SCHNEIDER MESSTECHNIK

IMP 320

Precision Pressure Transmitter with Fast Response Time

Stainless steel sensor

accuracy according to IEC 60770:
0.1% FSO

Nominal pressure

from 0...100 mbar up to 0...600 bar

Output signal

3-wire: 0.1 … 10 V
4 … 20 mA
others on request

Product characteristics

- extremely fast response time ≤ 0.5 ms
- internal sample rate 10 kHz
- accuracy 0.1% FSO
- excellent thermal behaviour
- outstanding long term stability

optional versions

- customer specific versions

DMP 320 stands for speed and precision.

With a response time of ≤ 0.5 msec and a sampling rate of 10 kHz, the pressure transmitter was designed for applications, in which an extremely fast and exact pressure measuring is required. Pressure curves, peaks and hits can be monitored and evaluated exactly.

The signal processing of the sensor signal is done by newly developed digital electronics, which detect the signal with a sampling rate of 10 kHz. Sensor-specific deviations such as non-linearity, hysteresis and temperature errors are compensated actively.

Preferred areas of use are

- Plant and Machine Engineering
- Energy Industry

CE

ICS Schneider Messtechnik GmbH
Briesestraße 59
D-16562 Hohen Neuendorf / OT Bergfelde

Tel.: 03303 / 504066
Fax: 03303 / 504068

info@ics-schneider.de
www.ics-schneider.de

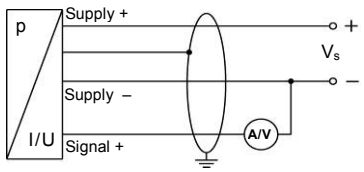
Input pressure range											
Nominal pressure gauge [bar]	-1…0	0.10	0.16	0.25	0.40	0.60	1	1.6	2.5	4	6
Nominal pressure abs. [bar]	-	-	-	-	0.40	0.60	1	1.6	2.5	4	6
Overpressure [bar]	5	0.5	1	1	2	5	5	10	10	20	40
Burst pressure ≥ [bar]	7.5	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50

Nominal pressure gauge /abs [bar]	10	16	25	40	60	100	160	250	400	600
Overpressure [bar]	40	80	80	105	210	600	600	1000	1000	1000
Burst pressure ≥ [bar]	50	120	120	210	420	1000	1000	1250	1250	1250
Vacuum resistance	P_N ≥ 1 bar: unlimited vacuum resistance P_N < 1 bar: on request									

Output signal / Supply	
3-wire	0.1 … 10 V / V_S = 14 … 30 V_{DC}
3-wire	4 ... 20 mA / V_S = 14 ... 30 V_{DC} (in preparation)
Performance	
Accuracy [1]	≤ ± 0.1 % FSO
Permissible load	Current 3-wire: R_{max} = 500 Ω Voltage 3-wire: R_{min} = 10 kΩ
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ
Long term stability	≤ ± 0.1 % FSO / year
Response time	≤ 0.5 ms
[1] accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (Offset and Span) / Permissible temperatures	
Tolerance band [% FSO]	≤ ± 0.2 in compensated range -20 ... 80 °C
TC, average [% FSO / 10 K]	± 0.02 in compensated range -20 ... 80 °C
Permissible temperatures	medium: -40 ... 125°C electronics / environment: -40 ... 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	10 g RMS (25 ... 2000 Hz) nach DIN EN 60068-2-6
Shock	500 g / 1 ms nach DIN EN 60068-2-27
Materials	
Pressure Port	stainless steel 1.4404
Housing	stainless steel 1.4404
Option compact field housing	stainless steel 1.4305, cable gland M12x1,5, brass, nickel plated others on request
Seals (media wetted)	standard: FKM options: EPDM others on request
Diaphragm	Stainless steel 1.4435
Media wetted parts	Pressure port, seal, diaphragm
Miscellaneous	
Current consumption	Signal output current: max. 25 mA
Weight	approx. 200 g
Installation position	any [2]
Operational life	> 100 x 10^6 pressure cycles
CE-conformity	EMV-Directive: 2004/108/EG
[2] Pressure transmitters are calibrated in a vertical position with the pressure connection down. If this position is changed on installation ther can be slight deviations in the zero point for pressure ranges P_N ≤ 1 bar.	

Wiring diagrams

3-wire-system (current/voltage)



Pin configuration

Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1/metal (4-pin)	Field housing	cable colours (DIN 47100)
Supply + Supply – Signal +	1 2 3	3 4 1	1 2 3	IN + IN – OUT +	wh (white) bn (brown) gn (green)
Shield	Ground pin	5	4	⏚	ye/gn (yellow/green)

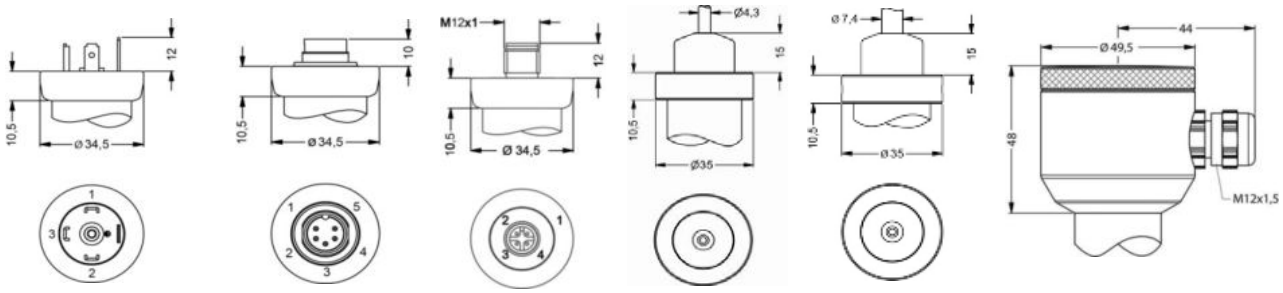
ICS Schneider Messtechnik GmbH
Briesestraße 59
D-16562 Hohen Neuendorf / OT Bergfelde

