

**Pressure transmitters with
explosion flameproof
a/w diaphragm seal, MDI
series EDN.617**



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...250 bar
- Explosion-proof Ex d IIC T6
- Ingress protection IP 65
- Wetted & housing parts of stainless steel 316L
- Explosion flameproof 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...250 bar
Min. span range > 1 bar

Accuracy

included Linearity+Hysteresis+Repeatability
 $\pm 0.35\%$ FS
 $\pm 0.15\%$ FS / option (pressure range, ≥ 2 bar)
Span range, less 2 bar: $\pm 0.5\%$ 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: $\pm 0.75\%$ FS @ 25°C (typ.)
Span thermal error: $\pm 0.75\%$ FS @ 25°C (typ.)



Pressure transmitter series EDN.617

Power supply

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

Response time

$\leq 5\text{ms}$

Isolation

> 100M Ω at 100 VDC

Materials

Wetted parts: st. steel 316L
Measurement cell: st. steel 316L
Body: st. steel 304

Electrical connection

Explosion flameproof cable gland

Pressure connection

According to DIN 1092-1
According to ASME B16.5
According to JIS
others on request

Protection

IP 65

Weight

840g

Option

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

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

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...60°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

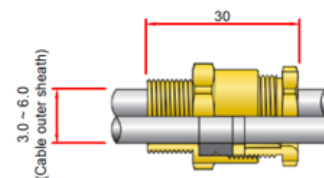
■ EN 61326-2-3: 2013 / IEC 61326-1:2012

Electrical connecting cable gland

■ IP66

■ Materials: Brass with nickel plated

■ Cable outer : 3.0...6.0 mm



Ordering information

Model code

EDN.617 · · · 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

Process connection

Process flange	See tables on
as per each standard	page 4

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
RYY	Others on request

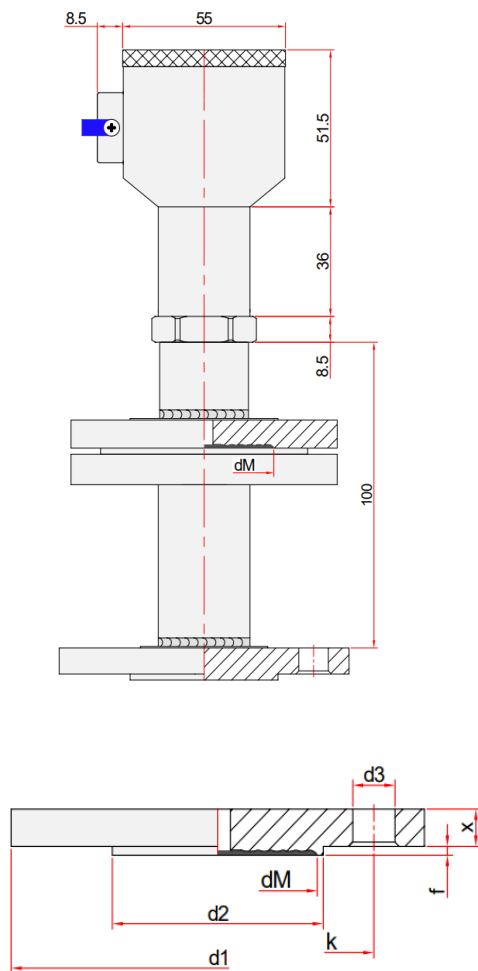
Option code

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
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

EDN617.O1.BR50. DN25 PN100

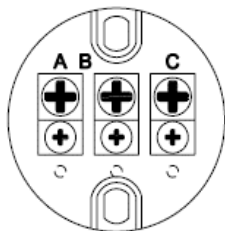
EDN.617, 4...20mA, 0-400 bar assembled with DN25 PN100 according to the DIN 1092-1



