

Pressure transmitter for air and water applications MBS 1900

Features



- Designed for use in air and water applications
- Enclosure and wetted parts of stainless steel (AISI 304)
- Pressure ranges in relative (gauge) or absolute from 0 up to 25 bar
- Output signals: 4 - 20 mA, or ratio metric
- Absolute or relative (gauge) sensor element
- A wide range of pressure and electrical connections
- Digitally compensated

Description

The pressure transmitter MBS 1900 is designed for use in air and water applications like Booster Pumps and Air Compressors.

The flexible pressure transmitter programme covers different output signals, absolute and gauge (relative) versions, measuring ranges from 0-4 bar to 0-25 bar and a wide range of pressure and electrical connections.

Enclosure material is stainless steel AISI 304.

Ordering standard versions

Measuring range P _e	Type	Code no.
0 - 6 bar	MBS 1900 - 1811 - A1AB04	
0 - 10 bar	MBS 1900 - 2011 - A1AB04	
0 - 16 bar	MBS 1900 - 2211 - A1AB04	
0 - 16 bar	MBS 1900 - 2211 - A1GB04	
0 - 16 bar	MBS 1900 - 2211 - B1GB04	
0 - 16 bar	MBS 1900 - 2216 - B1GB04	
0 - 25 bar	MBS 1900 - 2411 - A1AB04	
0 - 100 Psi	MBS 1900 - 5811 - A1AC04	
0 - 200 Psi	MBS 1900 - 6211 - A1AC04	
0 - 250 Psi	MBS 1900 - 6311 - A1AC04	
0 - 250 Psi	MBS 1900 - 6311 - B1AC04	
0 - 250 Psi	MBS 1900 - 6316 - B1AC04	
0 - 300 Psi	MBS 1900 - 6411 - A1AC04	

Output signal = 4-20 mA, Pressure connection = G ¼ A (EN 837), Electrical connection = For Plug: EN 175301-803, P_e = gauge pressure

Technical data
Performance (EN 60770)

Accuracy (at reference condition, 20°C)	±1% FS (typ.)
Non-linearity BFSL (conformity)	≤ ±0.5% FS
Hysteresis and repeatability	≤ ±0.1% FS
Thermal zero point shift	≤ ±0.1% FS/10 K (typ.) ≤ ±0.3% FS/10 K (max.)
Thermal sensitivity (span) shift	≤ ±0.1% FS/10 K (typ.) ≤ ±0.3% FS/10 K (max.)
Response time	< 50 ms
Overload pressure (static)	3 × FS (max. 75 bar)
Burst pressure	4 × FS (max. 100 bar)
Durability, P: 10-90% FS	>10×10 ⁶ cycles

Electrical specifications

	Nom. output signal (short-circuit protected)	
	4 – 20 mA	Ratiometric (10-90% of V _{supp})
Supply voltage [U _s], polarity protected	9 → 28 V	5 V ± 10%
Supply - current consumption	-	≤ 5 mA
Supply voltage dependency	≤ ±0.2% FS/10 V	
Load [R _L] (load connected to 0 V)	R _L ≤ (U _s -9V)/0.02 A	R _L ≥ 5 KΩ @ 5 V d.c.
Output impedance	-	< 25 Ω

