

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 20V
Available power: DC 12...30V

Response time

≤ 5 ms

Isolation

$> 100M\Omega$ 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...200°C with cooling device
as an option

Temperature compensating range:

-20...80°C,
-40...125°C / option

Ambient: -20...100°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, $R_L \text{ max} = [(V_s - V_s \text{ min}) / 0.02 \text{A}] \Omega$
Voltage: 3-wire, $R_L \text{ min} = 10 \text{k}\Omega$

Influence effects:

Supply: 0.05%FSO/10V
Longterm stability: $\leq \pm 0.5\% \text{FS} / \text{year}$
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
-40...125°C / option
Compensated temperature: 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
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 · [] · [] · [] · B [] · [] [] []

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
RYY	Others on request

Option code

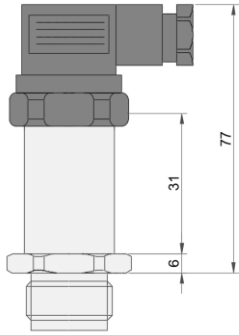
Code	Description
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

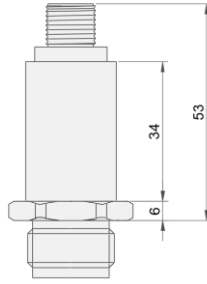
EDN.320.O1.D.G2.HTC.CDO.BR35

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

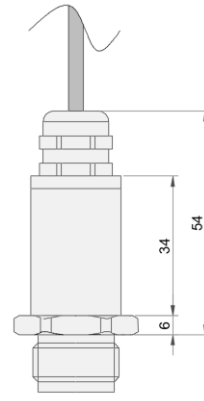
Outline drawing



DIN 43650 A Type

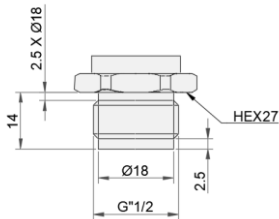


M12 Plug Type



Cable gland Type

Process connection

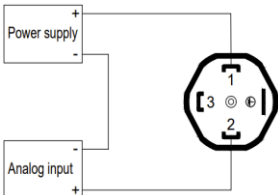


G 1/2" A
DIN EN ISO 1179-2

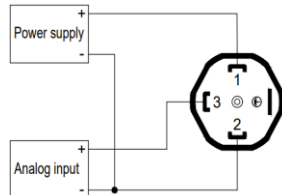
Pin assignment

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

M12 x 1, 5-pin / male



2-wire / current



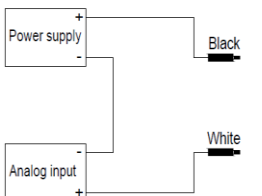
3-wire / voltage

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

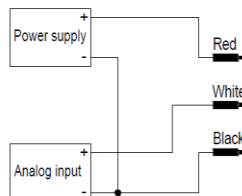


Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		

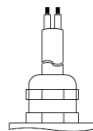
Flying leads with 2m cable



2-wire / current



3-wire / voltage



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