Pressure transmitters for general industries. series EDN.305

CE

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…1000 bar
- Wiring with DIN43650A L-connector or various connectors
- Ingress production 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 transmitter series EDN.305

Pressure ranges
-1…0 bar to 0…1000 bar

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

Non-linearity / BFSL
less than ± 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
≤ 5ms

Isolation
> 100MΩ at 100 VDC

Materials

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

Temperature range

Compensated temperature range:	0…70℃
Operating:	-20…80℃
	-40…+125 ℃ / option
Ambient:	-20…100℃
Storage:	-40…125℃

Thermal error

Zero thermal error:	±0.75%FS @ 25℃, typical
Span thermal error:	±0.75%FS @ 25℃, typical

Electrical connection & protection

DIN43650 A	IP65
M12 Plug	IP67
mPm plug	IP65
2m flying cable type	IP67
Underwater elec. Plug	IP68

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℃ / up to 300℃

DAHO

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Technical specifications

Input pressure range

Norminal 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

[1]Accuracy: ≤ ±0.5%FSO @ 25℃

[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 max=[(Vs-Vs min)/0.02A]Ω
Voltage:	3-wire,	R_L min=10kΩ

Influence effects:

Supply:	0.05%FSO/10V
Longterm stability:	≤±0.5%FS / year
Response time:	<5ms

Thermal effects (Offset and Span) / Permissible temperatures

FS thermal error:	±0.75%FS @ 25℃, typical
Zero thermal error:	±0.75%FS @ 25℃, typical
Operating temperature:	-20…80℃
	-40…+125 ℃ / option
Compensated tempearture:	0…70℃

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

Weather protection grade

■ Ingress protection: IP65 / IP67 / IP68
(depending on electrical connection)

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
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 ber used for EDL.324

Option code

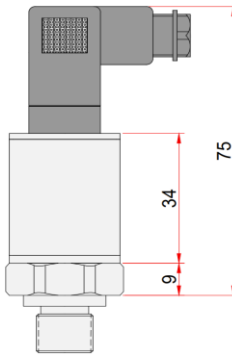
Code	Description
PAA	absolute pressure range [5…6 weeks delivery]
xL	x m cable exstension (예: 5L = 5 m, 3L = 3 m)
T4	-40…+125 °C
AC25	Restrictor screw in socket hole
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate

How to order

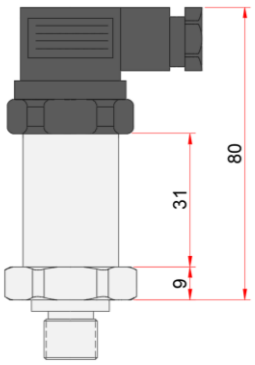
EDN.305.O1.P.G4.BR35

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

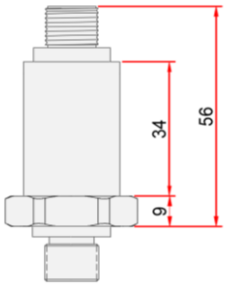
Outline drawing



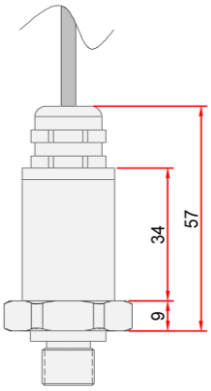
mPm plug type
/ IP65



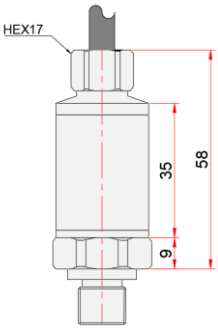
DIN 43650A type
/ IP65



M12 plug type
/ IP67

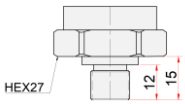


Cable gland type
/ IP67

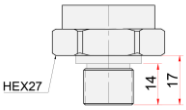


underwater plug
/ IP68

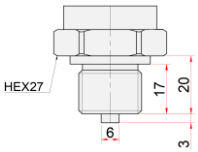
Process connection



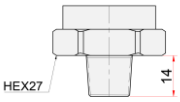
G1/4" A
DIN EN ISO 1179-2



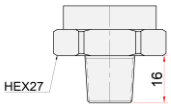
G3/8" A
DIN EN ISO 1179-2



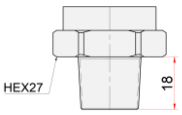
G1/2" B
EN 837-1



R1/4"
ISO 7



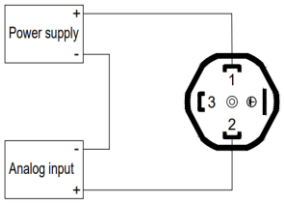
R3/8"
ISO 7



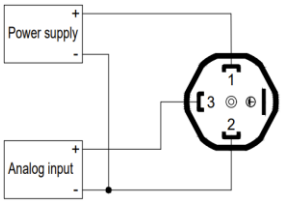
R1/2"
ISO 7

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

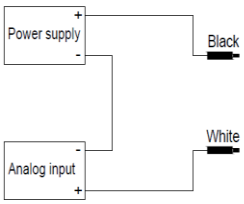
Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)

M12 x 1, 5-pin / male

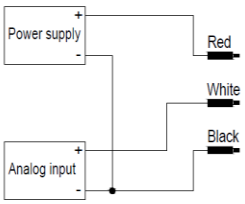


Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		

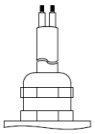
Flying leads with 2m cable



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

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