



Pressure transmitters for industrial applications

Type MBS 4500

Features



- Designed for use in severe industrial environments
- Enclosure and wetted parts of acid-resistant stainless steel (AISI 316L)
- Pressure ranges in relative (gauge) or absolute from 0 up to 600 bar
- Output signal: 4 - 20 mA
- A wide range of pressure connections
- Temperature compensated and laser calibrated
- Accuracy 0,5% FS
- Zero and span adjustment

Description

The high accuracy pressure transmitter MBS 4500 is designed for use in almost all industrial applications, and offers a reliable pressure measurement, even under harsh environmental conditions. The flexible pressure transmitter programme covers a 4-20 mA output signal, absolute and gauge (relative) versions, measuring ranges from

0-1 to 0-600 bar zero and span adjustment. A rotatable plug connection and a wide range of pressure connections. Excellent vibration stability, robust construction, and a high degree of EMC/EMI protection equip the pressure transmitter to meet the most stringent industrial requirements.

Ordering standard versions

Plug: Pg 9 (EN 175301-803-A)
Output: 4-20 mA
Pressure connection: G 1/2 A (EN 837)

Measuring range Pe ¹⁾ [bar]	Type no.	Code no.
0-1	MBS 4500-1011-1AB08	060G2401
0-1.6	MBS 4500-1211-1AB08	060G2402
0-2.5	MBS 4500-1411-1AB08	060G2403
0-4	MBS 4500-1611-1AB08	060G2404
0-6	MBS 4500-1811-1AB08	060G2405
0-10	MBS 4500-2011-1AB08	060G2406
0-16	MBS 4500-2211-1AB08	060G2407
0-25	MBS 4500-2411-1AB08	060G2408

1) Relative/ gauge

Technical data
Performance (EN 60770)

Accuracy (incl. non-linearity, hysteresis and repeatability)	±0.2% FS (typ.) ±0.5% FS (max.)	
Non-linearity BFSL (conformity)	≤ ±0.2% FS	
Hysteresis and repeatability	≤ ±0.1% FS	
Thermal zero point shift	≤ ±0.1% FS/10K (typ.) ≤ ±0.2% FS/10K (max.)	
Thermal sensitivity (span) shift	≤ ±0.1% FS/10K (typ.) ≤ ±0.2% FS/10K (max.)	
Response time	< 4 ms	
Overload pressure	6 × FS (max. 1500 bar)	
Burst pressure	> 6 × FS (max. 2000 bar)	
Durability, P: 10-90% FS	> 10×10 ⁶ cycles	
Zero point adjustment	0-1 to 0-10 bar measuring range	-5 to +20 % FS
	0-16 to 0-40 bar measuring range	-5 to +10% FS
	0-60 to 0-600 bar measuring range	-2.5 to +5% FS
Span adjustment	0-1 to 0-600 bar measuring range	-5 to +5% FS

Electrical specifications

Nom. output signal (short circuit protected)	4 to 20 mA
Supply voltage, U _B (polarity protected)	10 to 30 V dc
Supply voltage dependency	≤ ±0.05% FS/10 V
Current limitation (linear output signal up to 1.5 × rated range)	28 mA (typ.)
Load [R _L] (load connected to 0 V)	$R_L \leq \frac{U_B - 10 V}{0.02 A} [\Omega]$

