

Pressure Transmitter Model ECO-1

WIKA Data Sheet PE 81.14



Applications

- Mechanical engineering
- Hydraulics
- General industrial applications

Special Features

- Pressure ranges from 0 ... 1 bar to 0 ... 1000 bar
- Current or voltage output signals
- Case and wetted parts of stainless steel
- Medium temperature
-40 °C ... +100 °C / -40 °F ... +212 °F
- Wiring with L-connector or flying leads

Description

Wide range of applications

The pressure transmitter model EcoTronic® has been designed for all fields of industrial pressure measurement. Typical applications are in mechanical engineering, plant construction and automation industry.

Reliable measurement technology

Pressure ranges from 0 ... 1 bar up to 0 ... 1000 bar cover the measuring ranges of the most applications. The sensors made by WIKA, with high accuracy, long-term stability and repeatability, have been well established in industrial pressure measurement for decades. Depending on the pressure range, the suitable sensor, either piezoresistive or metallic thin film, will be utilized.



Fig. Pressure Transmitter ECO-1

Reliable signal acquisition

With various standard output signals like 4 ... 20 mA (2-wire), or 0 ... 10 V, 1 ... 5 V and 1 ... 6 V (3-wire), the transmitter can be easily integrated into different systems. RFI/EMI-characteristics according to EN 61 326 guarantee signal integrity even under difficult environmental conditions.

Interesting price/performance ratio

The excellent performance characteristics and the good price/performance ratio of the EcoTronic make it the perfect choice for applications with medium and large volumes.

Specifications

Model ECO-1

Pressure ranges	bar	1	1.6	2.5	4	6	10	16	25
Over pressure safety	bar	5	10	10	17	35	35	50	50
Burst pressure	bar	6	12	12	20.5	42	42	80	80
Pressure ranges	bar	40	60	100	160	250	400	600	1000
Over pressure safety	bar	80	120	200	320	500	800	1200	1500
Burst pressure	bar	200	300	500	800	1250	1300	1800	3000
{Absolute pressure: 0 ... 1 bar abs up to 0 ... 16 bar abs}									
Materials									
■ Wetted parts		Stainless steel							
■ Case		Stainless steel							
■ Internal transmission fluid ¹⁾		Synthetic oil							
¹⁾ Not with pressure ranges > 16 bar.									
Power supply UB	UB in VDC	10 < UB ≤ 30 (14 ... 30 with signal output 0 ... 10 V, 1 ... 6 V)							
Signal output and maximum ohmic load RA	RA in Ohm	4 ... 20 mA, 2-wire				RA ≤ (UB - 10 V) / 0.02 A			
		0 ... 10 V, 3-wire				RA > 10 k			
		1 ... 5 V, 3-wire				RA > 5 k			
		1 ... 6 V, 3-wire				RA > 6 k			
Response time (10 ... 90 %)	ms	≤ 5 (≤ 10 ms at medium temperatures below <-30°C for pressure ranges up to 16bar)							
Dielectric strength	VDC	500 ²⁾							
²⁾ NEC Class 02 power supply (low voltage and low current max. 100 VA even under fault conditions)									
Accuracy	% of span	≤ 0.5			(BFSL)				
	% of span	≤ 1.0 ³⁾							
³⁾ Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement per IEC 61298-2).									
Adjusted in vertical mounting position with lower pressure connection									
Non-linearity	% of span	≤ 0.4			(BFSL) according to IEC 61298-2				
1-year stability	% of span	≤ 0.3 (at reference conditions)							
Permissible temperature of									
■ Medium ⁴⁾		-40 ... +100 °C				-40 ... +212 °F			
■ Ambience ⁴⁾		-30 ... +80 °C				-22 ... +176 °F			
■ Storage ⁴⁾		-30 ... +100 °C				-22 ... +212 °F			
⁴⁾ Also complies with EN 50178, Tab. 7, Operation (C) 4K4H, Storage (D) 1K4, Transport (E) 2K3									
Compensated temp. range		0 ... +80 °C				32 ... +176 °F			
Temperature coefficients within compensated temp range									
■ Mean TC of zero	% of span	≤ 0.4 / 10 K							
■ Mean TC of range	% of span	≤ 0.3 / 10 K							
CE-conformity									
■ Pressure equipment directive		97/23/EC							
■ EMC directive		89/336/EEC emission (class B) and immunity according to EN 61 326							
Wiring protection	VDC								
■ Overvoltage protection		36							
■ Short-circuit proofness		Sig+ towards UB-							
■ Reverse polarity protection		UB+ towards UB-							
Weight	kg	Approx. 0.15							

