

OEM Pressure Transmitters

Type ECO-1

Applications

Hydraulics and pneumatics
 Mechanical engineering
 General industrial applications

Special Features

Pressure ranges from 0-15psi to 0...15,000psi
 4-20 mA 2-wire and 0-10V 3-wire output signals available from stock
 Stainless steel case and wetted parts

Description

WIKAI ECO-Tronic pressure transmitters are engineered to fit many industrial pressure measurement applications. Typical applications include hydraulics and pneumatics, compressor controls, pump protection, refrigeration and air conditioning systems.

Reliable Operation

The ECO Tronic features an all-welded stainless steel measuring cell for improved media compatibility. There are no internal soft sealing materials that may react with the media or deteriorate over time. The case is also made of stainless steel and is available with environmental protection ratings up to NEMA 4 / IP 67.

Pressure ranges from 15psi to 15,000psi meet the requirements of most industrial pressure sensing applications. Pressure ranges up to 300psi use a piezoresistive measuring cell. The higher pressure ranges use thin film sensor technology.

[Datasheet: ECO-1](#)



Left: ECO-1 with DIN connection
 Right: ECO-1 with cable option

Standard signal outputs of 4-20 mA and 0-10V allow the ECO-Tronic to be integrated into many existing applications. Excellent RFI and EMI resistance protect the output signal integrity under difficult operating conditions.

Each ECO-Tronic undergoes extensive quality control testing and calibration to achieve an accuracy of $\leq 0.50\%$ full scale. The printed circuit boards use state-of-the-art surface mount technology. Each is individually temperature compensated to assure accuracy and long-term stability even when exposed to severe ambient temperature variations.

Specifications
Model ECO-1

Pressure range	15psi	25psi	50psi	60psi	100psi	200psi	300psi	500psi	750psi
Maximum pressure*	72psi	145psi	240psi	240psi	500psi	1160psi	1160psi	1160psi	1740psi
Burst pressure**	87psi	170psi	290psi	290psi	600psi	1390psi	1390psi	5800psi	7970psi
Pressure range	1000psi	1500psi	2000psi	3000psi	5000psi	7500psi	10,000psi	15,000psi	
Maximum pressure*	1740psi	2900psi	4600psi	7200psi	11,600psi	17,400psi	17,400psi	21,750psi	
Burst pressure**	7970psi	11,600psi	14,500psi	17,400psi	24,650psi	34,800psi	34,800psi	43,500psi	

{Absolute pressure ranges available to 300 psia}

*Pressure applied up to the maximum rating will cause no permanent change in specifications but may lead to zero and span shifts

**Exceeding the burst pressure may result in destruction of the transmitter and possible loss of media

Materials			
■ Wetted parts		Stainless steel	
■ Case		Stainless steel	
Internal transmission fluid		Synthetic oil only for pressure ranges up to 300 psi {Halocarbon oil for oxygen applications} †	
Power supply U_B	DC V	$10 < U_B \leq 30$ (14 ... 30 with output signal 0 ... 10 V, 1 ... 6 V)	
Signal output and		4 ... 20 mA, 2- wire	$R_A \leq (U_B - 10V) / 0.02$ A with R_A in Ohm and U_B in Volt
Maximum load R_A		0 ... 10 V, 3- wire	$R_A > 10$ kOhm
		1 ... 5 V, 3- wire	$R_A > 5$ kOhm
		1 ... 6 V, 3- wire	$R_A > 5$ kOhm
Response time (10 ... 90 %)	ms	≤ 5 (≤ 10 ms at medium temperature < -30 °C for pressure ranges up to 300 psi)	
Accuracy ††)	% of span	≤ 1.0	(limit point calibration)
	% of span	≤ 0.5	(BFSL)
Non-repeatability	% of span	≤ 0.1	
1-year stability	% of span	≤ 0.3 (at reference conditions)	
Permissible temperature of			
■ Medium		-40 ... +212 °F	-40 ... +100 °C
■ Ambient		-22 ... +176 °F	-30 ... + 80 °C
■ Storage		-22 ... +212 °F	-30 ... +100 °C
Compensated temp range		32 ... + 176 °F	0 ... + 80 °C
Temperature coefficients (TC) within compensated temperature range			
■ Mean TC of zero	% of span	$\leq 0.4 / 10$ K	
■ Mean TC of range	% of span	$\leq 0.3 / 10$ K	
CE conformity			
		89/336/EWG interference emission and immunity see EN 61 326	
		97/23/EG Pressure equipment directive	
Wiring protection			
		Protected against reverse polarity, overvoltage and short circuit	
Ingress protection per			
		IEC 60 529 / EN 60 529, see page 3	
Weight			
	lb	Approx. .33	

