Aluminium housing pressure transmitters
LCD white bright digital window
series EDN.830

CE

RS485 communication
2 channel relays, swiches
with Declaration of Conformity, CE

General features

- Pressure range from -1…0 bar to 0…1050 bar
- Multi-functional LCD, 4 1/2-digit
- Various pressure scale units available
- Zero point, range adjustable
- 2 channe relays, switch functions [option]
- RS485 digital communication [option]

Application area

- Semiconductor industry
- Pharmacetical and midicine industry
- Hydraulic and pneumatic control systems
- Pressure calibration, pressure checking
- Liquid pressure system and switch

Pressure transmitter, series EDN.830

General specification

Pressure ranges
From -1…0 bar, 0…1 bar to 0…1050 bar
Min. span range is 1 bar

Accuracy
included Linearity+Hysteresis+Repeatability
± 0.5% FS

[options]
- ± 0.35% FS / option (pressure range, ≥ 2 bar)
- ± 0.15% FS / option (pressure range, ≥ 2 bar)

Overpressure
1.3 x pressure range

Output signal
4…20mA, 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
Temperature compensating range: 0…80℃
Operating: -20…80℃
-40…125 ℃ / option
Ambient: -40…100 ℃
Storage: -40…100 ℃

Thermal error
Zero thermal error: ±0.75%FS @ 25℃, typical
Span thermal error: ±0.75%FS @ 25℃, typical

Special functions [option]
- 2 channe relays, 2 switches.
- RS485 digital communication.

Relay 2 channel relays

Isolation > 100MΩ at 100 VDC

Electrical connection Flameproof cable gland / M12

Display LCD, 4 1/2 - digit, -1999…9999

Background Light white

Materials
Wetted parts: St.steel 316L
Diaphragm of measuring sensors : gold plated
Body: Aluminum alloy

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 window
Pressure ranges.
zero point adjustment.
characteristic curve and damping rate are adjustable on the device.

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Technical specifications

Input pressure range

Norminal pressure:

-1…0 bar, 0…2 bar up to 0…1050 bar

Permissible static pressure:

1.3 x pressure range, max.1100 bar

Output signal / Supply

Current:

2 channe 4…20mA Vs=12…30 VDC

Voltage:

3-wire 0…10V, 0…5V, 1…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…80℃

Compensated tempearture: 0…60℃

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

Wetted parts: stainless steel 316L

Housing / body: Aluminum alloy

Sensor diaphragm: Gold plated on Sensor Diaphragm

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 max. 25mA

EMC Test report for CE conformance

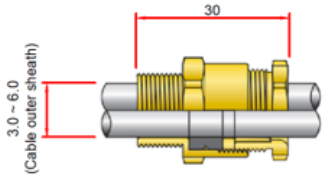
- EN 61326-2-3:2013 / Class A
- EN 61326-2-3: 2013 / IEC 61326-1:2012

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



Ordering information

Model code **EDN.830 · ____ · ____ · ____ · ____ · ____ · ____ · B ____**

Accuracy	
A4	≤ 0.5 % F.S
A5	≤ 0.35 % F.S
A8	≤ 0.15 % F.S

Output analog 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
O6	0.5…4.5V / 3-wire system

Electrical connection	
FP	Flameproof cable gland

RS485 digital communication	
RS485	RS485 digital comm.

2 channel relays, switches	
2 SW	2 channel relays, switches

Process connection	
G2	G 1/2" (PF 1/2")
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

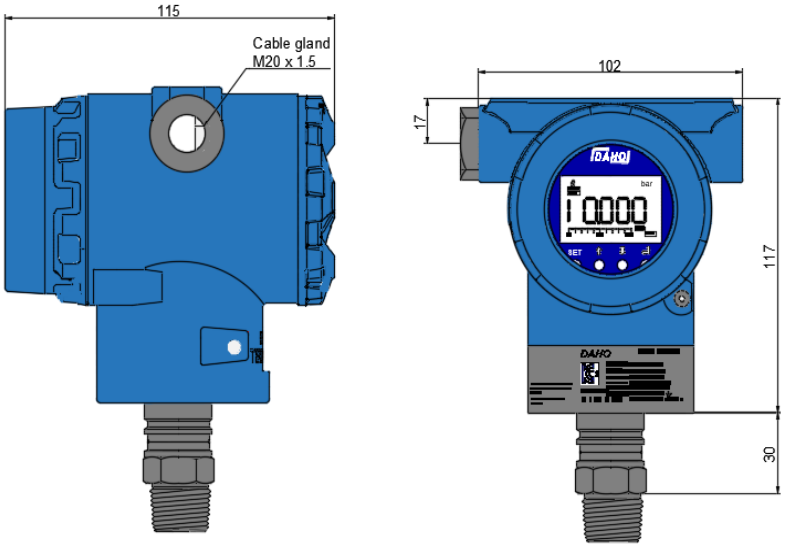
Code	pressure range
R19	-1…0
R23	0…1
R26	0…1.6
R28	0…2.5
R30	0…4
R32	0…6
R33	0…10
R35	0…16
R37	0…25
R39	0…40
R41	0…60
R43	0…100
R45	0…160
R47	0…250
R50	0…400
R53	0…600
R55	0…1000
R56	0…1050
RYY	Others on request

