

692

Differential  
pressure transmitter  
0 to 25 bar



EDITION 02/2004

HUBA-REGISTERED TRADE MARK

**Huba Control**

FOR FINE PRESSURE AND FLOW MEASUREMENT



TC sensitivity (% fs/K)  
 < +/- 0.015 at 2x nominal pressure  
 < +/- 0.022 at 3x nominal pressure  
 < +/- 0.037 at 5x nominal pressure

#### Load cycle

< 50 Hz

#### Dynamic response

Suitable for static and dynamic measurements.  
 Response time < 50 ms

#### Pressure connections

Push-on spigot or screw fittings

#### Weight

approx. 430 grams

#### Installation arrangement

Unrestricted

#### Signal Power supply

0 – 5 V 11 – 33 VDC  
 24 VAC +/- 15 %  
 3-wire cable

0 – 10 V 18 – 33 VDC  
 24 VAC +/- 15 %  
 3-wire cable

0 – 20 mA 18 – 33 VDC  
 24 VAC +/- 15 %  
 3-wire cable

4 – 20 mA 11 – 33 VDC  
 2-wire cable

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

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.

#### Load

0 – 5 V > 10 kOhm  
 0 – 10 V > 10 kOhm  
 0 – 20 mA < 300 Ohm  
 4 – 20 mA  $\leq \frac{\text{supply voltage} - 11 \text{ V}}{0.02 \text{ A}}$  [Ohm]

#### Current consumption

At maximum signal output:  
 0 – 5 V < 5 mA  
 0 – 10 V < 5 mA  
 0 – 20 mA < 25 mA  
 4 – 20 mA < 25 mA

#### Electrical connections/protection class

Cable 1.5 meters, IP 65, with cable gland (threaded)  
 Round plug connector DIN 41524, 3-pole, IP 65  
 Connector DIN 43650-A, IP 65

#### Calibration by customer

Adjustable versions (zero point/slope approx. +/- 10 %)

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#### Technical overview

The differential pressure transmitter of type series 692 with proved, unique ceramic technology, features calibrated and amplified sensor signals which are available as standardized voltage or current outputs.

Various application-specific pressure and electrical connections and housing materials suitable for different media can be provided.

#### Legend to cross-section drawing

- 1 Fixing screw (do not loosen)
- 2 Seals
- 3 Ceramic element
- 4 P2 lower pressure, higher vacuum
- 5 P1 higher pressure, lower vacuum

#### Pressure ranges see order code selection table

#### Overload see order code selection table

#### System pressure

(P1 and P2 simultaneously)  
 25 bar to pressure range 6 bar  
 50 bar on pressure range 10/16 / 25 bar

#### Rupture pressure

1.5 x system pressure

#### Accuracy (linear signals)

Total of linearity, hysteresis and repeatability  
 < +/- 0.5 % fs at 2x nominal pressure  
 < +/- 0.8 % fs at 3x nominal pressure  
 < +/- 1.3 % fs at 5x nominal pressure  
 Zero point residual voltage  
 < 50 mV at 2x nominal pressure  
 < 75 mV at 3x nominal pressure  
 < 125 mV at 5x nominal pressure  
 Zero point residual current (0 - 20 mA)  
 < 100  $\mu$ A at 2x nominal pressure  
 < 150  $\mu$ A at 3x nominal pressure  
 < 250  $\mu$ A at 5x nominal pressure

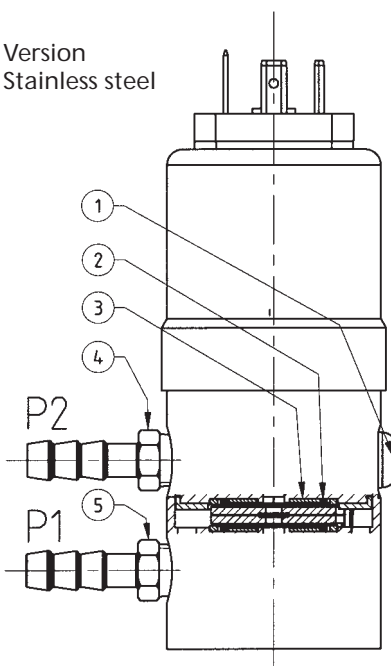
#### Materials of housing in contact with the medium

Ceramic/Stainless steel 1.4305, PVDF  
 Sealing material: optionally FPM, EPDM, NBR, MVQ according to order code selection table.

#### Temperature influences (linear signals)

Medium and ambient temperature -15 °C to +80 °C.  
 TC zero point see order code selection table

