

# 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.

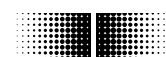
Based on TRANSBAR® ceramic technology, these transmitters are compatible with the majority of process fluids.



E910 with IP68 option

## Technical data (20°C)

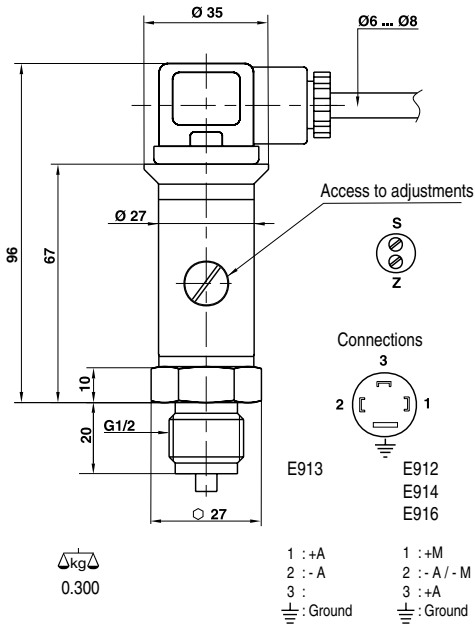
<b>Measurement range</b>	From 0...25 mbar to 0...600 bar Compound, gauge or absolute pressure	<b>Operating temperature</b>	
<b>Output signal</b>	<b>E912</b> : 0...10 Vdc. <b>E913</b> : 4...20 mA (except -1...0 bar where -1 = 20 mA, 0 = 4 mA) <b>E914</b> : 1...5 Vdc. <b>E916</b> : 0...20 mA	<b>Ambient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



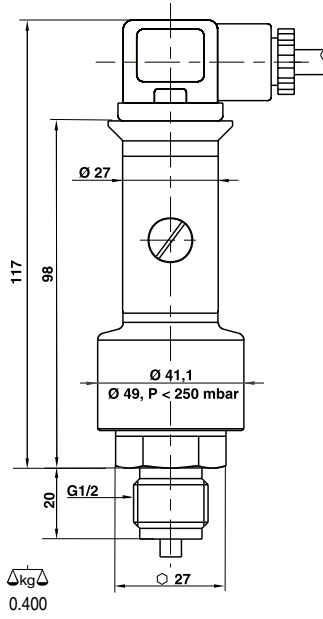
**Baumer**

# Dimensional Drawings (mm) - Mounting Details

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

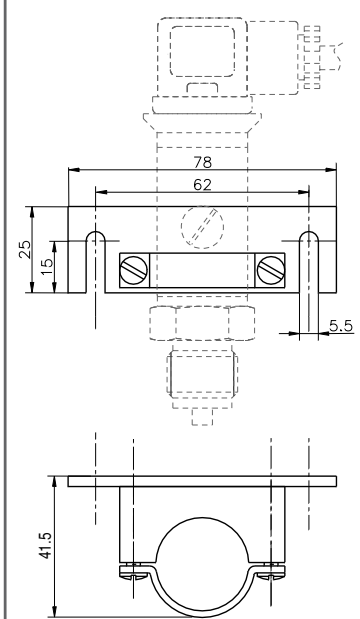


**Standard version P ≥ 1 bar**  
DIN 43650 plug

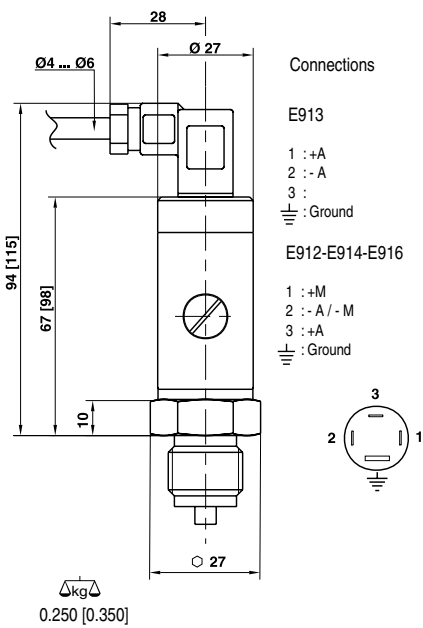


Version also used for -1...0 bar and 0...1 bar ranges with ± 50% span adjustment option

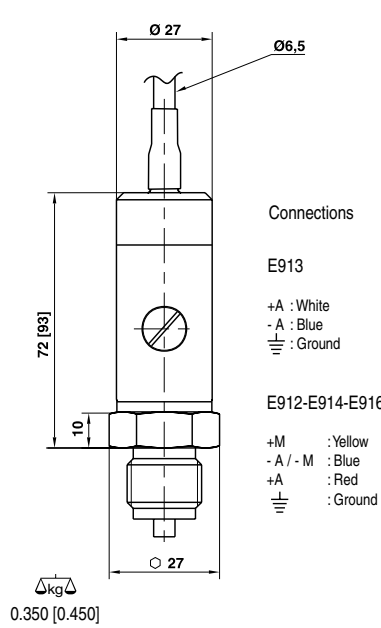
**Standard version P < 1 bar**  
DIN 43650 plug



