instruction Manual</b> German/English		<b>A5E00322799</b>

# Pressure Measurement

## Transmitters for general requirements

SITRANS P DS III  
Accessories/Spare Parts

1

Selection and Ordering data		Article No.
<b>Replacement measuring cell for pressure for SITRANS P DS III</b>		<b>7 MF 4 9 9 0 -</b>
		<b>0 - 0 DB 0</b>
<b>Measuring cell filling Measuring cell cleaning</b>		
Silicone oil	Normal	1
Inert liquid	grease-free to cleanliness level 2	3
<b>Measured span (min. ... max.)</b>		
0.01 ... 1 bar	(0.15 ... 14.5 psi)	B
0.04 ... 4 bar	(0.6 ... 58 psi)	C
0.16 ... 16 bar	(2.32 ... 232 psi)	D
0.63 ... 63 bar	(9.14 ... 914 psi)	E
1.6 ... 160 bar	(23.2 ... 2320 psi)	F
4.0 ... 400 bar	(58.0 ... 5802 psi)	G
7.0 ... 700 bar	(102.0 ... 10153 psi)	J
<b>Wetted parts materials</b>		
Seal diaphragm	Process connection	
Stainless steel	Stainless steel	A
Hastelloy	Stainless steel	B
Hastelloy	Hastelloy	C
<b>Process connection</b>		
• Connection shank G½B to EN 837-1		0
• Female thread ½-14 NPT		1
• Oval flange made of stainless steel, max. span 160 bar (2320 psi)		
- Mounting thread 7/16-20 UNF to IEC 61518		2
- Mounting thread M10 to DIN 19213		3
<b>Further designs</b>		Order code
Please add '-Z' to Article No. and specify Order code.		
<b>Inspection certificate</b>		<b>C12</b>
to EN 10204-3.1		

Selection and Ordering data		Article No.
<b>Replacement measuring cell for absolute pressure for SITRANS P DS III (from the pressure series)</b>		<b>7 MF 4 9 9 2 -</b>
		<b>0 - 0 DB 0</b>
<b>Measuring cell filling Measuring cell cleaning</b>		
Silicone oil	Normal	1
Inert liquid	grease-free to cleanliness level 2	3
<b>Measured span (min. ... max.)</b>		
8.3 ... 250 mbar a	(0.12 ... 3.62 psia)	D
43 ... 1300 mbar a	(0.62 ... 18.85 psia)	F
0.16 ... 5 bar a	(2.32 ... 72.5 psia)	G
1 ... 30 bar a	(14.5 ... 435 psia)	H
<b>Wetted parts materials</b>		
Seal diaphragm	Process connection	
Stainless steel	Stainless steel	A
Hastelloy	Stainless steel	B
Hastelloy	Hastelloy	C
<b>Process connection</b>		
• Connection shank G½B to EN 837-1		0
• Female thread ½-14 NPT		1
• Oval flange made of stainless steel, max. span 160 bar (2320 psi)		
- Mounting thread 7/16-20 UNF to IEC 61518		2
- Mounting thread M10 to DIN 19213		3
<b>Further designs</b>		Order code
Please add '-Z' to Article No. and specify Order code.		
<b>Inspection certificate</b>		<b>C12</b>
to EN 10204-3.1		



# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III Accessories/Spare Parts

