

Pressure transmitters for BOU of trains & subways series EDA.378



Zero & Span Adjustement function.

*All wetted parts & housing are made of st. steel.
with Declaration of Conformity, CE*

General features

- Specially designed for BOU of train industry
- Pressure range from 0...10 bar to 0...40 bar
- Wetted & housing parts of stainless steel
- CE certified, declaration of conformity
- Zero & Span Adjustement function
- 3-years warranty after installation

Application area

- Brake Operating Units of train & subway
- Hydraulic and pneumatic control systems.
- Monitorin of high quaified control system

General specification

Pressure ranges

0...1.6 bar to 0...40 bar

Accuracy

± 0.25% F.S

included Linearity+Hysteresis+Repeatability

Overpressure

1.3 X pressure range

Output type

Voltage output : 1...5V, 3-wire system

Power supply

Available power : DC 12...20V

Response time : ≤ 5ms

Isolation : > 100MΩ at 100 VDC

Temperature range

Operating : -20...120 °C

Compensated : -10...70 °C

Thermal error

Zero thermal shift error : ±0.75%FS @ 35 °C (typ.)

Span thermal shift error : ±0.75%FS @ 35 °C (typ.)

Materials

Wetted parts : St.steel 316L

Sensor sealing : No O-ring

Body : St.steel 304



Pressure transmitter series EDA.378

Electrical connection

Wiring with M12 x 1 circular connector

mPm plug

Cable type

Pressure connection

G 1/4" (DIN 3852-E with sealing by DIN 3869 ring seals)

7/16-20 UNF male & female

Whether protection

Ingress production IP65 to IP68

Weight

Approx. 140g

Option

High temperature adapter, cooling device

up to 200 °C / up to 300 °C

Technical specifications

Input pressure range

Normal pressure:
0...1.6 bar up to 0...40 bar

Permissible static pressure:
1.3 x pressure range, max. approx. 50 bar

Output signal / Supply

Voltage: 1...5V, 3-wire system $V_s=12...30$ VDC

Performance

¹Accuracy: $\leq \pm 0.25\% \text{FSO @ } 25^\circ\text{C}$
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
-40...+125 °C / option
Compensated temperature: -10...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

Voltage: 1...5V, 3-wire system

EMC Test report for CE conformance

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

Ingress protection: IP65

Ordering information

Model code

EDA.378 · [] · [] · [] · [] · B []

Output signal

O4	1...5V / 3-wire system
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Accuracy

A3	$\leq \pm 0.25\%$ F.S
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Electrical connection

P	mPm plug
M	M12 plug
C	2m flying cable

Process connection

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

Pressure range code, unit bar

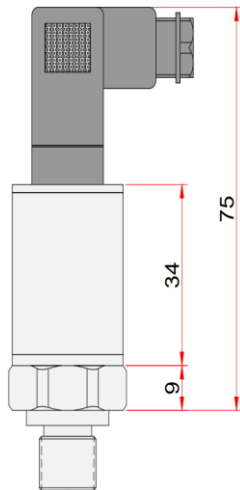
Code	Range
R26	0...1.6
R28	0...2.5
R30	0...4
R32	0...6
R33	0...10
R35	0...16
R37	0...25
R39	0...40
RYY	Others on request

How to order

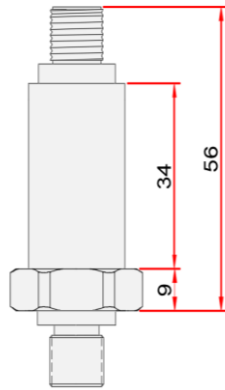
EDA.378.O4.A3.M.G4.BR35

EDA.378, 1...5V, M12 plug, G 1/4", 0...16 bar

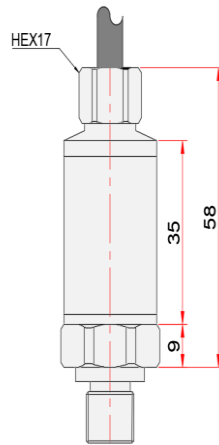
Outline drawing



mPm plug type
/ IP65

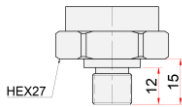


M12 plug type
/ IP65

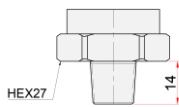


underwater plug
/ IP68

Process connection



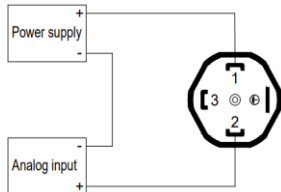
G1/4" A
DIN EN ISO 1179-2



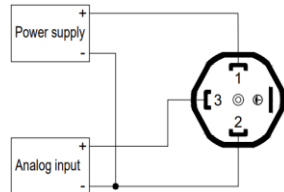
R1/4"
ISO 7

Pin assignment

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



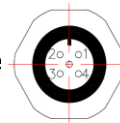
2-wire / current, 4...20mA



3-wire / voltage, 0...10V, 0...5V, 1...5V

Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)

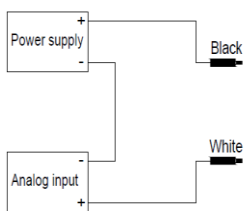
pe



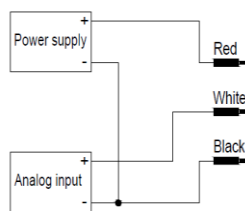
M12 x 1, 5-pin / male

Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		

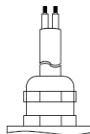
Flying leads with 2m cable



2-wire / current, 4...20mA



3-wire / voltage, 0...10V, 0...5V, 1...5V



	2-Wire	3-Wire
White	Output(mA)	Output(VDC)
Red		+Vcc
Black	+Vcc	GND