

OEM Pressure transmitter for heavy duty applications

Type MBS 1250

Features



- Designed for use in severe industrial OEM applications
- For medium and ambient temperatures up to 125°C
- All standard output signals: 4-20 mA, 0-5 V, 1-5 V, 1-6 V, 0-10 V, 10-90% ratiometric voltage
- Wetted parts made of stainless steel
- A wide range of pressure and electrical connections
- EMC protection up to 100 V/m
- All versions with integrated pulse-snobber
- UL 508 recognized
- CE marked
- Dual output transmitters, for further information please contact Danfoss.

Description

The compact heavy duty OEM pressure transmitter MBS 1250 is designed for use in severe hydraulic applications. The integrated pulse-snobber offers a high degree of protection against cavitations and

liquid hammer, and the well thought out design results in excellent vibration stability and an exceptional robustness. The high degree of EMI protection equips the pressure transmitter to meet the most stringent industrial requirements.

Technical data

Performance (EN 60770)

Accuracy (incl. nonlinearity, hysteresis and repeatability)	±0.5% FS
Thermal zero point shift	<± 0.15% FS/ 10K
Thermal span shift	<±0.15% FS/ 10K
Response time liquids (10-90%)	1 ms
Overload pressure (static)	see table below
Burst pressure	See table below
Durability, P: 10-90% FS	>10 ×10 ⁶ cycles

Overload and burst pressure

Nominal pressure [bar]	6	10	16	25	40	60	100	160	250	400	600
Overload pressure	21	30	48	105	210	210	300	480	750	1200	1500
Burst pressure	280	400	640	700	1400	1400	2000	1600	2500	4000	>4000

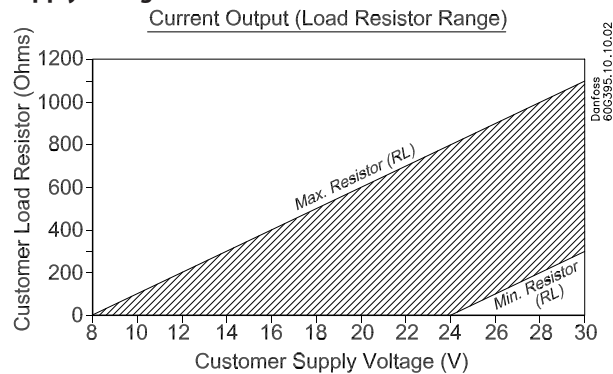
For higher pressure ranges, please contact Danfoss regarding MBS 1200.

Technical data (continued)

Electrical specifications

Nom. output signal (Short-circuit protected)	4 to 20 mA (2 wire)	0 to 5, 1 to 5 1 to 6 V	0 to 10 V	10 to 90% ratiometric
Supply voltage [UB], polarity protected	8 to 30 V	8 to 30 V	12 to 30 V	5V ±0.5 V
Supply - current consumption	–	4.5 mA	4.5 mA	4.5 mA
Output impedance	–	≤90 Ω	≤90 Ω	≤90 Ω
Load [R _L] (connected to 0 V)	See chart below	RL ≥ 10 kΩ	RL ≥ 10 kΩ	RL ≥ 5 kΩ
Load [R _L] (connected to + V)	See chart below	Not possible	Not possible	RL ≥ 5 kΩ

4 to 20 mA output - min. / max. resistance vs. supply voltage



Note:
Loop current should not exceed 22 mA continuous or 25 mA temporarily due to pressure peaks

Environmental conditions

Medium temperature range	–40°C → +125°C
Ambient temperature range	see page 4
Compensated temperature range	–40°C → +125°C
Transport temperature range	–40°C → +125°C
EMC - Emission	EN 55022
EMC - Immunity RF field 100 V/m, 26Mhz-1Ghz	EN 61000-6-2, EN 61000-4-6, EN 61000-4-3
DC isolation	250 V
Vibration stability 20g, 10-2000 Hz, sinus	EN 60068-2-6
Shock resistance 100 g	EN 60068-2-27
Enclosure (depending on electrical connection)	See page 5

Mechanical conditions

Materials:	
Wetted parts	17-4PH
Enclosure	AISI 304 or plastic
Pressure connection	17-4PH
Electrical connection	See page 4

Ordering of standard code numbers

Output signal	Electrical connection	Pressure connection	Measuring range Pe ¹⁾ [bar]	Industrial pack ²⁾ Code no.	Single pack Code no.
Ratiometric 10-90% of V _{sup.}	Deutsch DT 04	7/16-20 UNF	0-10	063G4266	063G1266
			0-40	063G4274	063G1274
			0-160	063G4282	063G1282
			0-250	063G4290	063G1290
			0-400	063G4298	063G1298
		G ¼ DIN 3852 - E	0-10	063G4265	063G1265
			0-40	063G4273	063G1273
			0-160	063G4281	063G1281
			0-250	063G4289	063G1289
			0-400	063G4297	063G1297
	Packard Metri Pack	G ¼ DIN 3852 - E	0-600	063G4305	063G1305
			0-10	063G4264	063G1264
			0-40	063G4272	063G1272
			0-160	063G4280	063G1280
			0-250	063G4288	063G1288
			0-400	063G4296	063G1296
			0-600	063G4304	063G1304

