

Pressure transmitters for general industries series EDN.331

General head mounting
for outdoor installation
with Declaration of Conformity, CE

General features

- Piezosistive Silicon Pressure Transmitters for industrial applications
- Pressure range from -1...1 bar to 0...1000 bar
- Wiring with DIN43650A L-connector or various connectors
- Ingress protection IP65
- Housing parts of stainless steel

Application area

- Hydraulic and pneumatic control systems
- Pump and compressors
- Cooling equipment and air conditioning system
- Liquid pressure system
- Outdoor installation in the field

General specification

Pressure ranges

-1...0 bar to 0...1000 bar

Accuracy

± 0.5% FS

included Linearity+Hysteresis+Repeatability

Overpressure

1.3 X pressure range

Output type

4...20mA, 2-wire system

0...10V, 3-wire system

1...5V, 3-wire system

0.5...4.5V ratiometric / supply power 5V ±0.25V

Power supply

Ref. power: DC 20V

Available power: DC 12...28V

Response time

≤ 5ms

Isolation

> 100MΩ at 100 VDC

Materials

Wetted parts: St. steel 316L

Sensor sealing: NBR O-ring

Body: St. steel 304



Pressure transmitter series EDN.331

Temperature range

Operating: -20...80°C

Temperature compensating range:

0...60°C, -10...70°C / option

Ambient: -20...85°C

Storage: -20...100°C

Thermal error

Zero thermal error: ±0.75%FS @ 25°C, typical

Span thermal error: ±0.75%FS @ 25°C, typical

Electrical connection

General head type

Pressure connection

G 1/4", DIN 3852-E with sealing by DIN 3869 ring seals

G 3/8"

G 1/2"

R 1/4"

R 1/2"

Protection

IP65 with general head mounting

Weight

Approx. 140g

Option available

High temperature adapter

up to 200°C / up to 300°C

Technical specifications

Input pressure range

Norminal pressure:
-1...0 bar up to 0...1000 bar

Permissible static pressure:
1.3 x pressure range, max.1100 bar

Output signal / Supply

Current:
2-wire 4...20mA $V_s=12...28$ VDC

Voltage:
3-wire 0...10V, 1-5V $V_s=12...28$ VDC
3-wire 0.5...4.5V ratiometric $V_s=5V \pm 0.25V$

Performance

¹Accuracy: $\leq \pm 0.5\% \text{FSO @ } 25^\circ\text{C}$
¹ accuracy according to IEC 60770 - limit point adjustment including non-linearity, hysteresis as well as repeatability

Permissible load / R_L
Current: 2-wire, $R_L \text{ max}=[(V_s-V_s \text{ min})/0.02A]\Omega$
Voltage: 3-wire, $R_L \text{ min}=10k\Omega$

Influence effects:
Supply: 0.05%FSO/10V
Longterm stability: $\leq \pm 0.5\% \text{FS / year}$
Response time: <5ms

Thermal effects (Offset and Span) / Permissible temperatures

FS thermal error: $\pm 0.75\% \text{FS @ } 25^\circ\text{C}$, typical
Zero thermal error: $\pm 0.75\% \text{FS @ } 25^\circ\text{C}$, typical
Operating temperature: -20...80 °C
Compensated teperature: 0...60 °C

Electrical protection

Electromagnetic compatibility:
Emission and immunity according to
EN 61326-2-3:20B CCISPR II Group 1, Class A
EN IEC 61000-3-2:2019

Insulation: the transmitter is grounded via
the process connection

Mechanical stability

Vibration: No change at 10 g RMS (20...2000) Hz
Shock: 0.1 g (1m/s) Max.

Materials

Pressure port: Stainless steel 316L
Housing / body: Stainless steel 304
Sensor diaphragm: Stainless steel 316L
Wetted parts: Stainless steel 316L

Miscellaneous

Current consumption
Signal output current max. 25mA

Current
4...20mA, 2-wire system
Signal output voltage max. 7mA

Voltage:
0...10V, 3-wire system

Ingress protection: IP65

EMC Test report for CE conformance

- EN 61326-2-3:2013 / Class A
- EN 61326-2-3: 2013 / IEC 61326-1:2012

Ordering information

Model code

EDN.331 ·

Output signal

O1	4...20mA / 2-wire system
O2	0...10V / 3-wire system
O3	1...5V / 3-wire system
O4	0.5...4.5V, ratiometric / 3-wire system

Electrical connection

H	General head mounting
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Process connection

G2	G 1/2" (PF 1/2")
G3	G 3/8" (PF 3/8")
G4	G 1/4" (PF 1/4")
R2	R 1/2" (BSPT 1/2")
R4	R 1/4" (BSPT 1/4")

Pressure range code, unit bar

Code	Range
R19	-1...0
R23	0...1
R26	0...1.6
R28	0...2.5
R30	0...4
R32	0...6
R33	0...10
R35	0...16
R37	0...25
R39	0...40
R41	0...60
R43	0...100
R45	0...160
R47	0...250
R50	0...400
R53	0...600
R55	0...1000
RYY	Others on request

Option code

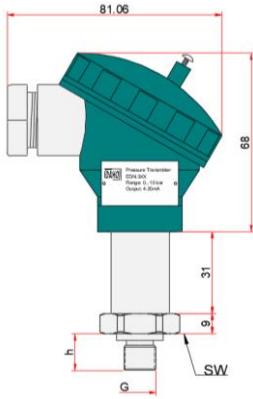
Code	Description
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
AD	Adapter
CD2	Cooling device up to 200 °C
CD3	Cooling device up to 300 °C
TP	St. steel tag plate, 60 x 20 x 0.5t
MC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

EDN.331.O1DG4R35

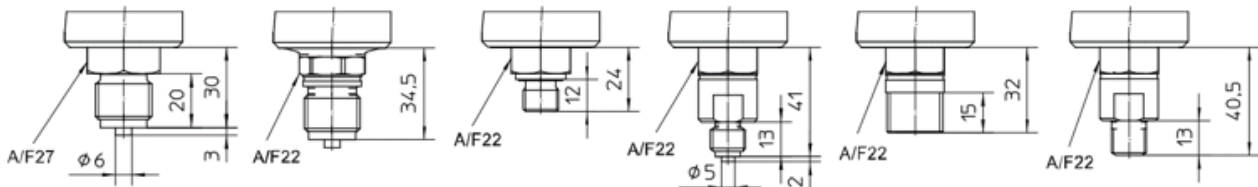
EDN.331, 4...20mA, DIN 43650 A, G 1/4", 0...16 bar

Outline drawing



General Head Mounting Type

Process connection



G1/2" B
DIN EN 837-1

G1/2" B
DIN EN 837-1
≥ 100 bar

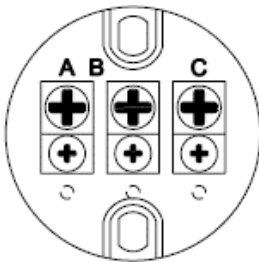
G1/2" B
DIN EN ISO 1179-2

G1/4" B
DIN EN 837-1

BSPT 1/2"

BSPT 1/4"

Pin assignment



Connection diagram

Pin No.	Current output	Voltage output
A	+Vcc	+Vcc
B	Output	GND
C		Output