

Pressure transmitter with precision series EDN.301



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

General features

- 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

- Institute and high precision application
- Hydraulic and pneumatic control systems
- Cooling equipment and air conditioning system
- Pressure calibration, pressure checking
- Liquid pressure system and switch

General specification

Pressure ranges

From -1...0 bar, 0...2 bar to 0...1000 bar
Min. span range: ≥ 1.0 bar

Accuracy

Higher than 2 bar: $\leq \pm 0.1\%$ F.S
Less 2bar should be used for EDL.324
Included Linearity+Hysteresis+Repeatability

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
Sensor sealing : FKM
Body : st. steel 304



Pressure transmitter series EDN.301

Temperature range

Compensated temperature range: 0...70°C
Operating: -20...80°C
-40...+125 °C / option
Ambient: -20...85°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 & protection

DIN43650 A	IP65
M12 Plug	IP65
mPm plug	IP65
2m flying cable type	IP65

Pressure connection

DIN 3852-E with sealing by DIN 3869 ring seals
G 1/4", G 3/8", G 1/2"
R 1/4", R 3/8", R 1/2"
NPT1/4", NPT1/2"

Weight Approx. 140g

Option

High temperature adapter
up to 200°C



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Technical specifications

Input pressure range

Normal pressure:

from 0...1 bar to 0...1000 bar
min. pressure range 0...1 bar

Permissible static pressure:

1.3 x pressure range, max.1100 bar

Output signal / Supply

Current:

2-wire 4...20mA $V_s=12...30$ VDC

Voltage:

3-wire 0...10V, 0...5V, 1...5V $V_s=12...30$ VDC

Performance

¹Accuracy: $\leq \pm 0.1\%$ FSO @ 25°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: $\leq \pm 0.5\%$ FS / year

Response time: <5ms

Thermal effects (Offset and Span)

/ Permissible temperatures

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

Zero thermal error: $\pm 0.75\%$ FS @ 25°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

0.5...4.5V / 24V, 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.301 · · · · 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
O6	0.5...4.5V / 24V, 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")
R3	R 3/8" (BSPT 3/8")
R4	R 1/4" (BSPT 1/4")

Pressure range code, unit bar

Code	Range
R19	-1...0
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

■ Less 2bar should be used for EDL.324

Option code

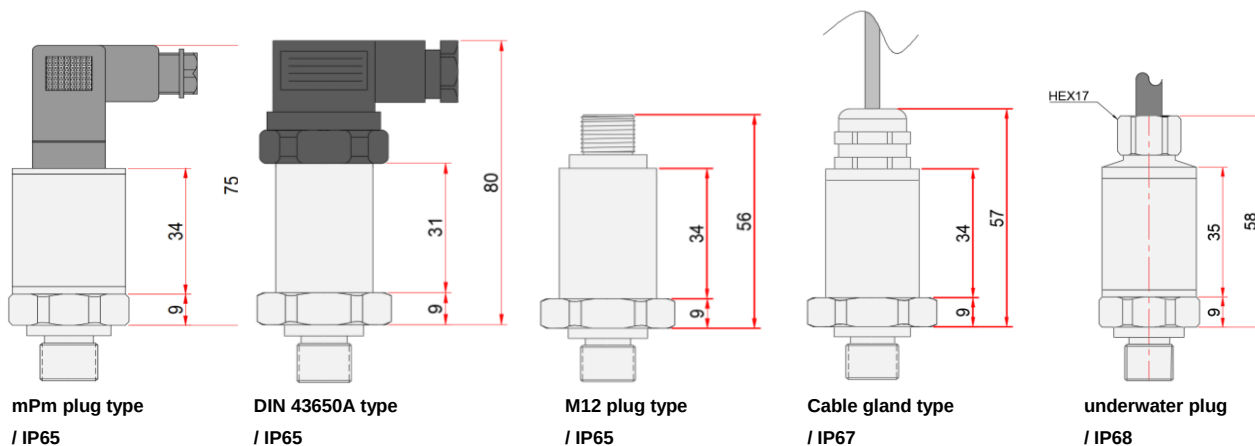
Code	Description
T4	Operating temperature -40...+125 °C
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
PCA	Adapter
CD2	Cooling device up to 200 °C
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

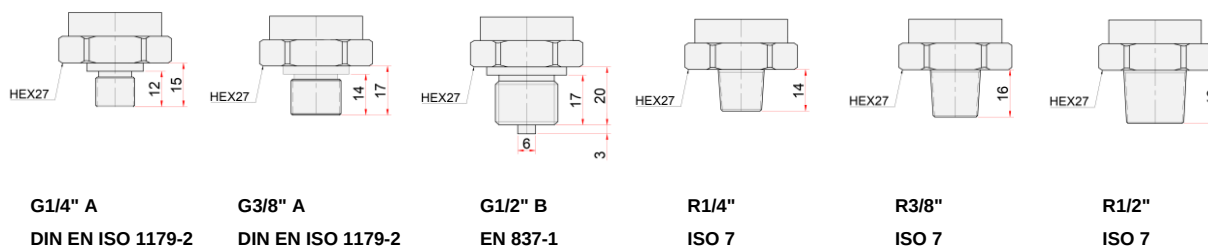
EDN.301.O1DG4BR35

EDN.301, 0.15%, 4...20mA, DIN 43650 A, G 1/4", 0...16 bar

Outline drawing

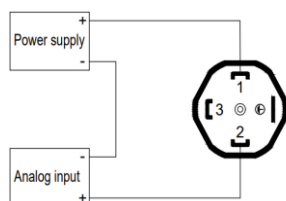


Process connection

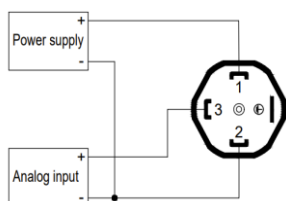


Pin assignment

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



2-wire / current, 4...20mA



3-wire / voltage, 0...10V, 0...5V, 1...5V

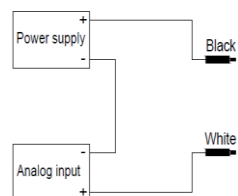
Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)

M12 x 1, 5-pin / male

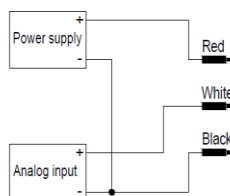


Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		

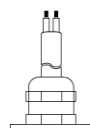
Flying leads with 2m cable



2-wire / current, 4...20mA



3-wire / voltage, 0...10V, 0...5V, 1...5V



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