

691

## Pressure transmitter

Relative -1 to 600 bar  
Absolute 0 to 16 bar

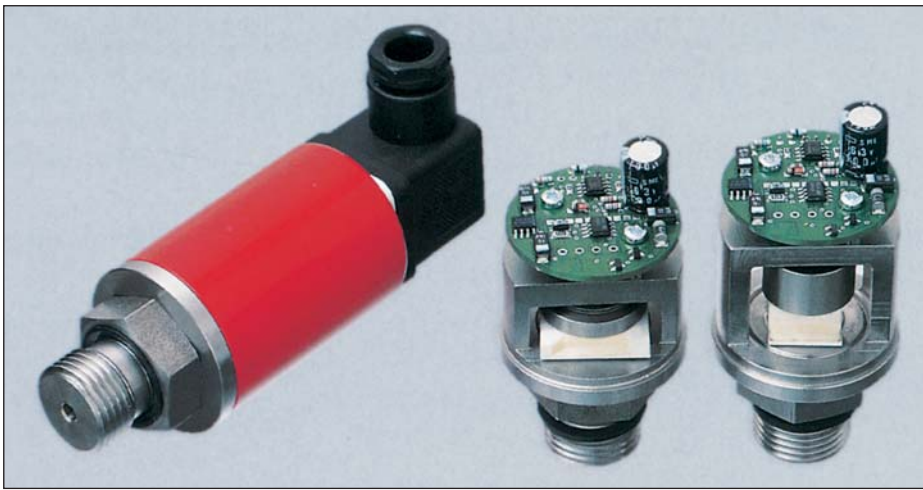


EDITION 12/2004

HUBA-REGISTERED TRADE MARK

**Huba Control**

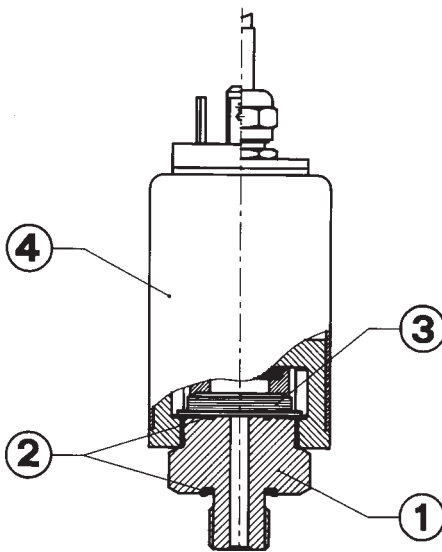
FOR FINE PRESSURE AND FLOW MEASUREMENT



### Technical overview

The pressure transmitter of type series 691 with unique and for the last 10 years used in millions of applications ceramic technology, features calibrated and amplified sensor signals which are available as standardized voltage or current outputs.

Various application-specific pressure and electrical connections can be provided.



### Legend to cross-section drawing

- 1 Connection fitting
- 2 Seals
- 3 Ceramic element
- 4 Cover

### The distinct advantages

- Very low temperature sensitivity
- High resistance to extreme temperatures
- No mechanical aging
- No mechanical creepage
- Individual applications due to modular system

### Pressure ranges

Absolute pressure, Relative pressure (Gauge) (differential measurement of pressure relative to ambient pressure) See order code selection table

### Overload

2 x Measuring range (fs)

### Rupture pressure

3 x Measuring range (fs)

### Accuracy

Total of linearity, hysteresis and repeatability < +/- 0.3% fs

Zero point residual voltage < 50 mV

Zero point residual current at version 0 – 20 mA < 150 µA

### Materials of housing in contact with the medium

Ceramic / Inox 1.4305 (Ceramic / PVDF on request)

Sealing material: optionally FPM, EPDM, NBR, silicone according to order code selection table

### Application temperature

Medium and ambient temperature – 15 ...+ 80 °C

Medium and ambient temperature – 40 °C only with CR seal and on request

### Temperature influences

TC zero point < +/- 0.03% fs/K

TC sensitivity < +/- 0.015% fs/K typ.

### Load cycle

< 50 Hz

### Dynamic response

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

### Pressure connections

Inside thread G 1/4

Outside thread, connection fitting sealed at front or at back (option) 1/4-18 NPT

### Weight

Inside thread G 1/4 200 g

Outside thread

G 1/8 / 7/16-20 UNF 212 g

G 1/4 / 1/4-18 NPT 245 g

G 1/2 / 1/2-14 NPT 280 g

### Installation arrangement

Unrestricted

### Signal

0 – 10 V

4 – 20 mA

0 – 5 Volt

### Power supply

18 – 33 VDC

24 VAC +/- 15%

3 wire cable

11 – 33 VDC

2-wire cable

11 – 33 VDC

24 VAC +/- 15%

3-wire cable

Short circuit-proof and protected against polarity reversal. Each connection against other with max. +/- supply voltage. Frequency output on request. Switching output, see type 615.

