

Intelligent Pressure Transmitter 'Digitrans'

with internal or front flush diaphragm
for gauge pressure and absolute pressure

accuracy 0.15%

standard output: 4...20 mA; 2-wire system



Description

The intelligent pressure transmitter 'Digitrans' allows by its freely programmable range an optimised adaption to the measuring task.

The good readable and high contrast display offers room for extra information besides the digital value, bargraph and tendency display. The standard display is mounted for frontview, but it can be easily adjusted for top view.

The menus are self-explanatory and allow to choose the configuration parameter as user language, engineering unit, zero and span, inverted output signal etc. The language can be switched between German, English, Spanish and Italian. The hidden buttons prevent an adjustment by mistake.

The intelligent pressure transmitter 'Digitrans' offers the possibility for a non linear scale (tank linearisation). Up to 32 points of the curve can be programmed.

All wetted parts are made of stainless steel and totally welded (no internal sealings).

The housing made of resistant plastic material, reinforced by fiberglass has protection class IP 65.

Features

- o Measuring ranges from 400 mbar to 4000 bar
- o Maximum Turn down: 1:20
- o Good readable and high contrast display
- o Corrosion resistant stainless steel design
- o Completely welded pressure cell
- o Display adjustable for front or top view
- o Simple programming on site
- o Protection type IP 65 (option IP 67)

Measuring Ranges

Gauge pressure 0...0.4 bar to 0...4000 bar

Absolute pressure 0...0.4 bar to 0...16 bar

Applications

Process engineering,
Plant and apparatus design,
Hydraulic and pneumatic,
Development and laboratory applications.

