

E910 Pressure Transmitter

Measurement of vacuum, absolute or gauge pressure

TRANSBAR® ceramic technology

Zero adjustment as standard ($\pm 10\%$ of range)

Welded construction – reinforced product

Modularity of electrical and hydraulic connections

Conforms to European EMC Directive, CE marked

Highly resistant to severe process conditions
($\geq 10^7$ pressure cycles)

Many approval (Bureau Veritas, Marine, Lloyd's Register...)

All stainless steel transmitter

Stainless steel transmitters intended for extremely diverse industrial applications: control of fluid flow, incorporation into equipment, continuous monitoring of fluid pressure, etc.

Based on TRANSBAR® ceramic technology, these transmitters are compatible with the majority of process fluids.



E910 with IP68 option

Technical data (20°C)

Measurement range	From 0...25 mbar to 0...600 bar Compound, gauge or absolute pressure	Operating temperature	
Output signal	E912 : 0...10 Vdc. E913 : 4...20 mA (except -1...0 bar where -1 = 20 mA, 0 = 4 mA) E914 : 1...5 Vdc. E916 : 0...20 mA	Ambient (Ta)	-25...+85°C <i>Option</i> <i>Low T°</i> : -40...+85°C. <i>High T°</i> : -25...+100°C
Supply voltage	E912 : 14...40 Vdc E913-E914 : 11...40 Vdc E916 : 8...40 Vdc <i>Option</i> <i>High voltage up to 48 Vdc</i> <i>Low voltage: 8...32 Vdc (E913, E914)</i>	Fluid	-25...+100°C (Ta \leq 50°C)
Insulation	> 100 M Ω at 250 Vdc. <i>Option</i> : 500 Vdc.	Storage temperature	-40...+85°C
Maximum input current	E912-E914 : 6 mA E916 : < 25 mA	Compensated temperature range (zero and sensitivity)	-10...+55°C. <i>Option</i> : -10...+70°C
Load impedance (+M / -M)	E912 : ≥ 2.5 k Ω E913 : $R_{\Omega} \leq (U_{supply} - 11)/0.02$ E913 : $R_{\Omega} \leq (U_{supply} - 8)/0.02$ (low voltage option) E916 : $R_{\Omega} \leq (U_{supply} - 6)/0.02$	Zero thermal drift	$\pm 0.025\%$ F.S./°C max. (except P \leq 1 bar: $\pm 0.06\%$ F.S./°C) <i>Option</i> : $\pm 0.015\%$ F.S./°C max. (except P \leq 1 bar: $\pm 0.025\%$ F.S./°C)
CE Conformity	EMC Directive 89/336 CE with screened cable, screen connected at both ends PED pressure Directive 97/23/CE.	Span thermal drift	Typically : $\pm 0.01\%/^{\circ}\text{C}$ / Max.: $\pm 0.015\%/^{\circ}\text{C}$
Global error (linearity, hysteresis and repeatability) by reference to BFSL	Typically: $\pm 0.2\%$ of F.S. / Max.: $\pm 0.3\%$ of F.S. For P \leq 60 mbar and P = 600 bar: Typically: $\pm 0.6\%$ of F.S. / Max.: $\pm 1\%$ of F.S.	Wetted parts	Ceramic + stainless steel 1.4404 (316L) + NBR seal (standard) for ranges \geq 250 mbar and Viton® for ranges < 250 mbar
		Standard connections	Electrical : DIN 43650 connector Pressure : G1/2 <i>Many options available</i>
		Protection rating (EN 60529)	Standard : IP65 (DIN connector) <i>Option</i> : IP67 or IP68 (depending on connection)
		Typical response time	≤ 3 ms
		Vibration resistance (IEC 68-2-6)	1.5 mm (10-55 Hz), 20 g (55 Hz to 2 kHz)
		Shock resistance (IEC 68-2-32)	25 falls from 1 m on concrete ground

