

Pressure transmitters with flush diaphragm series EDN.320



all st. steel housing of wetted parts
with Declaration of Conformity, CE

General features

- Piezosistive Silicon Pressure Transmitters for industrial applications
- Pressure range from -1...0 bar to 0...250 bar
- Special cooling device for high temperature applications
- Wiring with DIN43650A L-connector or various connectors
- Housing parts of stainless steel

Application area

- General industrial applications
- Viscous liquid applications
- Food and beverage industry
- Dosing devices and tanks
- Water and liquid level measurement

General specification

Pressure ranges

-1...0 bar to 0...250 bar
Other pressure ranges on request

Accuracy

better than 0.5% FS
including non-linearity, hysteresis, zero point and
full scale error according to IEC 61298-2

Non-linearity / BFSL

less than $\pm 0.25\%$ FS

Overpressure

1.3 X pressure range

Output type

4...20mA, 2-wire system
0...10V, 3-wire system
0...5V, 3-wire system
1...5V, 3-wire system

Power supply

Ref. power: DC 24V
Available power: DC 12...30V

Response time

≤ 5 ms

Isolation

$> 100\text{M}\Omega$ at 100 VDC

Materials

Wetted parts: St. steel 316L
Body: St. steel 304



Pressure transmitter, series EDN.320

Temperature range

Operating: -20...80°C
-40...125°C / option

Temperature compensating range: 0...70°C

Operating temperature: -20...80°C

Ambient: -20...80°C

Storage: -20...100°C

Thermal error

Zero thermal error: $\pm 0.75\%$ FS @ 25°C, typical
Span thermal error: $\pm 0.75\%$ FS @ 25°C, typical

Electrical connection

DIN43650 A
M12 Plug
Cable type

Pressure connection

G 1/2", DIN 3852-E with sealing by DIN 3869 ring seals

Protection

IP65 with plug DIN 43650A

Weight

Approx. 140g

Option

High temperature cooling device up to 200 °C



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Technical specifications

Input pressure range

Normal pressure:

-1...0 bar up to 0...250 bar
others on request

Permissible static pressure:

1.3 x pressure range, max.1100 bar

Output signal / Supply

Current: Vs=12...30 VDC
2-wire 4...20mA

Voltage: Vs=12...30 VDC
3-wire 0...10V
3-wire 0...5V
3-wire 1...5V

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: $\leq \pm 0.5\% \text{FS} / \text{year}$
Response time: $< 5\text{ms}$

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
-40...125°C / option
Compensated temperature: 0...70°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
0...5V, 3-wire system
1...5V, 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.320

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Output signal

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

Electrical connection

D	DIN 43650 A
M	M12 plug
C	2m cable

Process connection

G2	G 1/2" (PF 1/2"), flush diaphragm
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High temperature compensation

T6	-20...+80 °C
T4	-40...+125 °C

High temperature cooling device, 200 °C

CDX	without
CDO	with

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
RY Y	Others on request

Option code

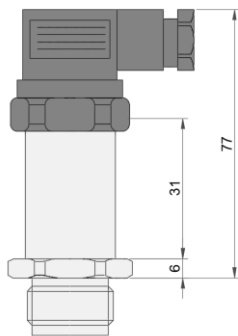
Code	Description
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

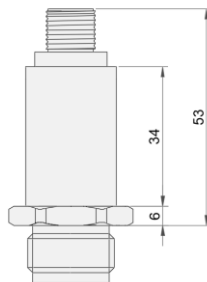
EDN.320.O1.D.G2.HTC.CDO.BR35

EDN.320, 4...20mA, DIN 43650 A, G 1/4", high temperature compensation, cooling device.0...16 bar. Manufacturer certi.

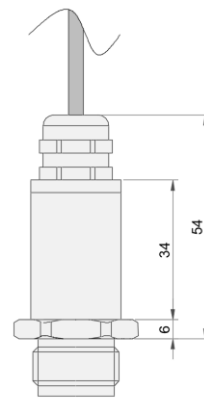
Outline drawing



DIN 43650 A Type

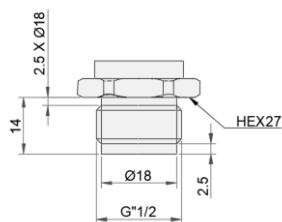


M12 Plug Type



Cable gland Type

Process connection

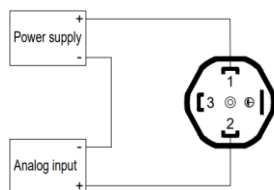


G 1/2" A

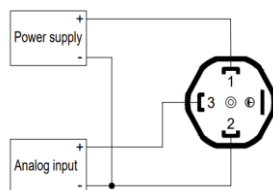
DIN EN ISO 1179-2

Pin assignment

DIN 43650A connector according to DIN EN 175301-803A



2-wire / current



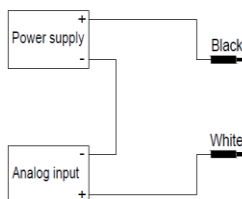
3-wire / voltage

Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)

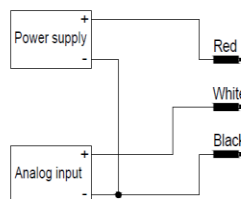


Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		

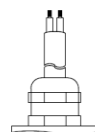
Flying leads with 2m cable



2-wire / current



3-wire / voltage



	2-Wire	3-Wire
White	Output(mA)	Output(VDC)
Red		+Vcc
Black	+Vcc	GND

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