Output signal	Electrical connection	Pressure connection	Measuring range Pe ¹⁾ [bar]	Industrial pack ²⁾ Code no.	Single pack Code no.
1-5 V	Deutsch DT 04	G ¼ DIN 3852 - E	0-10	063G4263	063G1263
			0-40	063G4271	063G1271
			0-160	063G4279	063G1279
			0-250	063G4287	063G1287
			0-400	063G4295	063G1295
			0-600	063G4303	063G1303
	Packard Metri Pack	G ¼ DIN 3852 - E	0-10	063G4262	063G1262
			0-40	063G4270	063G1270
			0-160	063G4278	063G1278
			0-250	063G4286	063G1286
			0-400	063G4294	063G1294
			0-600	063G4302	063G1302

Output signal	Electrical connection	Pressure connection	Measuring range Pe ¹⁾ [bar]	Industrial pack ²⁾ Code no.	Single pack Code no.
4-20 mA	M12 x 1	7/16-20 UNF	0-10	063G4267	063G1267
			0-40	063G4275	063G1275
			0-160	063G4283	063G1283
			0-250	063G4291	063G1291
			0-400	063G4299	063G1299
	Deutsch DT 04	G ¼ DIN 3852 - E	0-10	063G4261	063G1261
			0-40	063G4269	063G1269
			0-160	063G4277	063G1277
			0-250	063G4285	063G1285
			0-400	063G4293	063G1293
			0-600	063G4301	063G1301
			0-10	063G4260	063G1260
			0-40	063G4268	063G1268
	Packard Metri Pack	G ¼ DIN 3852 - E	0-160	063G4276	063G1276
			0-250	063G4284	063G1284
			0-400	063G4292	063G1292
			0-600	063G4300	063G1300

¹⁾ Gauge /relative

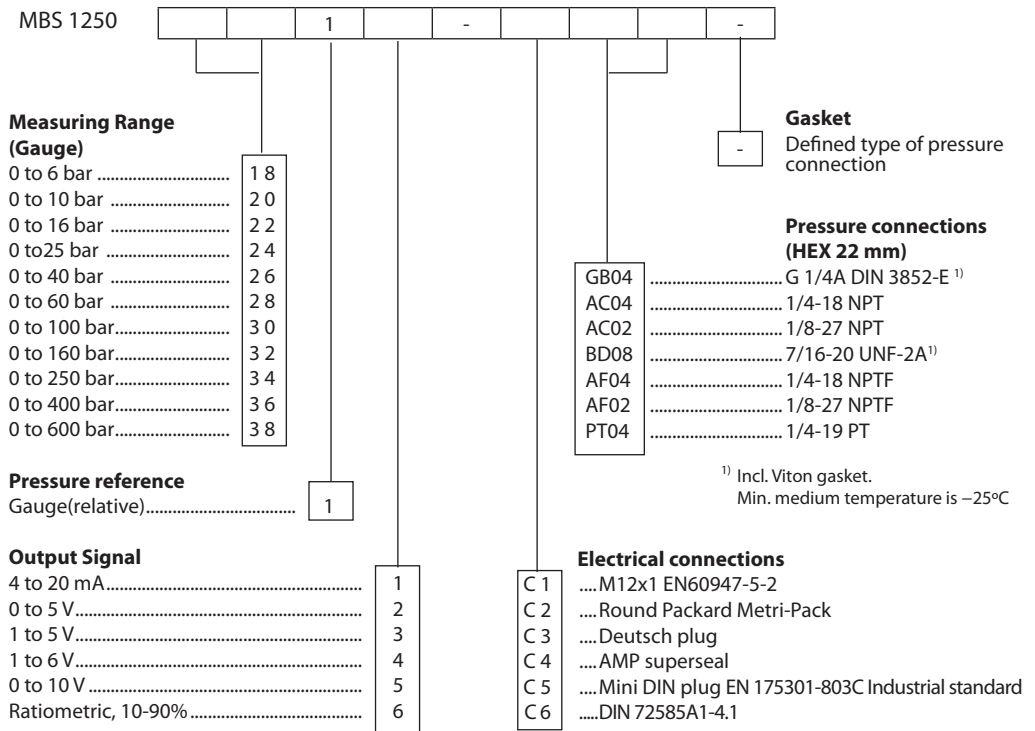
²⁾ To be ordered in the multiple of 50 pcs.

