

Pressure transmitter for refrigeration applications 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

-1...0 bar to -1...50 bar & upto 0...40 bar

Accuracy

± 0.5% F.S

included Linearity+Hysteresis+Repeatability

Overpressure

1.3 X pressure range

Output type

Current (2-wire) : 4...20mA

Voltage (3-wire) : 0...10V, 0...5V, 1...5V

Power supply

Available power : DC 12...30V

Temperature range

Operating : -20...80 °C

Compensated : 0...70 °C

Thermal error

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

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

Isolation : > 100MΩ at 100 VDC

Response time : ≤ 5ms



Pressure transmitter series EDN.336

Materials

Wetted parts : St. steel 316L

Sensor sealing : No O-ring

Body : St. steel 304

Electrical connection with weather protection

DIN 4650 A : IP65

M12 Plug : IP65

2m flying cable : IP67

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

Option

Cooling device : High temperature adapter
up to 200 °C / up to 300 °C



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Technical data

for refrigeration applications

Input pressure range

Normal pressure:

-1...0 bar up to -1...50 bar & upto 0...40 bar

Permissible static pressure:

Piezoresistive silicon pressure sensors

Output signal / Supply

Current:

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

Voltage:

3-wire 0...10V, 0...5V, 1...5V Vs=12...30 VDC

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

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: $< 5 \text{ ms}$

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: $-20 \dots 80^\circ\text{C}$

Compensated temperature: $0 \dots 70^\circ\text{C}$

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

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 • for refrigeration applications 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

D	DIN 43650 A
M	M12 plug
C	2m flying cable

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
R01	-1...50 bar
R02	-1...35 bar
R05	-1...24 bar
R06	-1...20 bar
R07	-1...15 bar
R09	-1...9 bar
R11	-1...5 bar
R19	-1...0 bar
R33	0...10 bar
R35	0...16 bar
R37	0...25 bar
R39	0...40 bar
RYY	Others on request

Option code

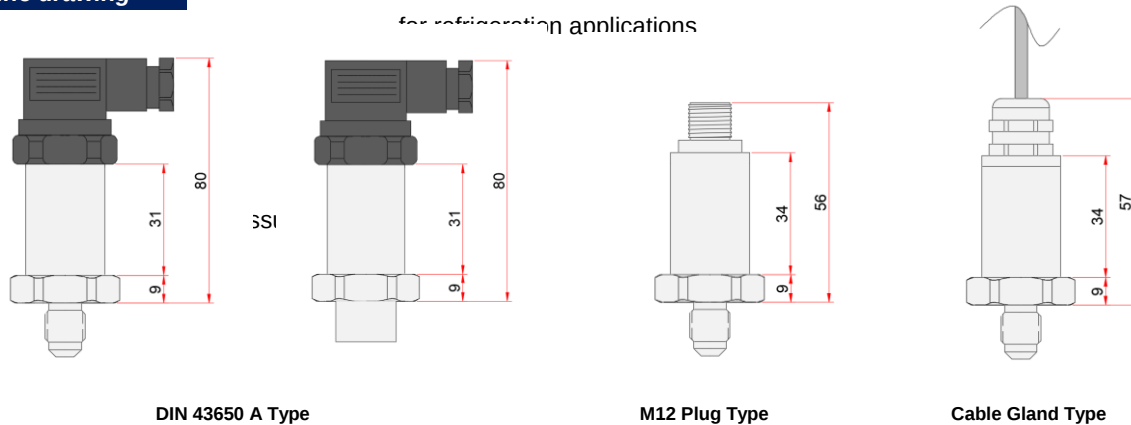
Code	Description
CD2	Cooling device up to 200 °C
CD3	Cooling device up to 300 °C
TP	St. stell tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate

How to Order

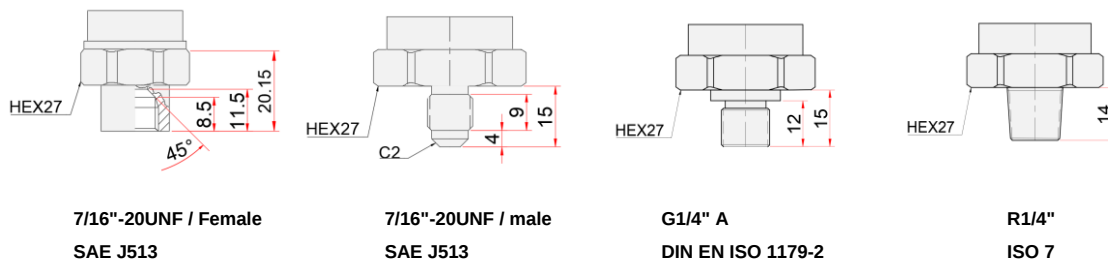
EDN.336.O1.C.U2.R02

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

Outline drawing

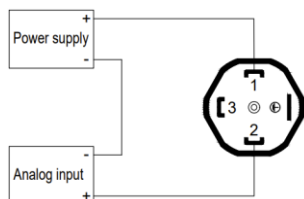


Process connection

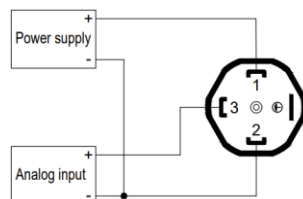


Pin assignment

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

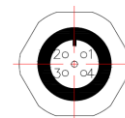


2-wire / current



3-wire / voltage

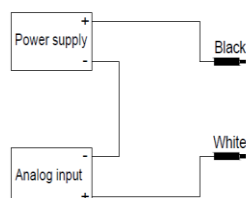
Pin No.	2-Wire	3-Wire
1	+Vcc	+Vcc
2	Output(mA)	GND
3		Output(VDC)



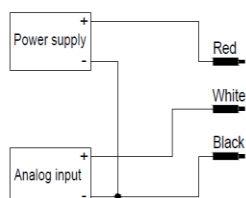
M12 x 1, 5-pin / male

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

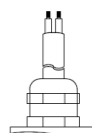
Flying leads with 2m cable



2-wire / current



3-wire / voltage



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