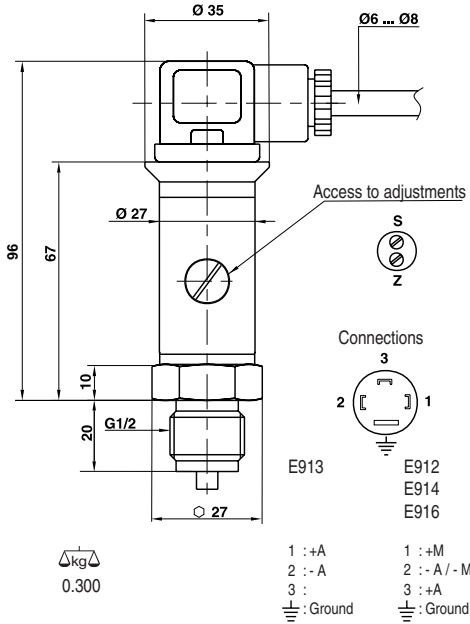
**BOURDON
HAENNI**

made to measure

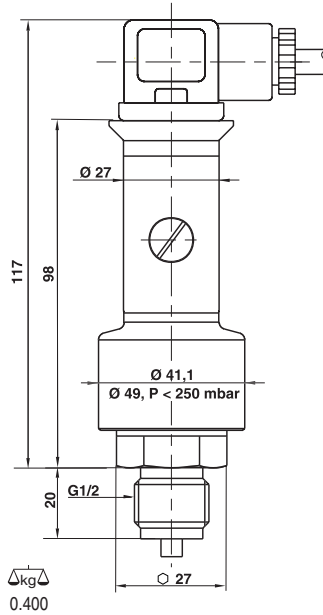


Dimensional Drawings (mm) - Mounting Details

[xx] : dimensions and weight for "P < 1 bar" versions.

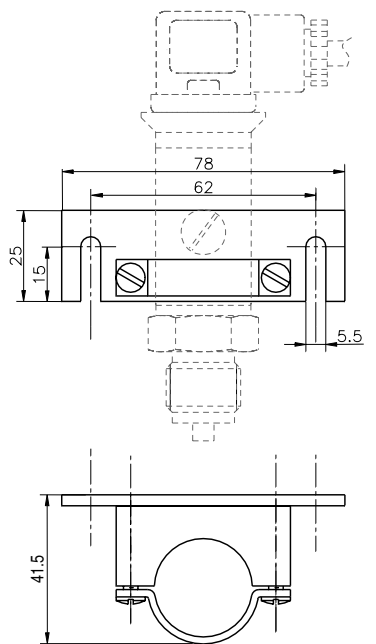


Standard version. P ≥ 1 bar
DIN 43650 plug

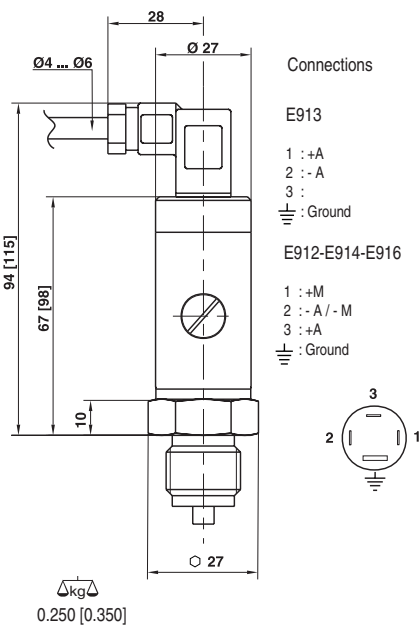


Version also used for -1...0 bar and 0...1 bar ranges with ±50% span adjustment option.

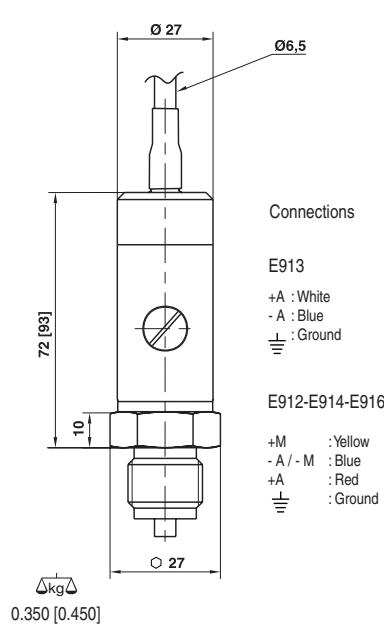
Standard version for P < 1 bar
DIN 43650 plug



