

Pressure transmitters
0.5...4.5V / 5V ratio-metric
EDN.345 accuracy 0.5%
EDN.343 accuracy 0.25%
EDN.341 accuracy 0.1%

wetted parts & housing are made of st. steel
 for second battery application
 with Declaration of Conformity, CE



General features

- Piezosistive Silicon Pressure Transmitters for industrial applications, ratiometric output
- Pressure range from -1...0 bar & 0...1 bar to 0...1000 bar
- Wiring with DIN43650A L-connector or various connectors
- Ingress protection IP65
- Housing parts of stainless steel

Application area

- Vehicle industry for secondary battery
- Hydraulic and pneumatic control systems
- Pump and compressors
- Control equipments and air conditioning system
- pressure checking system

General specification

Pressure ranges

-1...0 bar to 0...1 bar to 0...1000 bar

Accuracy

including non-linearity, hysteresis, zero point and full scale error according to IEC 61298-2

EDN.345 accuracy $\leq 0.5\%$
 EDN.343 accuracy $\leq 0.25\%$
 EDN.341 accuracy $\leq 0.1\%$

Output type

0.5...4.5V / 5V, ratio-metric, 3-wire system

Overpressure 1.3 X pressure range

Power supply 5.0 V_{DC} $\pm$ / Ref. power:

Response time $\leq 10\text{ms}$

Isolation $> 100\text{M}\Omega$ at 100 V_{DC}

Reverse Polarity and overvoltage protection $\pm 40\text{V}_{\text{DC}}$

Materials

Wetted parts: St. steel 316L
 Sensor sealing: FKM
 Body: St. steel 304

Thermal error

Zero thermal error: $\pm 0.15\%\text{FS}$ @ 25 °C, typical
 Span thermal error: $\pm 0.15\%\text{FS}$ @ 25 °C, typical



Pressure transmitter series EDR.341

Temperature range

Compensated temperature range: 0...80 °C

Temperature range of

Operating: -20...80 °C
 -40...125 °C / option
 Ambient: -40...100 °C
 Storage: -40...100 °C

Electrical connection

DIN43650 A IP65
 M12 Plug IP65
 Cable type IP67
 mPm Plug IP65
 Underwater plug IP68

Pressure connection

G 1/4", DIN 3852-E with sealing by DIN 3869 ring seals
 G 1/2"
 R 1/4"
 R 1/2"
 Others on request

Protection

IP65, DIN 43650A plug & mPm plug
 IP67, Flying cable
 IP68, Underwater plug with flying cable

Weight

Approx. 140g



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Technical specifications

Input pressure range

Normal pressure:

-1...0 bar up to 0...1000 bar

Permissible static pressure:

1.3 X pressure range, max.1100 bar

Output signal / Supply

Voltage:

3-wire 0.5...4.5V ratiometric $V_s=5,0 V_{DC} \pm 0,5 V$

Reverse Polarity and Overvoltage Protection

$\pm 40 V_{DC}$

Performance

¹Accuracy: $\leq \pm 0.5\% FSO @ 25^\circ C$

¹ accuracy according to IEC 60770 - limit point adjustment including non-linearity, hysteresis as well as repeatability

Permissible load / R_L

Voltage: 3-wire, $R_L \min=10k\Omega$

Influence effects:

Supply: $\pm 1.0\% FSO/5V$

Longterm stability: $\leq \pm 0.025\% FS / \text{year}$

Response time: $< 10ms$

Thermal effects (Offset and Span) / Permissible temperatures

FS thermal error: $\pm 0.75\% FS @ 25^\circ C$, typical

Zero thermal error: $\pm 0.75\% FS @ 25^\circ C$, typical

Operating temperature: $-30...100^\circ C$

Compensated temperature: $-20...70^\circ C$

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

Voltage:

0.5...4.5V ratiometric, 3-wire system

Ingress protection:

IP65 with plug DIN 43650A

IP65 with M12 plug

IP67 with flying cable type

IP65 with mPm plug

IP68 with underwater plug

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 ($\pm 40V_{DC}$)

■ High Noise Immunity Performance against Electrical Fast Transient (EFT) noise. ($\pm 2,000V$ CE Test)

■ High Precision against variations in ambient temperature. ($\pm 1.3\%$ in $-20...70^\circ C$)

■ Wide pressure operating range.

30% lower than the minimum
and 30% higher than the maximum.

