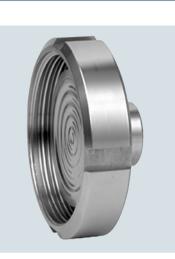
Remote seals for pressure transmitters SITRANS P300, P DS III, P410, P500

## Overview



Quick-release diaphragm seals, to DIN 11851 with slotted union nut



Quick-release diaphragm seals, with clamp connection

Quick-release diaphragm seals are available for the following SITRANS P pressure transmitter series:

- For pressure: P300, DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus
- For differential pressure and flow: P500, DS III with HART, DS III with PROFIBUS PA and DS III with FOUNDATION Fieldbus
- The quick-release remote seals are common designs in the food industry. Their design means that the measured medium cannot accumulate in dead volumes. The quick-release clamp present on the remote seal means that quick dismounting is possible for cleaning.

#### Technical specifications

Quick-release diaphragm seal						
Connection, nominal diameter	Nominal pressure					
For pressure						
• To DIN 11851 with slotted union nut						
- DN 25	PN 40					
- DN 32	PN 40					
- DN 40	PN 40					
- DN 50	PN 25					
- DN 65	PN 25					
- DN 80	PN 25					
• To DIN 11851 with threaded socket						
- DN 25	PN 40					
- DN 32	PN 40					
- DN 40	PN 40					
- DN 50	PN 25					
- DN 65	PN 25					
- DN 80	PN 25					

Clamp connection	
- 1½ inch	PN 16
- 2 inch	PN 16
- 21/2 inch	PN 16
- 3 inch	PN 10
For differential pressure and flow	
To DIN 11851 with slotted union nut	
- DN 50	PN 25
- DN 65	PN 25
- DN 80	PN 25
To DIN 11851 with threaded socket	
- DN 50	PN 25
- DN 65	PN 25
- DN 80	PN 25
<ul> <li>Clamp connection</li> </ul>	
- 2 inch	PN 16
- 21/2 inch	PN 16
- 3 inch	PN 10
Sealing surface	
<ul> <li>For stainless steel, mat. No. 1.4404/316L</li> </ul>	To EN 1092-1, form B1 or ASME B 16.5RF 125 250 AA
For the other materials	To EN 1092-1, form B2 or
	ASME B16.5 RFSF
Materials	
Main body	Stainless steel 316L
Wetted parts	Stainless steel 316L
• Capillary	Stainless steel, mat. No. 1.4571/316Ti
Sheath	Spiral protective tube made of stainless steel, mat. no.1.4404/316L
Maximum pressure	See above and the technical data of the pressure transmitter
Tube length	Without tube
Capillary	
• Length	Max. 10 m (32.8 ft), longer lengths on request
<ul> <li>Internal diameter</li> </ul>	2 mm (0.079 inch)
<ul> <li>Minimum bending radius</li> </ul>	150 mm (5.9 inch)
Sheath	Spiral protective tube made of stainless steel, mat. No. 1.4301/316
Filling liquid	Food oil (FDA listed)
Permissible ambient temperature	Dependent on the pressure trans- mitter and the filling liquid of the remote seal
	More information can be found in the technical data of the pressure transmitters and in the section "Technical data of filling liquid" in the Technical description to the remote seals
Weight	Approx. 4 kg (8.82 lb)
Certificates and approvals	
Classification according to pressure equipment directive (DGRL 2014/68/EU)	For gases of fluid group 1 and liq- uids of fluid group 1; complies with requirements of article 4, paragraph 3 (sound engineering practice)
EHEDG	Complies with EHEDG recom- mendations