1

Selection and Ordering data	Article No.
<b>Replacement measuring cell for absolute pressure (from the differential pressure series)</b> for SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus series	<b>7 MF 4 9 9 3 -</b> - 0 DC 0
<b>Measuring cell filling</b> <b>Measuring cell cleaning</b>	
Silicone oil                      Normal	1
Inert liquid                    grease-free to cleanliness level 2	3
<b>Measured span (min. ... max.)</b>	
8.3 ... 250 mbar a            (0.12 ... 3.62 psia)	D
43 ... 1300 mbar a           (0.62 ... 18.85 psia)	F
0.16 ... 5 bar a                (2.32 ... 72.5 psia)	G
1 ... 30 bar a                  (14.5 ... 435 psia)	H
5.3 ... 100 bar a              (76.9 ... 1450 psia)	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	H
Gold                             Gold	L
<b>Process connection</b>	
Female thread 1/4-18 NPT with flange connection	
• Sealing screw opposite process connection	
- Mounting thread M10 to DIN 19213	0
- Mounting thread 7/16-20 UNF to IEC 61518	2
• Vent on side of process flange <sup>1)</sup>	
- Mounting thread M10 to DIN 19213	4
- Mounting thread 7/16-20 UNF to IEC 61518	6
<b>Non-wetted parts materials</b>	
• Stainless steel process flange screws	2
<b>Further designs</b>	Order code
Please add <b>"-Z"</b> to Article No. and specify Order code.	
<b>O-rings for process flanges</b> (instead of FPM (Viton))	
• PTFE (Teflon)	A20
• FEP (with silicone core, approved for food)	A21
• FFPM (Kalrez, compound 4079)	A22
• NBR (Buna N)	A23
<b>Inspection certificate</b> to EN 10204-3.1	C12
<b>Process connection G1/2B</b>	D16
<b>Remote seal flanges</b> (not together with K01, K02 and K04)	D20
<b>Vent on side for gas measurements</b>	H02
<b>Process flanges</b>	
• without	K00
• with process flange made of	
- Hastelloy	K01
- Monel	K02
- Stainless steel with PVDF insert max. PN 10 (MAWP 145 psi) max. temperature of medium 90 °C (194 °F) For 1/2-14 NPT inner process connection on the side in the middle of the process flange, vent valve not possible	K04

<sup>1)</sup> Not for span "5.3 ... 100 bar (76.9 ... 1450 psi)"

Selection and Ordering data	Article No.
<b>Replacement measuring cell for differential pressure and PN 32/160 (MAWP 464/2320 psi)</b> for SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus series	<b>7 MF 4 9 9 4 -</b> - 0 DC 0
<b>Measuring cell filling</b> <b>Measuring cell cleaning</b>	
Silicone oil                      Normal	1
Inert liquid                    grease-free to cleanliness level 2	3
<b>Measured span (min. ... max.)</b>	
<b>PN 32 (MAWP 464 psi)</b>	
1 ... 20 mbar <sup>1)</sup> (0.4 ... 8 inH <sub>2</sub> O)	B
<b>PN 160 (MAWP 2320 psi)</b>	
1 ... 60 mbar                  (0.4 ... 24 inH <sub>2</sub> O)	C
2.5 ... 250 mbar              (1 ... 100 inH <sub>2</sub> O)	D
6 ... 600 mbar                (2.4 ... 240 inH <sub>2</sub> O)	E
16 ... 1600 mbar              (6.4 ... 642 inH <sub>2</sub> O)	F
50 ... 5000 mbar              (20 ... 2000 inH <sub>2</sub> O)	G
0.3 ... 30 bar                  (4.35 ... 435 psi)	H
<b>Wetted parts materials</b> (stainless steel process flanges)	
Seal diaphragm              Parts of measuring cell	
Stainless steel                Stainless steel	A
Hastelloy                      Stainless steel	B
Hastelloy                      Hastelloy	C
Tantalum <sup>2)</sup> Tantalum	E
Monel <sup>2)</sup> Monel	H
Gold <sup>2)</sup> Gold	L
<b>Process connection</b>	
Female thread 1/4-18 NPT with flange connection	
• Sealing screw opposite process connection	
- Mounting thread M10 to DIN 19213	0
- Mounting thread 7/16-20 UNF to IEC 61518	2
• Vent on side of process flange	
- Mounting thread M10 to DIN 19213	4
- Mounting thread 7/16-20 UNF to IEC 61518	6
<b>Non-wetted parts materials</b>	
Stainless steel process flange screws	2
<b>Further designs</b>	Order code
Please add <b>"-Z"</b> to Article No. and specify Order code.	
<b>O-rings for process flanges</b> (instead of FPM (Viton))	
• PTFE (Teflon)	A20
• FEP (with silicone core, approved for food)	A21
• FFPM (Kalrez, compound 4079)	A22
• NBR (Buna N)	A23
<b>Inspection certificate</b> to EN 10204-3.1	C12
<b>Remote seal flanges</b> (not together with K01, K02 and K04)	D20
<b>Vent on side for gas measurements</b>	H02
<b>Stainless steel process flanges for vertical differential pressure lines</b> (not together with K01, K02 and K04)	H03
<b>Process flanges</b>	
• without	K00
• with process flange made of	
- Hastelloy	K01
- Monel	K02
- Stainless steel with PVDF insert max. PN 10 (MAWP 145 psi) max. temperature of medium 90 °C (194 °F) For 1/2-14 NPT inner process connection on the side in the middle of the process flange, vent valve not possible	K04

