



Data sheet

High Pressure Transmitter for marine applications Type MBS 6300



The design of the high pressure transmitters, type MBS 6300 ensures that the transmitters are accurate and reliable, even in extreme environments with pressure peaks, vibration, temperature fluctuations and EMC interference.

The robust product design withstands humidity cycles and heavy vibration.

Features

- Typical applications
 - High pressure fuel injection
- Designed for use in harsh environment
- Overload pressure 3000 bar
- Enclosure stainless steel (AISI 304)
- Wetted parts stainless steel (AISI 630)
- Pressure ranges from 0 up to 2500 bar
- Output signals: 4 – 20 mA, ratiometric and absolute voltage
- Temperature compensated
- High vibration stability
- For medium and ambient temperature up to 125 °C

Approvals

Lloyds Register of shipping, LRS
Germanischer Lloyd, GL
Bureau Veritas, BV
Det Norske Veritas, DNV
Registro Italiano Navale, RINA

Nippon Kaiji Kyokai, NKK
American Bureau of Shipping, ABS
Korean Register of Shipping, KR
China Classification Society, CCS
Russian Maritime Register of Shipping, RMRS

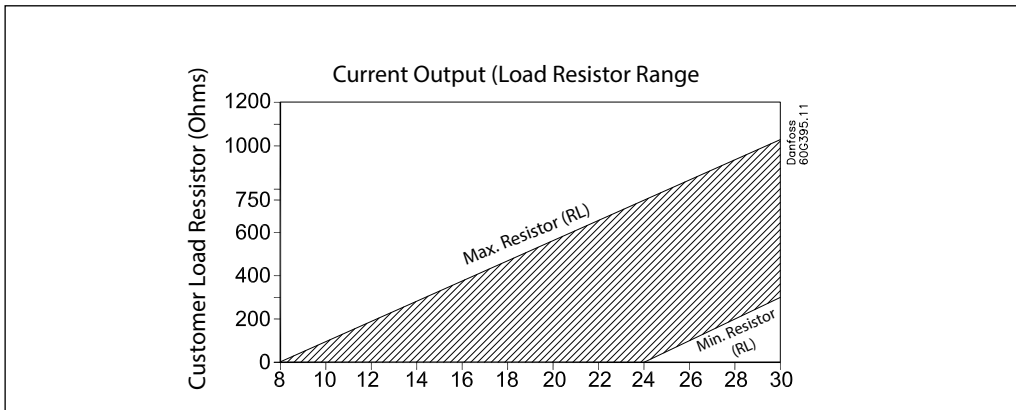
Technical data

Performance (EN 60770)

| | |
|--|--------------------------|
| Accuracy (incl. non-linearity, hysteresis and repeatability) | ≤ ± 1.0% FS |
| Non-linearity BFSL (conformity) | ≤ ± 0.2% FS |
| Hysteresis and repeatability | ≤ ± 1.0% FS |
| Total error band @Temp. 0 – 90 °C | ≤ ± 2.0% FS ¹ |
| Total error band @Temp. 90 – 125 °C | ≤ ± 3.0% FS |
| Response time | ≤ 1 ms |
| Overload pressure (static) | 3000 bar |
| Burst pressure | > 4000 bar |

Electrical specifications

| Nom. output signal (Short-circuit protected) | 4 – 20 mA (2 wire) | 0 – 5, 1 – 5 1 – 6 V | 0 – 10 V | 10 – 90% ratiometric |
|--|--------------------|-------------------------|------------------------|------------------------|
| Supply voltage [U _b], polarity protected | 24 V (8 – 30 V) | 24 V (8 – 30 V) | 24 V (12 – 30 V) | 5V (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 0V) | See chart below | R _L ≥ 10 kΩ | R _L ≥ 10 kΩ | R _L ≥ 10 kΩ |
| Load [R _L] (connected to +V) | See chart below | Not possible | Not possible | R _L ≥ 5 kΩ |



Note:
Loop current should not exceed 22 mA continuous or 25 mA temporarily.