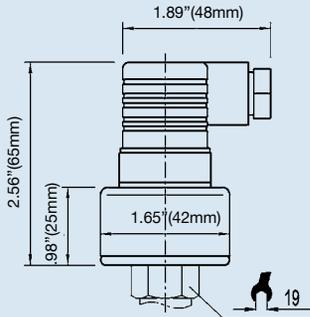
†) Media temperature for oxygen version : -22 ... 140 °F (-30 ... +60 °C)

††) Accuracy statement includes linearity, hysteresis and repeatability.
Limit point calibration performed in vertical mounting position with pressure connection facing down.

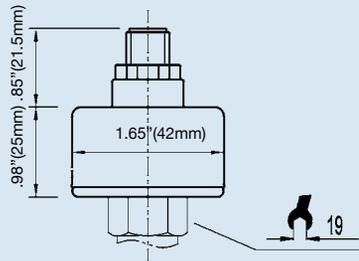
{ } Items in curved brackets are optional extras for additional cost.

Dimensions in inches (mm)

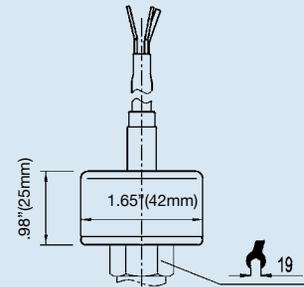
L-connector
DIN EN 175301-803, (DIN 43 650)
IP 65
Order code: A4



Circular connector
M 12x1, 4-pin
IP65
Order code: M4

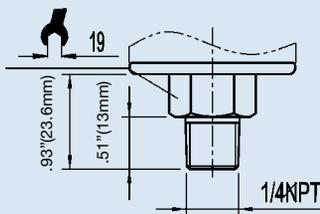


Cable with free ends
NEMA 4 / IP67
Order code: DL

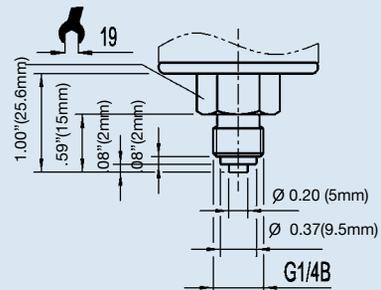


Pressure connections

1/4 NPT male
Order code: NB



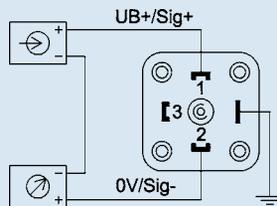
G 1/4
EN 837
Order code: GB



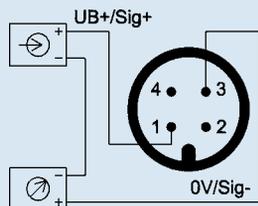
Wiring

2-wire system

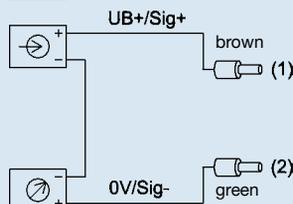
L-connector



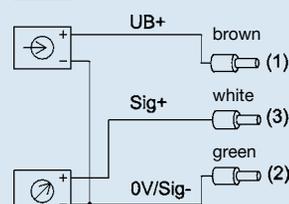
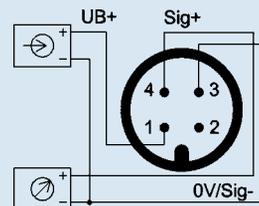
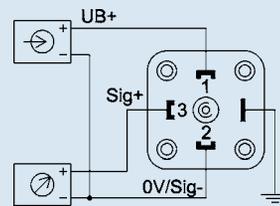
Circular connector
M 12x1 4-pin