Tel.: 03303 / 504066
Fax: 03303 / 504068

info@ics-schneider.de
www.ics-schneider.de

Electrical connections (dimensions in mm)

Standard **Optional**



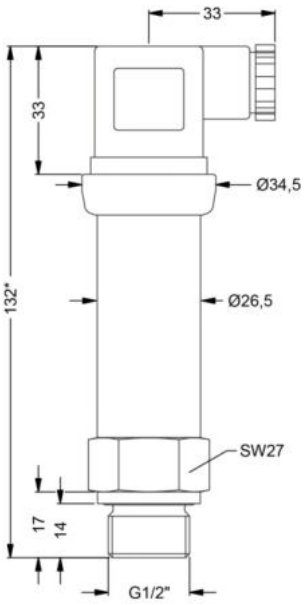
ISO 4400 (IP65)	Binder Serie 723 5-pin (IP67)	M12x1, 4-pin (IP67)	Cable outlet with PVC cable (IP67)[3]	Cable outlet, cable with ventilation tube (IP68)[4]	Compact field housing (IP 67)

⇨ **universal field housing stainless steel 1.4404 with cable gland M20x1,5 (ordering code 880) and other versions on request**

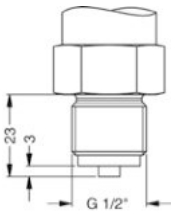
[3] *standard: 2 m PVC-cable without ventilation tube (permissible temperature: -5 … 70°C)*
[4] *different cable types and lengths available, permissible temperature depends on kind of cable*

Mechanical connections (dimensions in mm)

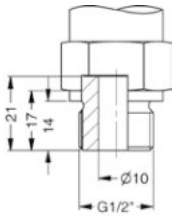
Standard **Optional**



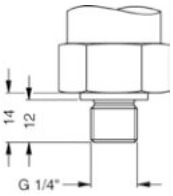
G1/2" DIN 3852 with ISO 4400



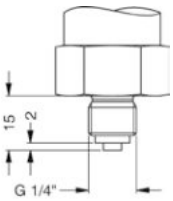
G1/2" EN 837



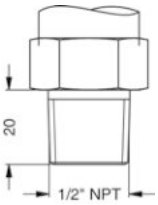
G1/2“ open port, $P_N \leq 40$



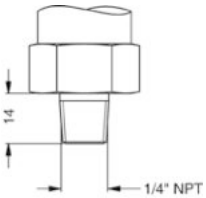
G1/4" DIN 3852



G1/4" EN 837



1/2" NPT



1/4" NPT

⇨ **metric threads and other versions on request**

⇨ *** for nominal pressure P_N > 40 bar increases the length of devices by 9 mm**

This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.

ICS Schneider Messtechnik GmbH
Briesestraße 59
D-16562 Hohen Neuendorf / OT Bergfelde

Tel.: 03303 / 504066
Fax: 03303 / 504068

info@ics-schneider.de
www.ics-schneider.de

SCHNEIDER MESSTECHNIK

Ordering code IMP 320

IMP 320 □□□-□□□□-□-□-□□□-□□□-□-□□□

Pressure																						
gauge	1	1	C																			
absolute [1]	1	1	D																			
Input	**[bar]**																					
0.10 [1]				1	0	0	0															
0.16 [1]				1	6	0	0															
0.25 [1]				2	5	0	0															
0.40				4	0	0	0															
0.60				6	0	0	0															
1.0				1	0	0	1															
1.6				1	6	0	1															
2.5				2	5	0	1															
4.0				4	0	0	1															
6.0				6	0	0	1															
10				1	0	0	2															
16				1	6	0	2															
25				2	5	0	2															
40				4	0	0	2															
60				6	0	0	2															
100				1	0	0	3															
160				1	6	0	3															
250				2	5	0	3															
400				4	0	0	3															
600				6	0	0	3															
-1 … 0				X	1	0	2															
customer				9	9	9	9															consult
Output																						
0,1 … 10 V / 3 wire								3A														
4 … 20 mA / 3-wire								7														
customer								9														consult
Accuracy																						
0.1 %									1													
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 [2]										T	A	0										
Cable outlet [3]										T	R	0										
Male plug M12x1 (4-pin) / metal										M	1	0										
Compact field housing stainless steel 1.4305										8	5	0										
customer										9	9	9										consult
Mechanical connection																						
G1/2" DIN 3852													1	0	0							
G1/2" EN 837													2	0	0							
G1/4" DIN 3852													3	0	0							
G1/4" EN 837													4	0	0							
G1/2" DIN 3852 open pressure port [4]													H	0	0							
1/2" NPT													N	0	0							
1/4" NPT													N	4	0							
customer													9	9	9							consult
Seals																						
FKM																1						
EPDM																3						
customer																9						consult
Special version																						
standard																	0	0	0			
customer																	9	9	9			consult

[1] absolute pressure possible from 0.4 bar
[2] standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 … 70°C), others on request
[3] cable with ventilation tube (code TR0 = PVC cable), different cable types and lengths available, price without cable
[4] only for P_N ≤ 40 bar

17.03.2014

This dokument contains product specification; properties are not guaranteed. Detailed information about options are defined in the datasheet. Subject to change without notice.

ICS Schneider Messtechnik GmbH
Briesestraße 59
D-16562 Hohen Neuendorf / OT Bergfelde

Tel.: 03303 / 504066
Fax: 03303 / 504068

info@ics-schneider.de
www.ics-schneider.de