

Pressure Measurement

Transmitters for gauge pressure for the paper industry

SITRANS P DS III
with PMC connection

1

Selection and Ordering data		Article No.
SITRANS P pressure transmitters for gauge pressure, with PMC connection series DS III with HART		7 MF 4 1 3 3 -
Measuring cell filling	Measuring cell-cleaning	
Silicone oil	normal	1
Inert liquid	grease-free to cleanliness level 2	3
Measuring span (min. ... max.)		
0.01 ... 1 bar ¹⁾	(0.15 ... 14.5 psi) ¹⁾	B
0.04 ... 4 bar	(0.58 ... 58 psi)	C
0.1.6 ... 16 bar	(2.32 ... 232 psi)	D
Wetted parts materials		
Seal diaphragm	Connection shank	
Hastelloy	Stainless steel	B
Process connection		
<ul style="list-style-type: none"> • PMC Style Standard: Thread 1½" • PMC Style Minibolt: front-flush 1" (not with minimum span: 500 mbar (7.25 psi) - version "B") 		2 3
Non-wetted parts materials		
<ul style="list-style-type: none"> • Housing made of die-cast aluminium • Housing stainless steel precision casting 		0 3
Version		
<ul style="list-style-type: none"> • Standard versions • International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable) 		1 2
Explosion protection		
<ul style="list-style-type: none"> • None • With ATEX, Type of protection: <ul style="list-style-type: none"> - "Intrinsic safety (Ex ia)" • Zone 20/21/22²⁾ • Ex nA/nL (Zone 2)³⁾ • With FM + CSA, Type of protection: <ul style="list-style-type: none"> - "Intrinsic Safe (is)" (planned) 		A B C E M
Electrical connection / cable entry		
<ul style="list-style-type: none"> • Female thread M20 x 1.5 • Female thread ½-14 NPT • M12 connectors (stainless steel)⁴⁾ 		B C F
Display		
<ul style="list-style-type: none"> • Without display • Without visible display (display concealed, setting: mA) • With visible display • With customer-specific display (setting as specified, Order code "Y21" required) 		0 1 6 7

▶ Available ex stock

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

- Included in delivery of the device:
- Brief instructions (Leporello)
 - CD-ROM with detailed documentation
 - sealing ring

1) Only with "PMC Style Standard" process connection
 2) Not in conjunction with electrical connection option A.
 3) Only available together with electrical connection options B, C, F or G.
 4) M12 delivered without cable socket

Selection and Ordering data		Article No.
SITRANS P pressure transmitter for gauge pressure, with PMC connection		
DS III with PROFIBUS PA (PA)		7 MF 4 1 3 4 -
DS III with FOUNDATION Fieldbus (FF)		7 MF 4 1 3 5 -
Measuring cell filling	Measuring cell cleaning	
Silicone oil	normal	1
Inert liquid	grease-free to cleanliness level 2	3
Nominal measuring range		
1 bar ¹⁾	(14.5 psi) ¹⁾	B
4 bar	(58 psi)	C
16 bar	(232 psi)	D
Wetted parts materials		
Seal diaphragm	Connection shank	
Hastelloy	Stainless steel	B
Process connection²⁾		
<ul style="list-style-type: none"> • PMC Style Standard: Thread 1½" • PMC Style Minibolt: front-flush 1" (minimum span: 500 mbar (7.25 psi), not available with 1-bar-measuring cell (Option B)) 		2 3
Non-wetted parts materials		
<ul style="list-style-type: none"> • Housing made of die-cast aluminium • Housing stainless steel precision casting 		0 3
Version		
<ul style="list-style-type: none"> • Standard versions • International version, English label inscriptions, documentation in 5 languages on CD (no Order code selectable) 		1 2
Explosion protection		
<ul style="list-style-type: none"> • None 		A
Electrical connection / cable entry		
<ul style="list-style-type: none"> • Screwed gland M20x1.5 • Screwed gland ½-14 NPT • M12 connectors (stainless steel)³⁾ 		B C F
Display		
<ul style="list-style-type: none"> • Without display • Without visible display (display concealed, setting: bar) ▶ • With visible display • With customer-specific display (setting as specified, Order code "Y21" required) 		0 1 6 7

▶ Available ex stock

- Included in delivery of the device:
- Brief instructions (Leporello)
 - CD-ROM with detailed documentation
 - sealing ring

1) Only with "PMC Style Standard" process connection
 2) Sealing is included in delivery.
 3) M12 delivered without cable socket

