

Differential pressure transmitters series EDN.650



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

General features

- Piezoresistive Silicon Pressure Transmitters for industrial applications
- Differential pressure range from 0...400 mbar to 0...35 bar
- Wiring with DIN43650A L-connector or various connectors
- Ingress protection IP65
- Housing parts of stainless steel

Application area

- Hydraulic and pneumatic control systems
- Level measurement system
- Control equipments and air conditioning system
- pressure checking system

General specification

Pressure ranges

from 0...400 mbar to 0...35 bar

Maximum Static Pressure

0...200 bar

Accuracy

0.5% FS

including non-linearity, hysteresis, zero point and full scale error according to IEC 61298-2

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

Temperature range

Operating: -20...80 °C

Temperature compensating range: -20...70 °C,

Ambient: -20...100 °C

Storage: -40...120 °C

Thermal error

Zero thermal error: ±0.75%FS @ 25 °C, typical

Span thermal error: ±0.75%FS @ 25 °C, typical



Pressure transmitter series EDN.650

Long term stability

- pressure range > 400 mbar, 0.1% FS typical. 0.2% FS max.
- pressure range ≤ 400 mbar, typical. 2 mbar max.

Power supply

Ref. power: DC 24V

Available power: DC 12...28V, max. 30V

Response time ≤ 5ms

Isolation > 100MΩ at 100 VDC

Materials

Wetted parts: st. steel 316L

Sensor sealing: FKM O-ring

Body: st. steel 316L

Electrical connection

DIN43650 A

M12 Plug

Cable type

Head type

Others on request

Pressure connection

Female G 1/4" Female G1/4" accordance with ISO 228

Protection

IP65 with plug DIN 43650A

Weight

≤ 350g

Technical specifications

Input pressure range

Normal pressure:
0...400 mbar up to 0...35 bar

Permissible static pressure:
1.3 x pressure range

Output signal / Supply

Current:
2-wire 4...20mA $V_s=12...28$ VDC
max. 30V

Voltage:
3-wire 0...10V, 0...5V, 1...5V $V_s=12...28$ VDC
max. 30V

Performance

¹Accuracy: $\leq \pm 0.5\% \text{FSO @ } 25^\circ\text{C}$
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: $\leq \pm 0.5\% \text{FS / year}$
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 temperature: $0...60^\circ\text{C}$

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 type
• Current 4...20mA: 25 mA
• Voltage 0...10V, 0...5V, 1...5V: 7mA
■ 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.650 · [] · [] · [] · 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

FP	Flameproof cable gland
M	M12 plug

Process connection

G4	G 1/4" Female + G1/4" Female
R4	R 1/4" Female + R 1/4" Female
N4	NPT 1/4" Female + NPT 1/4" Female
	Other on request

Pressure range code, unit bar

Code	Range
R137	0...0.4
R21	0...0.6
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
R38	0...35
RYY	Others on request

Option code

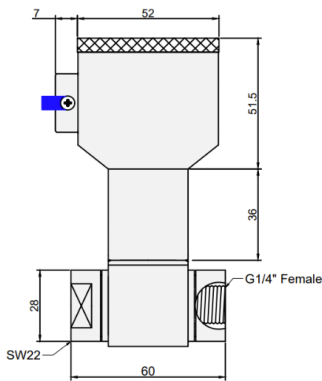
Code	Description
NO	"USE NO OIL" for Oxygen application
PCA	Adapter G1/4" Male + G1/4" Male
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate

How to order

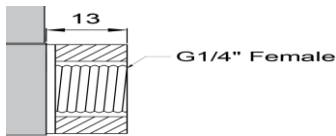
EDN.650.O1.D.G4.BR30

EDN.650, 4...20mA, DIN 43650 A, G 1/4" Female, 0...4 bar

Outline drawing



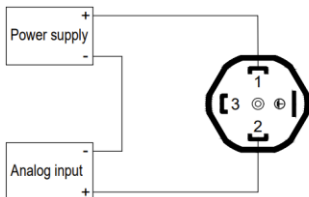
Process connection



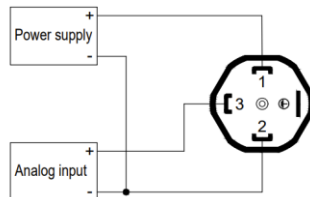
G 1/4" Female
DIN EN ISO 228

Pin assignment

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



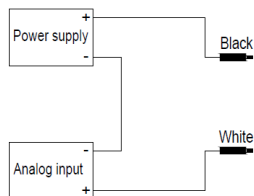
2-wire / current



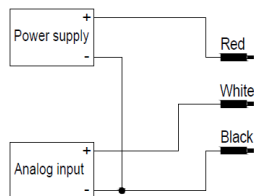
3-wire / voltage

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

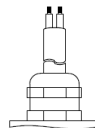
Flying leads with 2m cable



2-wire / current



3-wire / voltage



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