Models: P3950

Technical data

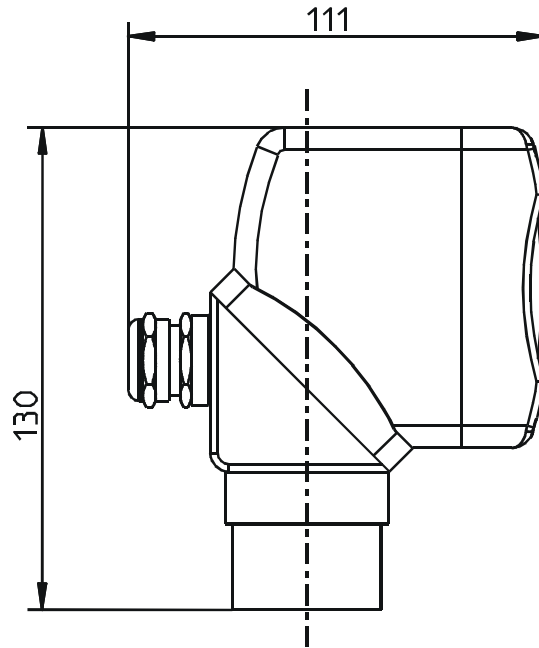
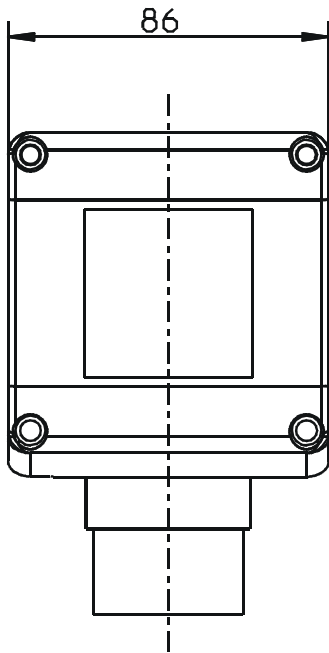
Model	P3950												Option
Measuring ranges [bar] ¹⁾	0,4	1,6	6	16	40	100	250	600	1000	1600	2500	4000	
Overload limit [bar]	2	10	35	80	80	200	500	1200	1500	2000	3000	4400	
Pressure type	positive gauge pressure												Abs. press. (up to 16 bar), negative and positive gauge pressure
Output signal	4...20 mA - 2-wire system												
Sensor element	piezoresistive						thin film						
Accuracy ²⁾	0.1 % of F.S. (≤ 0.3% for measuring range > 1000 bar)												
- Turn down ≤ 1:5	no change in accuracy												
- Turn down > 1:5	accuracy · (Turn down / 5)												
Hysteresis	≤ ± 0.04 % of F.S.												
Repeatability	≤ ± 0.05 % of F.S.												
Stability per year	≤ ± 0.1 % of F.S. in rated conditions												
Case	resistant plastic material reinforced by fiberglass (PBT)												
Pressure connection													
- 3950	G ½ B according to DIN 837 (M16 x 1,5 female from 1600 bar)												½ NPT
- 3952	G 1 B, from 0...6 bar to 0...600 bar G ½ B front flush diaphragm with O-ring front flush diaphragm with O-ring												G 1 ½ acc. to ISO 228 (0...0.4 to 0...16 bar)
Wetted parts													
- 3950	stainless steel 1.4571 and 2.4711 (1.4534 for measuring range >1000 bar)												Hastelloy C4 Viton [®] 5), EPDM
- 3952	stainless steel 1.4571 O-Ring: NBR												
Electrical connection	cable gland M20x1.5 with internal screw terminals (for cable diameter from 7 to 13 mm, wire gauge to 2.5 mm ²)												
Power supply	12...36 VDC												
Load	$R_A[\Omega] \leq (U_B[V] - 12 V) / 0.023 A$												
Temp. compens. range	-20...80°C												
Temperature influence	≤ 0.1 % /10 K (for zero point and measuring range)												
Total accuracy (10...40°C)	≤ 0.15% (≤ 0.6% for measuring range > 1000 bar)												
Adjustability													
- Zero point	-2.5...99%												
- Measuring range	Turn down 1:20 (1:2 for measuring range > 1000bar)												
Response time	≤ 10 ms (within 10 % to 90 % of F.S.)												
Protection type	IP 65 according to EN 60529/IEC 529												IP 67 on request
Emission ³⁾	according to EN 61326												
Interference ³⁾	according to EN 61326												
Electric protection type	reverse polarity overload and short circuit protection												
Shock	100g according to IEC 770 (mechanical shock)												
Vibration	5g according to IEC 770 (vibration at resonance)												
Temperature ranges													
- storage	-40 ... 85 °C				(-35 ... 80°C with display)								
- medium	-30 ... 105 °C				4)								
- ambient	-20 ... 85 °C				(-20 ... 70°C with display)								
Weight	approx. 0.2 kg												

of F.S. = of full scale value

- 1) Other measuring ranges can be adjusted by turn down.
- 2) Terminal point adjustment according to DIN 16086, incl. Linearity, repeatability and hysteresis. Calibrated for vertical mounting, pressure connection downwards.
- 3) Declaration of conformity on request
- 4) For pressure connection G 1 ½ up to 30 min. 140°C at ambient temperatures < 50°C.
- 5) Viton[®] fluoroelastomer, a product of DuPont Dow Elastomers