Environmental conditions

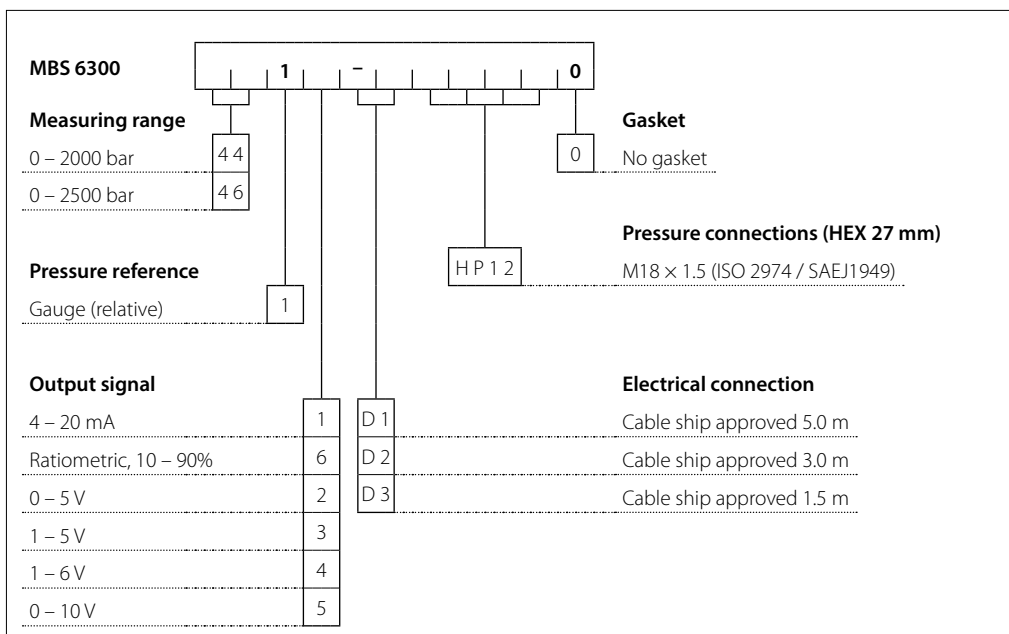
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|--|--------------|-------------------|--------------------|
| Media temperature range | -40 – 125 °C | | |
| Ambient temperature range (depending on electrical connection) | see page 3 | | |
| Compensated temperature range | 0 – 125 °C | | |
| Storage temperature | -50 – 125 °C | | |
| EMC – Emission | EN 61000-6-3 | | |
| EMC – Immunity | EN 61000-6-2 | | |
| DC isolation | 1000 V | | |
| Vibration stability | Sinusoidal | 20 g / 25 – 2 kHz | IEC 60068-2-6 Fc |
| Shock resistance | Shock | 500 g / 1ms | IEC 60068 - 2 - 27 |
| Enclosure | IP67 | | |

Mechanical conditions

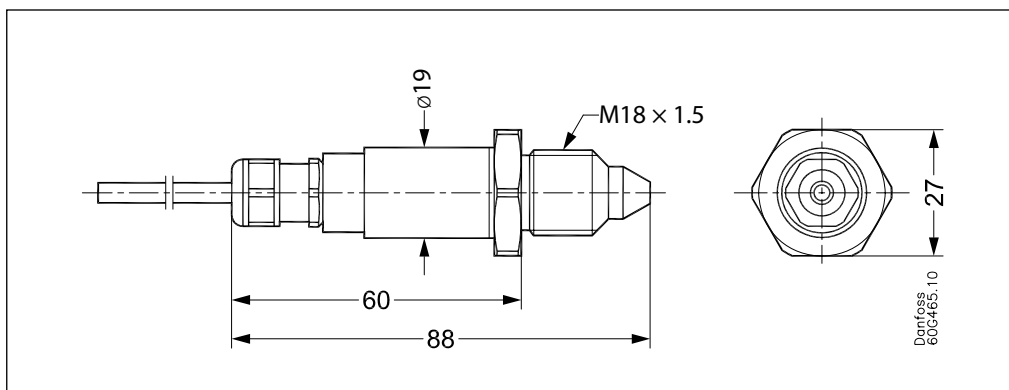
| | | |
|--------------------------------|-----------------------|----------------------|
| Materials | Wetted parts | 17 – 4 PH / AISI 630 |
| | Enclosure | AISI 304 |
| | Pressure connection | see page 3 |
| | Electrical connection | see page 3 |
| Recommended mounting torque | 30 Nm | |
| Net weight (here of 1 m cable) | 160 g (40 g) | |

¹*) Requirement for Ratiometric output is relaxed to ±3% for Conducted RF immunity in the range 150kHz – 500kHz

Ordering standard



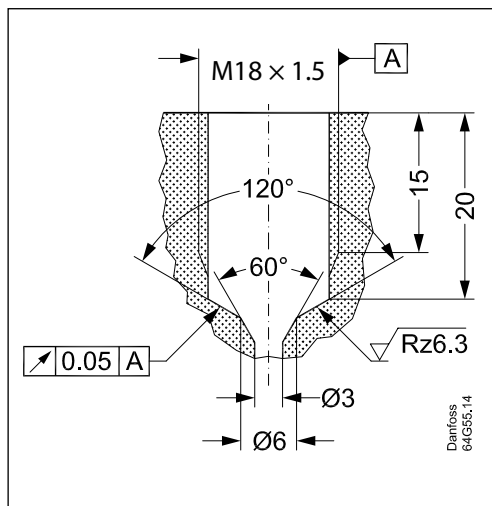
Dimensions [mm]



Electrical connections

| Type code | 1 |
|--|--|
| | <p>Screened cable $\varnothing 4.9$</p> |
| Ambient temperature 4 – 20 mA | -35 – 110 °C |
| Ambient temperature, ratiometric and absolute voltage | -35 – 125 °C |
| Enclosure | IP67 |
| Material | Polyofin cable; Screen (Cu-Sn) Insulation ETFE |
| Electrical connections, 4 – 20 mA (2 wire) | Red wire: + supply White wire: - supply Red/black wire: not used White/black wire: not used Screen: not connected to MBS housing |
| Electrical connection, ratiometric output and absolute voltage output | Red wire: + supply White wire: - supply Red/black wire: output White/black wire: not used Screen: not connected to MBS housing |

Female part



Recommended hardness:
HRC 50 or higher