Ex.) Operable -0.5bar to 13bar for 0...10bar transmitters

■ Protection against instantaneous surge voltage

■ Durable design for severe vibration

■ Sturdy st. steel housing

■ Blocking from the outside due to laser welding

Ordering information

Model code

EDR.34X · · · · B

Third digit according to accuracy class

5	accuracy ≤ 0.5 %
3	accuracy ≤ 0.25 %
1	accuracy ≤ 0.1 %

Electrical connection

P	mPm plug
D	DIN 43650 A
M	M12 plug
C	2m flying cable
U	underwater plug

Process connection

G2	G 1/2" (PF 1/2")
G4	G 1/4" (PF 1/4")
R2	R 1/2" (BSPT 1/2")
R4	R 1/4" (BSPT 1/4")

Pressure range code, unit bar

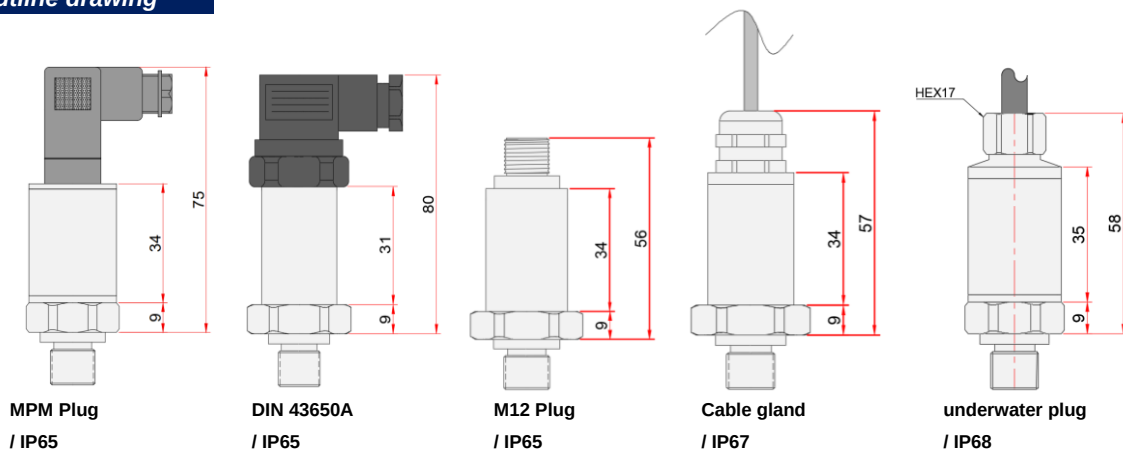
Code	Range
R19	-1...0
R23	0...1
R26	0...1.6
R28	0...2.5
R30	0...4
R34	0...6
R33	0...10
R35	0...16
R37	0...25
R39	0...40
R41	0...60
R43	0...100
R45	0...160
R47	0...250
R50	0...400
R53	0...600
R55	0...1000
RYY	others on request

How to order

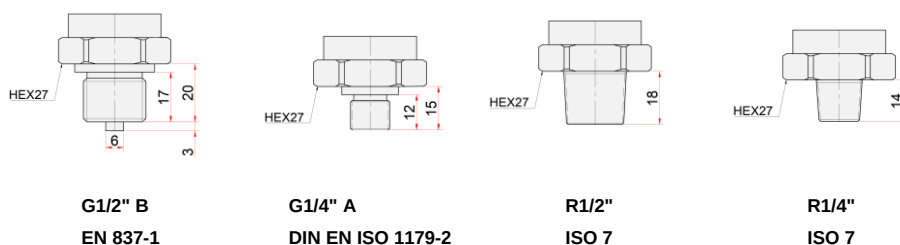
EDR.341.O5.P.G4.BR35

EDR.341, 0.5...4.5V ratiometric, mPm plug, G1/4", 0...16bar

Outline drawing

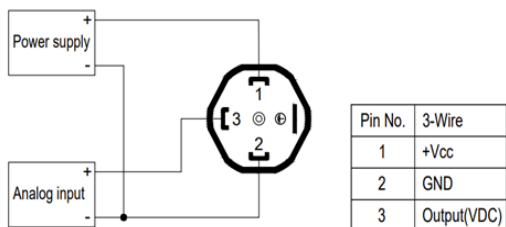


Process connection

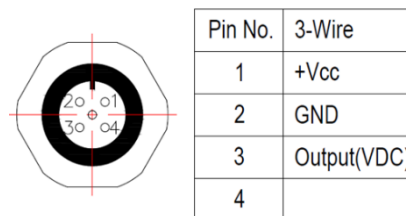


Pin assignment

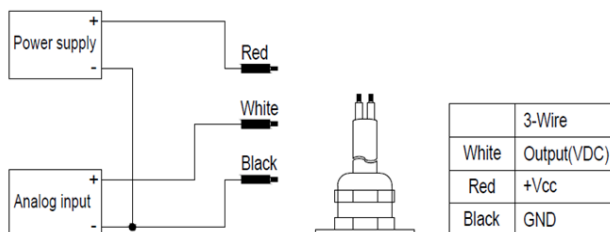
DIN 43650A connector according to DIN EN 175301-803A



M12 x 1, 5-pin / male



± 40 VDC



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