<sup>1)</sup> Not suitable for connection of remote seal

<sup>2)</sup> Only together with max. spans 250, 1600, 5000 and 30000 mbar (100 inH<sub>2</sub>O, 642 inH<sub>2</sub>O, 2000 inH<sub>2</sub>O und 435 psi).

# Pressure Measurement

## Transmitters for general requirements

SITRANS P DS III  
Accessories/Spare Parts

1

Selection and Ordering data		Article No.
<b>Replacement measuring cell for differential pressure and PN 420 (MAWP 6092 psi)</b> for SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus series		<b>7 MF 4 9 9 5 -</b> - 0 D C 0
<b>Measuring cell filling</b>	<b>Measuring cell cleaning</b>	1
Silicone oil	Normal	
<b>Measured span (min. ... max.)</b>		D E F G H
2.5 ... 250 mbar	(1 ... 100 inH <sub>2</sub> O)	
6 ... 600 mbar	(2.4 ... 240 inH <sub>2</sub> O)	
16 ... 1600 mbar	(6.4 ... 642 inH <sub>2</sub> O)	
50 ... 5000 mbar	(20 ... 2000 inH <sub>2</sub> O)	
0.3 ... 30 bar	(4.35 ... 435 psi)	
<b>Wetted parts materials</b> (stainless steel process flanges)		A B L
Seal diaphragm	Parts of measuring cell	
Stainless steel	Stainless steel	
Hastelloy	Stainless steel	
Gold <sup>1)</sup>	Gold	
<b>Process connection</b> Female thread 1/4-18 NPT with flange connection		
<ul style="list-style-type: none"> <li>Sealing screw opposite process connection               <ul style="list-style-type: none"> <li>Mounting thread M12 to DIN 19213</li> <li>Mounting thread 7/16-20 UNF to IEC 61518</li> </ul> </li> <li>Vent on side of process flange               <ul style="list-style-type: none"> <li>Mounting thread M12 to DIN 19213</li> <li>Mounting thread 7/16-20 UNF to IEC 61518</li> </ul> </li> </ul>		1 3 5 7
<b>Non-wetted parts materials</b>		2
<ul style="list-style-type: none"> <li>Stainless steel process flange screws</li> </ul>		
<b>Further designs</b>		Order code
Please add <b>"-Z"</b> to Article No. and specify Order code.		
<b>O-rings for process flanges</b> (instead of FPM (Viton))		A20 A21 A22 A23
<ul style="list-style-type: none"> <li>PTFE (Teflon)</li> </ul>		
<ul style="list-style-type: none"> <li>FEP (with silicone core, approved for food)</li> </ul>		
<ul style="list-style-type: none"> <li>FFPM (Kalrez, compound 4079)</li> <li>NBR (Buna N)</li> </ul>		
<b>Inspection certificate</b> to EN 10204-3.1		C12
<b>Stainless steel process flanges for vertical differential pressure lines</b>		H03
<b>without process flanges</b>		K00

<sup>1)</sup> Not together with max. span 600 mbar (240.9 inH<sub>2</sub>O)

