All st. steel pressure transmitter LCD window with a back light a/w diaphragm seal, MDB series EDN.715

Housing. body, wetted parts made of st. steel
optionally, 2 relay channels, switches & RS485
Declaration of Conformity, CE

General features

- Pressure range from 0…1.6 bar to 0…250 bar
- Multi-functional LCD, 4 1/2-digit
- Various pressure scale units available
- Zero point, range adjustable
- Switch function, 2 switches
- RS485 digital communication

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…250 bar

Accuracy
± 0.5% FS
included Linearity+Hysteriesis+Repeatability

Overpressure
1.3 X pressure range

Output type
4…20 mA, 2-wire system
0…10V, 0…5V, 1…5V, 0.5…4.5V, 3-wire system

Power supply

Available power:	DC 12…30V
Ref. power:	DC 24V

Temperature range

Operating:	-20…100 ℃
	-40…125 ℃ / option
Ambient:	-20…100 ℃
Storage:	-40…120 ℃
Temperature compensating range:	0…70℃

Thermal error

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

series EDN.715 for hygienic application

Special functions included / options
- RS485 digital communication
- 2 channel switches

Electrical connection
Flameproof explosion cable gland
M12 plug

Isolation	> 100MΩ at 100 VDC
Display	LCD, 4 1/2 digit, -1999…9999 Bar graph
Background	White back light

Materials

Wetted parts:	St.steel 316L
Body:	St.steel

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

Norminal pressure:

0…1.6 bar up to 0…250 bar

Permissible static pressure:

1.3 x pressure range

Output signal / Supply

Current:

2-wire	4…20mA	Vs=12…30 VDC

Voltage:

3-wire	0…10V, 0…5V, 1…5V 0.5…4.5V	Vs=12…30 VDC

Performance

[1]Accuracy: ≤ ±0.3%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:	-20…100°C
Compensated tempearture:	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, 0.5…4.5V, 3-wire system

Signal output voltage

EMC Test report for CE conformance

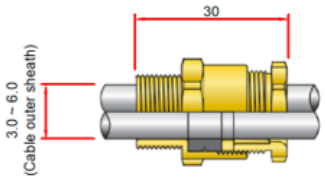
- EN 61326-2-3:2013 / Class A
- EN 61326-2-3: 2013 / IEC 61326-1:2012

Special features

- Protection against reverse polarity connections (±40VDC).
- High Noise Immunity Performance against Electrical Fast Transient (EFT) noise.
- High Precision against variations in ambient temperature. (±1.3% in -20…70℃).
- 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
- Cable outer : 3.0…6.0 mm



DAHO

Ordering information

Model code **EDN.715** · ____ · ____ · ____ · ____ · ____ · ____ · **B** ____ · ____

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, ratio-metric
O6	0.5…4.5V / 12-30V, analog

Digital communication	
O11	RS485

2 relay channel, switches	
O12	2 relay channel, switches

Accuracy	
A5	≤ ± 0.5 % F.S

Electrical connection	
FP	Flameproof cable gland
M	M12 plug with 12 pins

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
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
RYY	Others on request

Option code

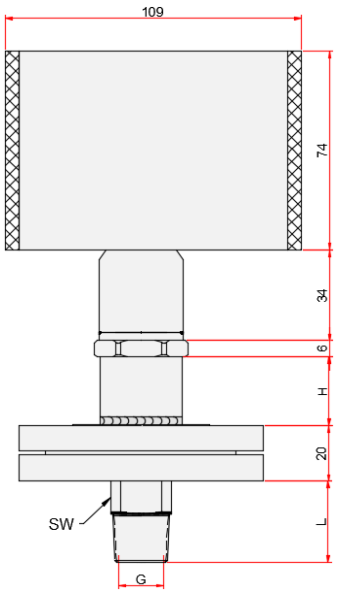
Code	Description
RS	Restrictor screw in socket hole
NO	"USE NO OIL" for Oxygen application
AD	Adapter
CD2	Cooling device up to 200℃
CD3	Cooling device up to 300℃
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

How to order

EDN.715.O1.FP.G3.BR35 aw MDB G3/8",A4

EDN.715, 0.5%, 4…20mA, Frameproof cable grand, 0…16 bar aw MDB G3/8"

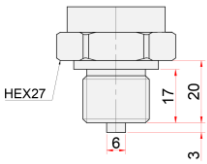
Pressure Transmitters with chemical seals