Pressure Measurement

Transmitters for gauge pressure for the paper industry

SITRANS P DS III with PMC connection

1

Selection and Ordering data	Order code			Selection and Ordering data	Order code				
Further designs Add "-Z" to Article No. and specify Order code.		HART	PA	FF	Additional data Please add "-Z" to Article No. and specify Order code(s) and plain text.		HART	PA	FF
Plug • Angled • Han 8D (metal, gray)	A32 A33	✓ ✓			Measuring range to be set Specify in plain text (max. 5 characters); Y01: ... up to ... mbar, bar, kPa, MPa, psi	Y01	✓		✓ ¹⁾
M12 cable sockets (metal)	A50	✓	✓	✓	Stainless steel tag plate and entry in device variable (measuring point description) Max. 16 characters, specify in plain text: Y15:	Y15	✓	✓	✓
Rating plate inscription (instead of German) • English • French • Spanish • Italian	B11 B12 B13 B14	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	Measuring point text (entry in device variable) Max. 27 characters, specify in plain text: Y16:	Y16	✓	✓	✓
English rating plate Pressure units in inH ₂ O and/or psi	B21	✓	✓	✓	Entry of HART address (TAG) Max. 8 characters, specify in plain text: Y17:	Y17	✓		
Quality inspection certificate (Five-step factory calibration) to IEC 60770-2	C11	✓	✓	✓	Setting of pressure indication in pressure units 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 ₂ O ^{*)} , inH ₂ O ^{*)} , ftH ₂ O ^{*)} , mmHG, inHG, psi, Pa, kPa, MPa, g/cm ² , kg/cm ² , Torr, ATM or %) ref. temperature 20 °C	Y21	✓	✓	✓
Inspection certificate Acc. to EN 10204-3.1	C12	✓	✓	✓	Setting of pressure indication in non-pressure units²⁾ Specify in plain text: Y22: up to l, m ³ , m, USg, ... (specification of measuring range in pressure units "Y01" is essential, unit with max. 5 characters)	Y22 + Y01	✓		
Factory certificate Acc. to EN 10204-2.2	C14	✓	✓	✓	Preset bus address possible between 1 and 126 Max. 8 characters, specify in plain text: Y25:	Y25		✓	✓
"Functional safety (SIL2)" certificate acc. to IEC 61508	C20	✓			Only "Y01" and "Y21" can be factory preset ✓ = available				
"Functional safety (SIL2/3)" certificate acc. to IEC 61508	C23	✓			ordering example Item line: 7MF4133-1DB20-1AB7-Z B line: C11 + Y01 + Y21 C line: Y01: 1 ... 10 bar (14.5 ... 145 psi) C line: Y21: bar (psi)				
Device passport Russia (For price request please contact the technical support www.siemens.com/automation/support-request)	C99	✓	✓	✓					
Output signal can be set to upper limit of 22.0mA	D05	✓	✓	✓					
Degree of protection IP65/IP68 (only for M20 x 1.5 and ½-14 NPT)	D12	✓	✓	✓					
Export approval Korea	E11	✓	✓	✓					
Mounting • Weldable sockets for standard 1½" threaded connection • Weldable socket for minibolt connection 1" (incl. screw 5/16-18 UNC-2B and washer)	P01 P02	✓ ✓	✓ ✓	✓ ✓					

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 gauge pressure for the paper industry