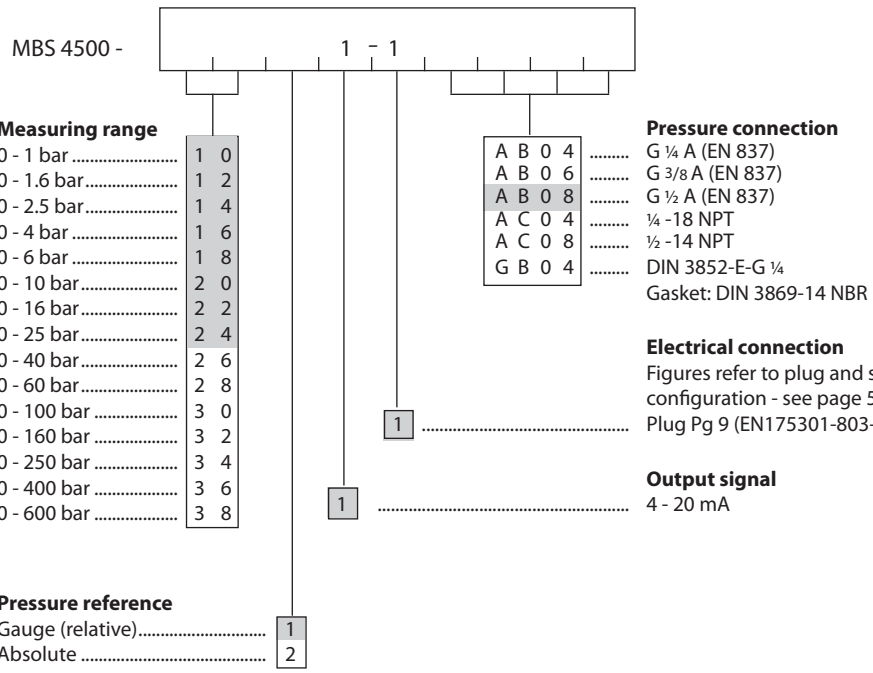
Environmental conditions

Medium temperature range	-40 → +85 °C		
Ambient temperature range	-40 → + 85 °C		
Compensated temperature range	0 → +80°C		
Transport temperature range	-50 → +85°C		
EMC - Emission	EN 61000-6-3		
EMC Immunity	EN 61000-6-2		
Insulation resistance	> 100 MΩ at 100 V		
Mains frequency test	SEN 361503		
Vibration stability	Sinusoidal	15.9 mm-pp, 5 Hz-25 Hz 20 g, 25 Hz - 2 kHz	IEC 60068-2-6
		Random 7.5 g _{rms} , 5 Hz - 1 kHz	IEC 60068-2-64
Shock resistance	Shock	500 g / 1 ms	IEC 60068 - 2 - 27
	Free fall		IEC 60068 - 2 - 32
Enclosure (IP protection fulfilled together with mating connector)	IP65		

Mechanical characteristics

Materials	Wetted parts	EN 10088-1; 1.4404 (AISI 316 L)
	Enclosure	EN 10088-1; 1.4404 (AISI 316 L)
	Electrical connections	Glass filled polyamid, PA 6.6
Weight (depending on pressure connection)	0.2 - 0.3 kg	

Ordering special versions

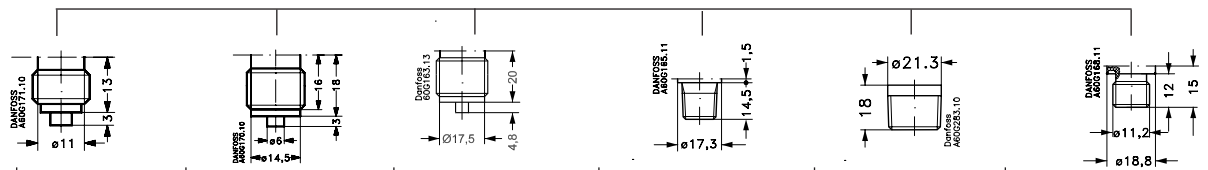
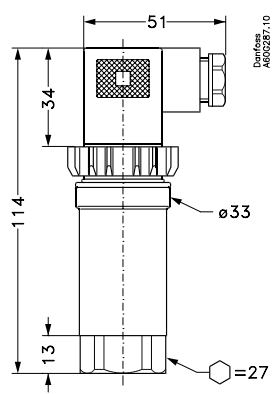


Preferred versions

Non-standard build-up combinations may be selected. However, minimum order quantities may apply. Please contact your local Danfoss office for further information, or request on other versions.

Dimensions / Combinations

Type code	1
	EN175301-803-A, Pg 9



	G ¼ A (EN 837)	G 3/8 A (EN 837)	G ½ A (EN 837)	¼ - 18 NPT	½ - 14 NPT	DIN 3852-E-G ¼ Gasket: DIN 3869-14
Type code	AB04	AB06	AB08	AC04	AC08	GB04
Recommended torque 1)	30-35 Nm	30-35 Nm	30-35 Nm	2-3 turns after finger tightened	2-3 turns after finger tightened	30-35 Nm

1) Depends of different parameters as packing material, mating material, thread lubrication and pressure level.

Electrical connection

Type code, page 4	<p>Electrical connection, 4 - 20 mA output (2 wire)</p> <p>Pin 1: + supply Pin 2: ÷ supply Pin 3: Not used</p> Earth: Connected to MBS enclosure
1	
EN 175301-803-A, Pg 9	

Adjustment

