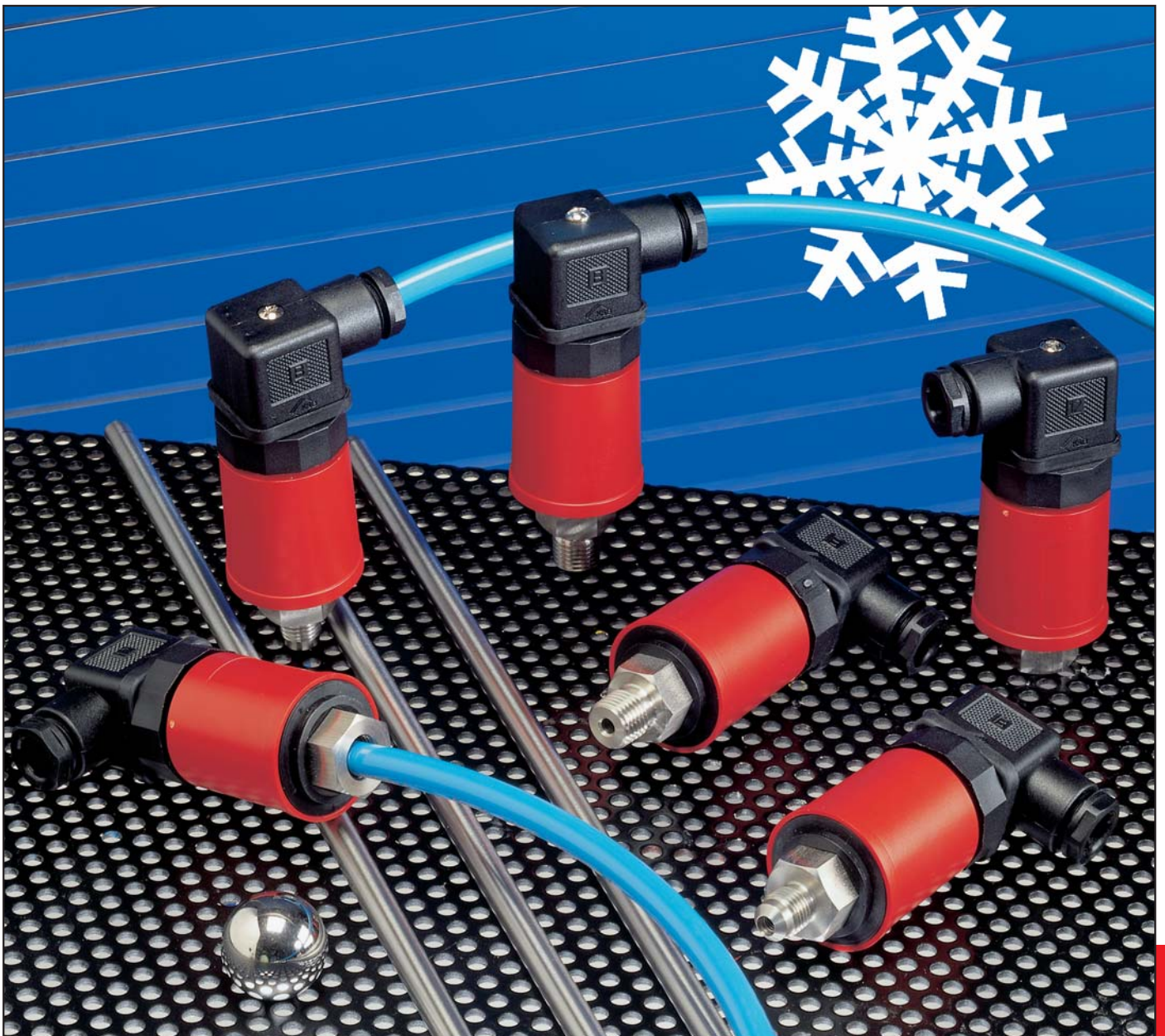


506

Pressure transmitter for refrigeration technology

Relative Pressure up to 60 bar



EDITION 02/2006

HUBA-REGISTERED TRADE MARK

Huba Control

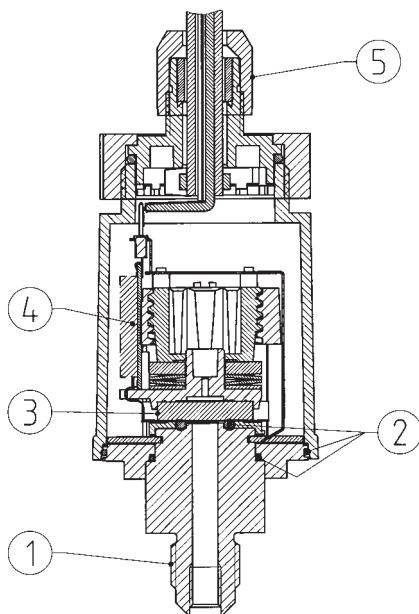
FOR FINE PRESSURE AND FLOW MEASUREMENT



Technical overview

The pressure transmitter type 506 with proven ceramic technology, features calibrated and amplified sensor signals which are available as standardised current outputs.

