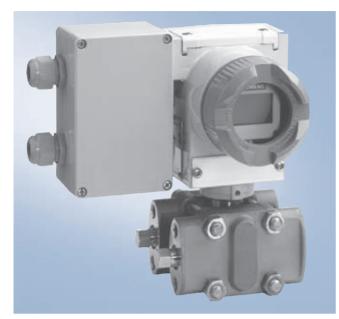
SITRANS P measuring instruments for pressure

SITRANS P Accessories

Overview



SITRANS P pressure transmitter with supplementary electronics for 4-

Direct connection of the supplementary electronics to a SITRANS P pressure transmitter from the DS III and DS III PA series produces a transmitter for four-wire connection.

The supplementary electronics cannot be attached to explosionprotected pressure transmitters. The supplementary electronics is fitted in a light metal housing which is mounted on the left side of the pressure transmitter.

Note on ordering:

The supplementary electronics has to be be ordered through the **supplementary options** of the pressure transmitter in question.

Technical specifications

SITRANS P, supplementary electronics for 4-wire connection

Output

Output signal 0 ... 20 mA or 4 ... 20 mA Load Max. 750 Ω

Voltage measurement Linear (square-rooting in transmitter if necessary) Electrical isolation Between power supply and input/

output

Measuring accuracy

Conformity error (in addition to ≤ 0.15% of set span

transmitter)

Influence of ambient temperature ≤ 0.1% per 10 K (≤ 0.1% per

≤ 0.1% per 10% change in vol-Power supply effect

tage or frequency

≤ 0.1% per 100% change Load effect

Rated conditions

Ambient temperature -20 ... +80 °C (-4 ... +176 °F) Storage temperature -50 ... +85 °C (-58 ... +185 °F) Degree of protection IP54 to EN 60529

Electromagnetic compatibility EN 50081, EN 50082

(EMC)

Supplementary electronics for 4-wire connection

Structural design

Dimensions (W x H x D) in mm 80 x 120 x 60 (3.15 x 4.72 x 2.36)

(inch)

Screw terminals (Pg 13.5 cable inlet) or Han 7D / Han 8U plug Electrical connection

Power supply

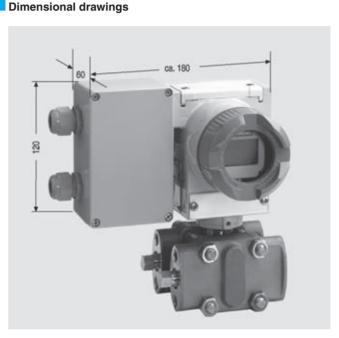
Supply voltage 230 V AC (-10 ... +6%,

47 ... 63 Hz, approx. 6 VA) or 24 V AC/DC (24 V AC ± 10%,

47 ... 63 Hz, approx. 3 VA)

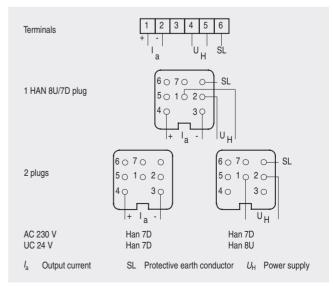
Approx. 2.5 V_{pp}

Permissible ripple (within the speci-



SITRANS P pressure transmitters with supplementary electronics for 4-wire connection, dimension drawing, dimensions in mm (inch)

Schematics



Supplementary electronics for 4-wire connection, connection diagram

SITRANS P measuring instruments for pressure SITRANS P Accessories

Supplementary electronics for 4-wire connection

Salastian and	Ordaring data	Order code		
Selection and Ordering data Supplementary electronics for 4-wire connection		Order code		
		V		
Order No. of the 7MF4.331	e transmitter AA. add "-Z" and Order code.			
Power supply	Electrical connection			
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		
Output current	t .			
0 to 20 mA		0		
4 to 20 mA		1		
Accessories		Order No.		
Instruction Manual		A5E00322799		

