

Relative pressure transmitter

0 ... 2.5 – 25 bar

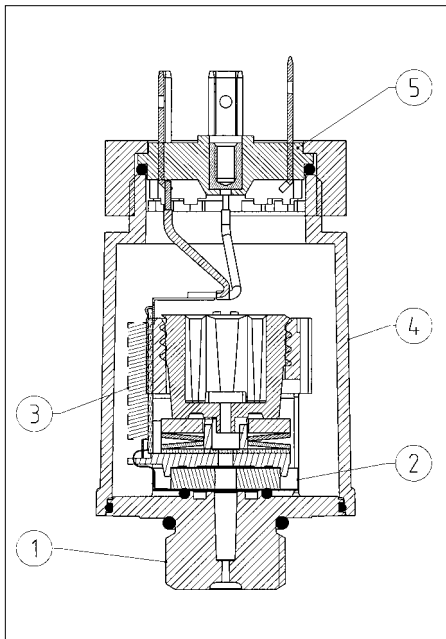


 **Huba Control**

FEINE MESSIDEEN FÜR DRUCK UND STRÖMUNG
FOR FINE PRESSURE AND FLOW MEASUREMENT
LA FINESSE DES MESURES DE PRESSION ET DE DÉBIT

Technical overview

The relative pressure transmitter of type series 503 with proved ceramic technology features, calibrated and amplified sensor signals which are available as standard voltage outputs. Designed for large batch production in OEM applications.



Legend to cross-section drawing

- 1 Connection fitting
- 2 Ceramic sensor
- 3 Hybrid electronics
- 4 Cover
- 5 Electrical connection

The distinct advantages

- Partial automatic production, giving ideal price/performance ratio
- Ideal for use as a control element, owing to small hysteresis
- Incorporates all the benefits of ceramics technology for industrial applications

Medium

Liquids and neutral gases

Pressure ranges

relative 0 ... 2.5 – 25 bar
(measurement of pressure relative to ambient pressure)

Overload admissible

2 x Measuring range (fs)

Rupture pressure

3 x Measuring range (fs)

Materials in contact with the medium

Pressure connection: Grivory GV 5H
or Noryl GTX 20% GF
Measuring cell: Ceramic Al₂O₃ (96%)
Seal: FPM, EPDM, NBR

Housing material

ABS for cover with connector AMP
PA 6 for cover with connector DIN or cable

Temperature

Medium	2 ... 90 °C
Ambient	10 ... 60 °C
Storage	-30 ... +85 °C

Output

0.5 ... 2.5 V
0.5 ... 3.5 V

Power supply

5 VDC (4.5 ... 5.5 V)
8.5 ... 30 VDC

Load

> 10 kOhm / <100 nF

Current consumption

At nominal pressure < 5 mA

Dynamic response

Suitable for static and dynamic measurements.

Response time

< 5 ms

Load cycle

< 50 Hz

Electrical connections

Connector DIN EN 175301-803
Connector RAST 2.5
Cable 1.5 m
(recommendation AMP DUOPLUG 2.5™)

Reverse voltage protection

Nominal voltage to declare. Short circuit-proof and protected against polarity reversal. For connector-versions only mechanically protected. The correct wiring acc. to the scheme has to be guaranteed by the OEM-customer.

Protection standard

Connector AMP	IP 00
Connector DIN and cable	IP 54

Pressure connections

Outside thread G 3/8
Plug connector Ø 15 mm
Counterpart, supplied by customer, (see drawing on dimensions)

Installation arrangement

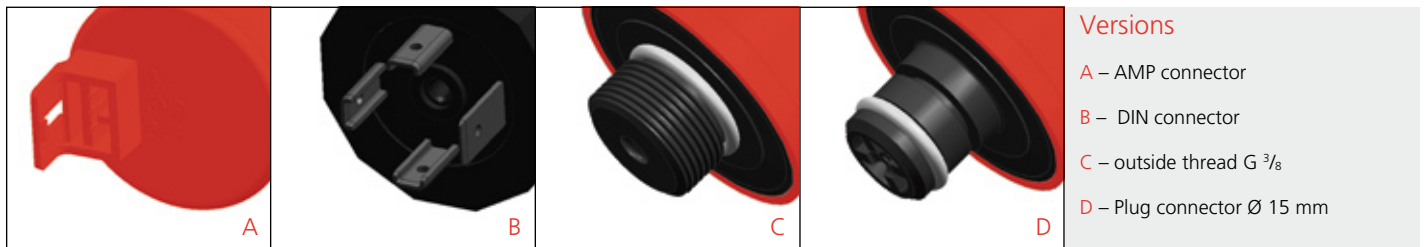
Optional with AMP connector do not use in the area of trickling water
Starting torque G3/8 min. 0.4 Nm / max. 0.8 Nm
Destruction > 30 Nm

Weight

with connector AMP	41 g
with connector DIN	55 g
with cable 1.5 meters	95 g

Packaging

Multiple packaging
Cardboard boxes with blister-pack inserts per 240 or 600 pieces



Versions

- A – AMP connector
- B – DIN connector
- C – outside thread G $\frac{3}{8}$
- D – Plug connector \varnothing 15 mm

Accuracy

Parameter		Unit	
Tolerance zero point	max.	% fs	\pm 1.5
Tolerance full scale	max.	% fs	\pm 1.5
Resolution		% fs	\pm 0.1
Somme of linearity, hysteresis and repeatability		% fs	\pm 1.0
Long term stability acc. to DIN IEC 770		% fs	\pm 0.5
TC zero point ¹⁾	max.	% fs/10K	\pm 0.6
TC sensitivity ¹⁾	max.	% fs/10K	\pm 0.15