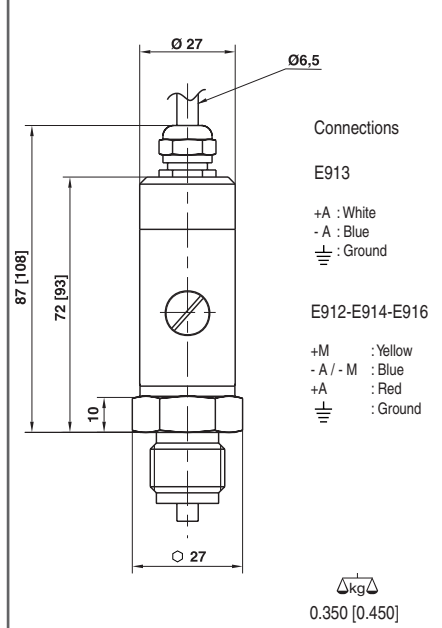
Option : Stainless steel surface
mounting brackets



DIN 43650C micro plug (8 mm)



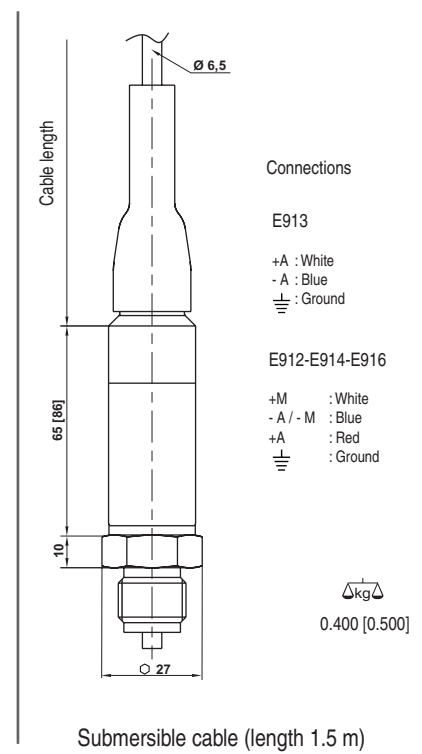
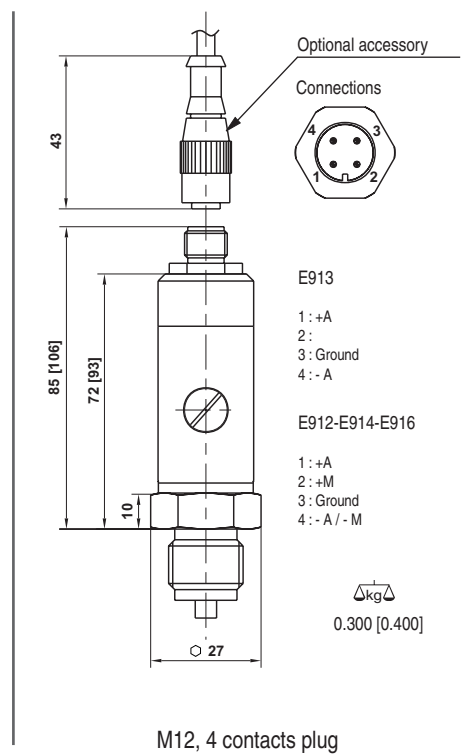
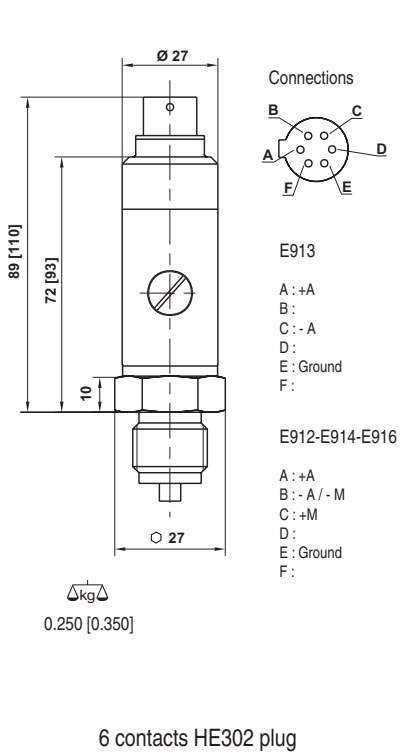
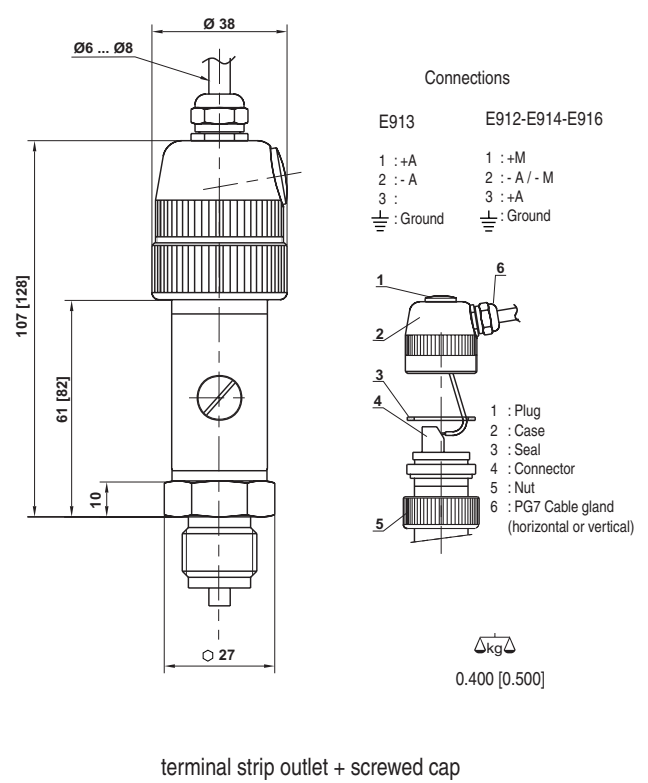
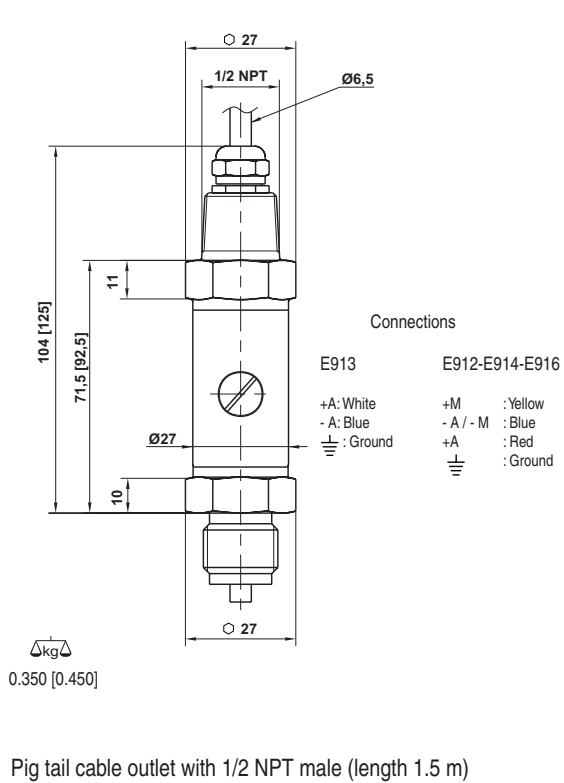
Pig tail (length 1.5 m)



Pig tail (length 1.5 m) + PG7 Cable gland

Dimensional Drawings (mm) - Mounting Details

[xx] : dimensions and weight for "P < 1 bar" versions.



Options

Degreased. **Code 0764**
 Lightning protection. **Code 0809**
 Marine version. **Code 0808**
 Supply voltage (high⁽¹⁾ - **Code 2180**) (low⁽¹⁾ - **Code 2182**)
 Ambient temperature (high⁽¹⁾ - **Code 2221**) (low⁽¹⁾ - **Code 2220**)
 Compensated temperature range (-10 ... +70 °C). **Code 2158**
 Zero thermal drift : ± 0.015 % of range/°C max. **Code 2159**
 Span adjustment ± 10 % of range. **Code 2151**
 Span adjustment ±50% of range (except for ranges ≤ 0...+0.25 bar and 0...+600 bar). **Code 2152**
 Calibration of sensor with certificate: Q1060
 Thread locking **Code 0771**
 Other hydraulic connections
 Additional length of cable
 Stainless steel surface mounting brackets. **Code 0409**
 Other units: kPa (code D), MPa (code E), kg/cm² (code F), psi (code H), mbar (code N)
 Atmospheric pressure measurement (Range: 800...1200 mbar absolute)

