



**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%)	output signal	4-20 mA	0-5 V	1-5 V	1-6 V	0-10 V	Ratiometric 10-90%
	ms	0.5	10	1	1.3	20	1
Overload pressure (static)	see table below						
Burst pressure	See table below						
Durability, P: 10-90% FS	>10 ×10 <sup>6</sup> cycles						

*Overload and burst pressure*

Nominal pressure [bar]	20	25	40	60	100	160	250	400	600
Overload pressure	80	80	210	210	300	480	750	1200	1500
Burst pressure	800	800	1400	1400	2000	1600	2500	4000	>4000

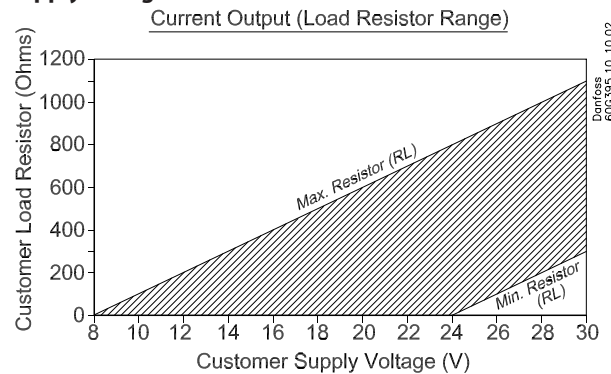
For higher pressure ranges, please contact Danfoss regarding MBS 1200.

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 <sub>L</sub> ] (connected to 0 V)	See chart below	RL ≥ 10 kΩ	RL ≥ 10 kΩ	RL ≥ 5 kΩ
Load [R <sub>L</sub> ] (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

Media temperature range	–40°C → +125°C
Ambient temperature range	see page 6
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 3 V/m, 1.4 GHz - 2.7 GHz
Electrical performance comply with	ISO 7637
DC isolation	500 V line to line 250 V line to earth
Vibration stability	20g, 10-2000 Hz, sinus
Shock resistance	100 g
Enclosure (depending on electrical connection)	See page 6

Mechanical conditions

Materials:	
Wetted parts	17-4PH
Enclosure	AISI 304 or plastic
Pressure connection	17-4PH
Electrical connection	See page 6

**Ordering of standard code numbers**

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

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

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

<sup>1)</sup> Gauge /relative

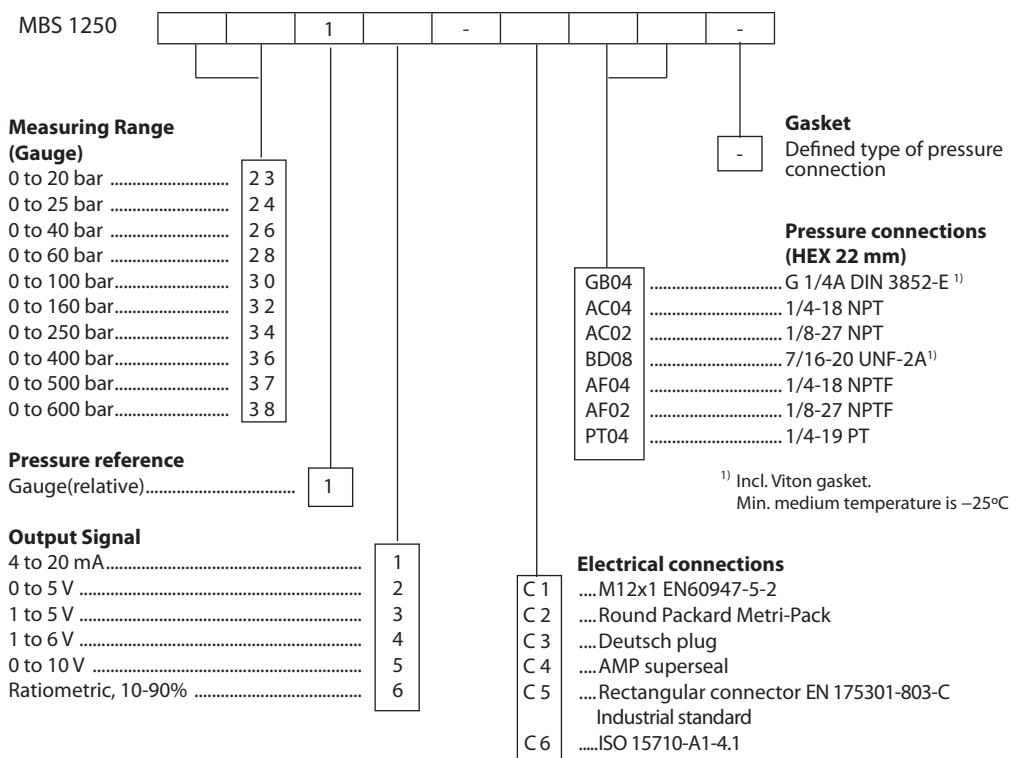
<sup>2)</sup> To be ordered in the multiple of 50 pcs.

**Ordering of adaptor code numbers**

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

Ordering of special versions

MBS 1250



Dimensions/ Combination

Type code	C1	C2	C3	C4	C5	C6
	M12x1 EN60947-5-2	Round Packard Metri-Pack	Deutsch DT04	AMP Superseal	Rectangular connector EN175301-803-C Industrial standard	ISO 15710-A1-4.1
	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 1)	18-20 Nm	2-3 turns after finger tightend	2-3 turns after finger tightend	2-3 turns after finger tightend	30-35 Nm	

Note: The diameter of all housings is 19 mm.

Note: HEX is 22 mm across flats.

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

Electrical connections

Type code page 5					
C1	C2	C3	C4	C5	C6
M12x1 EN60947-5-2  <small>Danfoss ref: 603597.11</small>	Round Packard Metri-Pack  <small>Danfoss ref: 603597.11</small>	Deutsch DT04  <small>Danfoss ref: 603596.12</small>	AMP Superseal 1.5  <small>Danfoss ref: 603596.12</small>	Rectangular connector EN175301-803-C Industrial standard  <small>Danfoss ref: 603596.12</small>	ISO 15710-A1-4.1  <small>Danfoss ref: 603597.11</small>
<i>Ambient temperature 4-20 mA</i>					
-40 to +100°C	-40 to +100°C	-40 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 (IP protection fulfilled together with mating connector)</i>					
IP 67	IP 67	IP 67	IP 67	IP40	IP 67
<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: Do not connect Pin 3: ÷ supply Pin 4: PE connected to MBS enclosure	Pin A: ÷ supply Pin B: + supply Pin C: Do not connect	Pin 1: ÷ supply Pin 2: + supply Pin 3: PE connected to MBS enclosure Pin 4: Do not connect	Pin 1: Do not connect Pin 2: ÷ supply Pin 3: + supply	Pin 1: Do not connect Pin 2: + supply Pin 3: PE connected to MBS enclosure Pin 4: ÷ supply	Pin 1: + supply Pin 2: ÷ supply Pin 3: Do not connect Pin 4: PE connected to MBS enclosure
<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: PE connected to MBS enclosure	Pin A: ÷ supply Pin B: + supply Pin C: Output	Pin 1: ÷ supply Pin 2: + supply Pin 3: PE connected to MBS enclosure Pin 4: Output	Pin 1: Output Pin 2: ÷ supply Pin 3: + supply	Pin 1: Output Pin 2: + supply Pin 3: PE connected to MBS enclosure Pin 4: ÷ supply	Pin 1: + supply Pin 2: ÷ supply Pin 3: Output Pin 4: PE connected to MBS enclosure