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## **Pressure Measurement**

Remote seals for pressure transmitters SITRANS P300, P DS III, P410, P500

Selection and Ordering data	Article No. Orc	l. code	Selection and Ordering data	Ord. code
Quick-release diaphragm seal 🧷	7MF4940-		Further designs	
for SITRANS P pressure transmitters for pressure 7MF2033; 7MF403 and 7MF423 together with Order code "V01"	A 0 - B		Please add "-Z" to Article No. and specify Order code.	Doo
(Negative pressure service) and 7MF802 <sup>1)</sup> ; must be ordered separately Filling liquid: Food oil (FDA listed) Material: Stainless steel, mat. No. 1.4435			Remote seal nameplate Attached out of stainless steel, contains MLFB and order number of the remote seal	B20
<ul> <li>Click on the Article No. for the online configuration in the PIA Life Cycle Portal.</li> </ul>			Quality Inspection Certificate (5-point charac- teristic curve test) according to IEC 60770-2	C11
Nom. diam. Nom. press.			Inspection certificate to EN 10204. section 3.1	C12
Connection to DIN 11851 with slotted union nut     DN 25 PN 40     DN 32 PN 40	1 B 1 C		<b>2.2 Certificate of FDA approval of fill oil</b> Only in conjunction with "Food-grade oil" fill liq- uid (FDA listed)"	C17
- DN 40 PN 40 - DN 50 PN 25 - DN 65 PN 25	1 D 1 E 1 F		Functional safety certificate ("SIL 2") to IEC 61508 (Only in conjunction with the Order code "C20"	C20
- DN 80 PN 25 • Connection to DIN 11851 with screw necks	1 G		in the case of SITRANS P DSIII transmitter) Functional safety certificate ("SIL 2/3") to	C23
- DN 25 PN 40 - DN 32 PN 40 - DN 40 PN 40	2 B 2 C 2 D		IEC 61508 (Only in conjunction with the Order code "C23" in the case of SITRANS P DSIII transmitter)	
- DN 50 PN 25 - DN 65 PN 25 - DN 80 PN 25	2 E 2 F 2 G		One-sided mounting on differential pressure transmitters (only for 7MF4940)	
<ul> <li>Tri-Clamp connection to DIN 32676/ISO 2852</li> <li>DN 40/1½ inch PN 16</li> <li>DN 50/2 inch PN 16</li> </ul>	4 L 4 M		on high-pressure side on low-pressure side PE protective tube	H10 H11
- DN 65/2½ inch PN 16 - DN 80/3 inch PN 10	4 N 4 P		over the spiral protective tube of the capillaries (color: white)	
Other version Add Order codes and plain text: Process connection:, Nominal diameter:; Nominal pressure:	9 A	H 1 Y	1.0 m (3.28 ft) 1.6 m (5.25 ft) 2.0 m (6.56 ft)	N20 N21 N22
Filling liquid			2.5 m (8.20 ft)	N23
Food oil (FDA listed)	7		3.0 m (9.84 ft)	N24
Other version	9	M1Y	4.0 m (13.12 ft)	N25
Add Order code and plain text:			5.0 m (16.40 ft)	N26
Filling liquid:			6.0 m (19.69 ft)	N27
Connection to pressure transmitter			7.0 m (22.97 ft)	N28
• direct	0		8.0 m (26.25 ft)	N29
through capillary, length: <sup>2)</sup>			9.0 m (29.53 ft)	N30
• 1.0 m (3.28 ft)	2		10.0 m (32.81 ft)	N31
• 1.6 m (5.25 ft) • 2.5 m (8.20 ft)	3 4		PTFE protective tube	
• 2.5 m (8.20 ft) • 4.0 m (13.1 ft)	4		over the spiral protective tube of the capillaries (color: transparent)	
• 6.0 m (19.7 ft)	6			N40
• 8.0 m (26.25 ft)	7		1.0 m (3.28 ft) 1.6 m (5.25 ft)	N40 N41
• 10.0 m (32.8 ft)	8		2.0 m (6.56 ft)	N42
Special lengths for capillaries			2.5 m (8.20 ft)	N43
• 2.0 m (6.56 ft)	9	N 1 C	2.5 m (8.20 lt) 3.0 m (9.84 ft)	N43
• 3.0 m (9.84 ft)	9	N1E	4.0 m (13.12 ft)	N45
• 5.0 m (16.40 ft)	9	N1G	5.0 m (16.40 ft)	N46
• 7.0 m (23.97 ft)	9	N1J	6.0 m (19.69 ft)	N46
• 9.0 m (29.53 ft)	9	N 1 L	7.0 m (22.97 ft)	N48
<sup>1)</sup> With 7MF802 and the measuring cells Q, S, T a	nd I Lalso order	the	8.0 m (26.25 ft)	N49
vacuum-tight version.	nu u also order	uie	9.0 m (29.53 ft)	N49 N50
-	iption"		0.0 III (20.00 II)	1100