Specially developed for use in the industrial refrigeration technology.



Legend to cross-section drawing

- 1 Connection fitting
- 2 Seals
- 3 Ceramic element
- 4 Hybrid electronics
- 5 Cable joint PG7

The distinct advantages

- Compact construction
- Manufactured by automatic assembly line to give ideal price/performance ratio
- Robust ceramic-sensor technology
- High resistance to extreme temperatures
- No mechanical ageing
- No mechanical creepage

Pressure ranges

Relative pressure/Gauge (measurement of pressure relative to ambient pressure)

Lowest pressure range 7 bar fs

Overload

2 x measuring range (fs) at full scale from
40 ... 60 bar max. 80 bar

Rupture pressure

3 x measuring range (fs) at full scale from
40 - 60 bar max. 90 bar

Accuracy

Total of linearity, hysteresis and repeatability
< +/- 0.5 % fs (> 10 - 60 bar)
< +/- 1.0 % fs (7 - 10 bar)

Adjustment accuracy zero point and full scale
(repeatable)

| | |
|----------|----------|
| 0 - 5 V | ± 50 mV |
| 1 - 6 V | ± 50 mV |
| 0 - 10 V | ± 100 mV |
| 10 - 90% | ± 1% |

Materials in contact with the medium

Ceramic / Stainless steel 1.4305
Sealing material: CR

Housing material

Cover Pa 6

Temperature influences

Medium and ambient temperature
- 40 °C ... + 80 °C

TC zero point
10 ... 60 bar < +/- 0.04% fs

TC sensitivity
7 ... 10 bar < +/- 0.015% fs
< +/- 0.02% fs

Load cycle

< 50 Hz

Dynamic response

Suitable for static and dynamic measurements.
Response time: < 5 ms

Signal and power supply

| | | |
|-----------|---------------------|--------------|
| 0 - 5 V | 11 - 33 VDC | 3-wire cable |
| 1 - 6 V | 11 - 33 VDC | 3-wire cable |
| 0 - 10 V | 18 - 33 VDC | 3-wire cable |
| 4 - 20 mA | 11 - 33 VDC | 2-wire cable |
| 10 - 90% | 4.5 - 6 VDC ratiom. | 3-wire cable |

Short circuit-proof and protected against polarity reversal. Each connection against other with max. +/- supply voltage.

Load

| | |
|-----------|--|
| 0 - 5 V | > 10 kOhm/<100 nF |
| 1 - 6 V | > 10 kOhm/<100 nF |
| 0 - 10 V | > 10 kOhm/<100 nF |
| 4 - 20 mA | $\leq \frac{\text{supply voltage} - 11 \text{ V}}{0.02 \text{ A}}$ [Ohm] |
| 10 - 90% | > 10 kOhm/<100 nF |

Current consumption

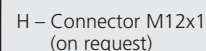
| | |
|-----------|-------|
| 0 - 5 V | 2 mA |
| 1 - 6 V | 2 mA |
| 0 - 10 V | 3 mA |
| 4 - 20 mA | 20 mA |
| 10 - 90% | 2 mA |

