

506

**Pressure transmitter for
refrigeration technology
Relative up to 60 bar**



HUBA-REGISTERED TRADE MARK

Huba Control

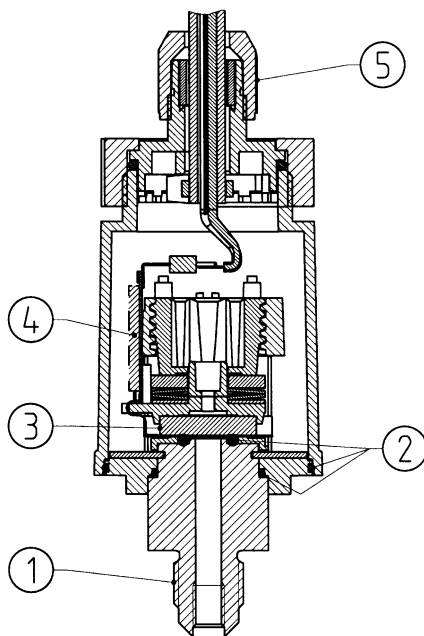
FOR FINE PRESSURE AND FLOW MEASUREMENT



Technical overview

The pressure transmitter of type series 506 with proved ceramic technology, features calibrated and amplified sensor signals which are available as standardized current outputs.

Specially developed for use in the industrial refrigeration technology.



The distinct advantages

- Compact construction
- By automatic largescale manufacture ideal price/performance ratio
- Robust ceramic-sensor technology
- High resistance to extreme temperatures
- No mechanical aging
- No mechanical creepage

Legend to cross-section drawing

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

Pressure ranges

Relative pressure/Gage (measurement of pressure relative to ambient pressure).
Lowest pressure range 7 bar fs

Overload

2x measuring range (fs)
(40 ... 60 bar max. 80 bar)

Rupture pressure

3x measuring range (fs)
(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 (repeatabile, stable)

0 - 5 V	± 50 mV
1 - 6 V	± 50 mV
0 - 10 V	± 100 mV
4 - 20 mA	± 0.16 mA
10 - 90 %	± 1 %

Housing material

Cover Pa 6

Materials in contact with the medium

Ceramic/Stainless steel 1.4305
(AISI 303)

Sealing material: CR

Temperature influences

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

TC zero point 10 to 60 bar
< +/- 0.04 % fs/°C
7 - 10 bar < +/- 0.06 % fs/°C

TC sensitivity
typically < +/- 0.015 % fs/°C
7 - 10 bar < +/- 0.02 % fs/°C typ.

Load cycle

< 50 Hz

Dynamic response

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

Pressure connections

Inside thread	7/16-20 UNF
Schrader	
Outside thread	7/16-20 UNF
Outside thread	1/4 - 18 NPT

Weight

Inside thread	50 grams
Outside thread	70 grams

Installation arrangement

Unrestricted

Signal 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 - 6.0 VDC
	3-wire cable
	ratiometric

• 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

With max. signal output:

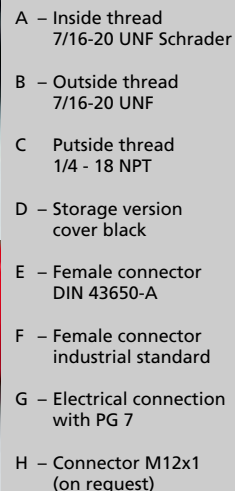
0 - 5 V	< 2 mA
1 - 6 V	< 2 mA
0 - 10 V	< 3 mA
4 - 20 mA	< 20 mA
10 - 90 %	< 2 mA

Electrical connections/protection class

Cable 1.5 meters, IP 65
Connector DIN 43650-A, IP 65
Connector industrial standard, IP 65

Calibration by customer

Calibrated in the factory.



Versions

506

Accessories	Female connector DIN 43650-A with seal (IP 65 when installed and latched)		1	0	3	5	1	0
	Female connector (industrial standard) with seal (IP 65 when installed and latched)		1	0	4	2	4	4
Packaging	Mention on order:	• single packaging • single packaging with DIN-connector order-no 103510 or Connector industrial standard order-no 104244	• multiple packaging (25 pcs) • multiple packaging (25 pcs) DIN-connector order-no 103510 or Connector industrial standard order-no 104244 enclosed separately					