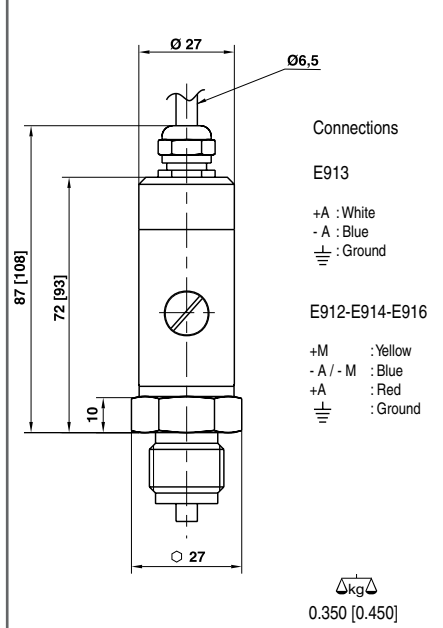
**Option : Stainless steel surface mounting brackets**



DIN 43650C micro plug (8 mm)



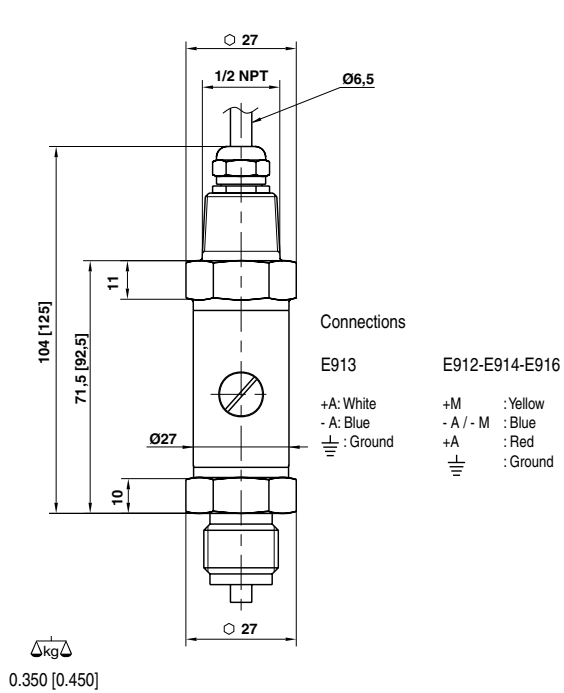
Pig tail (length 1.5 m)



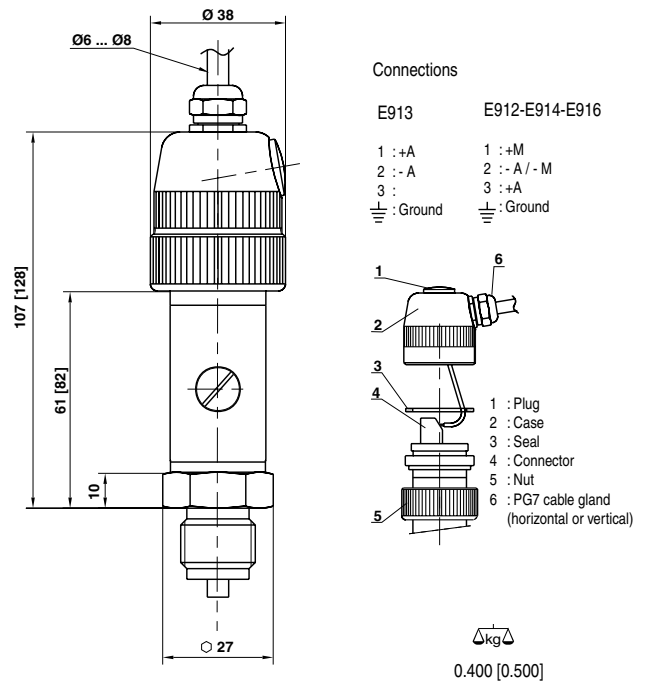
Pig tail (length 1.5 m) + PG7 cable gland

# Dimensional Drawings (mm) - Mounting Details

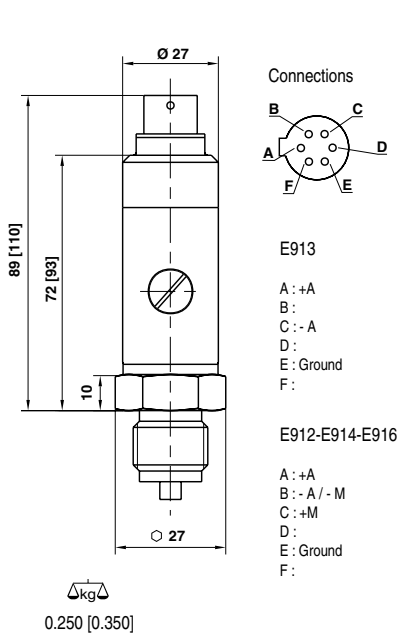
[xx] : dimensions and weight for "P < 1 bar" versions.