How to order

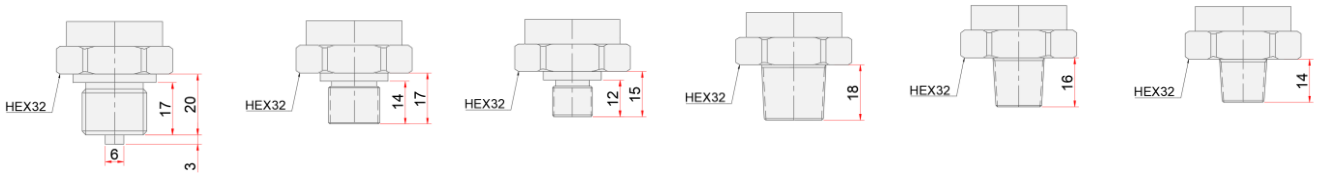
EDN.830.O1.RS485. FC.G4.BR35

EDN.830, 4…20mA, RS485, Frameproof cable gland, G 1/4", 0…16 bar

Outline drawing



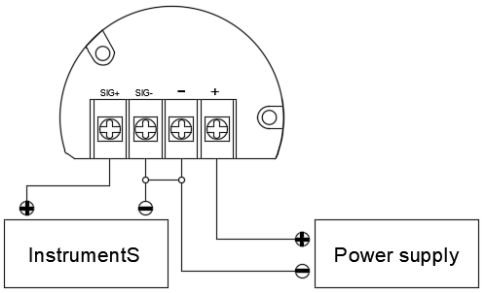
Process connection



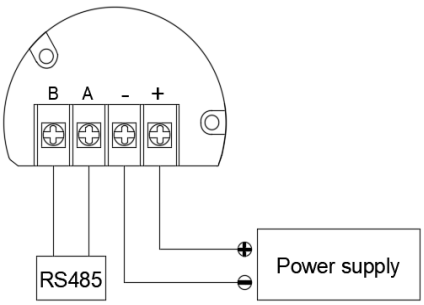
G1/2" B	G3/8" A	G1/4" A	R1/2"	R3/8"	R1/4"
EN 837-1	DIN EN ISO 1179-2	DIN EN ISO 1179-2	ISO 7	ISO 7	ISO 7

Electrical connection Diagram

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



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



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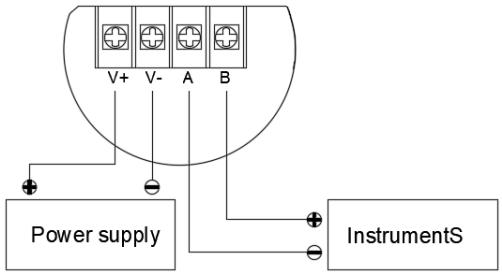
Electrical connection Diagram

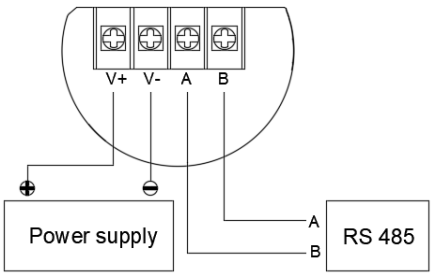
Analog output signal

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



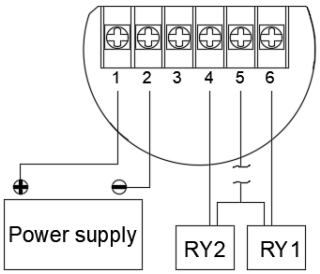
RS485 digital communication

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



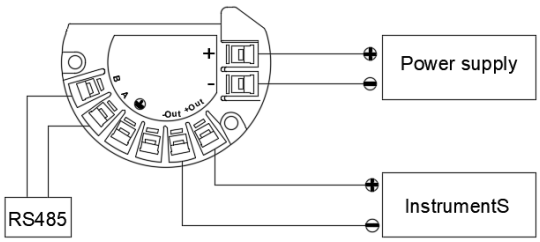
2 relay, switches

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



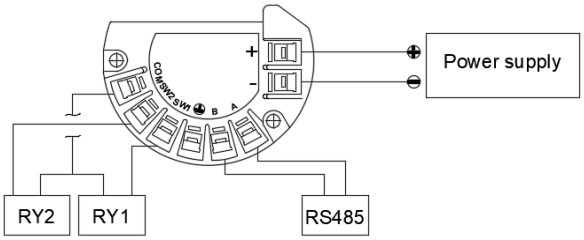
Analog + RS485 digital

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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