


**Design Features**

- Measuring ranges 0...1 bar to 0...160 bar rel./abs.
- Measuring system piezoresistive, vacuum tight and overload protected
- Signal output 4...20 mA, 2-wire circuitry
- Wetted parts of stainless steel; completely welded
- Stainless steel housing, protection type IP 65, optional IP 67
- Process temperature up to 140 °C
- EMC test per valid EC guidelines

**Application**

The device converts pressure measurements into a load-independent current signal of 4..20 mA. Because of their robust design, these transmitters are suitable for use in tough environments. The process temperature is allowed up to 140 °C. All wetted parts of stainless steel.

The transmitters have extensive circuitry which ensures electromagnetic compatibility; they thus satisfy the noise immunity requirements according valid EC recommendations.

**Design and Function**

The process pressure acts on suitable stainless steel diaphragm to a piezoresistive semiconductor measuring bridge. A compensation network ensures, to a large extent, the independence of the output signal to the process temperature. The electronics are encapsulated for protection against moisture and vibrations. Adjust zero point and span, separately, with internal trimming potentiometers. The output is provided via 2-wire circuitry.

**Technical Data**
**Case design**

material-no.: 1.4404  
internal trimming potentiometer for zero point and span, encapsulated electronics, inner chamber aeration for measuring ranges ≤ 10 bar

**Electrical connection**

- right angle plug per DIN 43650, cable gland conduit thread 11 for cable Ø 6...10 mm in protection type IP 65 (standard)
- lumberg plug in protection type IP 65
- connection cable with conduit thread screw joint, protection type IP 65
- field housing in protection type IP 65, optional protection type IP 67

**Process connection**

material-no.: 1.4404  
G 1/2 A with internal welded stainless steel separating diaphragm

**Filling material**

silicon oil

**Measuring system**

measuring bridge piezoresistive with temperature compensation

**Process temperature range**

- -25...+70 °C, standard
- -10...+140 °C, with temperature decoupler

**Storage temperature**

-25...+80 °C

**Temperature influence**

ambient temperature -10...+70 °C  
standard

- zero point: ≤ 0.5 % /10 K
  - meas. span: ≤ 0.3 % /10 K
- optional full compensation
- zero point: ≤ 0.2 % /10 K
  - meas. span: ≤ 0.2 % /10 K

**Auxiliary energy supply**

standard design:  
· nominal voltage 24 V DC  
· function range 14...30 V DC  
· max. allowable operating voltage 30 V DC

**Supply voltage influence**

≤ 0.2 % f.s. / 10 V

**Signal output**

4...20 mA, 2-wire circuitry

**Current limitation in output signal**

max. output current approx. 30 mA

**Measuring ranges/overload limits**

see order details  
intermediate measuring ranges upon request

**Adjusting range**

± 3 % f.s.  
zero point and measuring span separate adjustable

**Linearity error incl. hysteresis**

≤ 0.3 % f.s. (fixed-point adjustment)  
per ≤ 0.15 % f.s. (BSL), (B.F.S.L)

**Response time**

≤ 20 ms

**Burden**

2-wire circuitry  
standard design  $R_a = \frac{U_a - 14 V}{20 mA}$  (KOhm)  
 $U_B =$  operating voltage  
 $R_a =$  max. permiss. burden resistance (incl. line)

**Burden influence**

for 500 Ohm burden change: ≤ 0.1 % f.s.

**Weights**

- standard housing: approx. 200 g
- field housing: + approx. 260 g
- increased product temperature: + approx. 50 g

**EMC-Test**

- noise immunity as per EN 50082, section 2, March 95 issue for industry
- emitted interference as per EN 50081, section 1, 1993 issue for residential and industrial areas case without own reradiation

**Information on other models upon request or see order details**