Other electrical connections:

DIN 43650C micro plug (IP65 ⁽²⁾). **Code 2165**
 Pig tail (1.5 m) (IP65). **Code 2160**
 Pig tail (1.5 m) + PG7 cable gland (IP65, IP67 ⁽³⁾). **Code 2161**
 Pig tail cable outlet with 1/2 NPT male (1.5 m) (IP65). **Code 2162**
 Terminal strip outlet + screwed cap (IP65, IP67). **Code 2166**
 6 contacts HE302 plug (IP65). **Code 2163**
 M12, 4 contacts plug (IP65). **Code 2164**
 Submersible cable (IP68 version ⁽⁴⁾). **Code 2168**

⁽¹⁾ see specifications for details / ⁽²⁾ IP65 : water spray / ⁽³⁾ IP67 : temporary immersion /

⁽⁴⁾ IP68 : prolonged immersion

Measuring Ranges

compound pressure	Pressure in mbar								Pressure in bar														
	—	—	—	—	—	—	—	—	-1+0	-1+0.6	-1+1.5	-1+3	-1+5	-1+9	-1+15	-1+24	-1+39	—	—	—	—	—	—
pressure	25	40	60	100	160	250	400	600	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250	400	600
Measurement range	27.5	44	66	110	175	275	440	660	1.1	1.75	2.75	4.4	6.6	11	17.6	27.5	44	66	110	176	275	440	660
Max. over pressure	110	110	275	500	500	1000	1000	1000	3	3	4	8	12	20	32	50	80	120	200	320	500	600	800
Burst pressure	200	200	500	1000	1000	2000	2000	2000	6	6	7	12	18	30	48	75	120	180	300	480	600	800	1000

Ordering Details - E910

E91xxxxxxx	
Model	1'...3' digit
Standard	E91
Output signal	4' digit
0...10 Vdc	2
4...20 mA	3
1...5 Vdc	4
0...20 mA	6
Hydraulic connection	5' digit
G 1/4	2
G 1/2 standard	3
1/4 NPT	5
1/2 NPT	6
Sensor seal	6' digit
NBR (Nitril) standard (P ≥ 250 mbar)	3
CR (Neoprene) (P ≥ 250 mbar)	4
EPDM (P ≥ 250 mbar)	5
Kalrez® (1 bar ≤ P ≤ 250 bar)	7
FKM (Viton®) (P ≥ 250 mbar)	9
Kalrez® and Viton® are registered trademarks of DuPont Dow Elastomers	
Pressure range	7'...9' digit
See codes in tables	xxx
Pressure type	10' digit
Absolute	A
Gauge	R

code	Range in mbar			
N05	0	+	25	- R
N06	0	+	40	- R
N07	0	+	60	- R
N08	0	+	100	- R
N09	0	+	160	- R
N10	0	+	250	A R
N11	0	+	400	A R
N12	0	+	600	A R

code	Range in bar. Vacuum pressure			
B59	-1	+	0	- R
B72	-1	+	0.6	- R
B74	-1	+	1.5	- R
B76	-1	+	3	- R
B77	-1	+	5	- R
B79	-1	+	9	- R
B81	-1	+	15	- R
B82	-1	+	24	- R
B1L	-1	+	39	- R
B15	0	+	1	A R
B16	0	+	1.6	A R
B18	0	+	2.5	A R
B19	0	+	4	A R
B20	0	+	6	A R
B22	0	+	10	A R
B24	0	+	16	A R
B26	0	+	25	A R
B27	0	+	40	A R
B29	0	+	60	A R
B31	0	+	100	A R
B33	0	+	160	A R
B35	0	+	250	A R
B38	0	+	400	A R
B39	0	+	600	A R

Some products in the E913 range are on one day delivery (ex-works) : please contact