

**Al. housing Pressure Transmitters
with LCD window
a/w diaphragm seal, MDB
with switches & RS485
series EDN.815**

Aluminum housing for industrial version
LCD window with a bar graph and a white back light
made of all st. steel for wetted parts
KOSHA, Ex d IIC T6 will be certified by November, 2025



General features

- Pressure range from 0...1.6 bar to 0...100 bar
- Multi-functional LCD, 4 1/2-digit
- Various pressure scale units available
- Zero point, range adjustable
- Switch function, 2 switches [option]
- RS485 digital communication [option]

Application area

- Hydraulic and pneumatic control systems
- Pump and compressors
- Cooling equipment and air conditioning system
- Pressure calibration, pressure checking
- Liquid pressure system and switch

General specification

Pressure ranges

0...1.6 bar to 0...100 bar

Accuracy

± 0.5% FS

included Linearity+Hysteresis+Repeatability

** the negative pressure ranges are not produced.

Overpressure

1.3 X pressure range

Output type

4...20 mA, 2-wire system

0...10 V, 3-wire system

0...5 V, 3-wire system

1...5 V, 3-wire system

0.5...4.5 V, 3-wire system

0.5...4.5 V / 5V, ratiometric

Power supply

Available power: DC 12...30V

Temperature range

Operating: -20...80 °C

Ambient: -20...60 °C

Storage: -10...80 °C

Temperature compensating range: 0...70 °C

Thermal error

Zero thermal error: ±0.75%FS @ 25 °C (typ.)

Span thermal error: ±0.75%FS @ 25 °C (typ.)

Isolation

> 100MΩ at 100 VDC



series EDN.815

Special functions included

- Switches, 2 contacts
- RS485 digital communication

Materials

Wetted parts: st. steel 316L

Body: Aluminum alloy

Special material of diaphragm [Options]

- Teflon / PTFE coated
- Hastelloy C22 or Hastelloy C276
- Monel
- Titanium
- Tantalum

Electrical connection Flameproof

Display

LCD, 4 1/2 - digit -1999...9999

Background Light white

Pressure connection

G 1/4", G 3/8", G 1/2", R 1/4", R 3/8", R 1/2",
NPT 1/4", NPT1/2"

Adjustable Pressure units

bar, mbar, MPa, kPa, psi, kg/cm2, mmH2O, inH2O
mmHg, inHg, torr, atm

Operation

Pressure range, zero point adjustment,
characteristic curve and damping rate are adjustable
on the device



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Technical specifications

Input pressure range

Normal pressure:
0...1.6 bar up to 0...100 bar

Permissible static pressure:
1.3 x pressure range

Output signal / Supply

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

Voltage:
3-wire system 0...10V $V_s=12...30$ VDC
 0...5V
 1...5V
 0.5...4.5V / analog output
 0.5...4.5V / 5V, ratio-metric

Performance

¹Accuracy: $\leq \pm 0.3\% \text{FSO @ } 25^\circ\text{C}$
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 °C
Compensated temperature: 0...60 °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: Aluminum alloy
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, 3-wire system
0...5V, 3-wire system
1...5V, 3-wire system
0.5...4.5V, 3-wire system
0.5...4.5V / 5V, ratio-metric

EMC Test report for CE conformance

- EN 61326-2-3:2013 / Class A
- EN 61326-2-3: 2013 / IEC 61326-1:2012

Special features

- Protection against reverse polarity connections ($\pm 40 \text{VDC}$).
- High Noise Immunity Performance against Electrical Fast Transient (EFT) noise.
- High Precision against variations in ambient temperature. ($\pm 1.3\%$ in $-20...70^\circ\text{C}$).
- Wide pressure operating range. 30% lower than the minimum and 30% higher than the maximum.
- Protection against instantaneous surge voltage.
- Durable design for severe vibration.

Electrical connecting cable gland

- IP66
- Materials: Brass with nickel plated

Ordering information

Model code

EDN.815

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B

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Output signal

O1	4...20 mA / 2-wire system
O2	0...10 V / 3-wire system
O3	0...5V / 3-wire system
O4	1...5V / 3-wire system
O5	0.5...4.5V / 5V, ratiometric
O6	0.5...4.5V / 12-30V, analog

Digital communication

O11	RS485
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2 relay channel, switches

O12	2 relay channel, switches
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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")
N2	NPT 1/2"
N4	NPT 1/4"

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

Option code

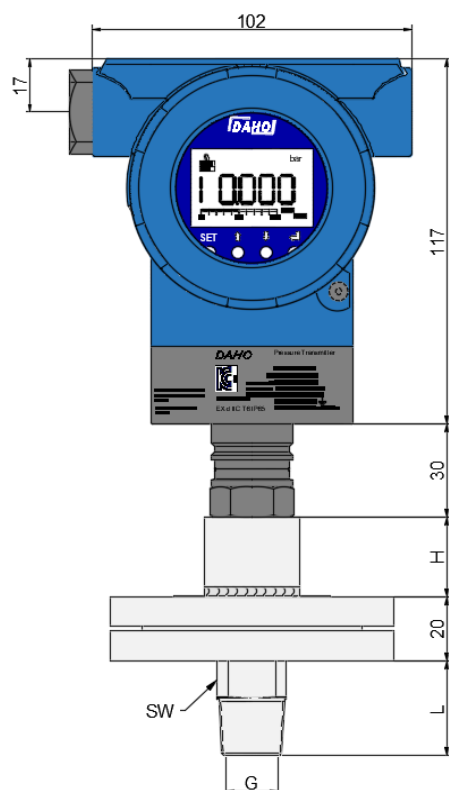
Code	Description
TFC	Teflon coated / PTFE coated
HC22	Hastelloy C22 / Hastelloy C276
MON	Monel
TIT	Titanium or Tantalum
NO	"USE NO OIL" for Oxygen application
TCD	Teflon coated on wetted part of diaphragm
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