# Pressure Measurement

## Transmitters for general requirements

### SITRANS P DS III Accessories/Spare Parts

1

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
<i>Spare parts/Accessories</i>			
<b>Mounting bracket and fastening parts</b> <u>for pressure transmitters</u> SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus (7MF403-.....-..C.) For absolute pressure transmitters SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus (7MF423-.....-..C.) <ul style="list-style-type: none"> <li>made of steel</li> <li>made of stainless steel</li> </ul>	7MF4997-1AB 7MF4997-1AH	<b>Mounting screws</b> For measuring point label, grounding and connection terminals or for display (50 units)	7MF4997-1CD
<b>Mounting bracket and fastening parts</b> <u>for pressure transmitters</u> SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus (7MF403-.....-..A., ..B., ..D. and ..F.) For absolute pressure transmitters SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus 7MF423-.....-..A., ..B., ..D. and ..F.) <ul style="list-style-type: none"> <li>made of steel</li> <li>made of stainless steel</li> </ul>	7MF4997-1AC 7MF4997-1AJ	<b>Sealing screws</b> (1 set = 2 units) for process flange <ul style="list-style-type: none"> <li>made of stainless steel</li> <li>made of Hastelloy</li> </ul>	7MF4997-1CG 7MF4997-1CH
<b>Mounting and fastening brackets</b> <u>For differential pressure transmitters with flange thread M10</u> SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus (7MF433-.... and 7MF443-....) <ul style="list-style-type: none"> <li>made of steel</li> <li>made of stainless steel</li> </ul>	7MF4997-1AD 7MF4997-1AK	<b>Sealing screws with vent valve</b> Complete (1 set = 2 units) <ul style="list-style-type: none"> <li>made of stainless steel</li> <li>made of Hastelloy</li> </ul>	7MF4997-1CP 7MF4997-1CQ
<b>Mounting and fastening brackets</b> <u>For differential pressure transmitters with flange thread M12</u> SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus (7MF453-....) <ul style="list-style-type: none"> <li>made of steel</li> <li>made of stainless steel</li> </ul>	7MF4997-1AE 7MF4997-1AL	<b>Electronics</b> <ul style="list-style-type: none"> <li>for SITRANS P DS III with HART</li> <li>for SITRANS P DS III with PROFIBUS PA</li> <li>for SITRANS P DS III with FOUNDATION Fieldbus</li> </ul>	7MF4997-1DK 7MF4997-1DL 7MF4997-1DM
<b>Mounting and fastening brackets</b> <u>For differential and absolute pressure transmitters with flange thread 7/16 -20 UNEF</u> SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus (7MF433-...., 7MF443-.... and 7MF453-....) <ul style="list-style-type: none"> <li>made of steel</li> <li>made of stainless steel</li> </ul>	7MF4997-1AF 7MF4997-1AM	<b>Connection board</b> <ul style="list-style-type: none"> <li>for SITRANS P DS III</li> <li>for SITRANS P DS III PROFIBUS PA and FOUNDATION Fieldbus</li> </ul>	7MF4997-1DN 7MF4997-1DP
<b>Cover</b> made of die-cast aluminum, including gasket, for SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus <ul style="list-style-type: none"> <li>without window</li> <li>with window</li> </ul>	7MF4997-1BB 7MF4997-1BE	<b>O-rings for process flanges made of:</b> <ul style="list-style-type: none"> <li>FPM (Viton)</li> <li>PTFE (Teflon)</li> <li>FEP (with silicone core, approved for food)</li> <li>FFPM (Kalrez, compound 4079)</li> <li>NBR (Buna N)</li> </ul>	7MF4997-2DA 7MF4997-2DB 7MF4997-2DC 7MF4997-2DD 7MF4997-2DE
<b>Cover</b> made of stainless steel, including gasket, for SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus <ul style="list-style-type: none"> <li>without window</li> <li>with window</li> </ul>	7MF4997-1BC 7MF4997-1BF	<b>Sealing ring for process connection</b> see "Fittings"	
<b>Digital indicator</b> Including mounting material for SITRANS P DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus	7MF4997-1BR	<b>Weldable sockets for PMC connection</b> <ul style="list-style-type: none"> <li>PMC Style Standard: Thread 1½"</li> <li>PMC Style Minibolt: front-flush 1"</li> </ul>	7MF4997-2HA 7MF4997-2HB
<b>Measuring point label</b> <ul style="list-style-type: none"> <li>without inscription (5 units)</li> <li>Printed (1 unit) Data according to Y01 or Y02, Y15, Y16 and Y99 (see "Pressure transmitters")</li> </ul>	7MF4997-1CA 7MF4997-1CB-Z Y...: .....	<b>Gaskets for PMC connection</b> (packing unit = 5 units) <ul style="list-style-type: none"> <li>PTFE seal for PMC Style Standard: Thread 1½"</li> <li>Gasket made of Viton for PMC Style Minibolt: front-flush 1"</li> </ul>	7MF4997-2HC 7MF4997-2HD
		<b>Weldable socket for TG52/50 and TG52/150 connection</b> <ul style="list-style-type: none"> <li>TG52/50 connection</li> <li>TG52/150 connection</li> </ul>	7MF4997-2HE 7MF4997-2HF
		<b>Seals for TG 52/50 and TG 52/150 made of silicone (FDA compliant)</b>	7MF4997-2HG
		<b>Seals for flange connection with front-flush diaphragm</b> Material FPM (Viton), 10 units <ul style="list-style-type: none"> <li>DN 25, PN 40 (M11)</li> <li>DN 25, PN 100 (M21)</li> <li>1", class 150 (M40)</li> <li>1", class 300 (M45)</li> </ul>	7MF4997-2HH 7MF4997-2HJ 7MF4997-2HK 7MF4997-2HL
		▶ Available ex stock	

