

**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
- All standard output signals: 4 - 20 mA, 0 - 5 V, 1 - 5 V, 1 - 6 V, 0 - 10 V, 1 - 10 V
- A wide range of pressure and electrical connections
- Temperature compensated and laser calibrated

**Description**

The compact pressure transmitter MBS 3000 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 different output signals, absolute and

gauge (relative) versions, measuring ranges from 0-1 to 0-600 bar and a wide range of pressure and electrical 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 signal: 4-20 mA  
Pressure connection:  
G 1/4 A (EN 837)

Measuring range $P_e^{1)}$ [bar]	Type	Code no.
0 - 1	MBS 3000 - 1011 - 1 AB04	<b>060G1113</b>
0 - 1.6	MBS 3000 - 1211 - 1 AB04	<b>060G1429</b>
0 - 2.5	MBS 3000 - 1411 - 1 AB04	<b>060G1122</b>
0 - 4	MBS 3000 - 1611 - 1 AB04	<b>060G1123</b>
0 - 6	MBS 3000 - 1811 - 1 AB04	<b>060G1124</b>
0 - 10	MBS 3000 - 2011 - 1 AB04	<b>060G1125</b>
0 - 16	MBS 3000 - 2211 - 1 AB04	<b>060G1133</b>
0 - 25	MBS 3000 - 2411 - 1 AB04	<b>060G1430</b>
0 - 40	MBS 3000 - 2611 - 1 AB04	<b>060G1105</b>
0 - 60	MBS 3000 - 2811 - 1 AB04	<b>060G1106</b>
0 - 100	MBS 3000 - 3011 - 1 AB04	<b>060G1107</b>
0 - 160	MBS 3000 - 3211 - 1 AB04	<b>060G1112</b>
0 - 250	MBS 3000 - 3411 - 1 AB04	<b>060G1111</b>
0 - 400	MBS 3000 - 3611 - 1 AB04	<b>060G1109</b>
0 - 600	MBS 3000 - 3811 - 1 AB04	<b>060G1110</b>

<sup>1)</sup> Relative/ gauge

**Technical data**
*Performance (EN 60770)*

Accuracy (incl. non-linearity, hysteresis and repeatability)	±0.5% FS (typ.) ±1% 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 (static)	6 × FS (max. 1500 bar)
Burst pressure	> 6 × FS (max. 2000 bar)
Durability, P: 10-90% FS	> 10×10 <sup>6</sup> cycles

*Electrical specifications*

	Nom. output signal (short-circuit protected)		
	4 – 20 mA	0 - 5, 1 - 5, 1 - 6 V	0 - 10 V, 1 - 10 V
Supply voltage [U <sub>s</sub> ], polarity protected	9 → 32 V	9 → 30 V	15 → 30 V
Supply - current consumption	-	≤ 5 mA	≤ 8 mA
Supply voltage dependency	≤ ±0.05% FS/10 V		
Current limitation	28 mA (typ.)	-	
Output impedance	≤ 25Ω		
Load [R <sub>L</sub> ] (load connected to 0V)	R <sub>L</sub> ≤ (U <sub>s</sub> - 9V)/0.02 A	R <sub>L</sub> ≥ 10 kΩ	R <sub>L</sub> ≥ 15 kΩ

