

**Pressure transmitters with  
explosion flameproof  
series EDN.610**



St. steel housing & st. steel pressure sensors  
Explosion flameproof version for 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) 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 is 2 bar

**Accuracy**

included Linearity+Hysteresis+Repeatability  
± 0.35% FS  
± 0.15% FS / option (pressure range, ≥ 2 bar)  
Span range, less 2 bar: ± 0.5% FS

**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

**Temperature range**

Operating: -20...100  
-40...125°C / option  
Ambient: -20...100°C  
Storage: -40...125°C  
Temperature compensating range:  
-20...80°C

**Thermal error**

Zero thermal error: ±0.75%FS @ 25°C (typ.)  
Span thermal error: ±0.75%FS @ 25°C (typ.)



Pressure transmitter series EDN.610

**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  
Measurement cell: st. steel 316L  
O-ring: FKM  
Body: st. steel 304

**Electrical connecting cable gland**

Flameproof

**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**

840g

**Option**

High temperature cooling device  
up to 200°C  
up to 300°C



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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  $V_s=12...30$  VDC

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

### Performance

Accuracy:  $\leq \pm 0.5\% \text{FSO @ } 25^\circ\text{C}$   
<sup>1</sup> 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...100 °C  
-40...125 °C /option  
Compensated temperature: -10...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

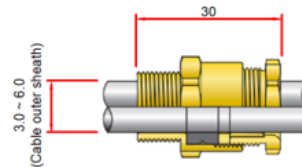
Ingress protection: IP65

### 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 [ ] · [ ]

### 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

FCG	Flameproof connecting cable gland
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### 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

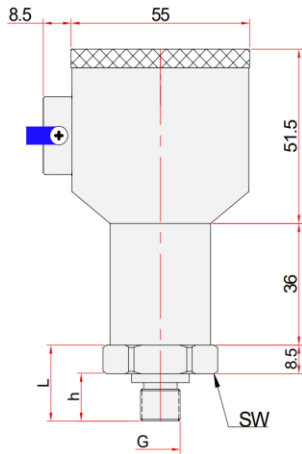
Code	Description
A6	Accuracy 0.15%
T4	-40...125 °C / operating temperature
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
PCA	Adapter
CD2	Cooling device up to 200 °C
CD3	Cooling device up to 300 °C
TP	St. steel tag plate, 60 x 20 x 0.5t
MC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

### How to order

EDN610.FCG.O1.G4.BR50

EDN.610, 4...20mA, G 1/4", 0-400 bar

## Pressure Transmitters with thread connection

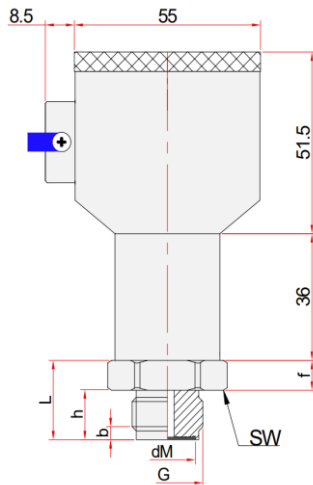


### ■ thread connection

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

## Pressure Transmitters with flush diaphragm

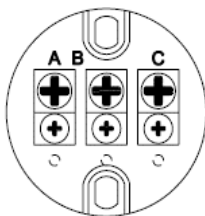


### ■ Flush Diaphragm

DIN 3852

G	dM	f	b	SW	h	L
G1/2"	18	12	2.5	32	14	26

## Pin assignment



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

## Wiring

