DMP 334i

Precision-Pressure Transmitter for High Pressure

Thinfilm Sensor

accuracy according to IEC 61298-2:
0.2 % FSO

Nominal pressure

from 0 ... 600 bar up to 0 ... 2200 bar

Analogue output

2-wire: 4 ... 20 mA
others on request

Special characteristics

- welded pressure sensor
- excellent accuracy
- robust and long-term stable

Optional versions

- pressure port
  M20x1.5 or 9/16 UNF
- different kinds of
  electrical connections

The precision pressure transmitter DMP 334i is a consistent further development of the approved industrial pressure transmitter DMP 334. Basic element is a thinfilm sensor which is welded with the pressure port.

The integrated digital electronics compensates actively sensor specific deviations like non-linearity and thermal error.

It is therefore possible to offer a high pressure transmitter with excellent metrological qualities.

Preferred areas of use are

Plant and machine engineering

Test benches

Commercial vehicles and
mobile hydraulics

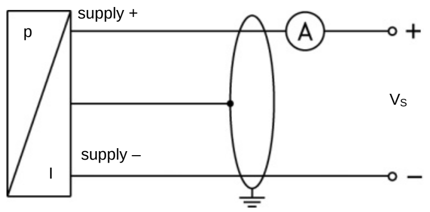
CE ROHS REACH

Input pressure range						
Nominal pressure gauge	[bar]	600	1000	1600	2000	2200
Overpressure	[bar]	2000	2000	2800	2800	2800

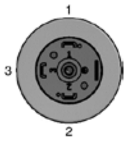
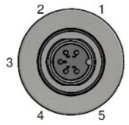
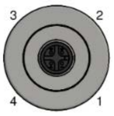
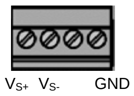
Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / $V_S = 12 \dots 36\ V_{DC}$
Performance	
Accuracy [1]	≤ ± 0.2 % FSO
Permissible load	$R_{max} = [(V_S - V_{S\ min}) / 0.02\ A]\ \Omega$
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ
Long term stability	≤ ± 0.1 % FSO / year at reference conditions
Response time	approx. 10 msec
[1] accuracy according to IEC 61298-2 – limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (offset and span)	
Tolerance band	≤ ± 0.3 % FSO
In compensated range	0 ... 80 °C
Permissible temperatures	
Medium	-40 ... 140 °C
Electronics / environment	-25 ... 85 °C
Storage	-40 ... 100 °C
Electrical protection	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326
Mechanical stability	
Vibration	20 g RMS / 10 ... 2000 Hz according to DIN EN 60068-2-6
Shock	500 g / 1 msec half sine according to DIN EN 60068-2-27
Materials	
Pressure port	stainless steel 1.4542 (17-4 PH)
Housing	stainless steel 1.4404 (316L)
Option compact field housing	stainless steel 1.4301 (304) cable gland M12x1.5, brass, nickel plated (clamping range 2 … 8 mm)
Seals	none (welded)
Diaphragm	stainless steel 1.4542 (17-4 PH)
Media wetted parts	pressure port, diaphragm
Miscellaneous	
Current consumption	max. 25 mA
Weight	approx. 300 g
Installation position	any
Operational life	$p_N = 600$ bar: 100 million load cycles $p_N > 600$ bar: 10 million load cycles
CE-conformity	EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A)

Wiring diagram

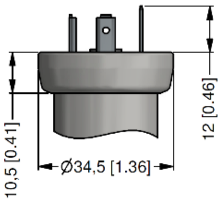
2-wire-system (current)



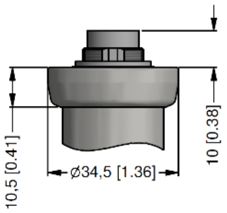
Pin configuration

Electrical connections	ISO 4400 	Binder 723 (5-pin) 	M12x1 / metal (4-pin) 	compact field housing 	cable colour (IEC 60757)
Supply +	1	3	1	V_S+	WH (white)
Supply –	2	4	2	V_S-	BN (brown)
Shield	ground pin ⏚	5	4	GND	GNYE (green-yellow)

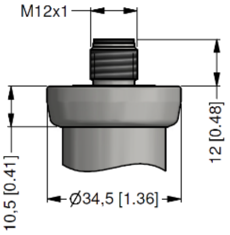
Electrical connections (dimensions mm / in)



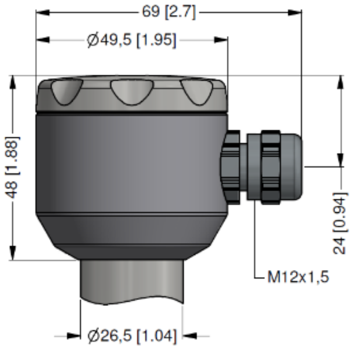
ISO 4400
(IP 65)



