

Pressure Transmitter with Flush Diaphragm and Clamp Connection ED 522



Application	Measurement of gauge and absolute pressure for gases and liquids
Construction	Stainless steel 1.4435 Flush diaphragm Clamp liner with gasket for the food industry ISO 2852 Zero point and span adjustment
Pressure range	100 mbar ... 16 bar
Output signal	0 ... 20 mA, 4 ... 20 mA, 0 ... 5 V DC, 0 ... 10 V DC
Static error band	≤ 0,25% FS typ., ≤ 0,15% FS typ.
Electrical connection	Cable or plug
Pressure connection	Clamp connection for quick mounting
Type of protection	IP 65, IP 67
EMC	Protected for industrial environments, conforming to EN 50081-2, EN-50081-1 and EN 50082-2
Accessory	Test certificate



Selection Chart

Ordering example:		ED 522 / 3 1 1 2 1 1 / A15			
System design	ED 522 EEx ia II C (ATEX) ¹⁾ EDX 522	↑	↑	↑	↑
Pressure type	Gauge pressure 3 Absolute pressure 4	↑	↑	↑	↑
Static error band (T_{med} = 25°C)	0,4% FS (T _{med} = 25°C), comp. temp. 0 ... 50°C	1	↑	↑	↑
	0,2% FS (T _{med} = 25°C), comp. temp. 0 ... 50°C	2	↑	↑	↑
	0,4% FS (T _{med} = 25°C), comp. temp. -10 ... 80°C	4	↑	↑	↑
	0,2% FS (T _{med} = 25°C), comp. temp. -10 ... 80°C	5	↑	↑	↑
	0,4% FS (T _{med} = 75°C), comp. temp. 50 ... 100°C	7	↑	↑	↑
	0,4% FS (T _{med} = 100°C), comp. temp. 75 ... 125°C	8	↑	↑	↑
	0,4% at specified adjusted temp., T _{max} = 150°C ¹⁾	A	↑	↑	↑
	0,2% at specified adjusted temp., T _{max} = 150°C ¹⁾	B	↑	↑	↑
Electrical connect.	Cable 2 m IP 65	1	↑	↑	↑
	Plug Fischer ²⁾ IP 67	2	↑	↑	↑
	Plug DIN 41 524 (Binder) IP 65	3	↑	↑	↑
	Plug DIN 43 650 IP 65	4	↑	↑	↑
Output signal	I _A = 0 ... 20 mA	1	↑	↑	↑
	I _A = 4 ... 20 mA	2	↑	↑	↑
	U _A = 0 ... 10 V DC	4	↑	↑	↑
	U _A = 0 ... 5 V DC	5	↑	↑	↑
Pressure connect.	Clamp ISO 2852, nominal size 22 mm, < 1 bar with TC zero p. corr.	1	↑	↑	↑
	Clamp ISO 2852, nominal size 38 mm (1½")	3	↑	↑	↑
	Clamp ISO 2852, nominal size 51 mm (2")	5	↑	↑	↑
	Clamp ISO 2852, nominal size 63,5 mm (2½")	6	↑	↑	↑
Diaphragm	Stainless steel 1.4404/316 L	1	↑	↑	↑
	Stainless steel, gold plated	9	↑	↑	↑
Pressure range	also other pressure ranges and versions in Pa, psi, H ₂ O etc. available				

Order code	Pressure range	Order code	Pressure range
125	0 ... 100 mbar	D05	0 ... -100 mbar
135	0 ... 160	D25	0 ... -200
A55	0 ... 200	D55	0 ... -500
145	0 ... 250	H65	-100 ... 100
155	0 ... 400	H75	-200 ... 200
A65	0 ... 500	H85	-500 ... 500
165	0 ... 600		
	bar		bar
025	0 ... 1	D85	0 ... -1
035	0 ... 1,6	H05	-1 ... 1
A15	0 ... 2	S25	-1 ... 3
045	0 ... 2,5	S35	-1 ... 5
055	0 ... 4	S45	-1 ... 9
A25	0 ... 5		
065	0 ... 6		
075	0 ... 10		
085	0 ... 16		

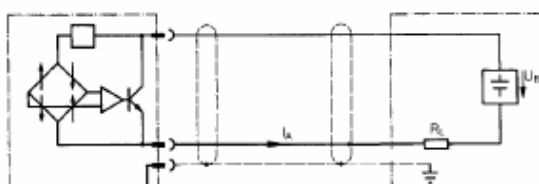
¹⁾For temperature adjustments (medium) other than 25°C, the temperature has to be indicated by the order code/9007/XXXX. Ordering example: adjustment at 125°C, order code /9007/0125. The compensated temperature range is ±25°C of the adjusted temperature. If the temperature is above 125°C the range will always be 100°C to 150°C.

²⁾Cable socket included.
³⁾Version 4 ... 20 mA only.

