Pressure transmitters for mass production with low cost series EDN.309

Piezoresistive silico pressure sensors
all st. steel housing of wetted parts
with Declaration of Conformity, CE

General features

- Piezosistive Silicon Pressure Transmitters for industrial applications
- Pressure range from 0…2.5 bar to 0…600 bar
- Wiring with mPm connector
- Wiring with 2m flying cable
- 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 ranges
0…2.5 to 0…600 bar

Accuracy
0.5% F.S
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

Power supply
Available power: DC 12…30V

Response time
≤ 5ms

Isolation
> 100MΩ at 100 VDC

Materials

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

Pressure transmitter series EDN.309

Temperature range

Compensated temperature range:	0…70℃
Operating temperature:	-20…80℃
Ambient temperature:	-20…85℃
Storage temperature:	-20…100℃

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

Electrical connection
2m flying cable type
mPm plug
DIN43650 A

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

Protection

DIN43650 A	IP65
mPm plug	IP65
2m flying cable type	IP67

Weight
Approx. 140g

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Technical specifications

Input pressure range

Norminal pressure:

0…2.5 to 0…600 bar

Permissible static pressure:

1.3 x pressure range, max.1100 bar

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

Performance

[1]Accuracy: BFSL ≤ ±0.25%FSO @ 25℃

[1] accuracy according to IEC 60770 - limit point adjustment

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…6000) 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

Weather protection grade

Ingress protection: IP65 / IP67
(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.309 · ▢ · ▢ · ▢ · 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	
P	mPm plug
C	2m cable
D	DIN 43650 A

Process connection	
G2	G 1/2" (PF 1/2")
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 bar

Code	Range
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

Option code

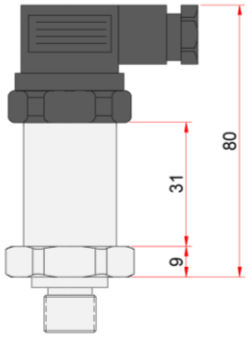
Code	Description
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
AD	Adapter
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin
T4	Operating temperature -40…+125 ℃

How to order

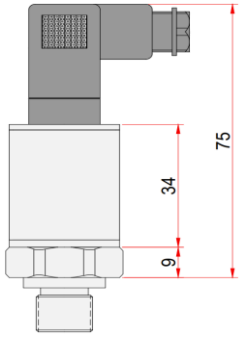
EDN.309.O1.P.G4.BR35

EDN.309, 0.5%, 4…20mA, mPm plug, G 1/4", 0…16 bar

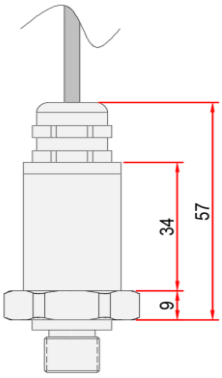
Outline drawing



DIN 43650A

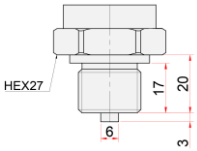


mPm plug

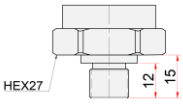


2m flying cable

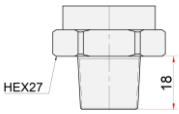
Process connection



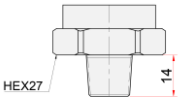
G1/2" B
EN 837-1



G1/4" A
DIN EN ISO 1179-2



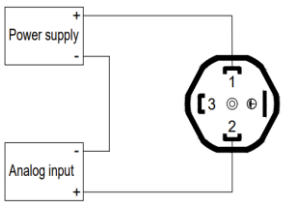
R1/2"
ISO 7



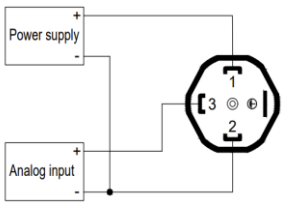
R1/4"
ISO 7

Pin assignment

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



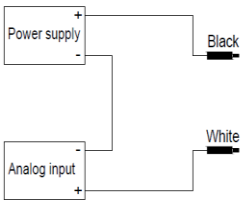
2-wire / current



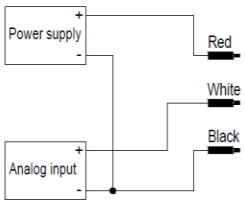
3-wire / voltage

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

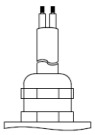
Flying leads with 2m cable



2-wire / current



3-wire / voltage



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

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