# Pressure Measurement

## Transmitters for general requirements

SITRANS P DS III  
Accessories/Spare Parts

1

Selection and Ordering data	Article No.
<b>Operating Instructions<sup>1)</sup></b>	
<ul style="list-style-type: none"> <li>• for SITRANS DS III with HART               <ul style="list-style-type: none"> <li>- German <b>A5E00047090</b></li> <li>- English <b>A5E00047092</b></li> <li>- French <b>A5E00053218</b></li> <li>- Spanish <b>A5E00053219</b></li> <li>- Italian <b>A5E00053220</b></li> </ul> </li> <li>• for SITRANS DS III with PROFIBUS PA               <ul style="list-style-type: none"> <li>- German <b>A5E00053275</b></li> <li>- English <b>A5E00053276</b></li> <li>- French <b>A5E00053277</b></li> <li>- Spanish <b>A5E00053278</b></li> <li>- Italian <b>A5E00053279</b></li> </ul> </li> <li>• for SITRANS DS III with FOUNDATION Fieldbus               <ul style="list-style-type: none"> <li>- German <b>A5E00279629</b></li> <li>- English <b>A5E00279627</b></li> </ul> </li> </ul>	
<b>Compact operating instructions</b>	
The compact operating instructions are available in 21 EU languages on the product CD supplied with each transmitter. They can also be downloaded from the SITRANS P web page.	
<b>Brief instruction (Leporello)</b>	
German, English	
<ul style="list-style-type: none"> <li>• for SITRANS DS III with HART <b>A5E00047093</b> <ul style="list-style-type: none"> <li>- German, English</li> </ul> </li> <li>• for SITRANS DS III with PROFIBUS PA <b>A5E00053274</b> <ul style="list-style-type: none"> <li>- German, English</li> </ul> </li> <li>• for SITRANS DS III with FOUNDATION Fieldbus <b>A5E00282355</b> <ul style="list-style-type: none"> <li>- German, English</li> </ul> </li> </ul>	
<b>CD with SITRANS P documentation</b>	<b>A5E00090345</b>
German, English, French, Spanish, Italian incl. compact operating instructions in 21 EU languages	
<b>Certificates (order only via SAP)</b>	
instead of Internet download	
<ul style="list-style-type: none"> <li>• hard copy (to order) <b>A5E03252406</b></li> <li>• on CD (to order) <b>A5E03252407</b></li> </ul>	
<b>Operating Instructions</b>	<b>A5E00078060</b>
for replacement of electronics, measuring cell and connection board (only available from the Internet <sup>1)</sup> )	
<b>HART modem</b>	
<ul style="list-style-type: none"> <li>• with RS232 interface ▶ <b>7MF4997-1DA</b></li> <li>• with USB interface ▶ <b>7MF4997-1DB</b></li> </ul>	
<b>Supplementary electronics for 4-wire connection</b>	<b>See page 1/159</b>

▶ Available ex stock

Power supply units see Chap. 7 "Supplementary Components".

<sup>1)</sup> You can download these operating instructions free-of-charge from our Internet site at [www.siemens.com/sitransp](http://www.siemens.com/sitransp).