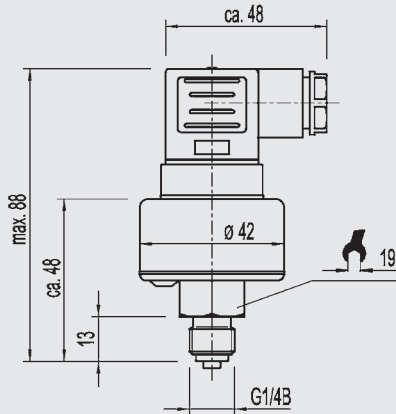
{ } Items in curved brackets are optional extras for additional price.

Dimensions in mm

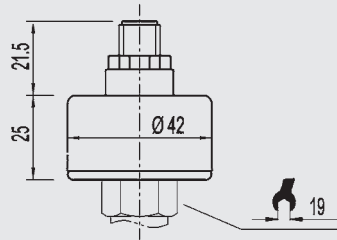
Ingress Protection IP per IEC 60529. The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding ingress protection.

Electrical connections

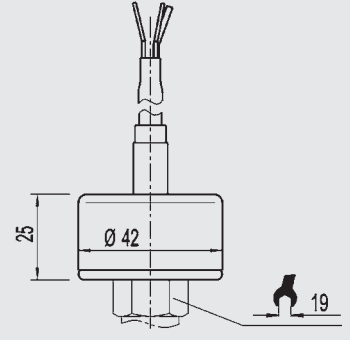
L-connector
for conductor cross section
up to max. 1.5 mm²,
conductor outer diameter 6-8 mm
IP 65
Order code: A4



M 12x1
Circular connector
4-pin
IP 67
Order code: M4

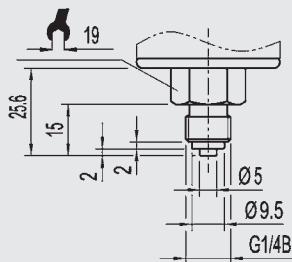


Flying leads with 1.5m of cable,
for conductor cross section 0.5 mm²,
AWG 20 with end splices,
conductor outer diameter 6.8 mm,
IP 67
Order code: DL

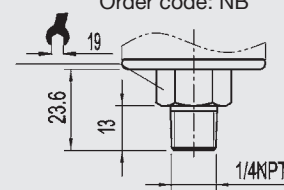


Pressure connections

G 1/4
EN 837
Order code: GB



1/4 NPT
per „Nominal size for US
standard tapered pipe
thread NPT“
Order code: NB



Others on request

For installation and safety instructions see the operating instructions for this product.

For tapped holes and welding sockets please see Technical Information IN 00.14 for download at www.wika.de

Wiring details

	2-wire	3-wire
DIN 175301-803 A L-Connector		
M 12x1, 4-pin Circular connector		
Flying leads		
Legend: power supply load (e.g. display)		

Further pressure transmitter from our OEM production



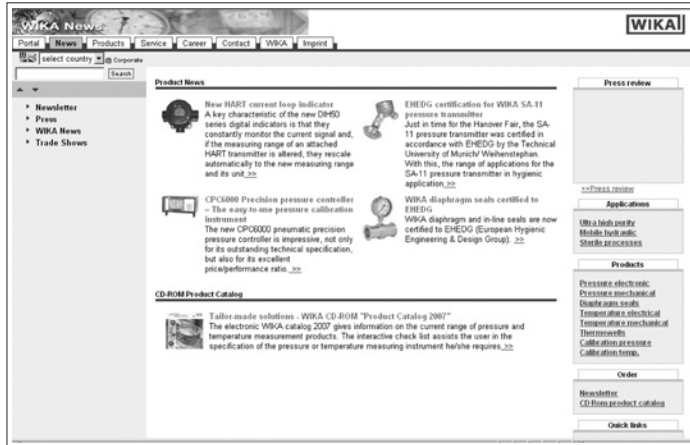
Fig. Pressure transmitter ECO-1 for Shipbuilding and Off-Shore with German Lloyd approval see data sheet PE 81.18



Fig. Pressure transmitter MH-2 with thinfilm technology for mobile hydraulic applications see data sheet PE 81.37

Further information

You can obtain further information (data sheets, instructions, etc.) via our internet address www.wika.de



Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.



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