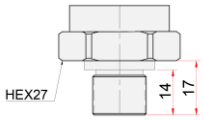
■ Flange type chemical seals

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

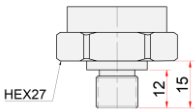
Process connection



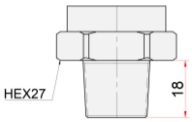
G1/2" B
EN 837-1



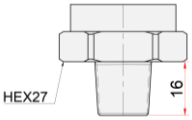
G3/8" A
DIN EN ISO 1179-2



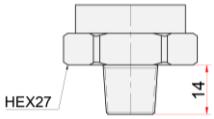
G1/4" A
DIN EN ISO 1179-2



R1/2"
ISO 7

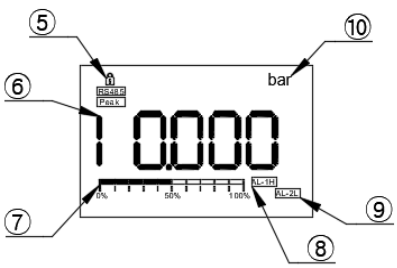


R3/8"
ISO 7



R1/4"
ISO 7

Display and Control unit



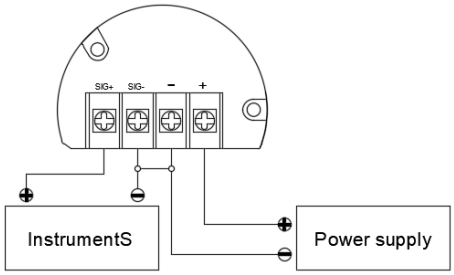
Functions

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

Electrical connection Diagram

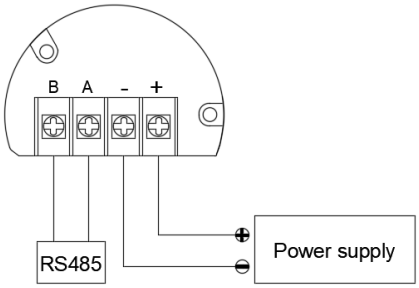
Analog output signal

Pin No.	Wire
+	+Vcc
-	-Vcc
+SIG	Out put +
-SIG	GND



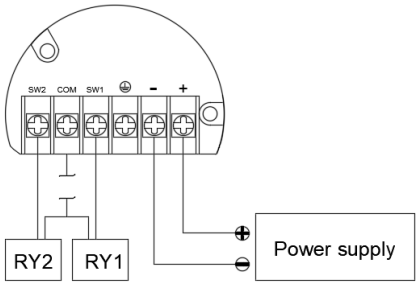
RS485 digital communication

Pin No.	2-wire
+	+Vcc
-	-Vcc
A	RS 485A
B	RS 485B



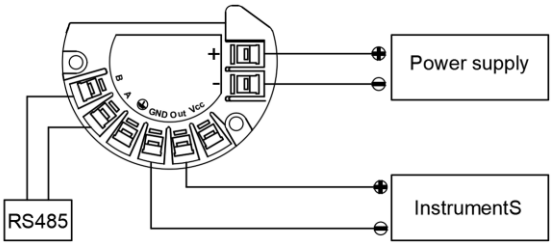
2 relay, switches

Pin No.	Wire
+	+Vcc
-	-Vcc
SW1	Relay 1
SW2	Relay 2
COM	Relay COM



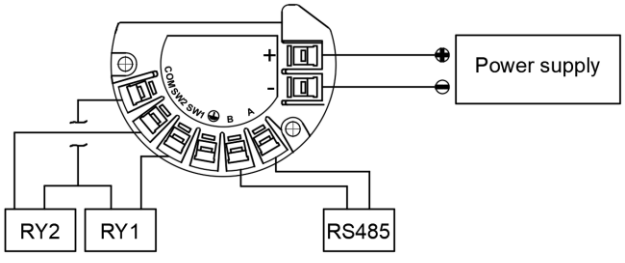
Analog + RS485 digital

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



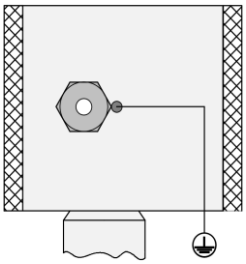
Analog + 2 relay + RS485 digital

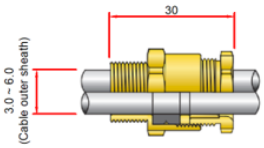
Pin No.	2-wire
+	+Vcc
-	-Vcc
A	RS 485A
B	RS 485B
SW1	Relay 1
SW2	Relay 2
COM	Relay COM



Electrical connection Diagram

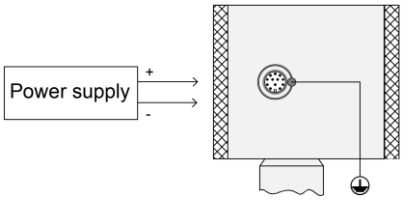
Cable gland





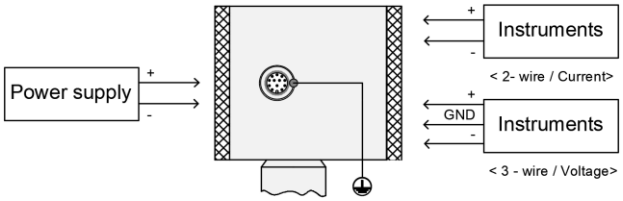
Electrical plug, M12

No Output signal



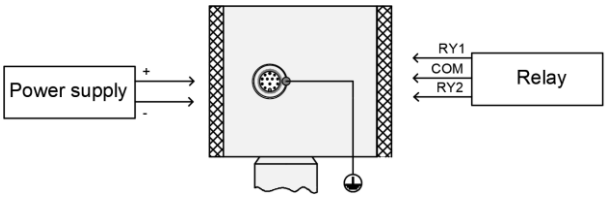
Pin No.	Wire
1	+Vcc
2	-Vcc

Output signal



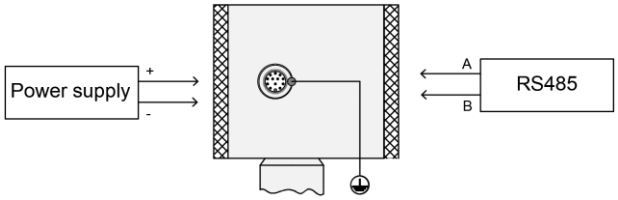
Pin No.	Current	Voltage
1	+Vcc	+Vcc
2	-Vcc	-Vcc
3	+Out	+Out
4	-Out	GND
5		-Out
12	earth	earth

Relay signal



Pin No.	Wire
1	+Vcc
2	-Vcc
6	Relay 1
7	Relay 2
8	COM
12	earth

RS485 Communication



Pin No.	Wire
1	+Vcc
2	-Vcc
9	RS 485A
10	RS 485B
12	earth

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