

**All st. steel pressure transmitters
with gold plated sensors
for hydrogen application.
accuracy $\leq 0.5\%$, $\leq 0.25\%$, $\leq 0.1\%$
series EDN.630**

*All stainless steel housing & wetted parts
Gold plated piezoresistive pressure sensors
Flameproof explosion for Hydrogen, H_2 application
Certified by KOSHA, Ex d IIB+H2 T4*



General features

- Specially designed for the measurement of Hydrogen H_2
- Pressure range from -1...0 bar to 0...1050 bar
- Ingress protection IP 65
- Housing parts of stainless steel
- Explosion-proof Ex d IIB H2 T4 certified by KOSHA

Application area

- Hydrogen supply line pressure measurement
- for hydrogen fueling stations
- systems for hydrogen production
- Hydrogen high-pressure storage system

General specification

Pressure ranges

-1...0 bar & 0...1 bar to 0...1050 bar
Min. span range, ≥ 200 mbar

Accuracy

included Linearity+Hysteresis+Repeatability

Accuracy code:

A4: $\leq 0.5\%$ FS

A7: $\leq 0.25\%$ FS

A9: $\leq 0.1\%$ FS in case of span range ≥ 200 mbar

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

0.5...4.5V, 3-wire system

Temperature range

Operating: -20...100°C

-40...125°C / option

Ambient: -20...100°C

Storage: -40...125°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.)



Pressure transmitter series EDN.630

Power supply

Available power : DC 12...30V

Response time : ≤ 5 ms

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

Materials

Wetted parts : st. steel 316L

Diaphragm of measuring sensors

: gold plated

Body : st. steel 304

Electrical connecting cable gland

Flameproof explosion certified

Pressure connection

NPT1/2", NPT1/4"

G1/4", G1/2"

9/16-18 UNF female thread

Protection

IP 65

Weight

approx. 975g



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Technical data

Input pressure range

Normal pressure:
-1...0 bar up to 0...1050 bar

Permissible static pressure:
1.3 x pressure range, max.1100 bar

Output signal / Supply

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

Voltage:
3-wire 0...10V $V_s=12...30$ VDC
0...5V
1...5V
0.5...4.5V
0.5...4.5V / 5V, ratio-metric [on request]

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...100°C
Compensated temperature: 0...70°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 / IEC 61326-1:2012

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.

Electric features in particular

- Over voltage protection, upto $\pm 33\text{V}$
- Reverse polarity voltage protection

Miscellaneous

Current consumption
Signal output current max. 25mA

Current: max. 7mA
4...20mA, 2-wire system
Signal output voltage

Voltage: max. 7mA
0...10V, 3-wire system
0...5V, 3-wire system
1...5V, 3-wire system
0.5...4.5V / 5V, ratio-metric

Ingress protection: IP65

EMC Test report for CE conformance

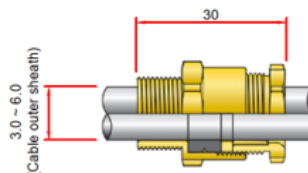
- EN 61326-2-3:2013 CCISPR II Group 1, Class A
- EN 61326-2-3: 2013 / IEC 61326-1:2012

Materials

Pressure port: Stainless steel 316L
Housing / body: Stainless steel 304
Sensor Diaphragm: Gold plated on Sensor Diaphragm
Wetted parts: Stainless steel 316L

Electrical connecting cable gland

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



Ordering information

Model code

EDN.630 · [] · [] · [] · [] · B [] · []

Electrical connection

A4	accuracy $\leq \pm 0.5\%$
A7	accuracy $\leq \pm 0.25\%$
A9	accuracy $\leq \pm 0.1\%$

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
O5	0.5...4.5V / 3-wire system

Electrical connection

FP	Flameproof conn. cable gland
M	M12 electrical plug

Process connection

G2	G 1/2"
G4	G 1/4"
N2	NPT 1/2"
N4	NPT 1/4"
U4	9/16-18 UNF female thread

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
R49	0...350
R50	0...400
R53	0...600
R55	0...1000
R70	0...1050
RY	Others on request

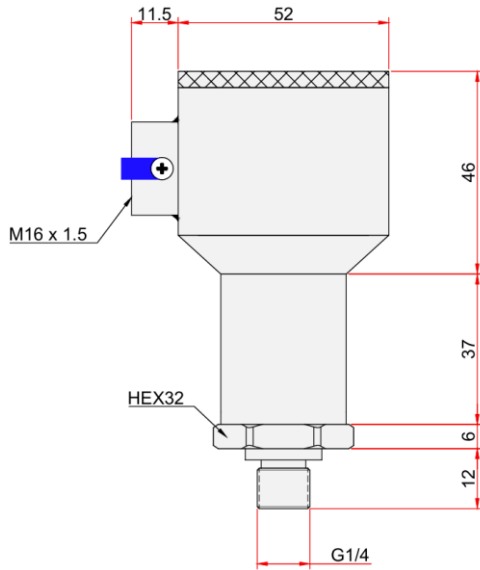
Code	Description
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
PCA	Adapter
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

EDN.630.A4.O1.FP.G4.BR50

EDN.630, 0.5%, 4...20mA, Flameproof conn. cable gland, G 1/4", 0...400 bar

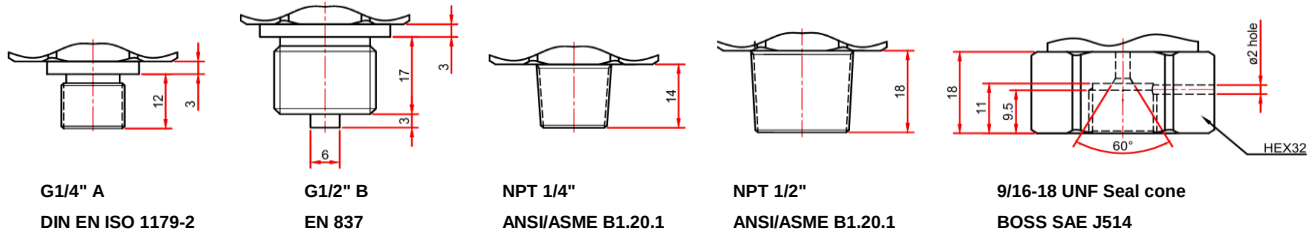
Pressure Transmitters with thread connection



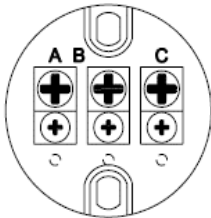
■ thread connection

ISO 1179-2, KS B0222				
Standard	G	h	SW	L
KS B0222	R 1/4"	13	32	21.5
	R 3/8"	15		23.5
	R 1/2"	19		27.5
A DIN EN ISO 1179-2	G 1/4"	14		22.5
	G 3/8"	16		24.5
	G 1/2"	20		28.5

Process connection

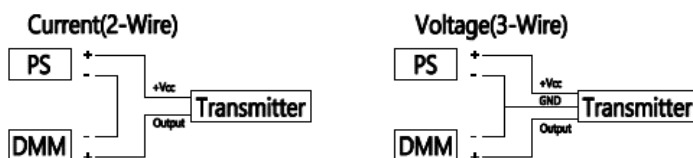


Pin assignment



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

Wiring



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