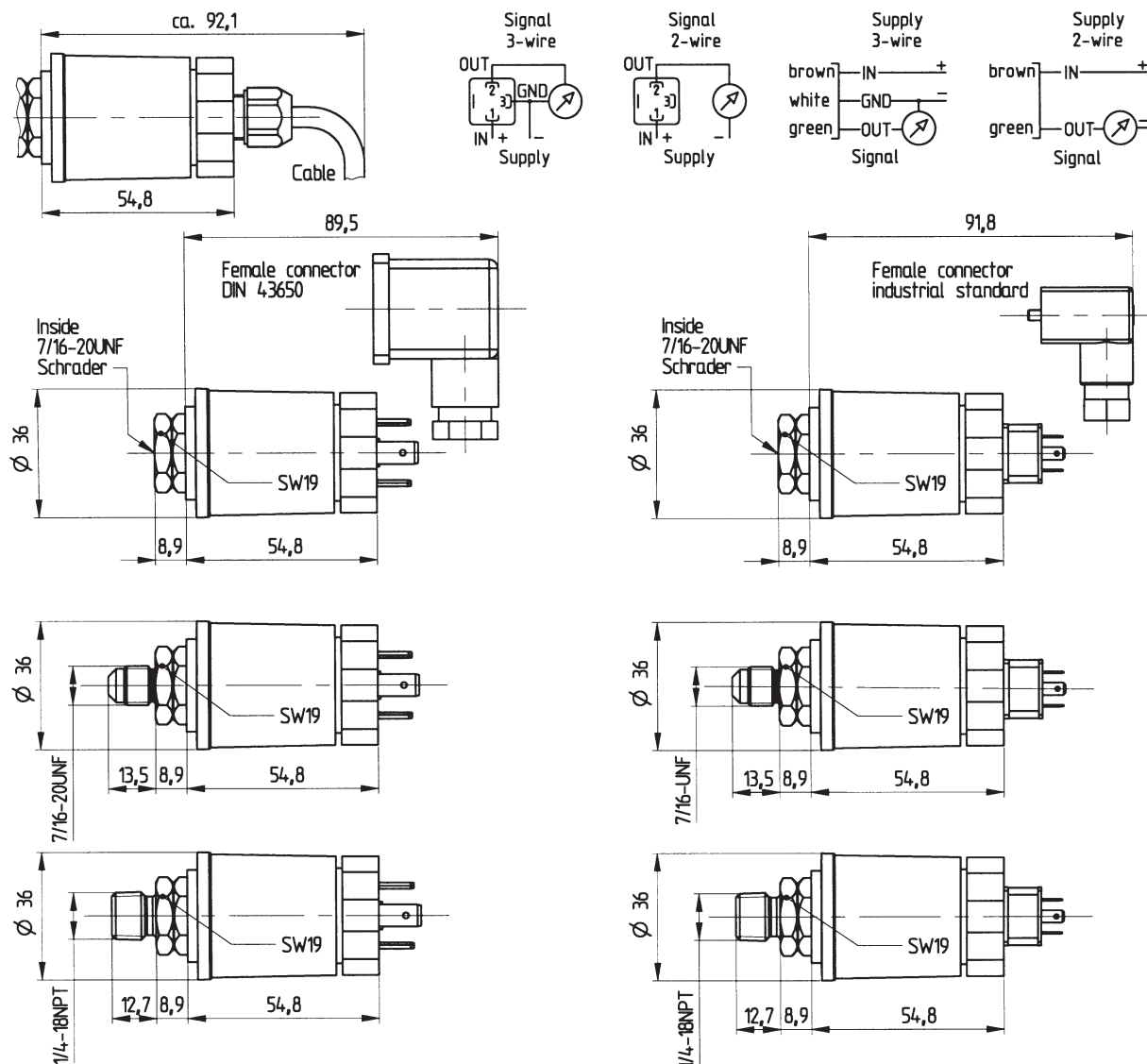
Storage versions according separate specification.

Order example: specifications of customer: 506.9XXA02121W - 0,5 ... 7 bar turns to factory number: 506.930A02121W - 0,5 ... 7 bar

¹ According to ISO standard R 1629, other sealing materials on request.

2 Without female connector.

3 Other connections and materials on request.



Electromagnetic compatibility:

CE conformity to EC directive 89/336 EEC (EMC) by application of harmonized standards EN 50081-1, EN 50081-2 and EN 50082-2.

Type of interference/Interference susceptibility	Test standard	Effects
Electrostatic discharge ESD	EN 61000-4-2 8 kV air discharge / 4 kV contact discharge	No failure except ratiometric types
High-frequency electromagnetic radiation (HF)	EN 61000-4-3 10 V/m / 80...1000 MHz	No effect up to 7 V/m
Conducted HF interference	EN 61000-4-6 10 V _{RMS} / 0.15 ... 80 MHz	No effect
Fast transients (burst)	EN 61000-4-4 2 kV	No effect
Magnetic fields 50 Hz 30 A/m	EN 61000-4-8	No effect
Type of interference/Emitted interference	Test standard	Effects
Conducted interference	EN 55022 0.15...30 MHz	No effect
Radiation from housing	30...1000 MHz, 10 meters	No effect

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