EDN.815.O1.O11.G2.BR35 a/w MDB thread G 3/8"

EDN.815, 0.5%, 4...20mA, RS485, 0...16 bar a/w MDB process connection thread G 3/8"

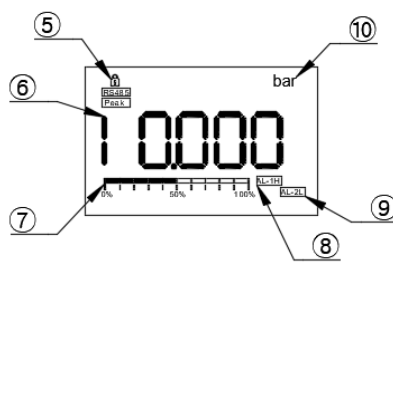
Outline drawing



■ Flange type chemical seals

ISO 1179-2, KS B0222				
Standard	G	H	SW	L
KS B0222	R 1/4"	15	24	29
	R 3/8"			31
	R 1/2"			33
A DIN EN ISO 1179-2	G 1/4"			30
	G 3/8"			32
	G 1/2"			35

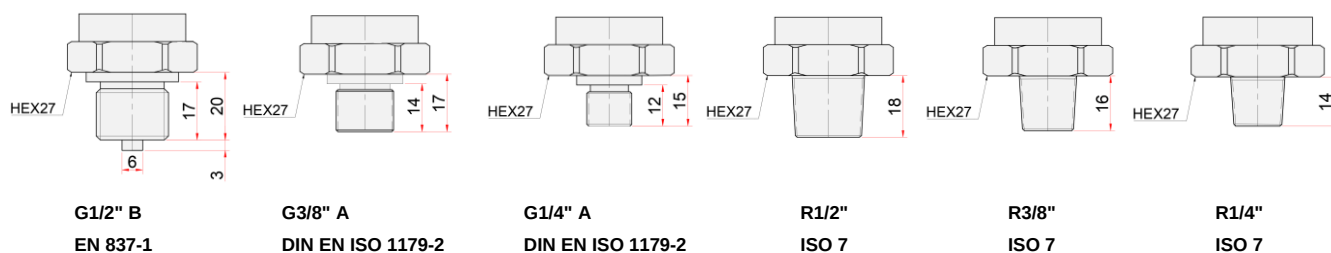
Display and Control unit



Functions

- ① Menu, Cancel
- ② Select function, increase
- ③ Select function, decrease
- ④ Confirm selected function or selected value
- ⑤ Lock mode
- ⑥ Pressure values & output signal values
- ⑦ Bar graph
- ⑧ Relay 1
- ⑨ Relay 2
- ⑩ Unit

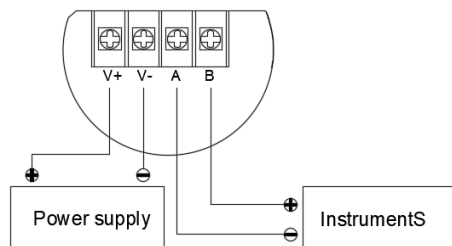
Process connection



Electrical connection Diagram

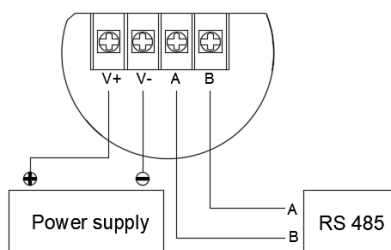
Analog output signal

Pin No.	Wire
V+	+Vcc
V-	-Vcc
B	Signal +
A	Signal -



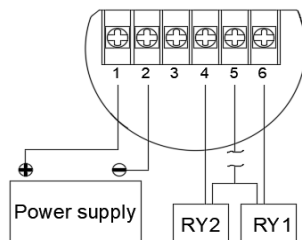
RS485 digital communication

Pin No.	Wire
V+	+Vcc
V-	-Vcc
A	RS 485A
B	RS 485B



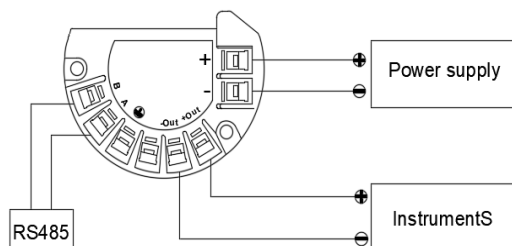
2 relay, switches

Pin No.	Wire
1	+Vcc
2	-Vcc
6	Relay 1
4	Relay 2
5	Relay COM



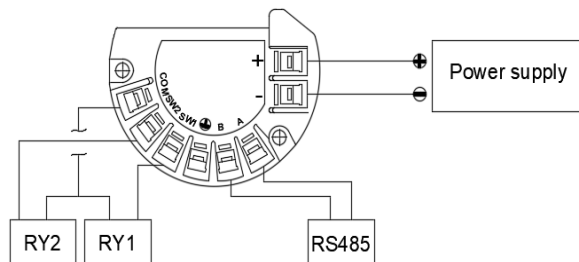
Analog + RS485 digital

Pin No.	Wire
+	+Vcc
-	-Vcc
+Out	+ Signal
-Out	- Signal
A	RS485 A
B	RS485 B



Analog + 2 relay + RS485 digital

Pin No.	Wire
+	+Vcc
-	-Vcc
A	RS 485A
B	RS 485B
SW1	Relay 1
SW2	Relay 2
COM	Relay COM



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