SITRANS P measuring instruments for pressure SITRANS P Accessories

Accessories / spare parts for MKII, MS, DS III, DS III PA and DS III FF series

Selection and Ordering data Replacement measuring cell for pressure for SITRANS P, DS III, DS III PA and DS III FF series		Order No.	Selection and Ordering data Replacement measuring cell for absolute pressure (from the pressure series) for SITRANS P, DS III, DS III PA and DS III FF series		0	Order No. 7 M F 4 9 9 2 - 0 - 0 D C	
		7 M F 4 9 9 0 -			-		
Measuring cell fill i Silicone oil Inert liquid	ing Measuring cell cleaning Standard Grease-free	1 3	Measuring cell filli Silicone oil Inert liquid	ing Measuring cell cleaning Standard Grease-free	1 3		
Measured span 0.01 1 bar 0.04 4 bar 0.16 16 bar 0.63 63 bar	(0.15 14.5 psi) (0.58 58 psi) (2.32 232 psi) (9.14 914 psi)	B C D	Measured span 8.3 250 mbar 43 1300 mbar 0.16 5 bar 1 30 bar	(0.12 3.63 psi) E (0.62 18.9 psi) E	E) E)	D F G	
1.6 160 bar 4.0 400 bar	(23.2 2320 psi) (58.0 5802 psi)	F G	Wetted parts materials Seal diaphragm Process connection		_		
Wetted parts mate Seal diaphragm Stainless steel	Process connection Stainless steel	A	Stainless steel Hastelloy Hastelloy	Stainless steel Stainless steel	Ē) Ē)	A B C	
Hastelloy Hastelloy	Stainless steel Hastelloy	B C	Process connection • Connection shank G½B to EN 837-1		_	0	
Process connection Connection shank G½B to EN 837-1 Female thread ½-14 NPT Oval flange made of stainless steel, max. span 160 bar (2320 psi) Mounting thread 7/16-20 UNF to EN 61518		0 1	 Female thread ½- Oval flange made max. span 160 ba Mounting thread 	14 NPT of stainless steel,		1 2 3	
	d M10 to DIN 19 213	3	Further designs				
Further designs			Please add "-Z" to (Order code.	Order No. and specify			
Please add "-Z" to Order No. and specify Order code.			Acceptance test c to EN 10204-3.1.B	ertificate B	C	2	
Acceptance test certificate B to EN 10204-3.1.B		C12	E) Combinations of t	the versions marked with E) are sub	ject	to the ex	xport

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

SITRANS P measuring instruments for pressure SITRANS P Accessories

Accessories / spare parts for MKII, MS, DS III, DS III PA and DS III FF series

Spare parts / Acces	ssories		Order No.		
Replacement measuring cell for absolute pres-			7MF4993-		
sure (from the differential pressure series) for SITRANS P, DS III, DS III PA and DS III FF series			- 0 D C 0		
-	ng Measuring cell cleaning				
Silicone oil Inert liquid	Standard Grease-free		1 3		
<u> </u>	Grease-free		3		
Measured span	(0.10 0.00 == 1)				
8.3 250 mbar	(0.12 3.63 psi)	E)			
43 1300 mbar 0.16 5 bar	(0.62 18.9 psi) (2.32 72.5 psi)	E) E)	F G		
1 30 bar	(14.5 435 psi)	L)	H		
5.3 100 bar	(76.9 1450 psi)		KE		
Wetted parts mater	. , ,				
Seal diaphragm	Parts of measuring cell				
Stainless steel	Stainless steel	-	A		
	Stainless steel	E)	В		
Hastelloy Hastelloy	Hastelloy	E)	C		
Tantalum	Tantalum	L)	E		
Monel	Monel	E)	H		
Gold	Gold	L)	Ü		
Process connectio	NPT with flange connection				
	oosite process connection				
	M10 to DIN 19 213		0		
	⁷ / ₁₆ -20 UNF to EN 61518		2		
Vent on side of pro	716-20 0111 to £11 01310		-		
	M10 to DIN 19 213		4		
O .	⁷ / ₁₆ -20 UNF to EN 61518		6		
Non-wetted parts n					
• Stainless steel pro			2		
Further designs					
_	Andre Nie and an aife				
Order code.	order No. and specify				
O-rings for process	s flanges				
(instead of FPM (Vite	on))				
 PTFE (Teflon) 			A20		
• FEP (with silicone	core, approved for food)		A21		
• FFPM (Kalrez, con	npound 4079)		A22		
 NBR (Buna N) 			A23		
Acceptance test ce to EN 10204-3.1.B	ertificate B		C12		
	m C1/ A		D10		
Process connectio			D16		
Remote seal flanges (not together with K01, K02 and K04)			D20		
Vent on side for ga			H02		
Process flanges			_		
• without			K00		
with process flang	e made of				
- Hastelloy			K01		
- Monel			K02		
- Stainless steel w	ith PVDF insert		K04		
max. PN 10 (MW					
	e of medium 90 °C (194 °F)				
1) Not for an an "E O	100 bor (76.0 1450 pgi)"				