Standard DIN 1092-1									
DN	PN	d1	d2	d3	dM	f	k	x	
25	10/40	115	68	Ø 14 x 4	28	2	85	18	
	63/100	140		Ø 18 x 4			100	24	
	160	150		Ø 22 x 4			105	28	
	250	160		Ø 26 x 4			115	34	
	320	180					130	38	
	400								
32	10/40	140	78	Ø 18 x 4	34	3	100	18	
40	10/40	150	88	Ø 18 x 4	38		110		
50	25/40	165	102	Ø 22 x 4	57		125	20	
	63	180		Ø 26 x 4			135	26	
	100	195		Ø 26 x 8			145	28	
	160	200		Ø 30 x 8			150	30	
	250	210		Ø 30 x 8			160	38	
	320	235					180	42	
	400						180	52	
65	25/40	185	122		72		145	22	
80	10/16	200	138	Ø 18 x 8	84		160	20	
	25/40			Ø 22 x 8			170	24	
	63			71			Ø 26 x 8	180	28
	100			75			Ø 30 x 8	180	32
	160			79				200	36
	250			89				200	46
100	10/16	63	158	Ø 18 x 8			180	20	
	25/40	67	162	Ø 22 x 8			190	24	
	63	73		Ø 26 x 8			200	30	
	100	79		Ø 30 x 8			210	36	
	160	83					210	40	
	250	97		Ø 33 x 8			235	54	

Standard ASME B16.5								
NPS	Class	d1	d2	d3	dM	f	k	x
1"	150	108	50.8	Ø 15.7 x 4	28	1.6	79.2	14.2
	300	124		Ø 19.1 x 4			88.9	17.5
	400/600	124		Ø 25.4 x 4		6.4	101.6	23.9
	900/1500	149.4		Ø 25.4 x 4			108	34.8
	2500	158.8		Ø 25.4 x 4			108	41.5
1 1/2"	150	127	73.2	Ø 15.7 x 4	38	1.6	98.6	17.5
	300	155.4		Ø 22.4 x 4			114.3	20.6
	400/600	155.4		Ø 22.4 x 4		6.4	114.3	28.8
2"	150	152.4	91.9	Ø 19.1 x 4	57	1.6	120.7	19.1
	300	165.1		Ø 19.1 x 8			127	22.4
	400/600	165.1		Ø 19.1 x 8		6.4	127	31.8
	900/1500	215.9		Ø 25.4 x 8			165.1	44.5
	2500	235		Ø 28.4 x 8			171.5	57.2
3"	150	190.5	127	Ø 19.1 x 8	84	1.6	152.4	23.9
	300	209.6		Ø 22.4 x 8			168.1	28.4
	400/600	209.6		Ø 22.4 x 8		6.4	168.1	38.2
	900	nectin		Ø 25.4 x 8			190.5	44.5
	1500	amepro		Ø 31.8 x 8			203.2	54.2
	2500	304.8		Ø 35.1 x 8			228.6	72.9
4"	150	228.6	157.2	Ø 19.1 x 8	84	1.6	190.5	23.9
	300	254		Ø 22.4 x 8			200.2	31.8
	400	254		Ø 25.4 x 8		6.4	200.2	41.5
	600	273.1		Ø 25.4 x 8			215.9	44.5
	900	292.1		Ø 31.8 x 8			234.9	50.8
	1500	311.2		Ø 35.1 x 8			241.3	60.2

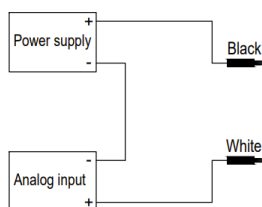
Pin assignment



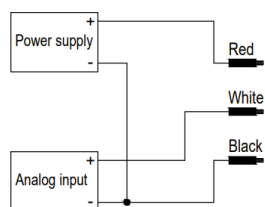
Connection diagram

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

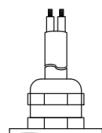
Wiring



2-wire / current



3-wire / voltage



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