Dimensions

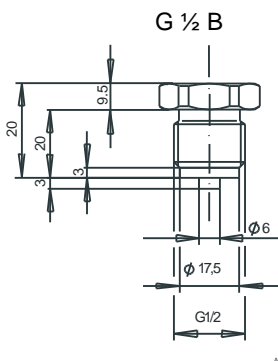
Case



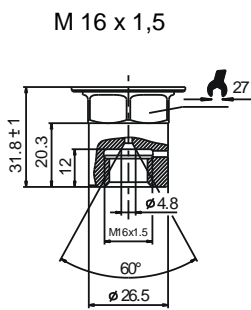
Pressure connections

internal diaphragm

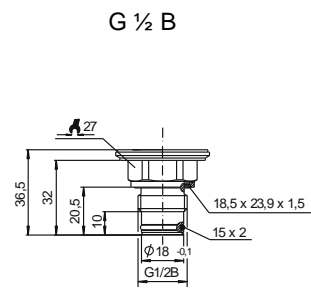
front flush diaphragm with O-ring



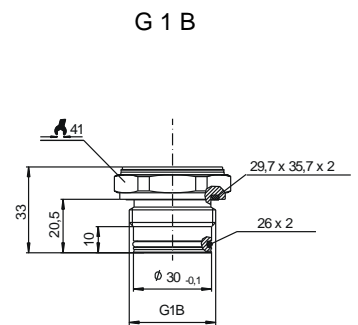
A-021



A-026

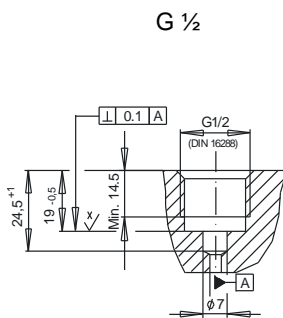


A-015

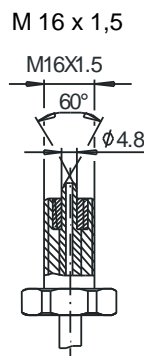


A-011

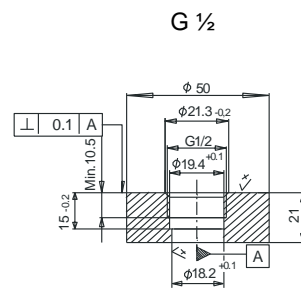
Screw-in aperture or weld-on socket



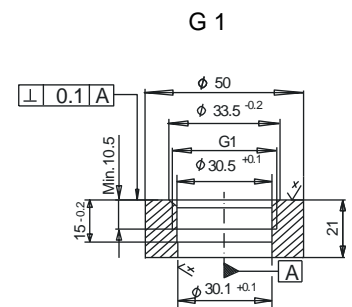
S-001



S-008



S-003

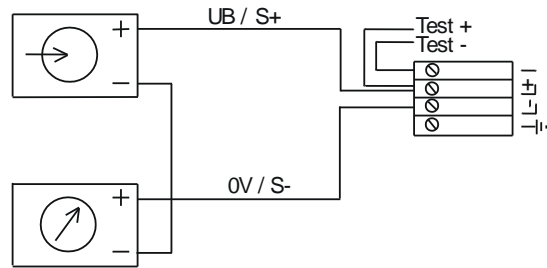


S-004

Electrical connection

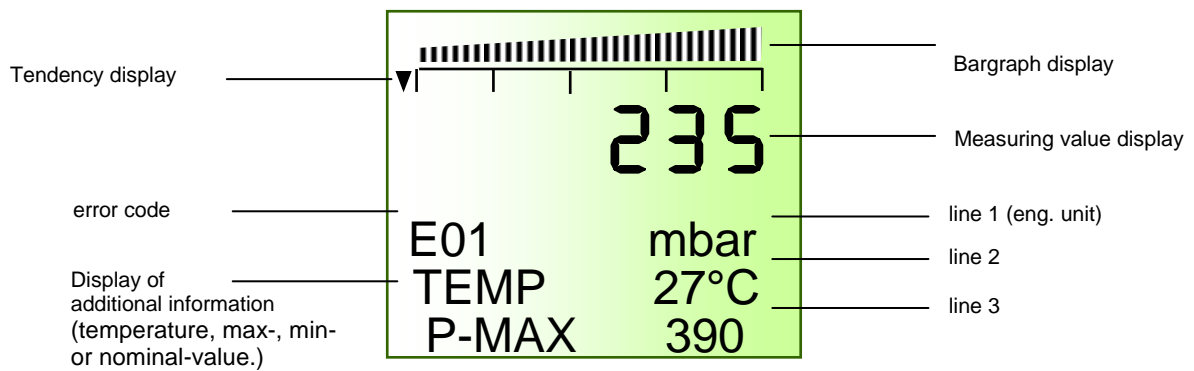
Two-wire system

Terminal assignment



E-046

Readout sample



Order details

1. Model
2. Measuring range
3. with / without display
4. Options

Modifications reserved