Version  
 Stainless steel

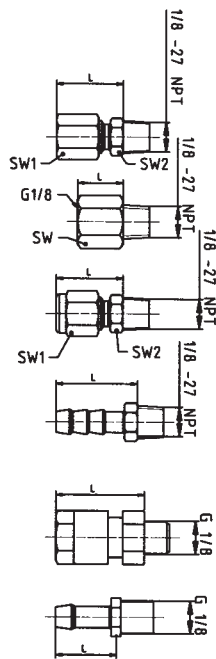
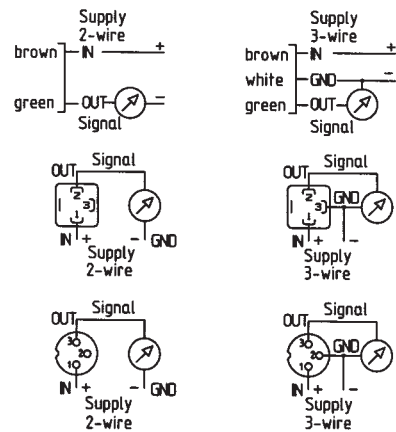
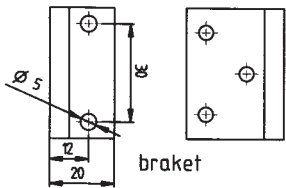
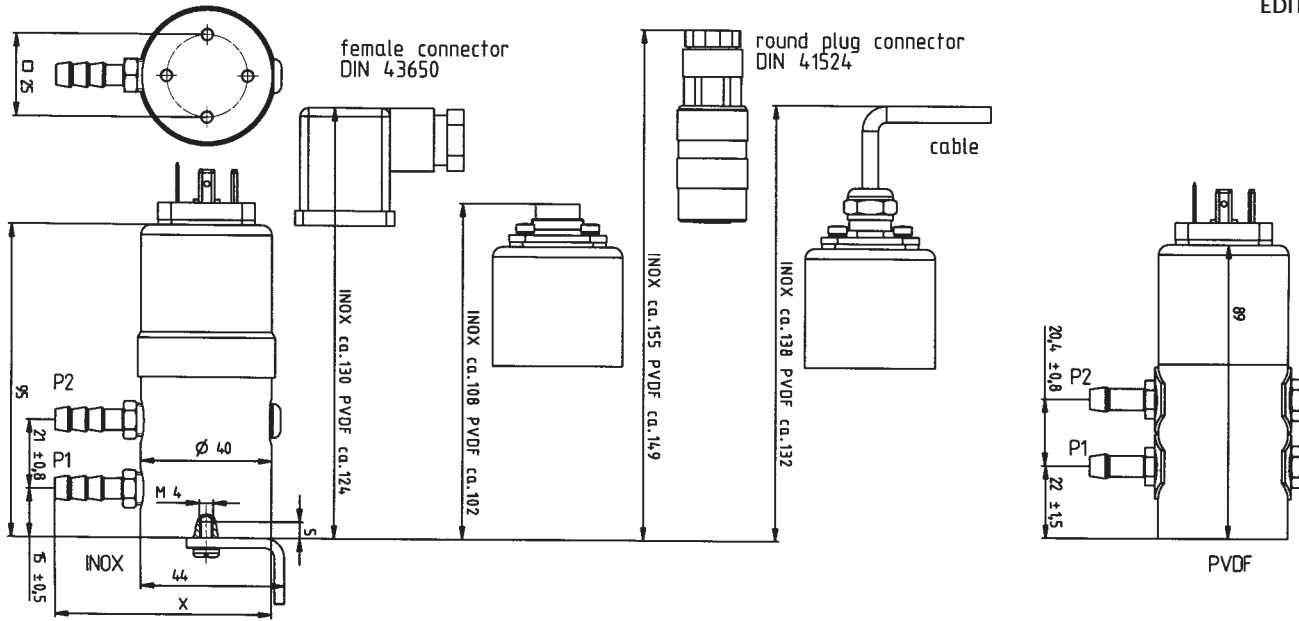


#### The distinct advantages

- Very low temperature sensitivity
- High resistance to extreme temperatures
- No mechanical aging
- No mechanical creepage
- Modular system and choice of materials to suit individual applications







measure X				
Inox	screw fitting for pipe on the outside Ø 6	SW1=10 SW2=12	L = ca. 20.5	L = ca. 61.5
	screw fitting for pipe on the outside Ø 8	SW1=12 SW2=14	L = ca. 22.5	L = ca. 63.5
Inox	adapter G1/8 inside thread	SW=14	L = ca. 14	L = ca. 55
CuZn	screw fitting for pipe on the outside Ø 6	SW1=10 SW2=12	L = ca. 20.5	L = ca. 61.5
	screw fitting for pipe on the outside Ø 8	SW1=12 SW2=14	L = ca. 22.5	L = ca. 63.5
CuZn	pressure tube for tube Ø 4	SW=10	L = 20	L = ca. 61
Inox	pressure tube for tube Ø 6	SW=10	L = 25	L = ca. 66
PVDF	pressure fitting for pipe on the outside Ø 6	SW=12	L = ca. 21.5	L = ca. 62.5
	pressure fitting for pipe on the outside Ø 8	SW=14	L = ca. 24.7	L = ca. 65.7
PVDF	pressure tube for tube Ø 6	SW=10	L = 20	L = ca. 63

**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	IEC 1000-4-2 8 kV air discharge / 4 kV contact discharge	No failure (criterion B)
High-frequency electromagnetic radiation (HF)	ENV 50140 10 V/m / 80...1000 MHz	No effect (criterion A)
Conducted HF interference	ENV 50141 10 V/m / 0.15 ... 80 MHz	No effect (criterion A)
Fast transients (burst)	IEC 801-4 2 kV	No failure (criterion B)
Magnetic fields 50 Hz 30 A/m	EN 61000-4-8	No effect (criterion A)
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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