

Pressure Transmitters For Shipbuilding Industry and Off-Shore

TRONIC LINE

Standard • Model S-10
(891.13.300 / 891.23.310)

- Pressure ranges from 0 ... 0.1 bar to 0 ... 1000 bar
- Case and wetted parts of stainless steel
- Various pressure connections
- Signal output 4 ... 20 mA, 2-wire
- Wiring with plug or flying leads
- Ingress protection IP 65 to IP 67
- Oxygen version available

General features

The principle features of these pressure transmitters are their high accuracy, their sturdy and compact construction as well as their flexibility which make these instruments universally suitable for a variety of measuring tasks. Field applications are, for example, monitoring of diesel engines, gears, pumps, transmissions, filters, compressors, hydraulic and pneumatic control systems.

Wetted parts are made of stainless steel and are hermetically welded. Therefore there is no need for additional sealing material, which could possibly react with the pressure medium. The compact case is also made of stainless steel and normally provides IP 65 ingress protection. For recalibration, zero and span may be adjusted by means of internal potentiometers which are easily accessible.

The transmitters can be supplied with a non-stabilized direct voltage of 10 (14)...30 V and provide an output signal of 4 ... 20 mA, 2-wire which is required by measurement standards.

For pressure transmitters with flying leads, the pressure compensation to atmosphere is carried out via a small ventilation pipe which is integrated into the lead. Pressure transmitters for oxygen applications are available for measuring ranges of 0 ... 0.25 bar to 0 ... 1000 bar (Technical Safety Check of the BAM is available; BAM = German Materials Testing Institute).

Supplementary data sheet:

- | | |
|-----------------------------------------------------------------------------------------------------|------------------------------------|
| • Pressure Transmitter for general applications (see data sheet PE 81.01) | Model S-1X |
| • Submersible Pressure Transmitter (see data sheet PE 81.09) | Model LS-10
Model LH-10 |
| • Field casing Transmitter (see data sheet PE 81.11) | Model F-1X
Model IF-1X |
| • Pressure Transmitter ECO-TRONIC for Shipbuilding Industry and Off-shore (see data sheet PE 81.18) | Model ECO-1 |



international approvals:



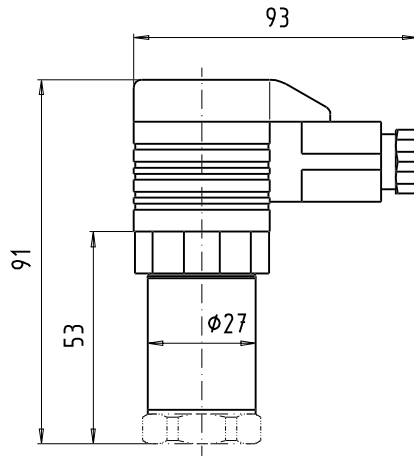
Specifications		Model S-10 (891.13.300)					Model S-10 (891.23.310)															
Pressure ranges	bar	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250	400	600	1000
Over pressure safety	bar	1	1.5	2	2	4	5	10	10	17	35	35	80	50	80	120	200	320	500	800	1200	1500
Burst pressure	bar	2	2	2	2	4	5	10	10	17	35	35	80	250	400	550	800	1000	1200	1700	2400	3000
		{absolute pressure: 0 ... 0.25 bar abs to 0 ... 16 bar abs}																				
		{special pressure range 800 ... 1200 mbar abs}																				
Pressure connection		G ½ B per DIN 16288 (G ¼ B, ½ NPT, ¼ NPT)										{other connections on request}										
Material																						
• wetted parts		stainless steel 1.4571										stainless steel 1.4571 and 1.4542										
		(other materials see WIKA chemical seal programm)																				
• case		stainless steel 1.4301																				
Internal transmission fluid		Synthetic oil (only for pressure ranges up to 0 ... 16 bar)																				
		{halocarbon oil for oxygen applications ¹⁾ }																				
Power Supply U _r	DC V	10 < U _r ≤ 30																				
Signal output and max. load R _A		4 ... 20 mA, 2-wire R _A ≤ (U _r - 10 V) / 0.02 A with R _A in Ohm and U _r in Volt																				
Current limit	mA	32																				
Response time (10 ... 90%)	ms	≤ 1 (≤ 10 ms at medium temperatures below -30 °C for pressure ranges up to 16 bar)																				
Accuracy	% of span	≤ 0.5 (limit point calibration)					(calibrated in vertical mounting position)															
	% of span	≤ 0.25 (BFSL)					with pressure connection facing down)															
Hysteresis	% of span	≤ 0.1																				
Repeatability	% of span	≤ 0.05																				
1-year stability	% of span	≤ 0.2 (at reference conditions)																				
Permissible temperature of																						
• medium	°C	-40 ... +100 {-40 ... +125}					-40 ... +212 °F {-40 ... +257 °F}															
• ambient	°C	-40 ... + 90					-40 ... +194 °F															
• storage	°C	-40 ... +100					-40 ... +212 °F															
compensated temp.range	°C	0 ... + 80					+32 ... +176 °F															
Temperature coefficient in compensated temp range:																						
• average TC of zero	% of span/10K	≤ 0.2 (< 0.4 with pressure ranges 0 ... 0.1 and 0 ... 0.16 bar)																				
• average TC of range	% of span/10K	≤ 0.2																				
CE-conformity		Interference emission and immunity see EN 61 326; declaration of conformity on request																				
ESD	kV	±8	contact discharge								IEC 1000-4-2											
Electromagnetic fields	V/m	10	80 % AM; 1 kHz								IEC 1000-4-3											
			0.01 ... 1000 MHz																			
Burst	kV	±2	coupling clamp								IEC 1000-4-4											
Conducted HF-disturbance	V	3	80 % AM; 1 kHz								IEC 1000-4-6											
			0.01 ... 100 MHz																			
			(up to 1 MHz increased error < 2 %)																			
Surge	kV	±0.5	symmetrically		} R _i = 42 Ohm with surge protection only e. g. model MM-DS/xNFE(L) Fa. Dehn & Söhne or similiar					IEC 1000-4-5												
	kV	±1	asymmetrically																			
	kV	±1	symmetrically																			
	kV	±2	asymmetrically																			
Conducted LF-disturbance	Veff.	3	0.05 ... 10 kHz								IEC 945											
Electrical connection		4-pin L-plug per DIN 43 650 with wide terminal box and strain relief, IP 65																				
		(on request: 4-pin L-plug per DIN 43 650, IP 65)																				
		{flying leads with 1.5 m of vented cable, IP 67}																				
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. 0.2																				
Dimensions		see drawings																				