¹⁾ Not for span "5.3 ... 100 bar (76.9 ... 1450 psi)"

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

Spare parts / Acce	essories	Order No.
Replacement measuring cell for differential		7MF4994-
pressure and PN 3	32/160 (MWP 464/2320 psi) for	- 0 D C (
	DS III PA and DS III FF series	0500
-	ng Measuring cell cleaning	
Silicone oil	Standard	1
Inert liquid	Grease-free	_ 3
Measured span		
PN 32 (MWP 464 p		
1 20 mbar ¹⁾	(0.0145 0.29 psi)	В
<u>PN 160 (MWP 2320</u>	<u>) psi)</u>	
1 60 mbar	(0.0145 0.87 psi)	С
2.5 250 mbar	(0.036 3.63 psi)	D
6 600 mbar	(0.087 8.70 psi)	E
16 1600 mbar	(0.232 23.2 psi)	F
50 5000 mbar	(0.725 72.5 psi)	G
0.3 30 bar	(4.35 435 psi)	_ H
Wetted parts mate (stainless steel prod		
(stairiless steer prot Seal diaphragm	Parts of measuring cell	
	Stainless steel	
Stainless steel Hastelloy	Stainless steel Stainless steel	A B
Hastelloy	Hastelloy	C
Tantalum ²⁾	Tantalum	E
Monel ²⁾	Monel	H
Gold ²⁾	Gold	Ü
Process connection	on	_
	3 NPT with flange connection	
	posite process connection	
	M10 to DIN 19 213	0
- Mounting thread	¹⁷ / ₁₆ -20 UNF to EN 61518	2
 Vent on side of pr 	ocess flange	
	M10 to DIN 19 213	4
- Mounting thread	¹⁷ / ₁₆ -20 UNF to EN 61518	6
Non-wetted parts		
Stainless steel proc	ess hange screws	2
Further designs		
Please add "-Z" to (Order code.	Order No. and specify	_
O-rings for proces	_	
(instead of FPM (Vit	con))	400
PTFE (Teflon) FED (with cilioppe	core, approved for food)	A20 A21
 FFPM (Kalrez, cor 		A21 A22
NBR (Buna N)	Tipouria 4070)	A23
,	autificate D	
Acceptance test control to EN 10204-3.1.B	er unicate d	C12
Remote seal flang	es	D20
(not together with K		DZO
Vent on side for ga		H02
•	ocess flanges for vertical	H03
differential pressu	re lines	1100
(not together with K	.01, K02 and K04)	
Process flanges		1400
• without		K00
with process flang	ge made of	1/04
- Hastelloy		K01
- Monel	with DVDE incort	K02
 Stainless steel v 	VILLI E VIDE ILISELL	K04
max. PN 10 (MV	VP 145 DSI)	

¹⁾ Not suitable for connection of remote seal

Only together with max. spans 250, 1600, 5000 and 30000 mbar (3.63, 23.2, 72.5 and 435 psi).

