

- 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
- Ingress protection IP 65 or IP 67
- Wiring with DIN L-plug or flying leads

#### General features

The pressure transmitter model ECO-TRONIC has been designed for all fields of industrial pressure measurement. Typical applications are in mechanical engineering, plant construction and automation industry as well as in the refrigeration and air conditioning industry.

Pressure ranges from 0 ... 1 bar up to 0 ... 1000 bar cover the measuring ranges of the most applications. For ranges up to 10 bar the already well-proven piezo resistive sensor elements are used. Thin-film strain gauge sensors are used for ranges beyond 16 bar. This sensor type is perfectly suited for hydraulic applications.

Standard material of all wetted parts is 1.4571 or 1.4542 stainless steel. The standard pressure connection is G 1/4 B.

The accuracy is 1 % in limit point calibration (0.5 % BFSL). 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.

Electrical connections are either L-plug per DIN 43 650 IP 65, locking plug M 12x1 with 4 pins IP 65, or flying leads IP 67.

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



#### Supplementary data sheet:

- Pressure Transmitter ECO-TRONIC for Shipbuilding Industry and Off-shore (see data sheet PE 81.18)
- Pressure Transmitters for mobile hydraulics (see data sheet PE 81.21)

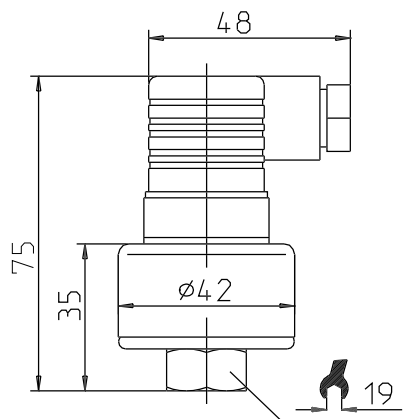
**Model ECO-1**  
(891.14.300 / 891.24.310)

**Model MH-1**

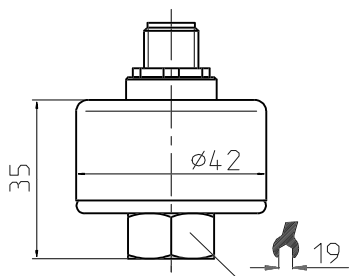
Specifications		Model ECO-1															
Pressure ranges	bar	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250	400	600	1000
Over pressure safety	bar	5	10	10	17	35	35	50	50	80	120	200	320	500	800	1200	1500
Burst pressure	bar	5	10	10	17	35	35	80	80	200	300	500	800	1250	1300	1800	3000
Pressure reference		relative pressure {absolute pressure: 0 ... 1 bar abs to 0 ... 10 bar abs}															
Pressure connection		G ¼ B (1/4 NPT) { other on request }															
Material																	
• wetted parts		stainless steel 1.4571 and 1.4542															
• case		stainless steel 1.4301															
internal transmission fluid		Synthetic oil (only for pressure ranges up to 0 ... 10 bar)															
Power supply $U_R$	DC V	$10 < U_B \leq 30$ (14 ... 30 with output signal 0 ... 10 V, 1 ... 5 V, 1 ... 6 V)															
Signal output and maximum load $R_A$		4 ... 20 mA, 2-wire system $R_A \leq (U_R - 10 V) / 0,02 A$ with $R_A$ in Ohm and $U_R$ in Volt 0 ... 10 V, 3-wire system $R_A \geq 10 k\Omega$ 1 ... 5 V, 3-wire system $R_A \geq 5 k\Omega$ 1 ... 6 V, 3-wire system $R_A \geq 6 k\Omega$															
Response time (10 ... 90 %)	ms	$\leq 5$ ( $\leq 10$ ms at medium temperatures below $-30$ °C for pressure ranges up to 10 bar)															
Accuracy (including hysteresis)	% of span	$< 1.0$ (limit point calibration) $< 0.5$ (BFSL)															
Repeatability	% of span	$< 0.1$															
1-year stability	% of span	$< 0.3$ (at reference conditions)															
Permissible temperature of																	
• medium	°C	-40 ... +100								-40 ... +212 °F							
• ambient	°C	-30 ... +80								-22 ... +176 °F							
• storage	°C	-30 ... +100								-22 ... +212 °F							
Compensated temp. range	°C	0 ... +80								+32 ... +176 °F							
Temperature coefficients in compensated temp range:																	
• mean TC of zero	% of span/10K	$\leq 0.4$															
• mean TC of range	% of span/10K	$\leq 0.3$															
CE - conformity		Interference emission and immunity see EN 61 326; declaration of conformity on request															
Electrical connection		L-plug per DIN 43 650 {flying leads, cable length 1.5 m} {locking plug M 12 x1, 4-pin}															
Wiring protection		protected against polarity crossing and short circuiting															
Degree of protection per EN 60 529 / IEC 529		IP 65 {IP 67 with cable}															
Weight	kg	approx. 0.15															
Dimensions		see drawings															
Items in curved brackets { } are optional extras for additional price.																	

