

All st. steel pressure transmitters
 LCD window with a back light
 a/w chemical seal MDI
 Model EDN.717



Housing, body, wetted parts are made of st. steel
 optionally, 2 relay channels, switches & RS485
 Certified by KOSHA, Ex d IIC T6

General features

- Specially designed for the measurement in Hazardous area
- Pressure range from 0...1.6 bar to 0...250 bar
- Explosion-proof Ex Ex d IIC T6
- Zero point, range adjustable
- Switch function, 2 switches
- RS485 digital communication

Application area

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

General specification

Pressure ranges

From 0...1.6 bar to 0...250 bar

Accuracy

included Linearity+Hysteresis+Repeatability
 $\pm 0.5\%$ FS

Overpressure

1.3 X pressure range

Output type

4...20 mA, 2-wire system
 0...10 V, 3-wire system
 0...5 V, 3-wire system
 1...5 V, 3-wire system
 0.5...4.5 V, 3-wire system

Power supply

Available power: DC 12...30V

Temperature range

Operating: -20...80 °C
 Ambient: -20...60 °C
 Storage: -10...80 °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.)

Special functions could be included / options

- 2 relay, channel switches
- RS485 digital communication



series EDN.717 for hygienic application

Isolation	> 100MΩ at 100 VDC
Electrical connection	Flameproof cable gland M12 plug
Display	LCD, 4 1/2 - digit -1999...9999 Bar graph
Background	white back light
Materials	
Wetted parts:	St. steel 316L
Body:	St. steel

Pressure connection

According to DIN 1092-1
 According to ASME B16.5
 According to JIS

Adjustable Pressure units

bar, mbar, MPa, kPa, psi, kg/cm²,
 mmH₂O, inH₂O
 mmHg, inHg, torr, atm

Operation

Pressure range, zero point adjustment,
 characteristic curve and damping rate are
 adjustable on the device



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Technical specifications

Input pressure range

Norminal pressure:
0...1.6 bar up to 0...250 bar

Permissible static pressure:
1.3 x pressure range

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
0.5...4.5V

Performance

¹Accuracy: $\leq \pm 0.3\% \text{FSO @ } 25^\circ\text{C}$
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: $\leq \pm 0.5\% \text{FS / year}$
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: $-20...80^\circ\text{C}$
Compensated teperature: $0...60^\circ\text{C}$

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, 0...5V, 1...5V, 0.5...4.5V, 3-wire system
Signal output voltage

EMC Test report for CE conformance

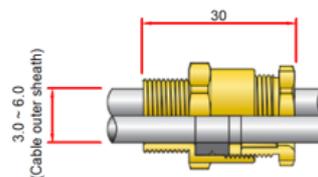
- EN 61326-2-3:2013 / Class A
- EN 61326-2-3: 2013 / IEC 61326-1:2012

Special features

- Protection against reverse polarity connections ($\pm 40\text{VDC}$).
- High Noise Immunity Performance against Electrical Fast Transient (EFT) noise.
- High Precision against variations in ambient temperature. ($\pm 1.3\%$ in $-20...70^\circ\text{C}$).
- Wide pressure operating range.30% lower than the minimum and 30% higher than the maximum.
- Protection against instantaneous surge voltage.
- Durable design for severe vibration.

Electrical connecting cable gland

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



Ordering information

Model code EDN.717 · [] · [] · [] · [] · [] · [] · B [] · []

Output signal

O1	4...20 mA / 2-wire system
O2	0...10 V / 3-wire system
O3	0...5V / 3-wire system
O4	1...5V / 3-wire system
O6	0.5...4.5V / 12-30V, analog

Accuracy

A5 ≤ ± 0.5 % F.S

Electrical connection

FP	Flameproof cable gland
M	M12 plug with 12 pins

Digital communication

O11 RS485

2 relay channel, switches

O12 2 relay channel, switches

Process connection

• See tables on page 4

Flange standard DIN 1092-1
 Flange standard ASME B16.5
 Flange standard JIS

Pressure range code, unit bar

Code	Range
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

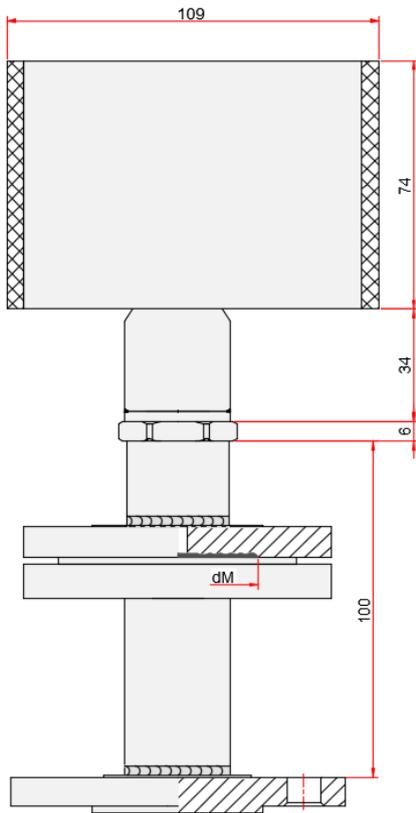
Option code

Code	Description
NO	"USE NO OIL" for Oxygen application
AD	Adapter
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate included
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

