

Pressure transmitter for low pressure measurement series EDN.324



St. steel housing & wetted part
with Declaration of Conformity, CE

General features

- Low pressure transmitters based on piezoresistive silicon sensors.
- Pressure range, less 1 bar
- Wiring with M12 connector or various connectors
- Housing parts of stainless steel

Application area

- for low pressure measurement
- for air & various gases pressure measurement
- for HVAC application

General specification

Pressure ranges

From 0...25 mbar to 0...1000 mbar

Accuracy & BFSL, non linearity

Higher than 100 mbar, between $20^{\circ}\text{C} \leq T_M \leq 30^{\circ}\text{C}$

accuracy $\leq \pm 0.5\%$ F.S

non-linearity [BFSL] $\leq \pm 0.2\%$

hysteresis and repeatability $\leq \pm 0.1\%$

Lower than 100 mbar, between $20^{\circ}\text{C} \leq T_M \leq 30^{\circ}\text{C}$

accuracy $\leq \pm 1.0\%$ F.S

non-linearity [BFSL] $\leq \pm 0.2\%$

hysteresis and repeatability $\leq \pm 0.1\%$

Overpressure

upto 3.5 bar, static pressure range

Output type

Current (2-wire) : 4...20mA

Voltage (3-wire) : 0...10V
0...5V
1...5V
0.5...4.5V

Power supply

Ref. power : DC 24V

Available power : DC 12...30V

Temperature range

Compensated temperature range: 0...70°C

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

Ambient: -20...100°C

Storage: -40...125°C



Pressure transmitter series EDN.324

Isolation

> 100MΩ at 100 VDC

Response time

$\leq 5\text{ms}$

Materials

Wetted parts : st.steel 316L

Body : st.steel 304

Electrical connection

DIN 43650 A, M12 Plug, Cable type

Pressure connection

G 1/2", G 3/8", G1/4"

R 1/2", R1/4"

Others on request

Protection

IP65 : DIN 43650 A
mPm plug
M12 plug
2m flying cable

Weight

Approx. 166g

Option

High temperature adapter
up to 200°C / up to 300°C



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Technical specifications

Input pressure range

Normal pressure:
0...25 mbar to 0...1000 mbar

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

Output signal / Supply

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

Voltage:
3-wire 0...10V, 0...5V, 1...5V Vs=12...30 VDC
0.5...4.5V

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
Compensated temperature: 0...70°C

Electrical protection

Electromagnetic comp DC 24V
Emission and immunity DC 12...30V
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 0...70°C

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
0.5...4.5V, 3-wire system

Ingress protection: IP65 / DIN 43650 A plug

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.324 ·

· · · B ·

Accuracy

A4	≤ 0.5 % F.S
A7	≤ 0.25 % F.S
A9	≤ 0.1 % F.S

Output signal

O1	4...20mA / 2-wire system
O2	0...10V / 3-wire system
O3	1...5V / 3-wire system
O4	0...5V / 3-wire system
O6	1.5...4.5V / 3-wire system

Electrical connection

D	DIN 43650 A
P	mPm plug
M	M12 plug
C	2m cable

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 mbar

Code	Range
R126	0...25
R128	0...40
R130	0...60
R131	0...100
R133	0...160
R135	0...250
R137	0...400
R21	0...600
R23	0...1000
RYY	others on request

Option code

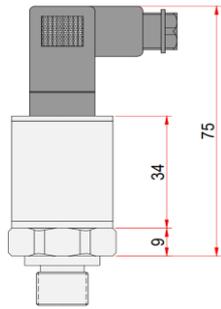
Code	Description
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
AD	Adapter
CD2	Cooling device up to 200 °C
CD3	Cooling device up to 300 °C
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate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

How to order

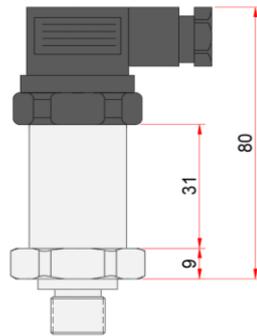
EDN.324.O1DG4BR137

EDN.324, 4...20mA, DIN 43650 A, G 1/4", 0...400 mbar

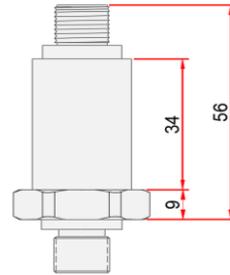
Outline drawing



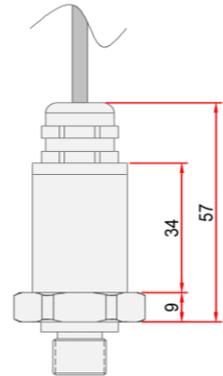
mPm plug type



DIN 43650A type

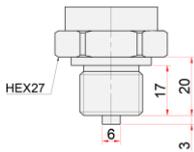


M12 plug type

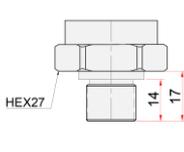


Cable gland type

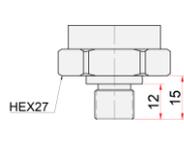
Process connection



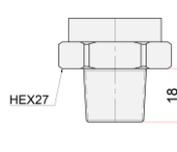
G1/2" B
EN 837-1



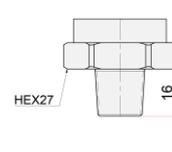
G3/8" A
DIN EN ISO 1179-2



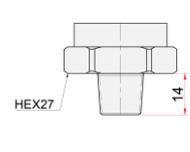
G1/4" A
DIN EN ISO 1179-2



R1/2"
ISO 7



R3/8"
ISO 7

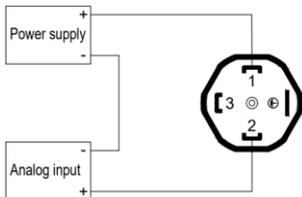


R1/4"
ISO 7

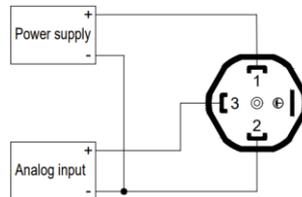
Pin assignment

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

M12 x 1, 5-pin / male

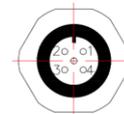


2-wire / current



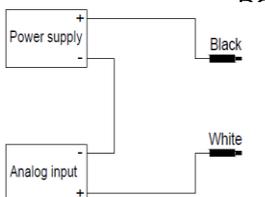
3-wire / voltage

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

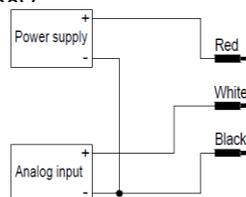


Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		

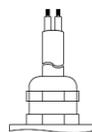
Flying leads with 2 DC 24V



2-wire / current



3-wire / voltage



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