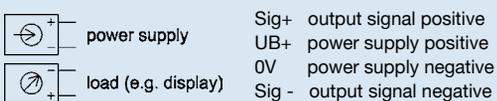
cable with free ends



3-wire system



Legend:



Type ECO-1 OEM Pressure Transmitter

15 psi to 15,000 psi

Standard Features

- **Signal Output:** 4-20 mA 2-wire or 0-10 V 3-wire
- **Supply Voltage:** 10-30 DC (14-30 VDC)
- **Process Connection:** 1/4 NPT Male
- **Electrical Connection:** DIN EN 175301-803 (DIN 43 650) with plug connector



Gauge Ranges Ready-To-Ship Transmitters		
Description		
Range	Part #	
	4-20 mA 2-wire	0-10 V 3-wire
0-15 psi	8392376	8392816
0-25 psi	8392386	8392826
0-50 psi	8392396	8392836
0-60 psi	8392406	8392856
0-100 psi	8392416	8392866
0-200 psi	8392426	8392876
0-300 psi	8392436	8392596
0-500 psi	8392446	8392606
0-750 psi	8392456	8392616
0-1000 psi	8392466	8392626
0-1500 psi	8392476	8392636
0-2000 psi	8392486	8392646
0-3000 psi	8392496	8392656
0-5000 psi	8392506	8392666
0-7500 psi	8392516	8392686
0-10,000 psi	8392526	8392696
0-15,000 psi	8392586	8392806

NOTE: Ready-to-ship part numbers shown in **bold, blue** print.

Ready-to-ship part numbers are available from stock (subject to prior sale). Items without part numbers are available on special order.

ECO-1 Option List

Feature
Signal Output
4... 20 mA, 2-wire
0... 10 V, 3-wire
1... 5 V, 3-wire
On inquiry
Unit
psi
psi absolute
On inquiry
Pressure Range
0 psi ... 15 psi
0 psi ... 25 psi
0 psi ... 50 psi
0 psi ... 60 psi
0 psi ... 100 psi
0 psi ... 200 psi
0 psi ... 300 psi
0 psi ... 500 psi
0 psi ... 750 psi
0 psi ... 1000 psi
0 psi ... 1500 psi
0 psi ... 2000 psi
0 psi ... 3000 psi
0 psi ... 5000 psi
0 psi ... 7500 psi
0 psi ... 10000 psi
0 psi ... 15000 psi
0 psi ... 15 psi absolute
0 psi ... 25 psi absolute
0 psi ... 50 psi absolute
0 psi ... 100 psi absolute
On inquiry

Feature
Process Connection
1/4" NPT
G 1/4 B
On inquiry
Special Design Features
Without
Oxygen, oil and grease free
Electrical Connection
4 Pin L-plug DIN EN 175301-803 with pg 9 (NEMA 5 / IP 65)
4 Pin L-plug DIN EN 175301-803 with 1/2" NPT female conduit (NEMA 5/IP 65)
4 Pin locking pin M12 x 1 (NEMA 4 / IP 65)
Cable with free ends (NEMA 4 / IP 67)
Cable Length
Without
5 feet
10 feet
20 feet
30 feet
40 feet
50 feet
Approvals
Without
GL, ABS, RINA
Quality Certificates
Without
NIST Certificate of Calibration
Digital Display
Without
Digital display
Additional Order Details
Without
Additional text