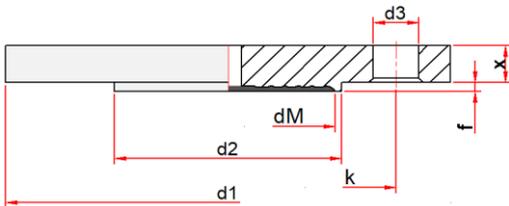
How to order

EDN717.O1.FP.BR47. DN25 PN100.A4

EDN.717, 0.5%, 4...20mA, cable gland, 0-250 bar assembled with DN25 PN100 according to the DIN 1092-1,



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		Ø 26 x 4			130	38
400	180	Ø 26 x 4	130	38				
32	10/40	140	78	Ø 18 x 4	34	3	100	18
40	10/40	150	88	Ø 18 x 4	38		110	18
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 4			145	28
	160	200		Ø 26 x 8		150	30	
	250	200		Ø 26 x 8		150	38	
320	210	Ø 30 x 8	160	42				
400	235	Ø 30 x 8	180	52				
65	25/40	185	122	Ø 18 x 8	72	3	145	22
80	10/16	200	138	Ø 18 x 8	84		160	20
	25/40	200		Ø 22 x 8			160	24
	63	71		Ø 26 x 8			170	28
	100	75		Ø 26 x 8			180	32
	160	79		Ø 30 x 8		180	36	
250	89	Ø 30 x 8	200	46				
100	10/16	63	158	Ø 18 x 8	84	180	20	
	25/40	67		Ø 22 x 8		190	24	
	63	73		Ø 26 x 8		200	30	
	100	79		Ø 30 x 8		210	36	
	160	83		Ø 30 x 8		210	40	
250	97	Ø 33 x 8	235	54				

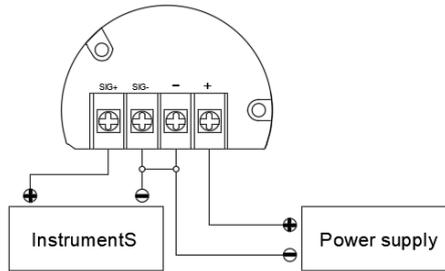


ASME B16.5								
NPS	Class	d1	d2	d3	dM	f	k	x
1"	150	108	50.8	Ø 15.7 x 4	28	1.6	79.2	14.2
	300	124		Ø 19.1 x 4			88.9	17.5
	400/600	124		Ø 19.1 x 4			88.9	17.5
	900/1500	149.4		Ø 25.4 x 4			101.6	34.8
	2500	158.8		Ø 25.4 x 4			108	41.5
1 1/2"	150	127	73.2	Ø 15.7 x 4	38	1.6	98.6	17.5
	300	155.4		Ø 22.4 x 4			114.3	20.6
	400/600	155.4		Ø 22.4 x 4			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			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			168.1	38.2
	900	241.3		Ø 25.4 x 8			190.5	44.5
	1500	266.7		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 22.4 x 8			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

