

**All st. steel pressure transmitters.
Flameproof explosion version.
accuracy $\leq 0.5\%$, $\leq 0.25\%$, $\leq 0.1\%$
series EDN.610**

*All st. steel housing & wetted parts
st. steel piezoresistive silicon pressure sensors
Flameproof explosion version in Hazardous area
Certified by KOSHA, Ex d IIC T6*



General features

- Specially designed for the measurement in Hazardous area
- Pressure range from -1...0 bar to 0...1000 bar
- Explosion-proof Ex d IIC T6
- Ingress protection IP 65
- Housing parts of stainless steel 316L
- Explosion-proof certified by KOSHA

Application area

- Hazardous area for pressure measurement
- Refineries and petrochemical industry
- Oxygen supplying station
- Gas compressors

General specification

Pressure ranges

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

Accuracy

included Linearity+Hysteresis+Repeatability

A4: $\leq \pm 0.5\%$ FS

A7: $\leq \pm 0.25\%$ FS

A9: $\leq \pm 0.1\%$ FS only for the span, ≥ 200 mbar

Overpressure 1.3 x pressure range

Output signal

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 ≤ 5 ms

Isolation $> 100\text{M}\Omega$ at 100 VDC

Materials

Wetted parts: st. steel 316L

Measurement cell: st. steel 316L

O-ring: FKM

Body: st. steel 304



Pressure transmitter series EDN.610

Temperature range

Operating: -20...100

-40...125°C / option

Ambient: -20...100

Storage: -40...125°C

Temperature compensating range: 0...70°C

Thermal error

Zero thermal error: $\pm 0.75\%$ FS @ 25°C (typ.)

Span thermal error: $\pm 0.75\%$ FS @ 25°C (typ.)

Electrical connecting cable gland

Flameproof explosion certified

Pressure connection

R1/4", R1/2", R3/8" KS B0222

G1/4", G3/8", G1/2" A DIN EN ISO 1179-2

others on request

Protection

IP 65

Weight

approx. 975g



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Technical data

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

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

Performance

Accuracy: $\leq \pm 0.5\% \text{FSO @ } 25^\circ\text{C}$
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
 $\pm 0.75\% \text{FS @ } 25^\circ\text{C}$, typical
Operating temperature: -20...100°C
-40...125°C/option
Compensated temperature: 0...70°C

Electrical protection

Electromagnetic compatibility:
Emission and immunity according to
EN 61326-2-3:2013 CCISPR II Group 1, Class A
EN 61326-2-3:2013 DC 12...30V

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, 0...5V, 1...5V, 3-wire system

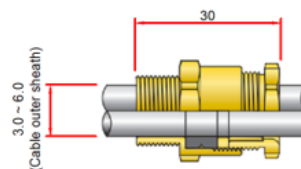
Ingress protection: IP65

EMC Test report for CE conformance

- EN 61326-2-3:2013 CCISPR II Group 1, Class A
- EN 61326-2-3: 2013 / IEC 61326-1:2012

Electrical connecting cable gland

- IP66
- Materials: Brass with nickel plated
- Cable outer : 3.0...6.0 mm



Ordering information

Model code

EDN.610 · · · · · 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	0...5V / 3-wire system
O4	1...5V / 3-wire system
O5	0.5...4.5V / 3-wire system

Electrical connection

FP	Flameproof conn. cable gland
M12	M12 electrical plug

Process connection

R2	R 1/2"
R4	R 1/4"
G2	G 1/2"
G3	G 3/8"
G4	G 1/4"
others on request	

Pressure range code, unit bar

Code	Range
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

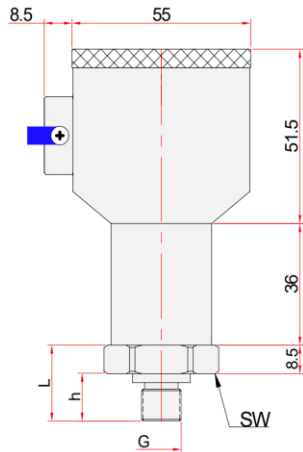
Code	Description
T4	-40...125 °C / operating temperature
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
PCA	Adapter
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

EDN.610.A4.O1.FP.G4.BR50

EDN.610, 0.5%, 4...20mA, Flameproof conn. cable gland, G 1/4", 0...400 bar

Pressure Transmitters with thread connection

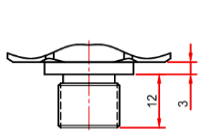


■ thread connection

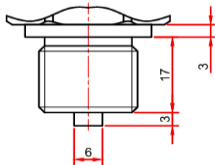
ISO 1179-2, KS B0222

Standard	G	h	SW	L
KS B0222	R 1/4"	13	32	21.5
	R 3/8"	15		23.5
	R 1/2"	19		27.5
A DIN EN ISO 1179-2	G 1/4"	14	32	22.5
	G 3/8"	16		24.5
	G 1/2"	20		28.5

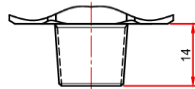
Process connection



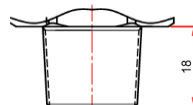
G1/4" A
DIN EN ISO 1179-2



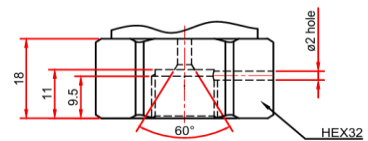
G1/2" B
EN 837



NPT 1/4"
ANSI/ASME B1.20.1

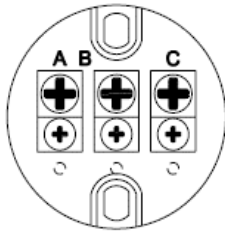


NPT 1/2"
ANSI/ASME B1.20.1



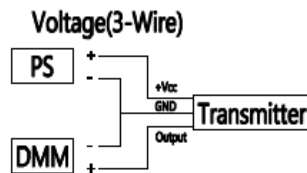
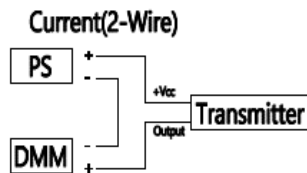
9/16-18 UNF Seal cone
BOSS SAE J514

Pin assignment



Pin No.	Current output	Voltage output
A	+Vcc	+Vcc
B	Output	Output
C	⊥	GND

Wiring



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