Pressure transmitters for Hydrogen Application series EDN.630

St. steel housing & st. steel pressure sensors
Gold plated on piezoresitive sensors
Explosion proof version mainly for Hydrogen, H_2

General features

- Specially designed for the measurement of Hydrogen
- Pressure range from -1…1 bar to 0…1000 bar
- Ingress production 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 transmitter series EDN.630

Pressure ranges
-1…0 bar to 0…1000 bar

Accuracy
included Linearity+Hysteresis+Repeatability
± 0.35% FS [Non-linearity per BFSL, ≤ 0.15% of span]
± 0.15% FS / option

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

Power supply
Available power : DC 12…30V
Best performance : DC 24V

Response time : ≤ 5ms

Isolation : > 100MΩ at 100 VDC

Materials
Wetted parts : st.steel 316L
Diaphragm
of measuring cell : gold plated
Body : st.steel 304

Electrical connecting cable gland
Flameproof

Pressure connection
R1/4", R1/2", R3/8" KS B0222
G1/4", G3/8",G1/2" A DIN EN ISO 1179-2
others on request

Temperature range
Operating: -40…120℃
-40…125℃ / option
Ambient: -40…100℃
Storage: -40…125℃
Temperature compensating range: -20…80℃

Thermal error
Zero thermal error: ±0.75%FS @ 25℃ (typ.)
Span thermal error: ±0.75%FS @ 25℃ (typ.)

Protection
IP 65

Weight
840g

Option
High temperature cooling device
up to 200℃
up to 300℃

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Technical data

Input pressure range

Norminal pressure:

-1…0 bar up to 0…1000 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
	0.5…4.5V / 5V ratio-metric	

Performance

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:	-40…120℃
Compensated tempearture:	0…60℃

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.

Materials

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

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

Ingress protection: IP65

EMC Test report for CE conformance

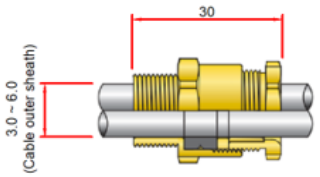
- EN 61326-2-3:2013 CCISPR II Group 1, Class A
- EN 61326-2-3: 2013 / IEC 61326-1:2012

Electric features in particular

- Over voltage protection, upto ± 33V
- Reverse polarity voltage protection

Electrical connecting cable gland

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



DAHO

Ordering information

Model code **EDN.630 · ___ · ___ · ___ · 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 connecting cable gland

Process connection	
R2	R 1/2"
R3	R 3/8"
R4	R 1/4"
G2	G 1/2"
G3	G 3/8"
G4	G 1/4"
N2	NPT 1/2"
N3	NPT 3/8"
N4	NPT 1/4"
U4	9/16-18 UNF female thread
others on request	

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
RYY	Others on request

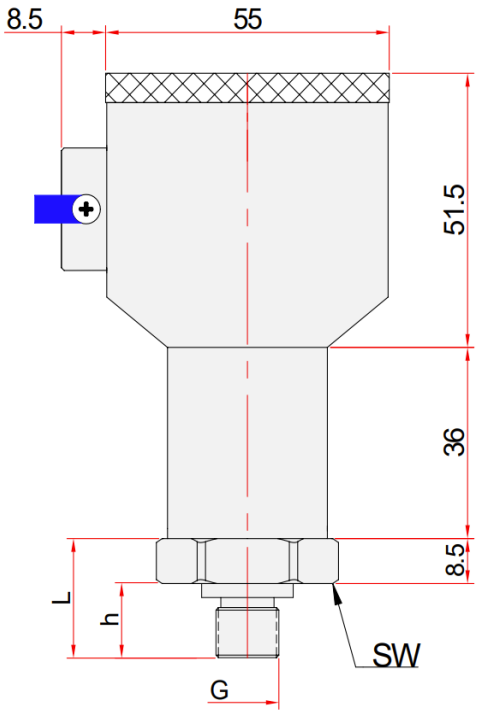
Option code

Code	Description
A6	Accuracy 0.15%
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
MC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

EDN.630.O1.FP.G4.BR49

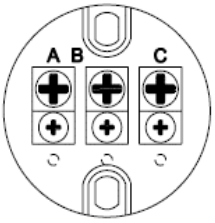
EDN.630, 4…20mA, connecting gland, G 1/4", 0-350 bar



■ 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

Pin assignment



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

Connection diagram

Wiring