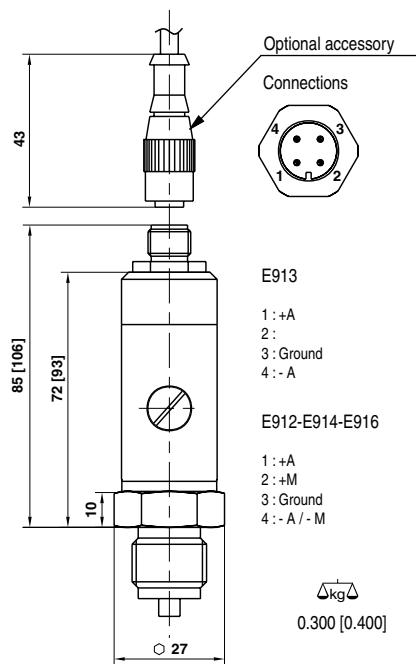
Pig tail cable outlet with 1/2 NPT male (length 1.5 m)



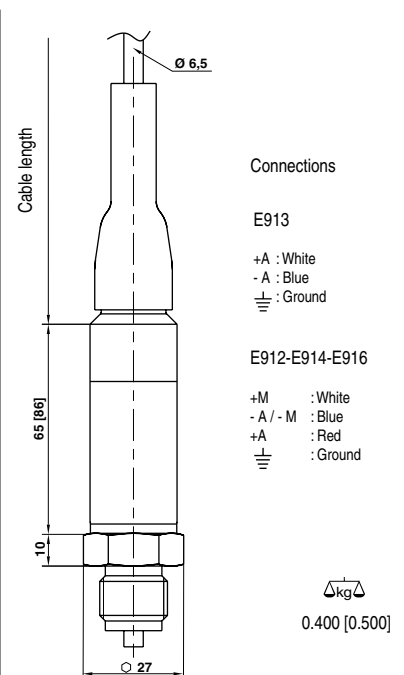
Terminal strip + screwed cap



6 contacts HE302 plug



M12, 4 contacts plug



Submersible cable (length 1.5 m)

## Options

Specific cleaning (gas application). **Code 0829**  
 Drinking water application. **Code 0619**  
 Oxygen application **Code 0765**  
 Lightning protection. **Code 0809**  
 Marine version. **Code 0808**  
 Supply voltage (high<sup>(1)</sup> - **Code 2180**) (low<sup>(1)</sup> - **Code 2182**)  
 Ambient temperature (high<sup>(1)</sup> - **Code 2221**) (low<sup>(1)</sup> - **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/cm<sup>2</sup> (code F), psi (code H), mbar (code N)  
 Atmospheric pressure measurement (Range: 800...1200 mbar absolute)

Other electrical connections:

DIN 43650C micro plug (IP65 <sup>(2)</sup>). **Code 2165**  
 Pig tail (1.5 m) (IP65). **Code 2160**  
 Pig tail (1.5 m) + PG7 cable gland (IP65, IP67 <sup>(3)</sup>). **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**  
 Terminal strip outlet + cap with M20x150 thread and gland (IP65, IP67). **Code 2167**  
 6 contacts HE302 plug (IP65). **Code 2163**  
 M12, 4 contacts plug (IP65). **Code 2164**  
 Submersible cable (IP68 version <sup>(4)</sup>). **Code 2168**

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

<sup>(4)</sup> IP68 : prolonged immersion

## Measuring Ranges

Compound and 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

E91xxxxxx	
<b>Model</b>	<b>1'...3' digit</b>
Standard	E91
<b>Output signal</b>	<b>4' digit</b>
0...10 Vdc	2
4...20 mA	3
1...5 Vdc	4
0...20 mA	6
<b>Hydraulic connection</b>	<b>5' digit</b>
G 1/4	2
G 1/2 standard	3
1/4 NPT	5
1/2 NPT	6
M20x150	9
<b>Sensor seal</b>	<b>6' digit</b>
NBR (Nitril) standard except (P < 250 mbar)	3
CR (Neoprene) except (P < 250 mbar)	4
EPDM	5
FFKM Chemraz® 505 1 bar ≤ P ≤ 250 bar	7
FKM (Viton®)	9
Viton® is a registered trademark of DuPont Dow Elastomers	
<b>Pressure range</b>	<b>7'...9' digit</b>
See codes in tables	xxx
<b>Pressure type</b>	<b>10' digit</b>
Absolute	A
Gauge	R
Some products in the E913 range are on one day delivery (ex-works) : please contact	

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

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