Test conditions: 25 °C, 45% rF, Power supply 24 VDC / 4 VDC
TC0 / TCE 2 ... 85 °C

Order code selection table

503. X X X X X X X X X

			9								
Pressure relative											
Pressure ranges (bar) ²⁾	0 ... +2.5		1	4							
	0 ... +4		1	5							
	0 ... +6		1	7							
	0 ... +10		3	0							
	0 ... +16		3	1							
	0 ... +25		3	2							
Sealing materials ³⁾	FPM Fluoro-elastomer				0						
	EPDM Ethylene propylene				1						
	NBR Nitrile butadiene				2						
Calibration	Factory calibrated						0				
Outputs and power supply	0.5 ... 2.5 V	5 VDC \pm 10%	3-wire cable						0		
	0.5 ... 3.5 V	8.5 ... 30 VDC	3-wire cable						1		
Electrical connections ⁴⁾	AMP Duoplug		IP 00							0	
	Connector DIN 175301-803 A		IP 54							1	
	Cable 1.5 m		IP 54							2	
Pressure connections	Outside thread	G $\frac{3}{8}$ sealed at front	Grivory GV 5H							0	
	Outside thread	G $\frac{3}{8}$ sealed at back	Grivory GV 5H								1
	Plug connector	(to max. 6 bar measuring range)	Noryl GTX 20% GF			1		1			2

Accessories

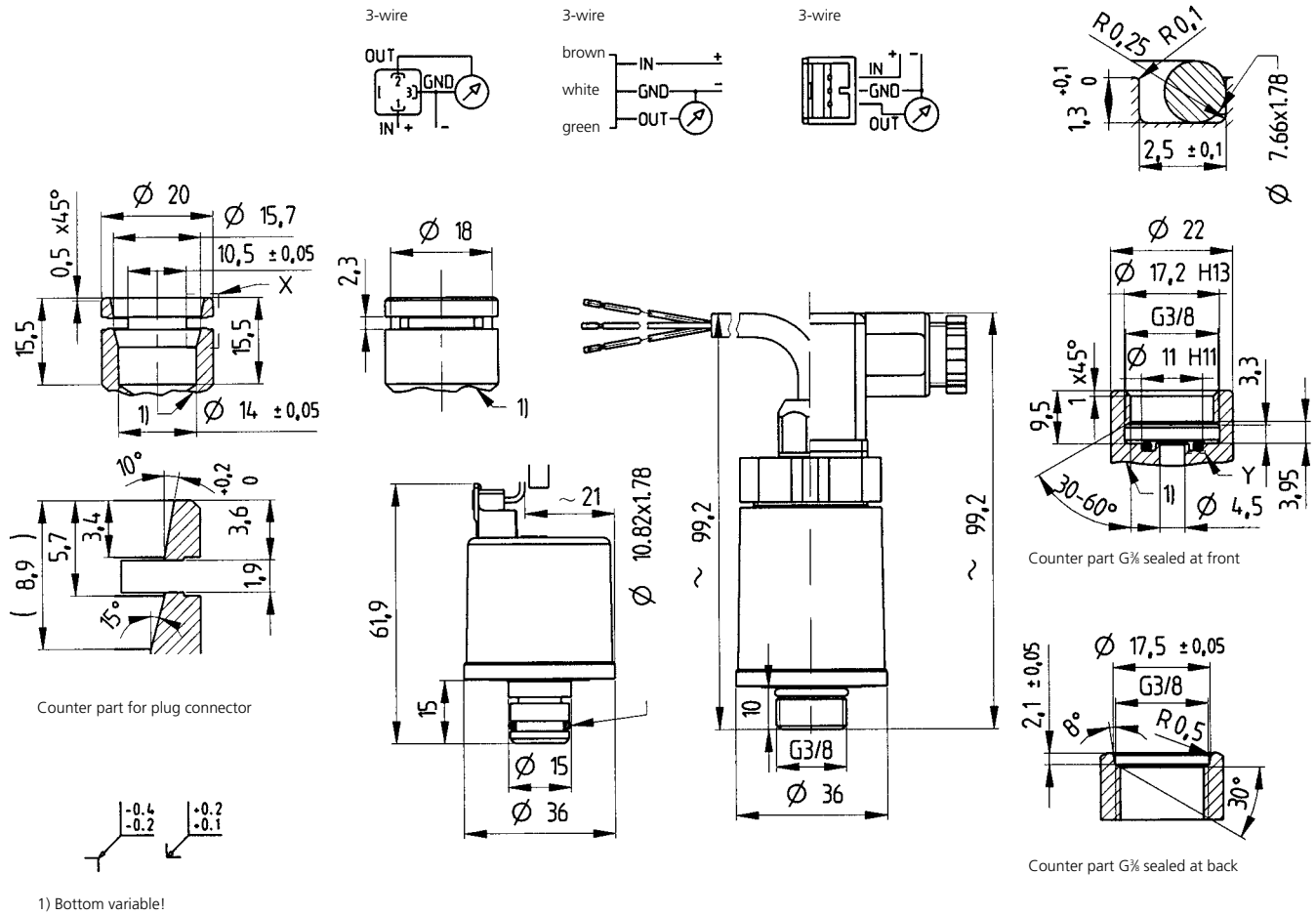
	Order-Number
Safety spring for plug connector	105883
Female connector DIN EN 175301-803-A with sealing	103510
Female connector AMP with cable 1450 mm	103167

¹⁾ TC = Temperature coefficient

³⁾ According to ISO standard R 1629, other sealing materials on request

²⁾ Other pressure ranges on request

⁴⁾ Delivery without female connector



Electromagnetic compatibility

The product is designed exclusively for installation in equipment which complies with EU directives. The customer is responsible for CE conformity.

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