Remote seals for pressure transmitters SITRANS P300, P DS III, P410, P500

Quick-release diaphragm seals	
Selection and Ordering data	Ord, code
Further designs	
Please add "-Z" to Article No. and specify Order code.	
PVC protective tube	
over the spiral protective tube of the capillaries (color: black)	
1.0 m (3.28 ft)	N60
1.6 m (5.25 ft)	N61
2.0 m (6.56 ft)	N62
2.5 m (8.20 ft)	N63
3.0 m (9.84 ft)	N64
4.0 m (13.12 ft)	N65
5.0 m (16.40 ft)	N66
6.0 m (19.69 ft)	N67
7.0 m (22.97 ft)	N68
8.0 m (26.25 ft)	N69
9.0 m (29.53 ft)	N70
10.0 m (32.81 ft)	N71
Cooling element max. medium temperature 300 °C, observe the	R22
maximum permissible media temperature of the filling liquid.	
Negative pressure service	
for use in low-pressure range for transmitters for	
gauge and absolute pressure from the pressu- re series	V01
Extended negative pressure service	
for use in low-pressure range for transmitters for	VET
<ul> <li>gauge and absolute pressure from the pressure series</li> </ul>	V51

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## **Pressure Measurement**

Remote seals for pressure transmitters SITRANS P300, P DS III, P410, P500

# Quick-release diaphragm seals

Selection and Ordering data		Article I	No. Or	d. code	Selection and Ordering data	Order c
Quick-release diaphragm seal	7	7 M F 4	943 -		Further designs	
for SITRANS P pressure transmitters for pres- sure for differential pressure and flow, type 7MF243; 7MF443 and 7MF54;		<b>A</b> 0	- B		Please add "-Z" to Article No. and specify Order code.	
order separately Filling liquid: Food oil (FDA listed) Material: Stainless steel, mat. No. 1.4435					Remote seal nameplate Attached out of stainless steel, contains MLFB and order number of the remote seal	B20
Delivery unit: 2 off Click on the Article No. for the online configu	1-				Quality Inspection Certificate (5-point charac- teristic curve test) according to IEC 60770-2	C11
ration in the PIA Life Cycle Portal.					Inspection certificate	C12
Nom. diam. Nom. press.					to EN 10204, section 3.1	
<ul> <li>Connection to DIN 11851 with slotted union nu</li> </ul>	ut				2.2 Certificate of FDA approval of fill oil	C17
- DN 50 PN 25		1 E			Only in conjunction with "Food-grade oil" fill lig-	
- DN 65 PN 25		1 F			uid (FDA listed)"	
- DN 80 PN 25		1 G			Functional safety certificate ("SIL 2") to	C20
Connection to DIN 11851 with threaded					IEC 61508	
socket - DN 50 PN 25		2 E			(Only in conjunction with the Order code "C20"	
- DN 65 PN 25		2 F			in the case of SITRANS P DSIII transmitter)	
- DN 80 PN 25		2 G			Functional safety certificate ("SIL 2/3") to	C23
Tri-Clamp connection to DIN 32676/ ISO 2852	>	20			IEC 61508	
- DN 50/2 inch PN 16	-	4 M			(Only in conjunction with the Order code "C23" in the case of SITRANS P DSIII transmitter)	
- DN 65/2½ inch PN 16		4 N			· · · · · · · · · · · · · · · · · · ·	
- DN 80/3 inch PN 10		4 P			PE protective tube	
Other version					over the spiral protective tube of the capillaries	
Add Order codes and plain text:					(color: white)	
Process connection:, Nominal diameter:;		9 A		H 1 Y	1.0 m (3.28 ft)	N20
Nominal pressure:					1.6 m (5.25 ft)	N21
Filling liquid					2.0 m (6.56 ft)	N22
<ul> <li>Food oil (FDA listed)</li> </ul>			7		2.5 m (8.20 ft)	N23
Other version			9	M1Y	3.0 m (9.84 ft)	N24
Add Order code and plain text:					4.0 m (13.12 ft)	N25
Filling liquid:					5.0 m (16.40 ft)	N26
Connection to transmitter					6.0 m (19.69 ft)	N27
through capillary, Length: <sup>1)</sup>					7.0 m (22.97 ft)	N28
• 1.0 m (3.28 ft)			2		8.0 m (26.25 ft)	N29
• 1.6 m (5.25 ft)			3		9.0 m (29.53 ft)	N30
• 2.5 m (8.20 ft)			4		10.0 m (32.81 ft)	N31
• 4.0 m (13.1 ft)			5		PTFE protective tube	
• 6.0 m (19.7 ft)			6		over the spiral protective tube of the capillaries	
• 8.0 m (26.25 ft)			7		(color: transparent)	
• 10.0 m (32.8 ft)			8		1.0 m (3.28 ft)	N40
Special lengths for capillaries					1.6 m (5.25 ft)	N40
			•	N 1 C	2.0 m (6.56 ft)	N42
• 2.0 m (6.56 ft) • 3.0 m (9.84 ft)			9 9	N1E		
• 5.0 m (16.40 ft)			9	N1G	2.5 m (8.20 ft)	N43
• 7.0 m (23.97 ft)					3.0 m (9.84 ft)	N44
			9	N 1 J	4.0 m (13.12 ft)	N45
• 9.0 m (29.53 ft)			9	N1L	5.0 m (16.40 ft)	N46
1) Max. capillary length, see section "Technical de	escri	ption"			6.0 m (19.69 ft) 7.0 m (22.97 ft)	N47 N48

