

Drucksensoren für mobilen Einsatz (OEM-Version)

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-snubber
- 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-snubber 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%) | > 0.5 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] | 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 |

Mechanical conditions

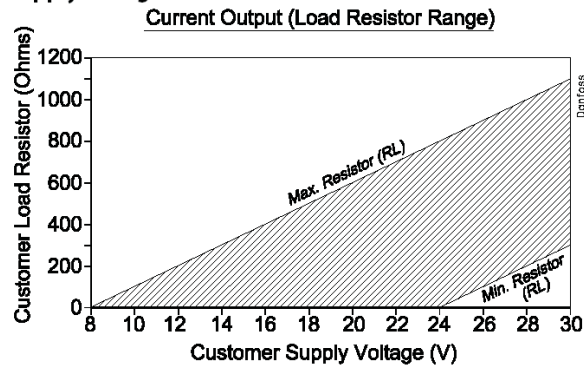
| | | |
|------------|-----------------------|---------------------|
| Materials: | Wetted parts | 17-4PH |
| | Enclosure | AISI 304 or plastic |
| | Pressure connection | 17-4PH |
| | Electrical connection | See page 6 |

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

| | |
|------------------------------------|---|
| 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 |

Dimensions/ Combination

| Type code | C1 | C2 | C3 | C4 | C5 | C6 |
|-----------|----|----|----|----|----|----|
|-----------|----|----|----|----|----|----|

M12x1 EN60947-5-2

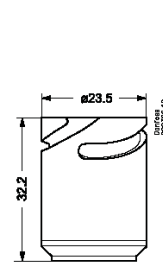
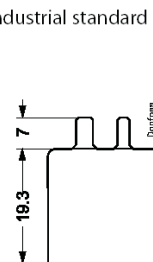
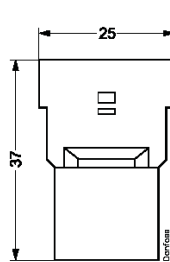
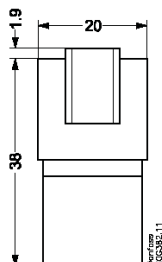
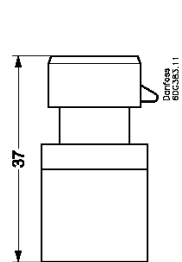
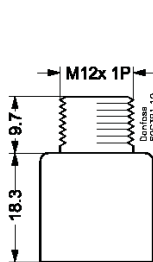
Round Packard
Metri-Pack

Deutsch DT04

AMP Superseal

Rectangular
connector
EN175301-803-C
Industrial standard

ISO 15710-A1-4.1



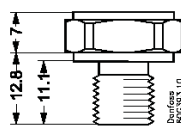
Note: The diameter of all housings is 19 mm.

Layout: © 2006 ibl-hydronic + www.gb-design.de

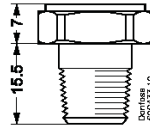
Die angegebenen Technischen Daten und Eigenschaften stellen keine zugesicherte Eigenschaft im rechtlichen Sinne dar. Es werden nur allgemeine Produkteigenschaften beschrieben. Für Fehler oder Irrtümer wird keine Haftung übernommen. Die Unterlage unterliegt nicht dem Änderungsdienst.

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Produktinformation

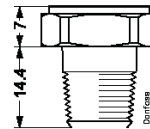
Note: HEX is 22 mm across flats.



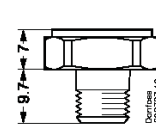
7/16-20 UNF-2A



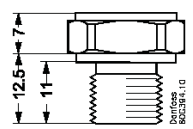
1/4-19 PT



1/4-18 NPT/NPTF



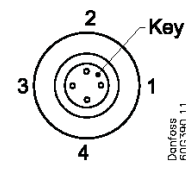
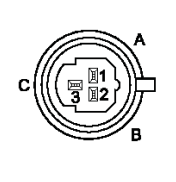
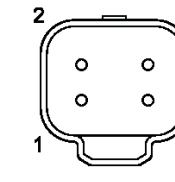
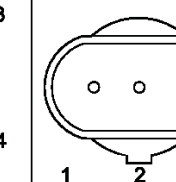
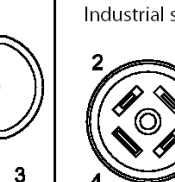
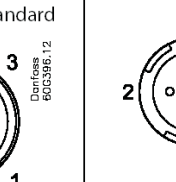
1/8-27 NPT/NPTF



G1/4A DIN 3852-E

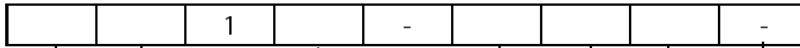
| | | | | | |
|-----------------------|----------|---------------------------------|---------------------------------|---------------------------------|----------|
| Type code | BD08 | PT04 | AC04/AF04 | AC02/AF02 | GB04 |
| Recommended torque 1) | 18-20 Nm | 2-3 turns after finger tightend | 2-3 turns after finger tightend | 2-3 turns after finger tightend | 30-35 Nm |

Electrical connections

| Type code page 5 | | | | | |
|---|--|---|--|--|--|
| C1 | C2 | C3 | C4 | C5 | C6 |
| M12x1 EN60947-5-2  | Round Packard Metri-Pack  | Deutsch DT04  | AMP Superseal 1.5  | Rectangular connector EN175301-803-C Industrial standard  | ISO 15710-A1-4.1  |
| <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 |

iblos ist ein eingetragenes Warenzeichen der IBL-hydronic

MBS 1250



Measuring Range (Gauge)

| | |
|-------------------|----|
| 0 to 20 bar | 23 |
| 0 to 25 bar | 24 |
| 0 to 40 bar | 26 |
| 0 to 60 bar | 28 |
| 0 to 100 bar..... | 30 |
| 0 to 160 bar..... | 32 |
| 0 to 250 bar..... | 34 |
| 0 to 400 bar..... | 36 |
| 0 to 500 bar..... | 37 |
| 0 to 600 bar..... | 38 |

Pressure reference

| | |
|----------------------|---|
| Gauge(relative)..... | 1 |
|----------------------|---|

Output Signal

| | |
|---------------------------|---|
| 4 to 20 mA..... | 1 |
| 0 to 5 V | 2 |
| 1 to 5 V | 3 |
| 1 to 6 V | 4 |
| 0 to 10 V | 5 |
| Ratiometric, 10-90% | 6 |

Gasket

Defined type of pressure connection

Pressure connections (HEX 22 mm)

| | |
|------------|---------------------------------|
| GB04 | G 1/4A DIN 3852-E ¹⁾ |
| AC04 | 1/4-18 NPT |
| AC02 | 1/8-27 NPT |
| BD08 | 7/16-20 UNF-2A ¹⁾ |
| AF04 | 1/4-18 NPTF |
| AF02 | 1/8-27 NPTF |
| PT04 | 1/4-19 PT |

¹⁾ Incl. Viton gasket.
Min. medium temperature is -25°C

Electrical connections

| | |
|-----|--|
| C 1 | M12x1 EN60947-5-2 |
| C 2 | Round Packard Metri-Pack |
| C 3 | Deutsch plug |
| C 4 | AMP superseal |
| C 5 | Rectangular connector EN 175301-803-C Industrial standard |
| C 6 | ISO 15710-A1-4.1 |

Please contact us for standard code numbers.