Electrical connection Diagram

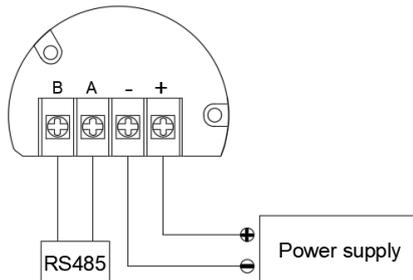
Analog output signal

Pin No.	Wire
+	+Vcc
-	-Vcc
+SIG	Out put +
-SIG	GND



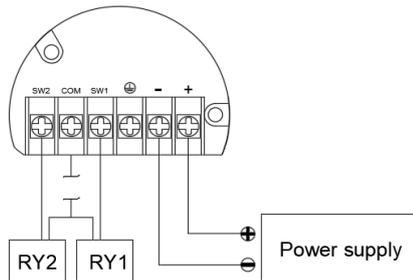
RS485 digital communication

Pin No.	2-wire
+	+Vcc
-	-Vcc
A	RS 485A
B	RS 485B



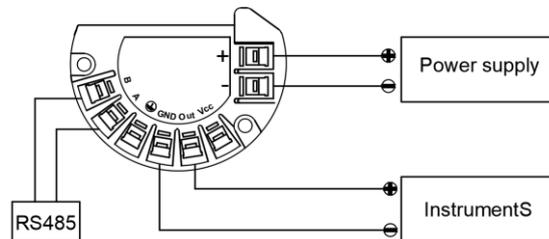
2 relay, switches

Pin No.	Wire
+	+Vcc
-	-Vcc
SW1	Relay 1
SW2	Relay 2
COM	Relay COM



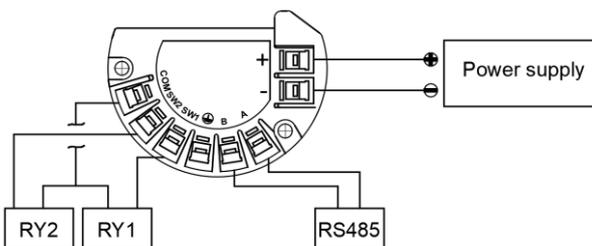
Analog + RS485 digital

Pin No.	Wire
+	+Vcc
-	-Vcc
Out	+ Signal
GND	- Signal
A	RS485 A
B	RS485 B



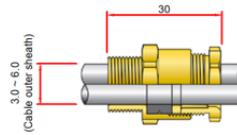
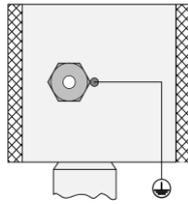
Analog + 2 relay + RS485 digital

Pin No.	2-wire
+	+Vcc
-	-Vcc
A	RS 485A
B	RS 485B
SW1	Relay 1
SW2	Relay 2
COM	Relay COM



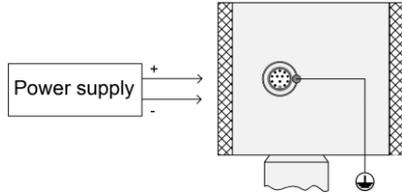
Electrical connection Diagram

Cable gland



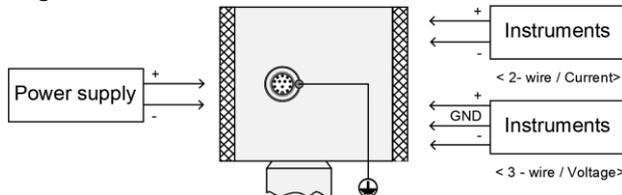
Electrical plug, M12

No Output signal



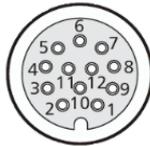
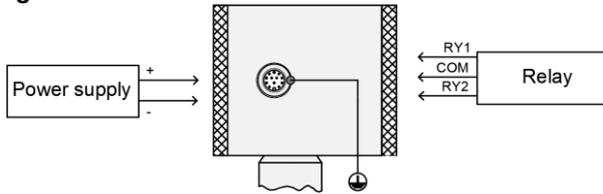
Pin No.	Wire
1	+Vcc
2	-Vcc

Output signal



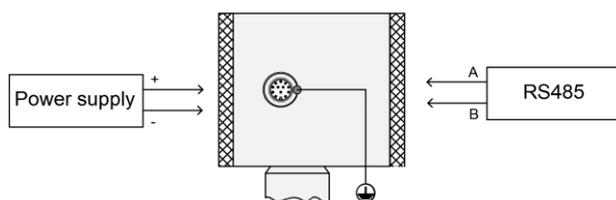
Pin No.	Current	Voltage
1	+Vcc	+Vcc
2	-Vcc	-Vcc
3	+Out	+Out
4	-Out	GND
5		-Out
12	earth	earth

Relay signal



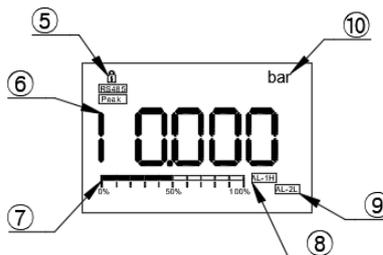
Pin No.	Wire
1	+Vcc
2	-Vcc
6	Relay 1
7	Relay 2
8	COM
12	earth

RS485 Communication



Pin No.	Wire
1	+Vcc
2	-Vcc
9	RS 485A
10	RS 485B
12	earth

Display and Control unit



Functions

- ① Menu, Cancel
- ② Select function, increase
- ③ Select function, decrease
- ④ Confirm selected function or selected value
- ⑤ Lock mode
- ⑥ Pressure values, output signal values
- ⑦ Bar graph
- ⑧ Relay 1
- ⑨ Relay 2
- ⑩ R 1/4", R 3/8", R 1/2" NPT 1/4", NPT1/2"