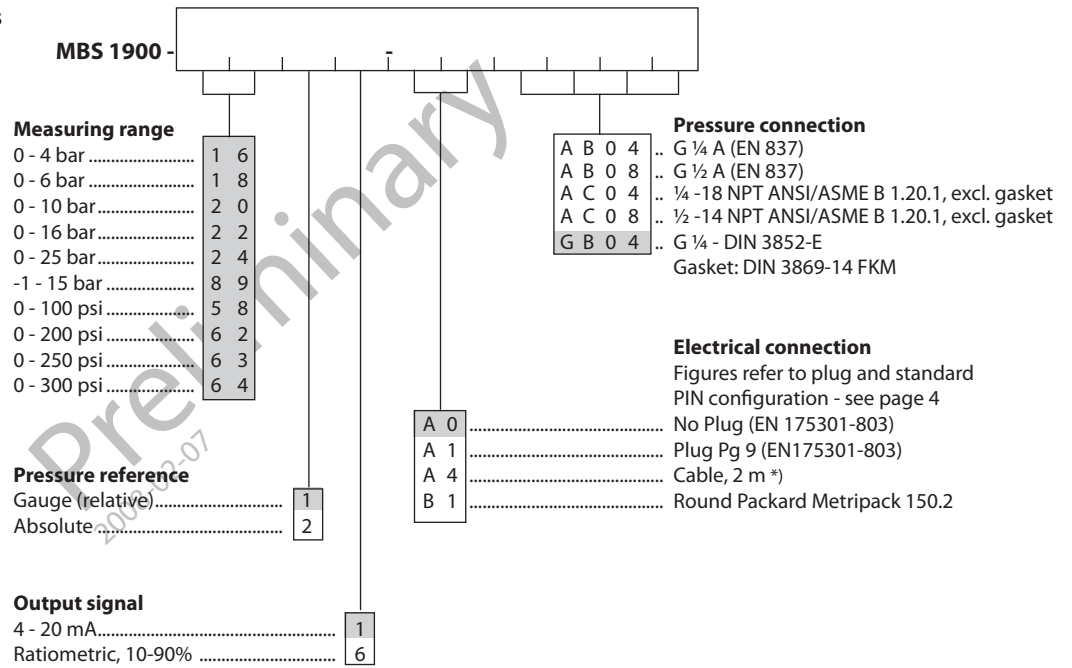
Environmental conditions

Medium temperature range	0 → +80°C	
Ambient temperature range (depending on electrical connection)	-20°C → 80°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	
Vibration stability	Sinusoidal	15g, 5 Hz - 2 kHz
	Random	7.2g _{rms} , 5 Hz - 1 kHz
Shock resistance	Shock	200g / 1 ms
	Free fall	
Enclosure (depending on electrical connection)	see page 4	

Mechanical characteristics

Materials	Wetted parts	EN 10088-1; 1.4401 (AISI 304)
	Enclosure	EN 10088-1; 1.4401 (AISI 304)
	Electrical connections	see page 4
Weight (depending on pressure connection and electrical connection)	0.15 - 0.3 kg	

Ordering of special versions



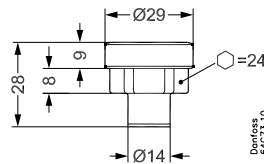
■ Preferred versions

*) Only available as sealed gauge 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 for other versions.

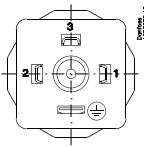
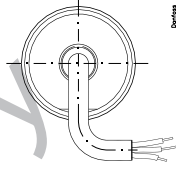
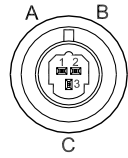
Dimensions / Combinations

Type Code	A0	A1	A4	B1
	(EN175301-803)	EN175301-803, Pg 9	2 m cable	Round Packard Metripack 150.2



	G ¼ 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	AB08	AC04	AC08	GB04

Electrical connections

Type code, page 3		A0, A1	A4	B1
		EN 175301-803 	2 m cable 	Round Packard metripack 150.2 
Ambient temperature		-20 → + 80°C	-20 → + 80°C	-20 → + 80°C
Enclosure		IP 65	IP 67	IP 67
Materials		Glass filled polyamid, PA 6.6	Poliolyfin cable	Glass filled PBTP
Electrical connection	4 - 20 mA (2 wire)	Pin 1: + supply Pin 2: ÷ supply Pin 3: Not used Earth: Connected to MBS enclosure	Brown wire: + supply Black wire: ÷ supply	Pin A: - supply Pin B: + supply Pin C: Not used
	Ratiometric 10 - 90%	Pin 1: + supply Pin 2: ÷ supply Pin 3: Output Earth: Connected to MBS enclosure	Brown wire: Output Black wire: ÷ supply Red wire: + supply	Pin A: - supply Pin B: + supply Pin C: Output