Pressure transmitters a/w process flange MDF Model EDN.316

CE

all st. steel housing of wetted parts with Declaration of Conformity, CE

General features

- Pressure Transmitters assembled with various flanges callled by MDF
- Pressure range from 0…1.6 bar to 0…250 bar
- Assembled with process flange according to the standard
- Ingress production IP65 / IP67 / IP68
- Wetted parts of stainless steel, 316L



Application area

- Petroleum and chemical industry
- Water supply and water treatment plant
- Hydraulic and pneumatic control systems
- Hydro and nuclear power application
- General process industry

General specification

series EDN.316 a/w chemical seal MDF

Pressure ranges
0…1.6 bar to 0…250 bar

Accuracy
± 0.5% FS
included Linearity+Hysteriesis+Repeatability
** pressure range, negative ≤ ± 1.0%

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

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

Response time
≤ 5ms

Isolation
> 100MΩ at 100 VDC

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

Materials

Wetted parts:	St.steel 316L
Body:	St.steel 316L

Temperature range

Operating:	-20…100℃
	-40…120℃ / option
Temperature compensating range:	
	0…70℃
	-10…80℃ / option
Ambient:	-20…100℃
Storage:	-20…100℃

Thermal error

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

Electrical connection

DIN43650 A / mPm plug	IP65
Head type	IP65
M12 plug	IP67
2m flying cable	IP67
Underwater elec. Plug	IP68

Weight
series EDN.3xx, approx. 140g and additionally depends on each flanges based on each standards.

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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	Vs=12…30 VDC

Voltage:

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

Performance

[1]Accuracy: ≤ ±0.5%FSO @ 25℃

[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 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…100℃
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…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 current max. 7mA

Voltage:

0…10V, 3-wire system
0…5V, 3-wire system
1…5V, 3-wire system

Ingress protection: IP65 / IP67 / IP68 (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.316 · ▢ · ▢ · 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	
D	DIN 43650 A
P	mpm plug
M	M12 plug
C	2m cable
H	General head

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

Process connection	
Flange standard DIN 1092-1	See tables on page 4
Flange standard ASME B16.5	
Flange standard JIS	

Option code

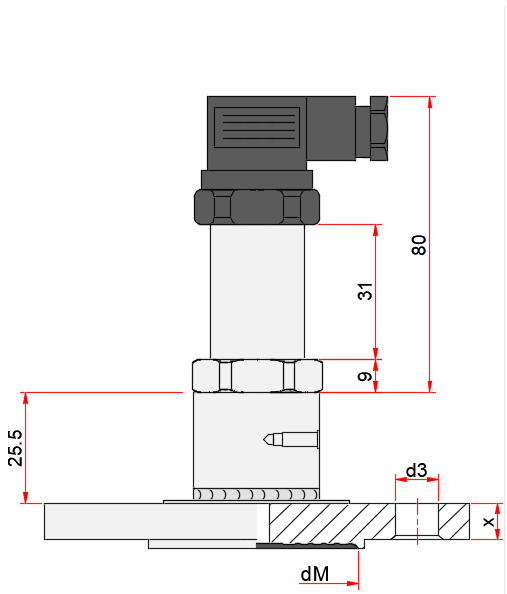
Code	Description
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
AD	Adapter
CD2	Cooling device up to 200℃
CD3	Cooling device up to 300℃
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

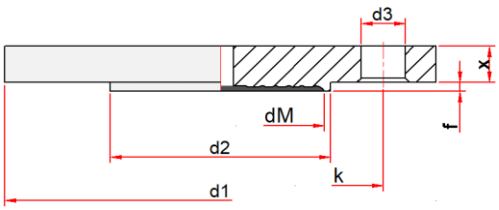
How to order

EDN.316.O1.D.BR35 aw MBF, DN25 PN160 according to DIN 1092-1

EDN.316, 4…20mA, DIN 43650, 0…16 bar aw MBF, DN25 PN160 according to DIN 1092-1,

assembled with process flangesbased on DIN 1092-1 & ASME B16.5





DIN 1092-1

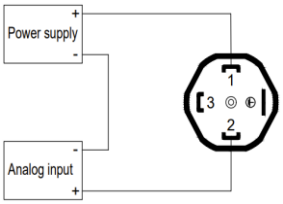
DN	PN	d1	d2	d3	dM	f	k	x
25	10/40	115	68	Ø 14 x 4	28	2	85	18
	63/100	140		Ø 18 x 4			100	24
	160							
	250	150		Ø 22 x 4			105	28
	320	160					115	34
	400	180		Ø 26 x 4			130	38
32	10/40	140	78	Ø 18 x 4	34		100	18
40	10/40	150	88	Ø 18 x 4	38	3	110	
50	25/40	165	102	Ø 22 x 4	57		125	20
	63	180		Ø 26 x 4			135	26
	100	195					145	28
	160			Ø 26 x 8				30
	250	200					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		84		160	20
	25/40							24
	63	71		Ø 22 X 8			170	28
	100	75		Ø 26 X 8			180	32
	160	79						36
	250	89		Ø 30 X 8			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						40
	250	97		Ø 33 X 8			235	54

ASME B16.5

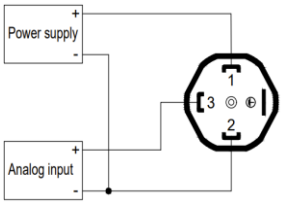
NPS	Class	d1	d2	d3	dM	f	k	x
1"	150	108	50.8	Ø 15.7 x 4	28	1.6	79.2	14.2
	300	124		Ø 19.1 x 4			88.9	17.5
	400/600	124				6.4		23.9
	900/1500	149.4		Ø 25.4 x 4			101.6	34.8
	2500	158.8					108	41.5
1 1/2"	150	127	73.2	Ø 15.7 x 4	38	1.6	98.6	17.5
	300	155.4		Ø 22.4 x 4			114.3	20.6
	400/600					6.4		28.8
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					6.4		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					6.4		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		1.6	190.5	23.9
	300	254		Ø 22.4 x 8			200.2	31.8
	400			Ø 25.4 x 8		6.4		41.5
	600	273.1					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

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



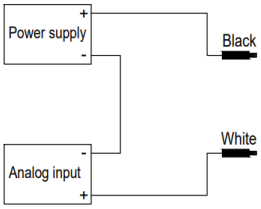
2-wire / current



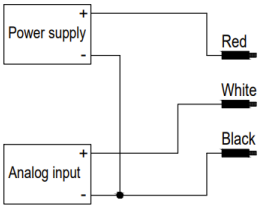
3-wire / voltage

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

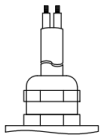
Flying leads with 2m cable



2-wire / current

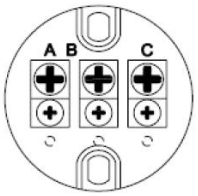


3-wire / voltage



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

Head type



Connection diaphragm

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

M12 x 1, 5-pin / male



Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		

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