Ordering of adaptor code numbers

From pressure connection	To pressure connection	Single pack Code no.
G ¼" DIN 3852	7/16-20 UNF - flare	063G0300
	7/16-20 UNF - 2A	063G0301
	9/16-18 UNF - 2A	063G0302
	¼" NPT	063G0303
	R ¼"	063G0304

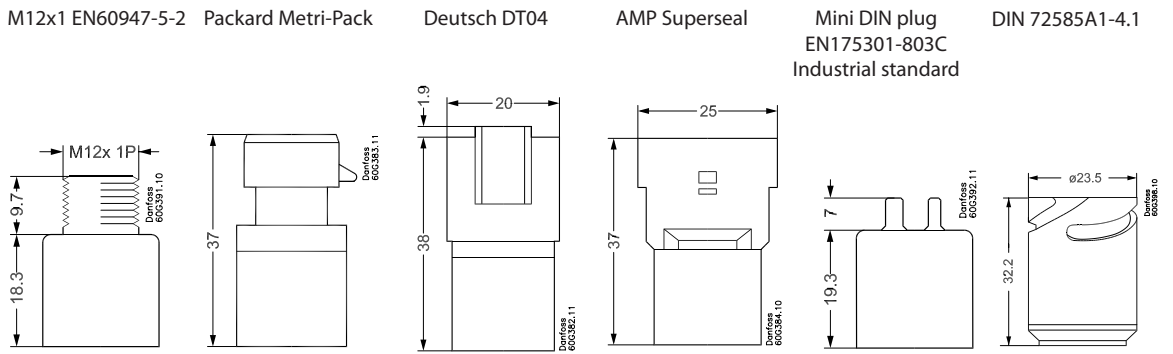
Ordering of special versions

MBS 1250



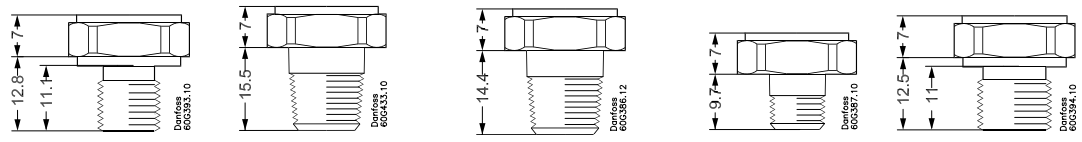
Dimensions/ Combination

Type code	C1	C2	C3	C4	C5	C6
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Note: The diameter of all housings is 19 mm.

Note: HEX is 22 mm across flats.



7/16-20 UNF-2A 1/4-19 PT 1/4-18 NPT/NPTF 1/8-27 NPT/NPTF G1/4A DIN 3852-E

Type code	BD08	PT04	AC04/AF04	AC02/AF02	GB04
Recommended torque	18-20 Nm	2-3 turns after finger tightend	2-3 turns after finger tightend	2-3 turns after finger tightend	30-35 Nm

Electrical connections

Type code page 4					
C1	C2	C3	C4	C5	C6
M12x1 EN60947-5-2 Danfoss 606397.11	Packard Metri-Pack Danfoss 606397.11	Deutsch DT04 Danfoss 606396.12	AMP Superseal 1.5 Danfoss 606396.12	Mini DIN plug EN175301-803 Industrial standard Danfoss 606396.12	DIN 72585A1-4.1 Danfoss 606397.11
<i>Ambient temperature 4-20 mA</i>					
-40 to +100°C	-40 to +100°C	-25 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C
<i>Ambient temperature, 0-5 V, 1-5 V, 1-6 V, 0-10 V, ratiometric 10-90%</i>					
-40 to +125°C	-40 to +125°C	-40 to +125°C	-40 to +125°C	-40 to +125°C	-40 to +125°C
<i>Enclosure</i>					
IP 67	IP 67	IP 67	IP 67	IP40	IP67
<i>Material</i>					
SS, PBT 30% GFR Gold (Au) plated	Glass filled PBT 30% GFR Tin (Sn) plated	Glass filled PBT 30% GFR Gold (Au) plated	Glass filled PBT 30% GFR Tin (Sn) plated	304 ss, PBT 30% GFR Tin (Sn) plated	Glass filled PBT 30% GFR Gold (Au) plated
<i>Electrical connections, 4-20 mA (2 wire)</i>					
Pin 1: + supply Pin 2: Not used Pin 3: ÷ supply Pin 4: Not used	Pin A: ÷ supply Pin B: + supply Pin C: Not used	Pin 1: ÷ supply Pin 2: + supply Pin 3: Not used Pin 4: Not used	Pin 1: Not used Pin 2: ÷ supply Pin 3: + supply	Pin 1: Not used Pin 2: + supply Pin 3: Not used Pin 4: ÷ supply	Pin 1: + supply Pin 2: ÷ supply Pin 3: Not used Pin 4: Not used
<i>Electrical connections, 0-5V, 1-5V, 1-6V, 0-10V, ratiometric 10-90%</i>					
Pin 1: + supply Pin 2: Output Pin 3: ÷ supply Pin 4: Not used	Pin A: ÷ supply Pin B: + supply Pin C: Output	Pin 1: ÷ supply Pin 2: + supply Pin 3: Not used Pin 4: Output	Pin 1: Output Pin 2: ÷ supply Pin 3: + supply	Pin 1: Output Pin 2: + supply Pin 3: Not used Pin 4: ÷ supply	Pin 1: + supply Pin 2: ÷ supply Pin 3: Output Pin 4: Not used