8.0 m (26.25 ft) 9.0 m (29.53 ft) 10.0 m (32.81 ft)

N49 N50 N51

Remote seals for pressure transmitters SITRANS P300, P DS III, P410, P500

Quick-release diaphragm seals	
Selection and Ordering data	Order code
Further designs	
Please add "-Z" to Article No. and specify Order code.	
PVC protective tube	
over the spiral protective tube of the capillaries (color: black)	
1.0 m (3.28 ft)	N60
1.6 m (5.25 ft)	N61
2.0 m (6.56 ft)	N62
2.5 m (8.20 ft)	N63
3.0 m (9.84 ft)	N64
4.0 m (13.12 ft)	N65
5.0 m (16.40 ft)	N66
6.0 m (19.69 ft)	N67
7.0 m (22.97 ft)	N68
8.0 m (26.25 ft)	N69
9.0 m (29.53 ft)	N70
10.0 m (32.81 ft)	N71
Negative pressure service	
for use in low-pressure range for transmitters for	V03
differential pressure	VU3
Extended negative pressure service	

V53

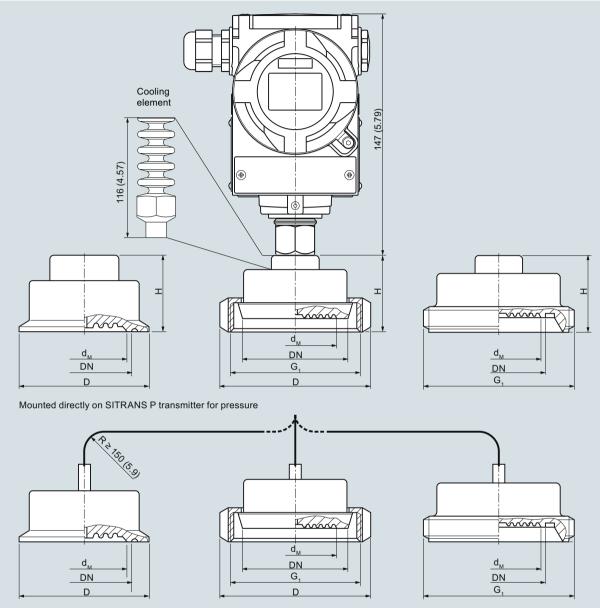
for use in low-pressure range for transmitters for

• differential pressure

Remote seals for pressure transmitters SITRANS P300, P DS III, P410, P500

Quick-release diaphragm seals

Dimensional drawings



Mounted on SITRANS P transmitter for pressure or differential pressure and flow

Quick-release diaphragm seal, dimensions in mm (inch)

Clamp connection (left)	
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DN	Ød	м	ØD		н	
40 (1½ inch)	32	(1.26)	50.5	(2)	35	(1.38)
50 (2 inch)	40	(1.57)	64	(2.52)	35	(1.38)
65 (2½ inch)	52	(2.05)	77.5	(3.05)	35	(1.38)
80 (3 inch)	72	(2.83)	91	(3.58)	35	(1.38)

Connection to DIN 11851 with slotted union nut (center)						
DN	Ø d <sub>M</sub>	ØD	н	G <sub>1</sub>		
25	25	63	36	Rd 52x1/6		
32	32	70	36	Rd 52x1/6		
40	40	78	36	Rd 65x1/6		
50	52	112	36	Rd 78x1/6		
65	65	112	36	Rd 95x1/6		
80	72	127	36	Rd 110x1/6		
25	25	63	36	Rd 52x1/6		

Connection to DIN 11851 with threaded socket (right)						
DN	Ød <sub>M</sub>	н	G <sub>1</sub>			
25	25	36	Rd 52x1/6			
32	32	36	Rd 52x1/6			
40	40	36	Rd 65x1/6			
50	52	36	Rd 78x1/6			
65	65	36	Rd 95x1/6			
80	72	36	Rd 110x1/6			

d<sub>M</sub> Effective diaphragm diameter

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