SITRANS P measuring instruments for pressure SITRANS P Accessories

Accessories / spare parts for MKII, MS, DS III, DS III PA and DS III FF series

Spare parts / Accessories		Order No.		
Replacement measuring cell for differential pressure and PN 420 (MWP 6092 psi) for SIT-RANS P, DS III, DS III PA and		7MF499	5 -	
			0 D C 0	
DS III FF series	a and			
Measuring cell filling	Measuring cell cleaning			
Silicone oil	Standard	1		
	Staridard			
Measured span 2.5 250 mbar	(0.036 3.63 poi)	D		
6 600 mbar	(0.036 3.63 psi) (0.087 8.70 psi)	E		
16 1600 mbar	(0.232 23.2 psi)	F		
50 5000 mbar	(0.725 72.5 psi)	G		
0.3 30 bar	(4.35 435 psi)	H		
	· · · · · · · · · · · · · · · · · · ·			
Wetted parts materials (stainless steel process				
	<i>o</i> ,			
Seal diaphragm	Parts of measuring cell			
Stainless steel	Stainless steel	Α		
Hastelloy	Stainless steel	В		
Gold ¹⁾	Gold	L		
Process connection				
Female thread 1/4-18 NP	T with flange			
connection				
 Sealing screw opposit 	•			
- Mounting thread M1		1		
- Mounting thread ⁷ / ₁₆	₅ -20 UNF to EN 61518	3		
• Vent on side of proces	ss flange			
- Mounting thread M1	2 to DIN 19 213	5		
- Mounting thread ⁷ / ₁₆	3-20 UNF to EN 61518	7		
Non-wetted parts mate				
 Stainless steel proces 		2		
Further designs				
•	r No. and specify Order			
Please add "-Z" to Orde code.	i ivo. and specify Order			
O-rings for process fla	inges			
(instead of FPM (Viton))	900			
• PTFE (Teflon)		A20		
• FEP (with silicone core	e, approved for food)	A21		
• FFPM (Kalrez, compound 4079)		A22		
• NBR (Buna N)	,	A23		
Acceptance test certifito EN 10204-3.1.B	icate B	C12		
Stainless steel proces rential pressure lines	s flanges for vertical diffe-	H03		
without process flange	es	K00		
out process name		.100		

¹⁾ Not together with max. span 600 mbar

Spare parts / Access	ories	Order No.		
Replacement measuring cell for level for SITRANS P, DS III, DS III PA and DS III FF series		7 M F 4 9 9 6 -		
Measuring cell filling Silicone oil	Measuring cell cleaning Standard	1		
Rated measuring ran 250 mbar 600 mbar 1600 mbar 5 bar	(3.63 psi) (8.70 psi) (23.2 psi) (72.5 psi)	D E F G		
Wetted parts materia (stainless steel proces	ss flanges)			
Seal diaphragm Stainless steel	Parts of measuring cell Stainless steel	A		
- Mounting thread N	site process connection I10 to DIN 19 213 I ₁₆ -20 UNF to EN 61518	0 2		
Non-wetted parts ma • Stainless steel proce		2		
Further designs Please add "-Z" to Ord code.	ler No. and specify Order			
O-rings for process to (instead of FPM (Viton • PTFE (Teflon) • FEP (with silicone co • FFPM (Kalrez, comp • NBR (Buna N))) ore, approved for food)	A20 A21 A22 A23		
Acceptance test cert to EN 10 204-3.1 B	ificate B	C12		
without process flan	ges	K00		