### Load

0 – 10 V

4 – 20 mA

> 10 k Ohm

$\leq \frac{\text{supply voltage} - 11 \text{ V}}{0.02 \text{ A}}$  [Ohm]

### Load

With max. signal output

0 – 10 V < 5 mA

4 – 20 mA < 20 mA

### Electrical connections / Protection standard

Cable 1.5 meters, IP 67 or IP 65

Round plug connector DIN 41524, 3-pole, IP 65

Connector DIN EN 175301-803-A, IP 65

### Electromagnetic compatibility

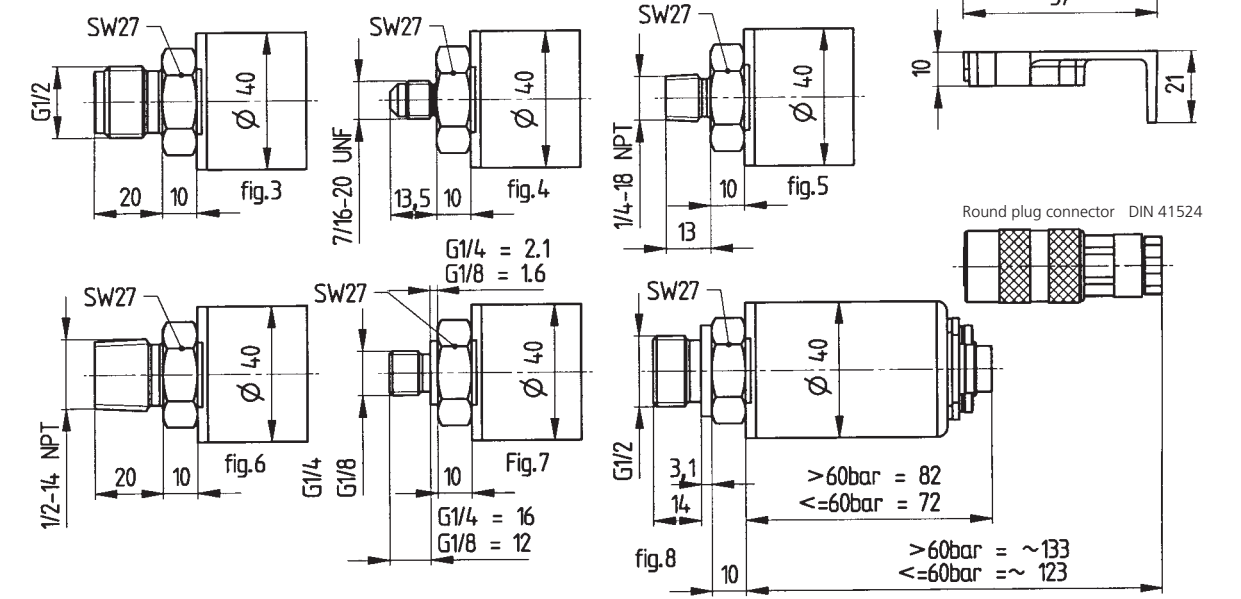
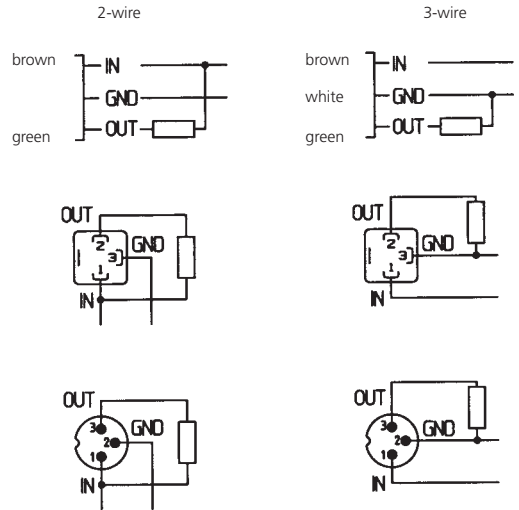
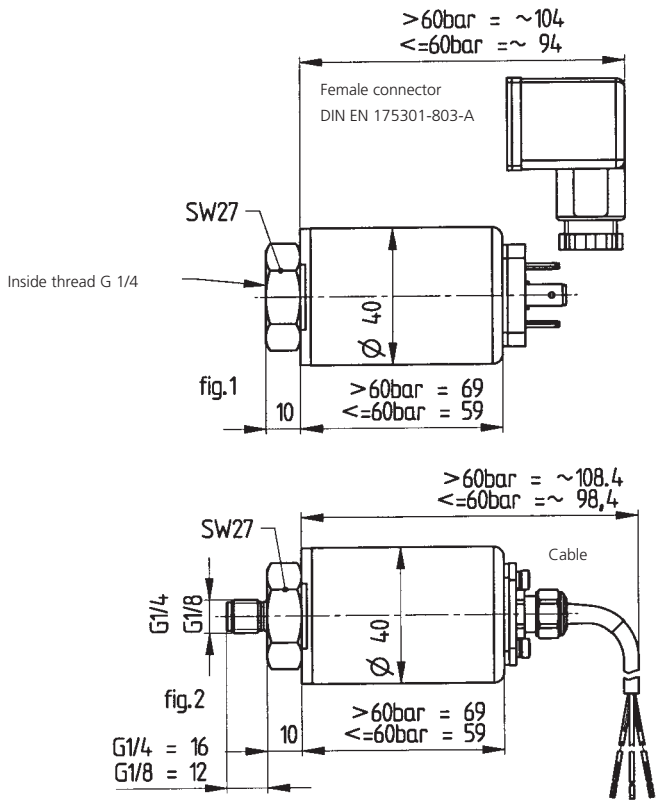
EMC-Behavior see on the back. «Germanischer Lloyd» certification on request.

### Calibration by customer

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



The delivery includes a detailed connection diagram for each connection variant.



**Electromagnetic compatibility:**

CE conformity (EMC) by application of harmonized standards: Interference stability EN 61000-6-2 and EN 61000-6-3

Interference stability	Test standard	Effect	
Electrostatic discharge (ESD)	EN 61000-4-2	8 kV air, 8 kV contact	no effect
High-frequency electromagnetic radiation (HF)	EN 61000-4-3	10 V/m, 80 ... 1000 Mz	no effect
Conducted HF interference	EN 61000-4-6	10 V, 0.15 ... 80 MHz	no effect
Fast transients (burst)	EN 61000-4-4	2 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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