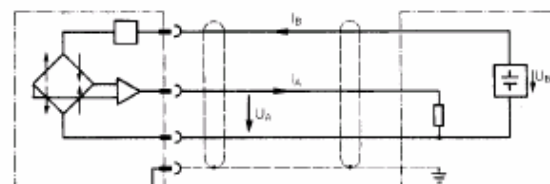
Special Designs see D6.901 E / Accessories see D6.911 E

Electrical Connection (Pin assignments and cable colours see D0.320 E)

I_A = 4 ... 20 mA



I_A = 0 ... 20 mA, U_A = 0 ... 5 V, U_A = 0 ... 10 V





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Technical Data

Pressure range 1	0 ... +P	bar		0,1 ... 0,25	0,4 ... 0,6	0,1 ... 1,6	2 ... 4	5 ... 10	11 ... 16
Maximum Pressure	P max.	bar		4	6	10	15	30	30
Deviation of characteristic curve (T _{amb} = 25°C)	ED 522/x1, x4, x7, x8, xA ED 522/x2, x5, x8	± % FS	≤	0,25 typ./0,4 max. (see diagram D0.320 D) 0,15 typ./0,2 max. (see diagram D0.320 D)					
Hysteresis and reproducibility		± % FS	≤	0,2 (p < 0,4 bar) / 0,1 (p ≥ 0,4 bar)					
TC zero point		± % FS/10 K	≤	0,5	0,35		0,2	0,2	
TC sensitivity		± % FS/10 K	≤	0,2					
Operating temp. (medium) compensated		°C		according selection chart					
Housing temperature		°C		-20 ... 80					
Storage temperature		°C		-40 ... 80					
Supply voltage U _B	I _A = 0 ... 20 mA I _A = 4 ... 20 mA U _A = 0 ... 5 V DC U _A = 0 ... 10 V DC	V DC		16 ... 30 10 ... 30 9 ... 30 14 ... 30					
Reverse polarity protection for supply voltage U _B				yes					
Short circuit proof output				yes					
Overvoltage protection				yes					
Load (R _L + R _{L,ext})	I _A = 0 ... 20 mA I _A = 4 ... 20 mA U _A = 0 ... 5 V DC U _A = 0 ... 10 V DC	Ohm	≤	500 1000 (see diagram D0.320) 5 10					
Zero point adjusting range		± % FS		2					
Insulation resistance at 750 V DC		MOhm	≥	1,2					
Type of protection (DIN 40 050, IEC 144)				according selection chart					
EMC emission (EN 50 081-1 and -2)				fulfilled					
EMC immunity (EN 50 082-2)				fulfilled					
IEC 1000-4-2/EN 61000-4-2	level 3 (8 kV)			fulfilled					
IEC 1000-4-3/EN 50140	level 3 (10 V/m)			fulfilled					
IEC 1000-4-4/EN 61000-4-4	level 4 (4 kV)			fulfilled					
IEC 1000-4-6/EN 50141	level (10 kV)			fulfilled					
Vibration test DIN IEC 68				fulfilled					
Test of cycles		cycles	≥	10 millions					
Weight		kg		0,30					

Construction and Function

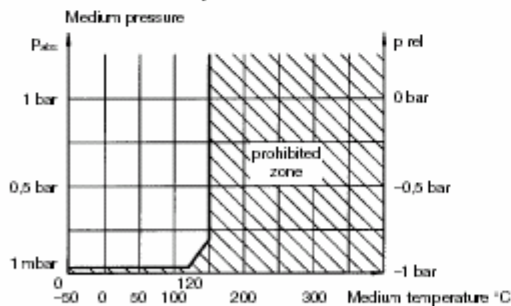
Pressure transmitter ED 522 consists of a pressure connection section with welded stainless steel diaphragm and a stainless steel case for housing the electronic circuit and the electrical connection. The piezoresistive pressure sensor is mounted right behind the diaphragm (except for the types ED 522/xAx and ED 522/xBx). The pressure being measured is transmitted by the external diaphragm and the oil filling to the measuring diaphragm of the piezoresistive silicon sensor.

An amplifier converts the pressure sensor's bridge signal to the desired signal level. The amplifier space is sealed to provide optimal shock and vibration resistance. The transmitter has a clamp connection for quick mounting.

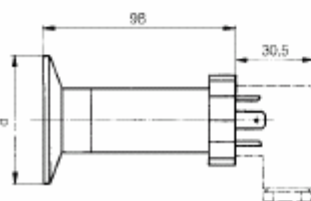
Access to the adjusting potentiometer is obtained by unscrewing the closure ring. Both zero point and range can be adjusted with a screwdriver.

Medium pressure

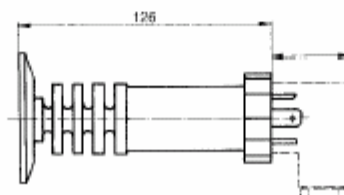
Admissible medium pressure as a function of medium temperature



Dimensions



ED 522/xAx,xxx
ED 522/xBx,xxx



Nominal size	d (mm)
22 mm	34
38 mm (1 1/2")	50,5
51 mm	64
63,5 mm	77,5

Accessories	Order no.	
Clamp ring	20	D 12271.0000
	1 1/2"	D 12271.0001
	2"	D 12271.0002
	2 1/2"	D 12271.0003
Gasket NBR/Nitril	20	D 12272.01 00
	1 1/2"	D 12272.01 01
	2"	D 12272.01 02
	2 1/2"	D 12272.01 03
Clamp liner welding 1.4404	20	D 12273.0000
	1 1/2"	D 12273.0001
	2"	D 12273.0002
	2 1/2"	D 12273.0003

Mounting example