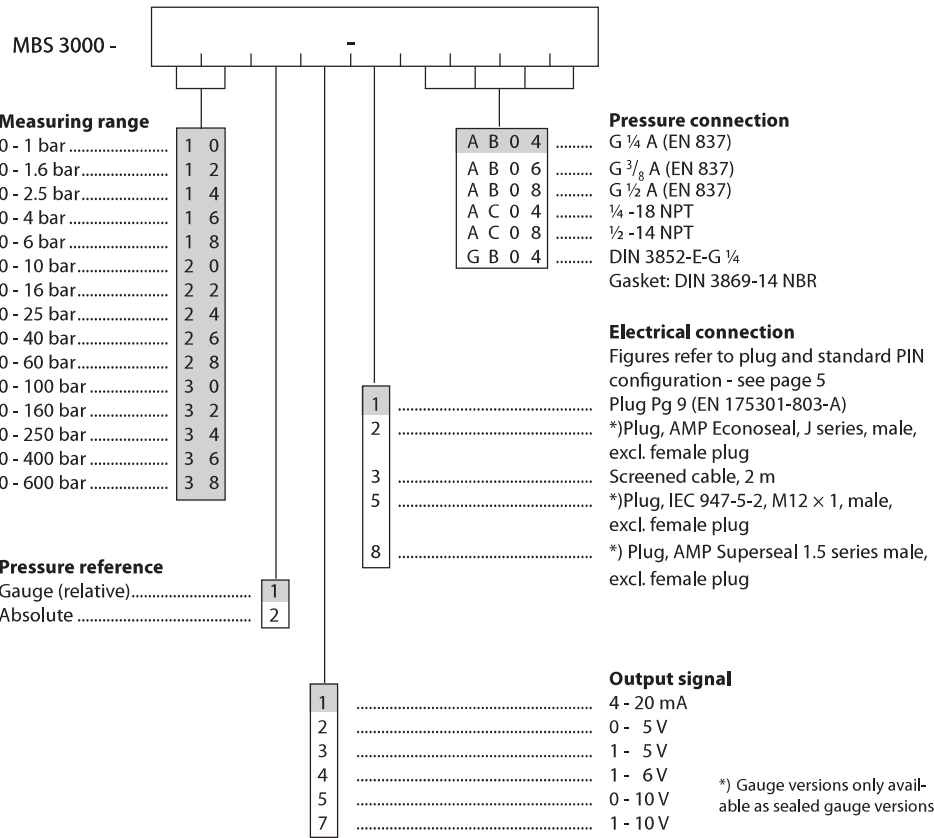
*Environmental conditions*

Media temperature range	-40 → +85°C		
Ambient temperature range (depending on electrical connection)	see page 5		
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	IEC 60068-2-6
		20 g, 25 Hz - 2 kHz	
Shock resistance	Shock	500 g / 1 ms	IEC 60068 - 2 - 27
		Free fall	IEC 60068 - 2 - 32
Enclosure (depending on electrical connection)	see page 5		

*Mechanical characteristics*

Materials	Wetted parts	EN 10088-1; 1.4404 (AISI 316 L)
	Enclosure	EN 10088-1; 1.4404 (AISI 316 L)
	Electrical connections	see page 5
Weight (depending on pressure connection and electrical connection)		0.2 - 0.3 kg