Dimensions in mm

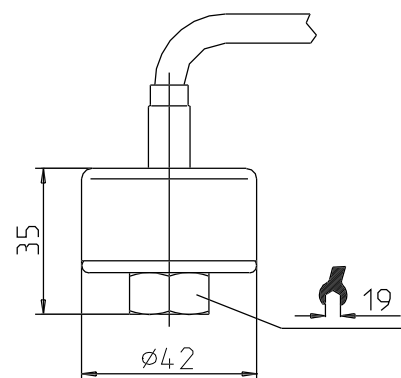
L-plug, DIN 43 650



locking plug, 4-pin,  
M 12x1

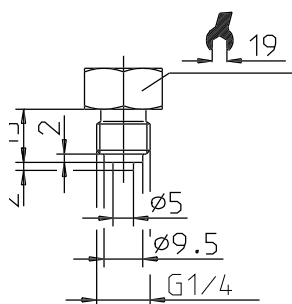


flying leads

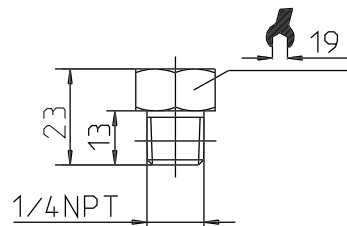


Pressure connections

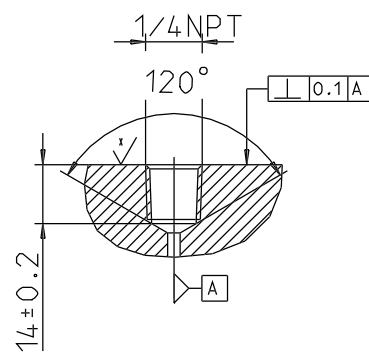
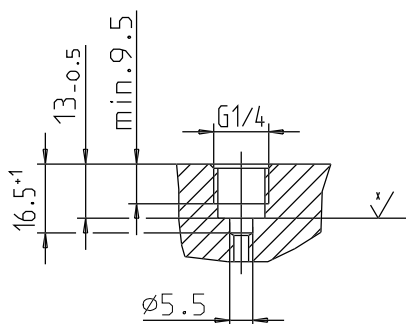
G 1/4 B



1/4 NPT



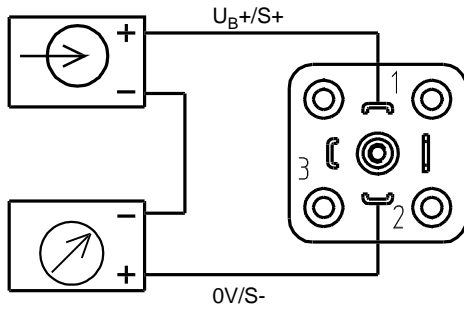
Sockets



## Wiring details

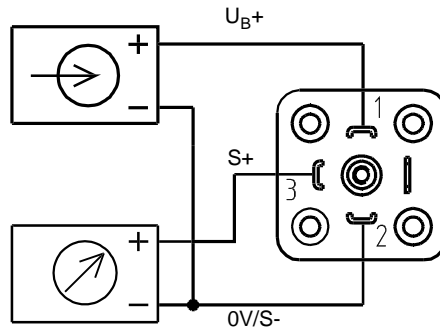
### 2-wire-system

L-plug  
DIN 43 650

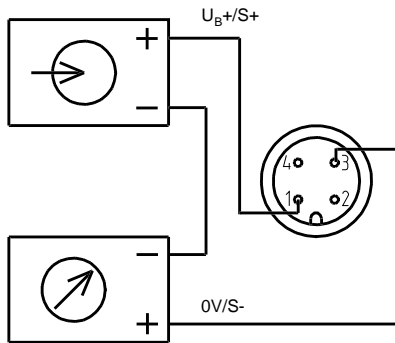


### 3-wire-system

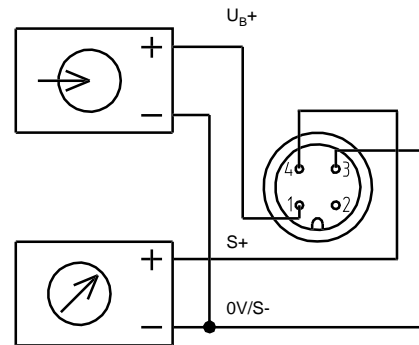
L-plug  
DIN 43 650



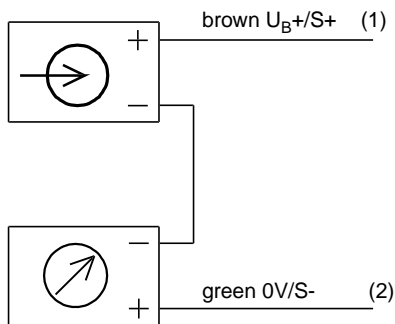
### locking plug, 4-pin M 12x1



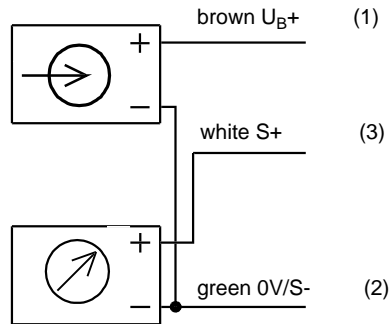
### locking plug, 4-pin M 12x1



### flying leads



### flying leads



Specifications and dimensions given in this document 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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