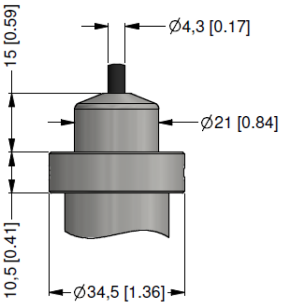
Binder series 723
(IP 67)



M12x1, 4-pin
(IP 67)



compact field housing
(IP 67)



cable outlet with
PVC cable (IP 67) [2]

⇨ universal field housing in stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request

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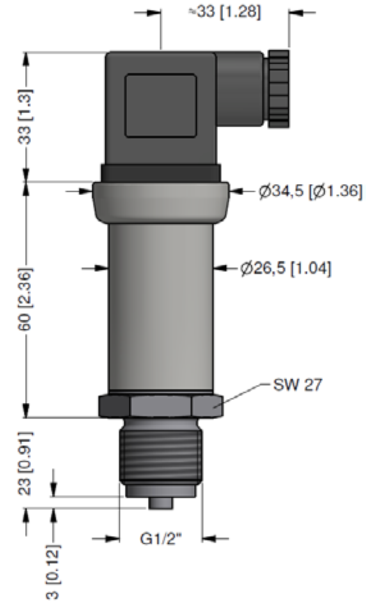
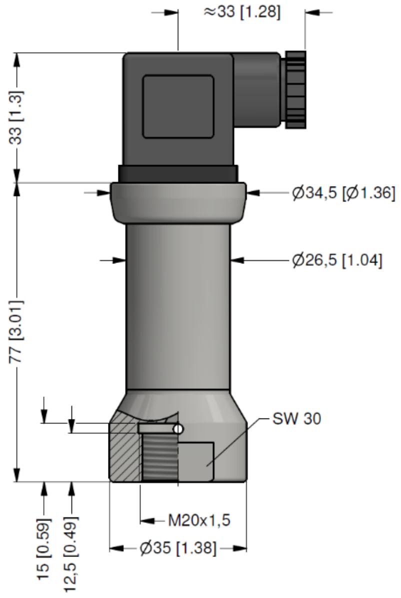
[2] standard: 2 m PVC cable, without ventilation tube (permissible temperature: -5 ... 70 °C); others on request

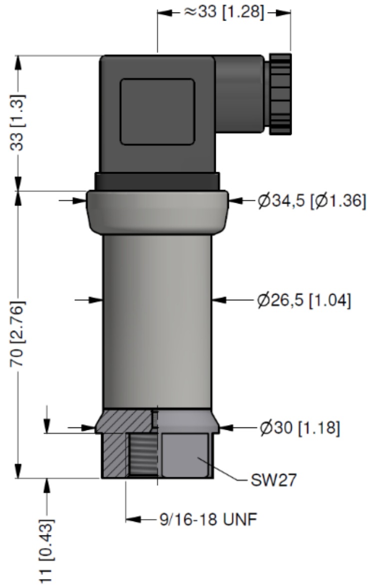
Mechanical connection (dimensions mm / in)



G1/2" EN 837 [3]



M20x1.5 internal thread



9/16-18 UNF internal thread

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[3] According to EN 837, the pressure port and the complement at pressure over 1000 bar must be preferably made of stainless steel with a tensile strength of R_P > 260 N/mm² in accordance with DIN 17440. The maximum allowed pressure is 1600 bar!

Ordering code DMP 334i

DMP 334i □□□-□□□□-□-□-□□□-□□□-□-□□□

Pressure		
gauge	1 4 0	
Input [bar]		
600	6 0 0 3	
1000	1 0 0 4	
1600	1 6 0 4	
2000	2 0 0 4	
2200	2 2 0 4	
customer	9 9 9 9	consult
Output		
4 … 20 mA / 2-wire	1	
customer	9	consult
Accuracy		
0.2 % FSO	B	
customer	9	consult
Electrical connection		
male and female plug ISO 4400	1 0 0	
male plug Binder series 723 (5-pin)	2 0 0	
cable outlet with PVC cable (IP67) [1]	T A 0	
male plug M12x1 (4-pin) / metal	M 1 0	
compact field housing stainless steel 1.4301 (304)	8 5 0	
customer	9 9 9	consult
Mechanical connection		
G1/2" EN 837 [2]	2 0 0	
M20x1.5 internal thread	D 2 8	
9/16 UNF internal thread	V 0 0	
customer	9 9 9	consult
Seal		
without (welded version)	2	
customer	9	consult
Special version		
standard	1 1 1	
customer	9 9 9	consult

[1] standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 … 70 °C), others on request

[2] According to EN 837, the pressure port and the complement, at pressure over 1000 bar must be preferably made of stainless steel with a tensile strength of R_P > 260 N/mm² in accordance with DIN 17440. The maximum allowed pressure is 1600 bar!

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