IKA 68

High-precision pressure transmitter IKA 68 is conceived for recording- and monitoring of absolute- and overpressures of liquid, as well as gaseous media for measuring spans 4 bar up to 100 bar. By integration of a separate temperature sensor as well as the conjunction of the pressure- and temperature signals in the internal microprocessor a higher stability and accuracy over the full rated temperature is being reached.
The robust full metal version and the resulting EMC-stability (double test level) predestines the IKA 68 for industrial apllications. The use of stainless steel grants a high IP-degree of protection and high chemical resistance.
With its two switching outputs, which are absolutely freely programmable regarding switching function, switch point and switch hyteresis, as well as the integrated RS-485-port, the IKA 68 constitutes a synergy of pressure transmitter and pressure switch in only one instrument. Simple, pressure controlled switching operations can be realised without additional SPC or logic modules and can be administrated by the user at any time with the software via RS-485.

APPLICATIONS

Laboratories
Service industries and calibration services
Research and development
Wind tunnels
Hydrology
Meteorology

HIGHLIGHTS

Total uncertainty of 0.08% of reading
Spans 4 bar up to 100 bar
High precision sensor with digital output
Long term stability <0.05% FS
RS485 communication interface
Compatible with gases and liquids
Fast response time (200 readings / s)

Technical data

Process connection	G 1/2 B (½" BSP), 1.4571 (316 Ti stainless steel), welded hermetically dense to internal measuring cell (leakage rate <10-9 mbar l/s)	
Measuring cell / sensor	Piezoresistive measuring cell: Internal diaphragm:	1.4435 (316 L stainless steel) 1.4435 (316 L stainless steel)
Case	1.4571 (316 Ti stainless steel), welded to process connection	
Pressure ranges	Spans 4 bar up to 100 bar, e. g.	–1 – 3 bar 0 – 6 bar absolute 0 – 100 bar
Electrical data	Output signal:	analogue: 2-wire 4 .. 20 mA digital: RS 485
	Electrical connection:	Miniature- angular plug connector M16x0.75; 4-pin massively metallic screened
	Load impedence:	RL< (UB-8V)/ 0.023A; max. 680 Ohm at 24VDC
	Power supply:	+12 to +24VDC (±25%);reverse voltage protected
Accuracy of the measurement	≤ 0.08% in rated temperature range (including non-linearity, hysteresis and non-repeatability)	
Temperature ranges	Transport- and storage temperature: Rated temperature:	-40 °C to +85 °C (-40 °F to +185 °F) -20 °C to +60 °C (-4 °F to +140 °F)
Reference temperature	+20°C (+68 °F)	
Long term stability	≤ 0.05%FS/ a (for reference conditions)	

CE

Position of installation/ connection	Any	
Protection type	IP 67	
CE- Conformity	IEC 61 326-1: 2006 EN 61 326-2-3: 2006	
EMC- Stability	RL2004/108/EG/2004/108/EC	IEC 61000-4-5: ±1kV
	IEC 61000-4-2: 8kV	IEC 61000-4-6: 10V
	IEC 61000-4-3: 10V/m	NE 21: 2007
	IEC 61000-4-4: ±4kV	GL VI part 7, chapter 2: 2003

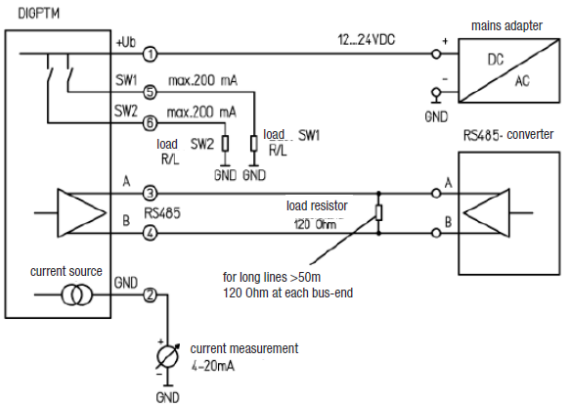
Optional

- Other process connections upon request
- Other measuring spans < 4 bar upon request
- High-precision version with accuracy ≤ 0.05% upon request
- Other rated temperature ranges upon request
- Free cable head (IP68) with 1.5 m cable
- Installation to pressure connection of the pressure gauge
- Switching output preset ex works:
  - 2 separate PNP-switches with NC-function;
    bottom contact or normally open contact or window or inverted window (see reverse side)
  - for ohmic, capacitive and inductive load each 0.2A;
  - short-circuit proof;
  - fall of voltage (at Imax= 0.2A) ≤ 2V,
  - 6-pin angular plug
- Please state in your order:
  - switching function
  - switch points and
  - switch hysteresis

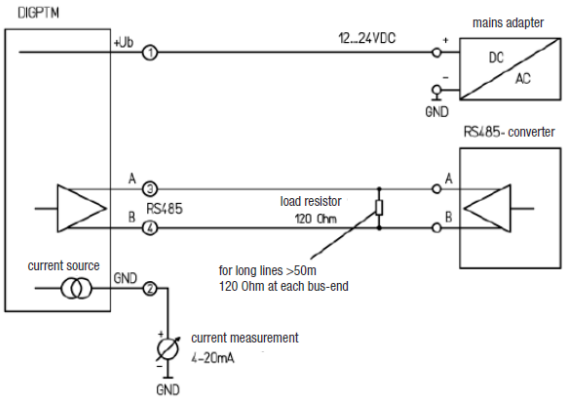
Accessories

- USB / RS-485 junction box for USB- PC-communication with the transmitter and PC-software for administration of the transmitter:
  - Adjustment of switching operations, set points and switching hysteresis
  - Adjustment of software low-pass, if applicable offset
  - RS-485-bus address
  - Output signal-transformation (current)
  - Indication of the digital value of the measurement
- ENAC Calibration Certificate 17025

External connection IKA 68 standard



External connection IKA 68 with switching output



Dimensional data in mm

A	46	B	20	C	Ø 6
C1	3	C2	20	G	G ½
L	134	L1	121.6	L2	95
SW	27	Weight	0.3