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

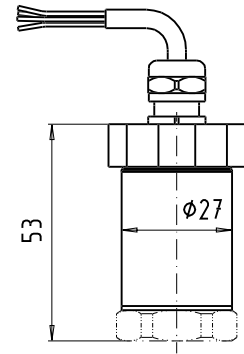
- 1) The oxygen version must not be operated under medium temperatures higher than 60°C (140°F)
The oxygen version cannot be manufactured for negative pressure ranges and for absolute pressure ranges < 1 bar abs.

Dimensions in mm

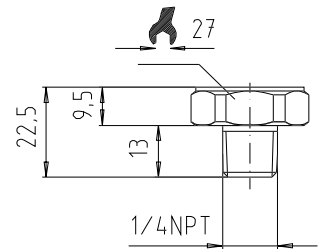
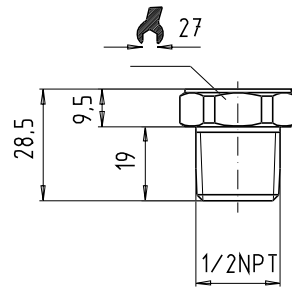
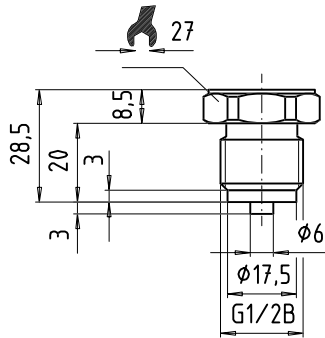
L-plug per DIN 43 650



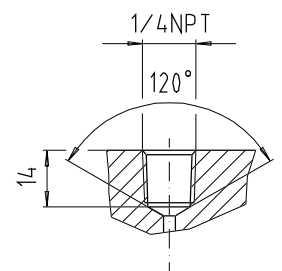
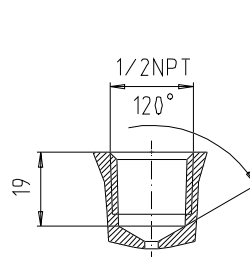
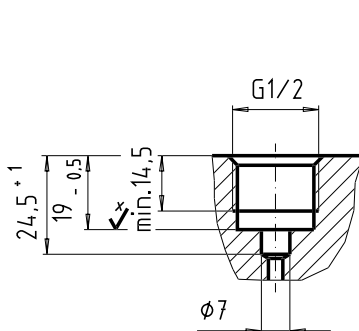
flying leads



Pressure connection



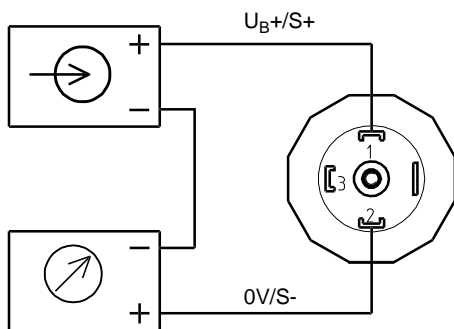
Socket for pressure connection



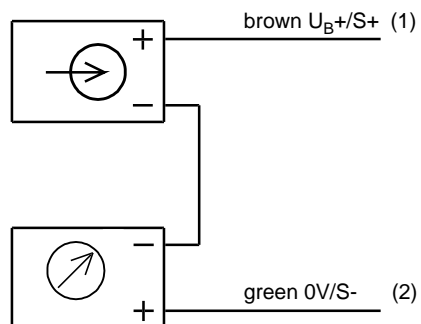
Wiring details

2-wire system

L-plug per DIN 43 650



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.



INGENIEROS ASOCIADOS DE CONTROL S.L.
Telf.: 913831390
comercial@iac-sl.es