

Pressure transmitter with precision series EDN.301



St. steel housing & wetted part
with Declaration of Conformity, CE

General features

- Silicon Pressure Transmitters for industrial applications
- Pressure range from -1...1 bar to 0...1000 bar
- Wiring with DIN43650A L-connector or various connectors
- Ingress protection IP65
- Housing parts of stainless steel

Application area

- Institute and high precision application
- Hydraulic and pneumatic control systems
- Cooling equipment and air conditioning system
- Pressure calibration, pressure checking
- Liquid pressure system and switch

General specification

Pressure ranges

From -1...0 bar, 0...2 bar to 0...1000 bar
Min. pressure range: ≥ 2.0 bar

Accuracy

Higher than 1 bar: $\leq \pm 0.15\%$ F.S
Span range less 1 bar: $\leq \pm 0.2\%$ F.S
Included Linearity+Hysteresis+Repeatability

[Option]

Higher than 1 bar: $\leq \pm 0.1\%$ F.S

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

Materials

Wetted parts : St. steel 316L
Sensor sealing : FKM
Body : st. steel 304

Electrical connection

DIN43650 A
mpm plug
M12 Plug
2m flying cable type



Pressure transmitter series EDN.301

Temperature range

Compensated temperature range: 0...70 °C

Operating: -20...80 °C
-40...+125 °C / option

Ambient: -20...85 °C
Storage: -20...100 °C

Thermal error

Zero thermal error: $\pm 0.75\%$ FS @ 25 °C, typical
Span thermal error: $\pm 0.75\%$ FS @ 25 °C, typical

Power supply

Available power : DC 12...30V

Response time ≤ 5 ms

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

Pressure connection

DIN 3852-E with sealing by DIN 3869 ring seals
G 1/4", G 3/8", G 1/2"
R 1/4", R 3/8", R 1/2"
NPT1/4", NPT1/2"

Protection IP65 with plug DIN 43650A

Weight Approx. 140g



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Technical specifications

Input pressure range

Normal pressure:
from 0...1 bar to 0...1000 bar
min. pressure range 0...1 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

¹Accuracy: $\leq \pm 0.15\%$ FSO @ 25 °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, $R_L \text{ max} = [(V_s - V_s \text{ min}) / 0.02A] \Omega$
Voltage: 3-wire, $R_L \text{ min} = 10k\Omega$

Influence effects:
Supply: 0.05%FSO/10V
Longterm stability: $\leq \pm 0.5\%$ FS / year
Response time: <5ms

Thermal effects (Offset and Span)

/ Permissible temperatures

FS thermal error: $\pm 0.75\%$ FS @ 25 °C, typical
Zero thermal error: $\pm 0.75\%$ FS @ 25 °C, typical
Operating temperature: -20...80 °C
-40...+125 °C / option
Compensated temperature: 0...70 °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, 3-wire system
0.5...4.5V / 5V, ratiometric, 3-wire system

Ingress protection: IP65

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.301 · [] · [] · [] · 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

Process connection

G2	G 1/2" (PF 1/2")
G3	G 3/8" (PF 3/8")
G4	G 1/4" (PF 1/4")
R2	R 1/2" (BSPT 1/2")
R3	R 3/8" (BSPT 3/8")
R4	R 1/4" (BSPT 1/4")

Pressure range code, unit bar

Code	Range
R19	-1...0
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

Note: the pressure ranges less than 1 bar should be applied for model EDN.315

Option code

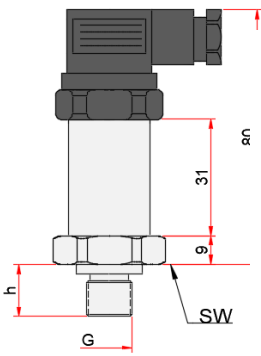
Code	Description
T4	Operating temperature -40...+125 °C
A1	Accuracy 0.1%
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
PCA	Adapter
CD2	Cooling device up to 200 °C
CD3	Cooling device up to 300 °C
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

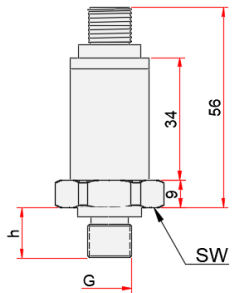
EDN.301.O1DG4BR35

EDN.301, 0.15%, 4...20mA, DIN 43650 A, G 1/4", 0...16 bar

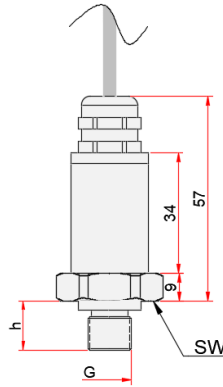
Outline drawing



DIN 43650A



M12 Plug type

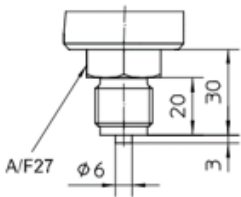


Cable gland type

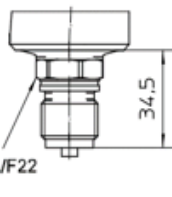
■ thread connection

ISO 1179-2, KS B0222			
Standard	G	h	SW
KS B0222	R 1/4"	13	32
	R 3/8"	15	
	R 1/2"	19	
A DIN EN ISO 1179-2	G 1/4"	14	
	G 3/8"	16	
	G 1/2"	20	

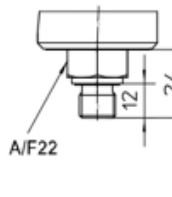
Process connection



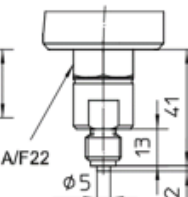
G1/2" B
DIN EN 837-1



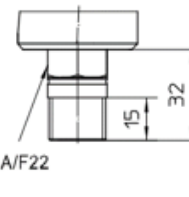
G1/2" B
DIN EN 837-1
≥ 100 bar



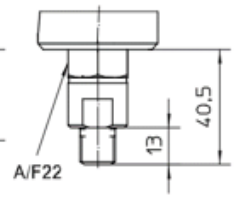
G1/2" B
DIN EN ISO 1179-2



G1/4" B
DIN EN 837-1



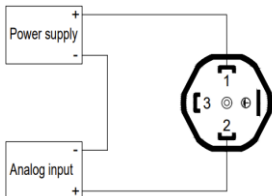
BSPT 1/2"



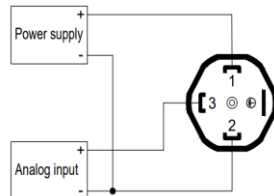
BSPT 1/4"

Pin assignment

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



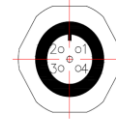
2-wire / current



3-wire / voltage

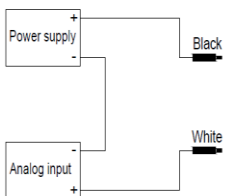
Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)

M12 x 1, 5-pin / male

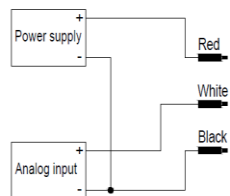


Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		

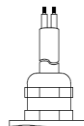
Flying leads with 2m cable



2-wire / current



3-wire / voltage



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