

Pressure transducer with integrated electronics

RE 30269/06.09
Replaces: 07.05

1/4

Type HM 17

Component series 1X

CE



H6983_d

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4	– 4-pin M12 connector at the housing
4	– Accuracy class 0.5
	– Eight pressure measuring ranges, maximally up to 600 bar
	– Connection thread G1/4
	– Components that are in contact with the media are of stainless steel
	– Compact design
	– Operational reliability due to high bursting pressure, reverse polarity, overvoltage and short-circuit protection
	– Protection class IP67

Features

Ordering code

HM 17 -1X/ - /V0/ 0

Pressure transducer with integrated electronics

Component series 10 to 19
(10 to 19: unchanged technical data and pinout)

Pressure measuring ranges

up to 50 bar	= 050
up to 100 bar	= 100
up to 200 bar	= 200
up to 250 bar	= 250
up to 315 bar	= 315
up to 400 bar	= 400
up to 450 bar	= 450
up to 600 bar	= 600

= 1X

0 = No options

V0 = Standard version

C = Power output 4 to 20 mA

H = Voltage output 0.1 to 10 V

F = Voltage output 0.5 to 5 V

Assembled cables or mating connectors are not included in the scope of supply; please order separately

Assembled cables and mating connectors

Technical data		Designation		Material no.	
Current carrying capacity	4 A		04 POL (with 2 m cable)	R900773031	
Temperature range	-25 ... 90 °C		04 POL (with 5 m cable)	R900779498	
Protection class	IP 67		04 POL (with 2 m cable)	R900779504	
Contacts	CuZn		04 POL (with 5 m cable)	R900779503	
Contact surface	Gold-plated			04 POL (without cable) ¹⁾	R900773042
Housing	TPU			04 POL (without cable) ¹⁾	R900779509
Seal	FKM				
Screwing	CuZn/Ni				
Wire cross-section	4 x 0.34 mm				
Jacket material	PUR				
Screening	Not connected on the connector side				
Jacket diameter	Ø 5.0 mm				
Jacket color	Black				
Bending radius in dyn. applications	At least 50 mm				
Connection in case of mating connectors with connection cable					

¹⁾ Protection class IP 68

Technical data (For applications outside these parameters, please consult us!)

Input variables									
Auxiliary energy	U_B	19 to 36 VDC with output 0.1 to 10 V 8 to 36 VDC with output 0.5 to 5 V 10 to 36 VDC with output 4 to 20 mA							
Current consumption	I	4 mA (with voltage output)							
Measuring range	p_N [bar]	50	100	200	250	315	400	450	600
Overload protection	p_{max} [bar]	120	200	500	500	780	800	1200	1200
Bursting pressure	p [bar]	550	800	1200	1200	1500	1700	2400	2400
Dead volume	V	ca. 200 mm ³							
Output variables									
Output signal and admissible load R_A	I_{Sig} U_{Sig}	4 to 20 mA, two-conductor $R_A = (U_B - 10 V) / 0.02 A$ with R_A in Ω and U_B in V 0.5 to 5 V, three-conductor $R_A > 10 k\Omega$ 0.1 to 10 V, three-conductor $R_A > 20 k\Omega$							
Accuracy		< 0.5 % Related to the complete measuring range, including non-linearity, hysteresis, zero point and end value deviation (corresponds to the measuring deviation according to IEC 61298-2)							
Zero point compensation error		< 0.25 % ¹⁾							
Temperature coefficients (TK) in the nominal temperature range									
–Largest TK of the zero point		< 0.2 % / 10 K							
–Largest TK of the range		< 0.2 % / 10 K							
Characteristic curve deviation		typ. < 0.2 % ¹⁾ (end point setting)							
Hysteresis		< 0.1 % ¹⁾							
Non-repeatability		< 0.05 % ¹⁾							
Setting time (10 to 90 %)	t	< 2 ms							
Long-term drift (1 year) with reference conditions		< 0.2 % ¹⁾							
Ambient conditions									
Nominal temperature range	ϑ	–20 ... +80 °C							
Limit temperature range	ϑ	–40 ... +85 °C							
Storage temperature range	ϑ	–40 ... +100 °C							
Hydraulic fluid temperature range	ϑ	–40 ... +90 °C							
Mechanical characteristics									
Pressure port		G1/4 external thread according to DIN 3852 form E (pressure channel with orifice \varnothing 0.6 mm), profile seal according to DIN 3869, FKM material							
Material:									
–Components in contact with the measuring material		CrNi steel 1.4571 and 1.4542							
–Housing		CrNi steel 1.4571							
Tightening torque	M_A	10 Nm							
Shock resistance, mechanic		800 g according to IEC 60068-2-27							
Vibration resistance in case of resonance		20 g according to IEC 60068-2-6							
Electric connection		4-pin M12 connector at the housing ²⁾							
Weight	m	0.05 kg							

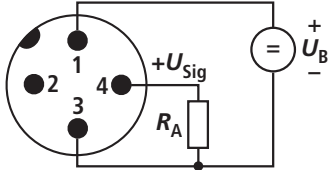
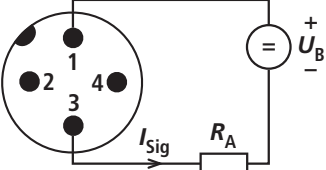
¹⁾ Related to the complete measuring range

²⁾ Recommendation:

Use of shielded connection cables, with mating connector M12x1, see page 2

Electrical connection

Version V= (4-pin M12 connector, view on contact side)

Voltage		Current (two-conductor system)	
	Values for U_B , R_A and U_{Sig} see page 3		Values for U_B , R_A and I_{Sig} see page 3

Unit dimensions (dimensions in mm)

Version V0

