

**Pressure transmitters
for general industries.
series EDN.305**



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

General features

- Piezoresistive Silicon Pressure Transmitters for industrial applications
- Pressure range from -1...0 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
- Control equipments and air conditioning system
- pressure checking system

General specification

Pressure ranges

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

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
0.5...4.5V, 3-wire system

Power supply

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

Response time

≤ 5 ms

Isolation

$> 100M\Omega$ at 100 VDC

Materials

Wetted parts: St. steel 316L
Sensor sealing: FKM
Body: St. steel 304



Pressure transmitter series EDN.305

Temperature range

Compensated temperature range: 0...70 °C

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

Ambient: -20...100 °C

Storage: -40...125 °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

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

Weight

Approx. 140g

Option

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

Technical specifications

Input pressure range

Normal 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 system 4...20mA Vs=12...30 VDC

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

Ingress protection: IP65 & IP67

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.305 · [] · [] · [] · 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

P	mPm plug
D	DIN 43650 A
M	M12 plug
C	2m flying 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
R01	-1...50
R02	-1...35
R05	-1...24
R06	-1...20
R07	-1...15
R09	-1...9
R11	-1...5
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

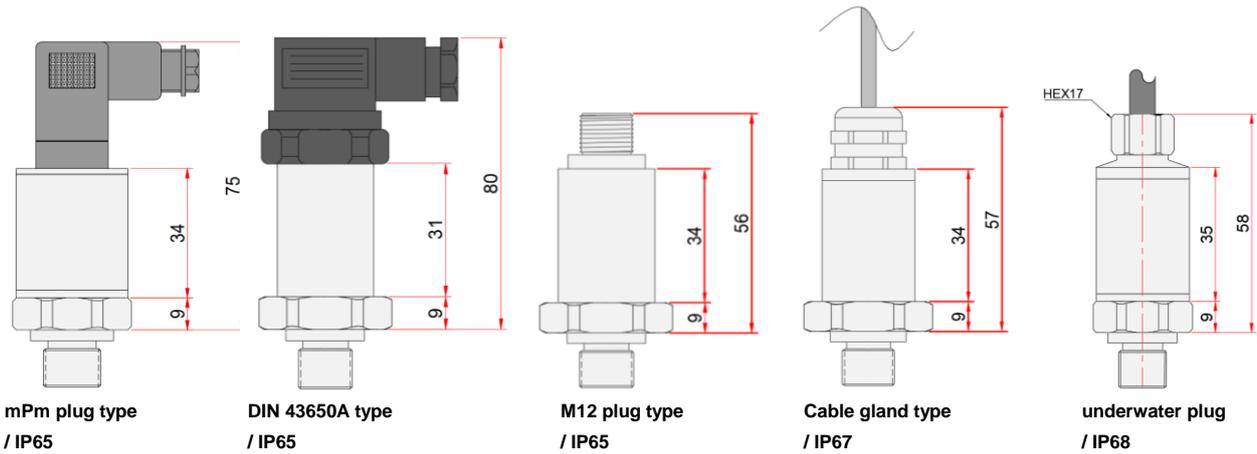
Code	Description
PAA	absolute pressure range [5...6 weeks delivery]
xL	x m cable extension (0: 5L = 5 m, 3L = 3 m)
T4	-40...+125 °C
AC25	Restrictor screw in socket hole
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate

How to order

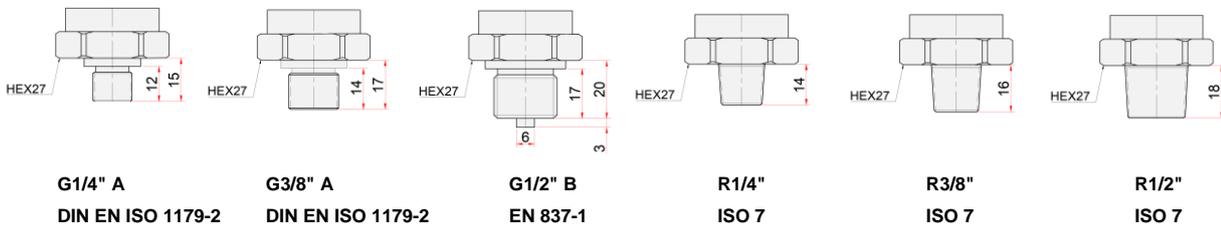
EDN.305.O1.P.G4.BR35

EDN.305, 4...20mA, mPm plug, G 1/4", 0...16 bar

Outline drawing

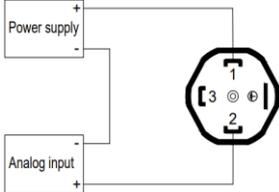


Process connection

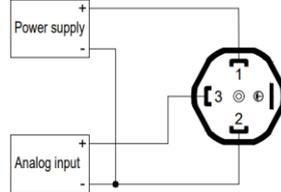


Pin assignment

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



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



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

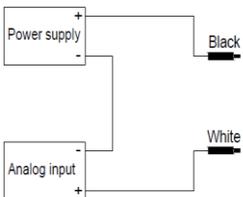
Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)

M12 x 1, 5-pin / male

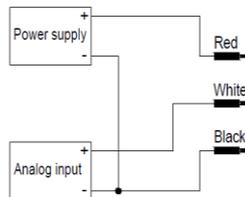


Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		

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