SITRANS P measuring instruments for pressure SITRANS P Accessories

Accessories / spare parts for MKII, MS, DS III, DS III PA and DS III FF series

MKII, MS, DS III, DS III PA and DS III	FF series		
Spare parts / Accessories	Order No.	Spare parts / Accessories	Order No.
Mounting bracket and mounting parts		Sealing screws	
for pressure transmitters		(1 set = 2 off) for process flange	
MKII series (7MF40101.C.) MS series (7MF40131.C.)		made of stainless steel	7MF4997-1CG
DS III, DS III PA and DS III FF series		 made of Hastelloy 	7MF4997-1CH
(7MF403C.)		Vent valves complete (1 set = 2 off)	
for absolute pressure transmitters DS III, DS III PA and DS III FF series		made of stainless steel	7MF4997-1CP
(7MF423C.)		 made of Hastelloy 	7MF4997-1CQ
• made of steel	7MF4997-1AB	Electronics	
 made of stainless steel 	7MF4997-1AH	for DS III series	7MF4997-1DK
Mounting bracket and mounting parts		• for DS III PA series	7MF4997-1DL
for pressure transmitters		• for DS III FF series	7MF4997-1DM
MKII series (7MF40101.A., -1.B. and -1.D.)		Connection board	
MS series (7MF40131.A., -1.B. and -1.D.) DS III, DS III PA and DS III FF series		• for DS III series	7MF4997-1DN
(7MF403A.,B. andD.)		 for DS III PA and DS III FF series 	7MF4997-1DP
for absolute pressure transmitters		O-rings for process flanges made of	
DS III, DS III PA and DS III FF series (7MF423B. andD.)		• FPM (Viton)	7MF4997-2DA
Made of steel	7MF4997-1AC	PTFE (Teflon)	7MF4997-2DB
	7MF4997-1AJ	 FEP (with silicone core, approved for food) FFPM (Kalrez, compound 4079) 	7MF4997-2DC 7MF4997-2DD
Mounting bracket and mounting parts		NBR (Buna N)	7MF4997-2DD 7MF4997-2DE
for differential pressure transmitters with flange		Instruction Manual 1)	1001 EDE
thread M10		• for MK II series	
DS III, DS III PA and DS III FF series		- German, English	C73000-B5674-C100
(7MF433 and 7MF443) • made of steel	7MF4997-1AD	- French, Spanish, Italian	C73000-B5650-C100
	7MF4997-1AK	• for MS series	
Mounting bracket and mounting parts		- German, English	C73000-B5674-C40
for differential pressure transmitters with flange		French, Spanish, Italianfor DS III series	C73000-B5650-C40
thread M12		- German	A5E00047090
DS III, DS III PA and DS III FF series		- English	A5E00047092
(7MF453) • made of steel	7MF4997-1AE	- French	A5E00053218
made of stainless steel	7MF4997-1AL	- Spanish	A5E00053219
	71111 4007 TAL	- Italian	A5E00053220
Mounting bracket and mounting parts for differential and absolute pressure trans-		for DS III PA series German	A5E00053275
mitters with flange thread 7/16-20 UNF		- English	A5E00053276
DS III, DS III PA and DS III FF series		- French	A5E00053277
(7MF433, 7MF443 and 7MF453) • made of steel	7MF4997-1AF	- Spanish	A5E00053278
made of stainless steel	7MF4997-1AF 7MF4997-1AM	- Italian	A5E00053279
	7 WI 4557-1AW	for DS III FF series German	A5E00279627
Cover Made of die-cast aluminium, including gasket,		- English (planned)	A5E00279629
for MK II, MS, DS III, DS III PA and DS III FF		- French (planned)	A5E00279630
series		- Spanish (planned)	A5E00279632
without window	7MF4997-1BB	- Italian (planned)	A5E00279631
• with window	7MF4997-1BE	Brief instructions (Leporello)	
Cover		• for MS series, German, English	C79000-X5674-C41
Made of stainless steel, including gasket, for DS III, DS III PA and DS III FF series		for DS III series, German, Englishfor DS III PA series, German, English	A5E00047093 A5E00053274
without window	7MF4997-1BC	for DS III PA series, German, English for DS III FF series, German, English	A5E00053274 A5E00282355
without window with window	7MF4997-1BF	CD with documentation	
Analog indicator		for MK II, MS, DS III, DS III PA and DS III FF series	A5E00090345
• Scale 0 100%	7MF4997-1BN	German, English, French, Italian, Spanish	
Customer-specific scale divisions as specified	7MF4997-1BP-Z	Instruction Manual	
in plain text	Y20:	for replacement of electronics, measuring cell	
Digital indicator		and connection board	
Including mounting material	7MF4997-1BR	German/English	A5E00078060
for MS, DS III, DS III PA and DS III FF series		HART communication	
Measuring-point label			7MF4997-1DA ^{D)}
• without inscription (5 off)	7MF4997-1CA	Supplementary electronics for 4-wire connection	see page 2/106
 with inscription (1 off) Data according to Y01 or Y02, Y15 and Y16 	7MF4997-1CB-Z Y:	Available ex stock	- 137
(see "SITRANS P pressure transmitters")	1		unite and investigation
Mounting screws	7MF4997-1CD	Power supply units see "SITRANS I power supply tors".	uriils and input isola-
for managering point label, conthing and connec	1001 100		

- 1) You can download the Instruction Manuals free-of-charge from the Internet site www.siemens.com/sitransp.
- D) Subject to export regulations AL: N, ECCN: EAR99H.

for measuring-point label, earthing and connec-

tion terminals or for digital indicator (50 off)