Electrical connections / Protection class

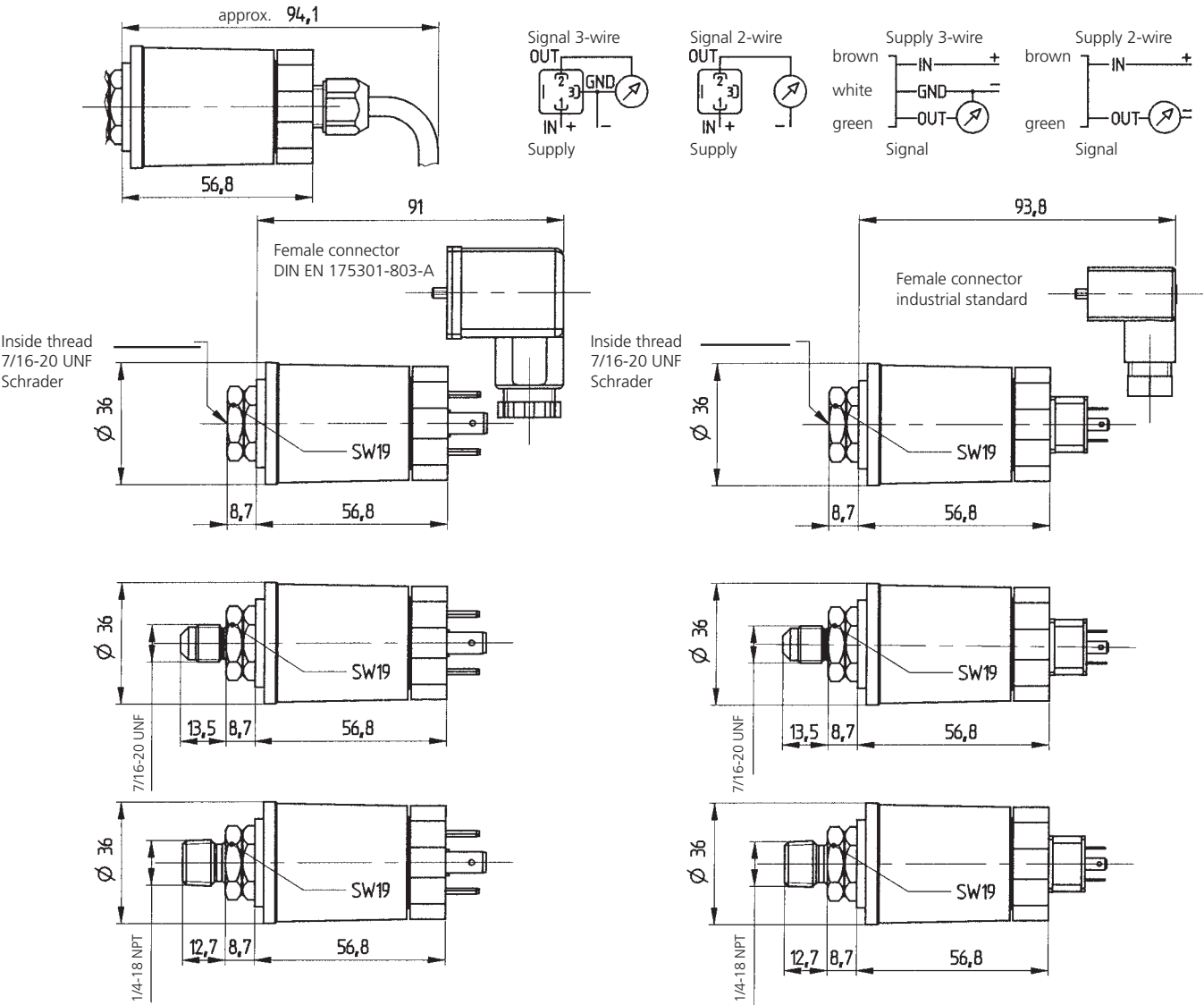
| | |
|-------------------------------|-------|
| Cable 1.5 m | IP 65 |
| Connector DIN EN 175301-803-A | IP 65 |
| Connector Industrial standard | IP 65 |

Calibration

Calibrated in factory



3 Other connections and materials on request



| | | | |
|---|---------------------|----------------------------------|-------------|
| Electromagnetic compatibility: CE conformity (EMC) by application of harmonized standards: Interference stability EN 61000-6-1 and EN 61000-6-3 | | | |
| Interference stability | Test standard | Effect | |
| Electrostatic discharge (ESD) | EN 61000-4-2 | 8 kV air, 4 kV contact | no effect |
| High-frequency electromagnetic radiation (HF) | EN 61000-4-3 | 3 V/m, 80 ... 1000 Mz | no effect |
| Conducted HF interference | EN 61000-4-6 | 3 V, 0.15 ... 80 MHz | no effect |
| Fast transients (burst) | EN 61000-4-4 | 1 kV | no effect |
| Surge | EN 61000-4-5 | max. tolerable cable length 10 m | no test |
| Magnetic fields | EN 61000-4-8 | 30 A/m, 50 Hz | no effect |
| Interference emit | Test standard | Effect | |
| Conducted interference | EN 55022 (CISPR 22) | 0.15... 30 MHz | no emission |
| Radiation from housing | | 30...1000 MHz, 10 m | no emission |

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