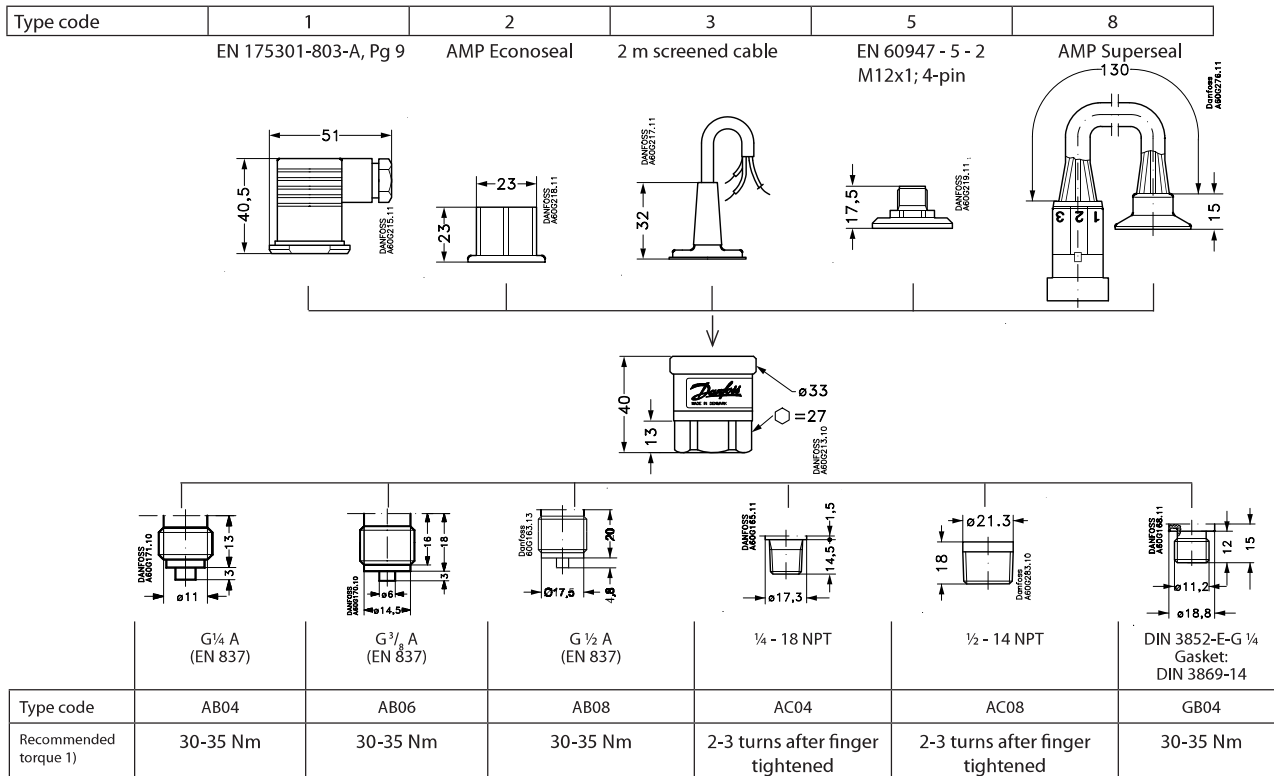
Ordering of special versions



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 for other versions.

Dimensions / Combinations



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

**Electrical connections**

Type code, page 4				
1	2	3	5	8
EN 175301-803-A, Pg 9	AMP Econoseal J series (male)	2 m screened cable	EN 60497-5-2 M12x1 4-pin	AMP Superseal 1.5 series (male)
<i>Ambient temperature</i>				
-40 → +85 °C	-40 → +85 °C	-30 → +85 °C	-25 → +85 °C	-40 → +85 °C
<i>Enclosure (IP protection fulfilled together with mating connector)</i>				
IP 65	IP 67	IP 67	IP 67	IP 67
<i>Materials</i>				
Glass filled polyamid, PA 6.6	Glass filled polyamid, PA 6.6 <sup>1)</sup>	Poliolyfin cable with PE shrinkage tubing	Nickel plated brass, CuZn/Ni	Glass filled polyamid, PA 6.6 <sup>2)</sup>
<i>Electrical connection, 4 - 20 mA output (2 wire)</i>				
Pin 1: + supply Pin 2: ÷ supply Pin 3: Not used Earth: Connected to MBS enclosure	Pin 1: + supply Pin 2: ÷ supply Pin 3: not used	Brown wire: + supply Black wire: ÷ supply Red wire: Not used Orange: Not used Screen: Not connected to MBS enclosure	Pin 1: + supply Pin 2: Not used Pin 3: Not used Pin 4: ÷ supply	Pin 1: + supply Pin 2: ÷ supply Pin 3 Not used
<i>Electrical connection, 0 - 5V, 1 - 5 V, 1 - 6 V, 0 - 10 V, 1 - 10 V output</i>				
Pin 1: + supply Pin 2: ÷ supply Pin 3: Output Earth: Connected to MBS enclosure	Pin 1: + supply Pin 2: ÷ supply Pin 3: Output	Brown wire: Output Black wire: ÷ supply Red wire: + supply Orange: Not used Screen: Not connected to MBS enclosure	Pin 1: + supply Pin 2: Not used Pin 3: Output Pin 4: ÷ supply	Pin 1: + supply Pin 2: ÷ supply Pin 3: Output

<sup>1)</sup> Female plug: Glass filled polyester, PBT

<sup>2)</sup> Wire: PETFE (teflon)  
Protection sleeve: PBT mesh (polyester)