SITRANS P300
 with PMC connection

1

Selection and Ordering data		Article No.	Selection and Ordering data		Article No.
SITRANS P300 pressure transmitters with PMC connection , single-chamber measuring housing, rating plate inscription in English			SITRANS P300 pressure transmitters with PMC connection , single-chamber measuring housing, rating plate inscription in English		
with 4 ... 20 mA / HART		7 MF 8 1 2 3 -	with 4 ... 20 mA / HART		7 MF 8 1 2 3 -
with PROFIBUS PA		7 MF 8 1 2 4 -	with PROFIBUS PA		7 MF 8 1 2 4 -
with FOUNDATION Fieldbus (FF)		7 MF 8 1 2 5 -	with FOUNDATION Fieldbus (FF)		7 MF 8 1 2 5 -
		■ ■ ■ ■ - ■ ■ ■ ■			■ ■ ■ ■ - ■ ■ ■ ■
Measuring cell filling	Measuring cell cleaning		Display		
Silicone oil	normal	1	• Without display, with keys, closed lid		1
Inert liquid	Cleanliness level 2 to DIN 25410	3	• With display and keys, closed lid ⁶⁾		2
Measuring span			• With display and keys, lid with Makrolon pane (setting on HART devices: mA, with PROFIBUS PA and FOUNDATION Fieldbus equipment: pressure units) ⁶⁾		4
1 bar ¹⁾	(14.5 psi)	B	• With display and keys (setting acc. to specifications, Order code "Y21" or "Y22" required), lid with Makrolon pane ⁶⁾		5
4 bar	(58 psi)	C	• With display and keys, lid with glass pane (setting on HART devices: mA, with PROFIBUS PA and FOUNDATION Fieldbus equipment: pressure unit) ⁶⁾		6
16 bar	(232 psi)	D	• With display (setting acc. to specifications, Order code "Y21" or "Y22" required), lid with glass panel ⁶⁾		7
Wetted parts materials			Power supply units see Chap. 7 "Supplementary Components".		
Seal diaphragm	Measuring cell		Included in delivery of the device:		
Hastelloy	Stainless steel	B	• Brief instructions (Leporello)		
Process connection			• CD-ROM with detailed documentation		
• PMC Style Standard: Thread 1½"		2	• sealing ring		
• PMC Style Minibolt: front-flush 1" (minimum span: 500 mbar (7.25 psi), not available with 1-bar-measuring cell (Option B))		3	1) Only with "Standard" process connection"		
Non-wetted parts materials			2) Not in conjunction with electrical connection option A.		
• Stainless steel, deep-drawn and electrolytically polished		4	3) Only available together with electrical connection options B, C, F or G.		
Version			4) Only together with HART electronics.		
• Standard versions		1	5) Without cable gland.		
Explosion protection			6) Display cannot be turned.		
• None		A			
• With ATEX, Type of protection:					
- "Intrinsic safety (Ex ia)"		B			
• Zone 20/21/22 ²⁾		C			
• Ex nA/nL (Zone 2) ³⁾		E			
• With FM + CSA, Type of protection:					
- "Intrinsic Safe (is)" (planned)		M			
Electrical connection/cable entry					
• Screwed gland M20 x .5 (polyamide) ⁴⁾		A			
• Screwed gland M20 x 1.5 (metal)		B			
• Screwed gland M20 x 1.5 (stainless steel)		C			
• M12 connectors (without cable socket)		F			
• M12 connectors (stainless steel), without cable socket		G			
• ½-14 NPT metal thread ⁵⁾		H			
• ½-14 NPT stainless steel thread ⁵⁾		J			

Pressure Measurement

Transmitters for gauge pressure for the paper industry

SITRANS P300 with PMC connection

1

Selection and Ordering data	Order code		
<i>Further designs</i>	HART	PA	FF
Add "-Z" to Article No. and specify Order code.			
Cable socket for M12 plug			
• metal	A50	✓	✓
• Stainless steel	A51	✓	✓
Rating plate inscription (instead of English)			
• German	B10	✓	✓
• French	B12	✓	✓
• Spanish	B13	✓	✓
• Italian	B14	✓	✓
English rating plate Pressure units in inH ₂ O and/or psi	B21	✓	✓
Quality inspection certificate (Five-step factory calibration) to IEC 60770-2	C11	✓	✓
Inspection certificate Acc. to EN 10204-3.1	C12	✓	✓
Factory certificate Acc. to EN 10204-2.2	C14	✓	✓
Set output signal to upper limit of 22.0mA	D05	✓	✓
Degree of protection IP65/IP68 (only for M20x1.5 and ½-14 NPT)	D12	✓	✓
Mounting			
• Weldable sockets for standard 1½" threaded connection	P01	✓	✓
• Weldable socket for minibolt connection 1" (incl. screw 5/16-18 UNC-2B and washer)	P02	✓	✓

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.			
Measuring range to be set Specify in plain text (max. 5 characters): Y01: ... up to ... mbar, bar, kPa, MPa, psi	Y01	✓	✓ ¹⁾
Stainless steel tag plate and entry in device variable (measuring point description) Max. 16 characters, specify in plain text: Y15:	Y15	✓	✓
Measuring point text (entry in device variable) Max. 27 char., specify in plain text: Y16:	Y16	✓	✓
Entry of HART address (TAG) Max. 8 char., specify in plain text: Y17:	Y17	✓	
Setting of pressure indication in pressure units 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 ₂ O ^{*)} , inH ₂ O ^{*)} , ftH ₂ O ^{*)} , mmHG, inHG, psi, Pa, kPa, MPa, g/cm ² , kg/cm ² , Torr, ATM or %) ref. temperature 20 °C	Y21	✓	✓
Setting of pressure indication in non-pressure units²⁾ Specify in plain text: Y22: up to l, m ³ , m, USg, ... (specification of measuring range in pressure units "Y01" is essential, unit with max. 5 characters)	Y22 + Y01	✓	
Preset bus address possible between 1 and 126 Specify in plain text: Y25:	Y25		✓

✓ = available

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.