

Pressure transmitter for refrigeration system series EDN.336



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

General features

- Piezoresistive silicon pressure sensors
- Pressure range from -1...0 bar to -1...50 bar
- Wiring with M12 x 1 circular connectors
- Electrical connection DIN 43650, 2m flying cable & others
- Ingress protection IP65
- All stainless steel for wetted parts and housing

Application area

- for refrigeration applications
- for air-conditioning applications
- for heating applications
- in the field of simultaneous application
of negative and positive pressure.

General specification

Pressure ranges

from -1...0 to -1...-50 bar
from 0...1.6 upto 0...200 bar

Accuracy

≤ ± 0.5% F.S
included Linearity+Hysteresis+Repeatability

Overpressure

1.3 X pressure range

Output signal

4...20 mA, 2 wire loop system
0...10V, 3-wire system
0...5V, 3-wire system
1...5V, 3-wire system

Power supply

Available power : DC 12...30V

Temperature range

Compensated temperature range: 0...70 °C
Operating: -20...80 °C
-40...+125 °C / option
Ambient: -20...85 °C
Storage: -40...100 °C

Thermal error

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



Pressure transmitter series EDN.336

Isolation : > 100MΩ at 100 VDC
Response time : ≤ 5ms

Materials

Wetted parts : St. steel 316L
Sensor sealing : No O-ring
Body : St. steel 304

Electrical connection with weather protection

mPm plug : IP65
2m flying cable : IP67 / [option, IP68]
DIN 4650 A : IP65
M12 Plug : IP65

Pressure connection

G 1/4" : DIN 3852-E with sealing
by DIN 3869 ring seals
R 1/4" : PT 1/4"
7/16-20 UNF male
7/16-20 UNF female

Weight : Approx. 140g



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Technical data

Input pressure range

Nominal pressure:

-1...0 bar to -1...50 bar & 0...1.6 bar upto 0...200 bar

Permissible static pressure:

1.3 x pressure ranges

Output signal / Supply

Current:

2-wire system 4...20mA Vs=12...30 VDC

Voltage:

3-wire system 0...10V Vs=12...30 VDC
0...5V
1...5V
0.5...4.5V

Performance

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

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: $\leq \pm 0.5\% \text{FS} / \text{year}$

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...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.

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

Ingress protection: IP65 & IP68

Materials

Pressure port: Stainless steel 316L

Housing / body: Stainless steel 304

Sensor diaphragm: Stainless steel 316L

Wetted parts: Stainless steel 316L

EMC Test report for CE conformance

■ EN 61326-2-3:2013 / Class A

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

Ordering Information

Model code EDN.336 · B

Output signal	
O1	4...20mA / 2-wire system
O2	0...10V / 3-wire system
O3	0...5V / 3-wire system
O4	1...5V / 3-wire system

Electrical connection	
P	mPm plug
C	2m flying cable
D	DIN 43650 A
M	M12 plug

Process connection	
G4	PF 1/4"
R4	PT 1/4"
U1	UNF 7/16"-20 male
U2	UNF 7/16"-20 female
RYY	Others on request

Pressure range code, unit bar

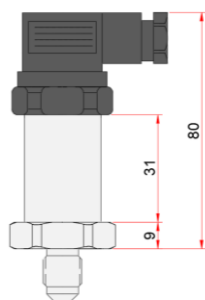
Code	Range in bar
R01	-1...50
R02	-1...35
R05	-1...24
R06	-1...20
R07	-1...15
R09	-1...9
R11	-1...5
R19	-1...0
R26	0...1.6
R28	0...2.5
R30	0...4
R32	0...6
R33	0...10
R35	0...16
R37	0...25
R39	0...40
R41	0...60
R43	0...100
R45	0...160
R46	0...200
RYY	Others on request

How to Order

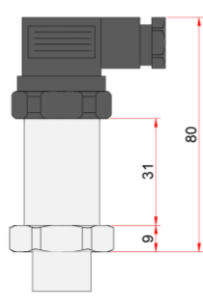
EDN.336.O1.C.U2.R02

EDN.336, accuracy $\pm 0.5\%$, 4...20mA, 7/16"-20 UNF(Female), 2m flying cable, -1...35 bar

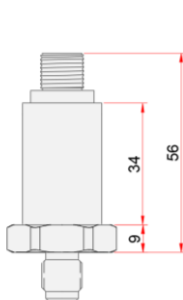
Outline drawing



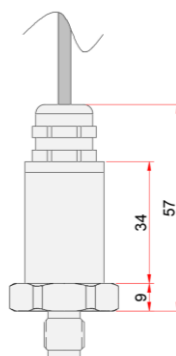
DIN 43650 A Type



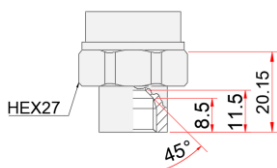
M12 Plug Type



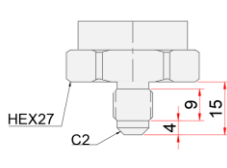
Cable Gland Type



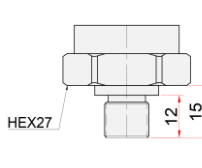
Process connection



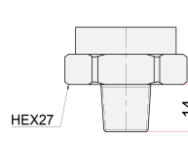
7/16"-20UNF / Female
SAE J513



7/16"-20UNF / male
SAE J513

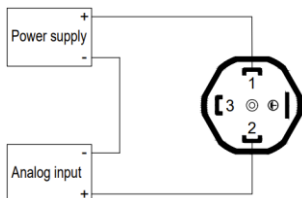


M12 x 1, 5-pin / male

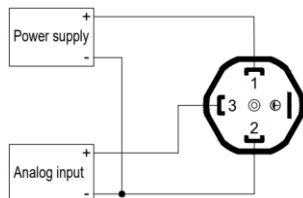


Pin assignment

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

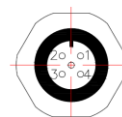


2-wire / current

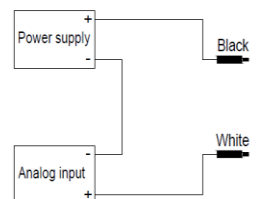


3-wire / voltage

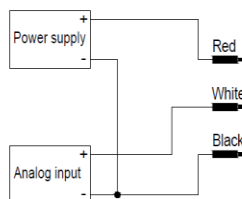
Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)



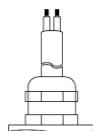
Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)
4		



2-wire / current



3-wire / voltage



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

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