

Y910 Intrinsically Safe 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

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

Marine version (Bureau Veritas Marine)

LCIE 02 ATEX 6133X

CE 0081



I M1
Ex ia I



II 1 G D
Ex ia IIC T6 or T5
Ex iaD A20 T80°C or T95°C IP6x



Hazardous area: 0, 1, 2, 20, 21, 22

The Y910 pressure transmitters allows pressure measurements on most corrosive fluids, in hazardous areas.

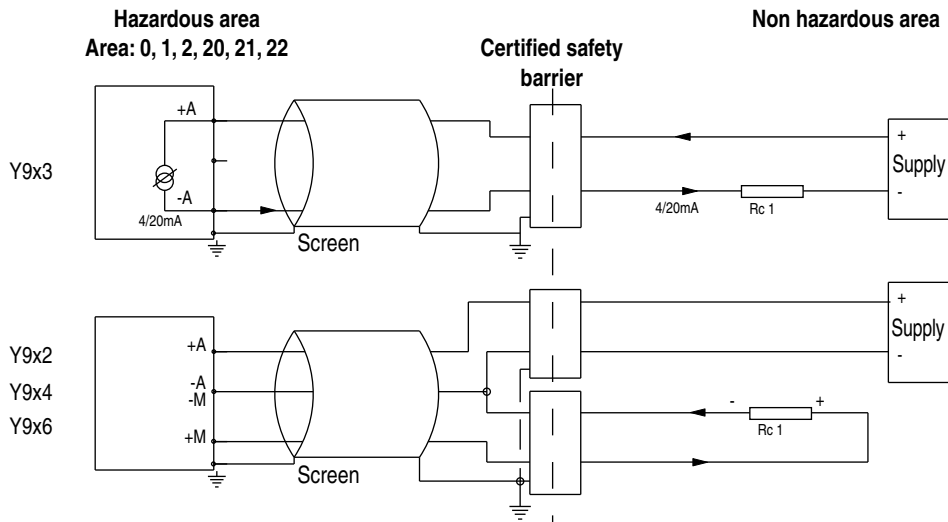
Technical data (20°C)

Measurement range	From 0...25 mbar to 0...600 bar Compound, gauge or absolute pressure	Operating temperature	
Output signal	Y912 : 0...10 Vdc. Y913 : 4...20 mA (except -1...0 bar where -1 = 20 mA, 0 = 4 mA) Y914 : 1...5 Vdc. Y916 : 0...20 mA	Ambient (Ta)	-25...+70°C Ta = +40°C G : T6 D IP65 : T°surface = +80°C Ta = +70°C G : T5 D IP65 : T°surface = +95°C (G = Gas ; D = Dust)
Supply voltage	Y912 : 14...28 Vdc Y913-Y914 : 11...28 Vdc Y916 : 8...28 Vdc	Fluid	-25...+100°C (Ta ≤ 50°C) depending on class
Option	Low voltage : 8...28 Vdc (Y913, Y914) Power supply electrical parameters device must be: $U_{supply} \leq 28$ Vdc ; $I \leq 120$ mA ; $P \leq 0.8$ W See drawings overleaf for more details.	Storage temperature	-40...+85°C
Insulation	> 100 MΩ at 500 Vdc	Compensated temperature range (zero and sensitivity)	-10...+55°C. Option: -10...+70°C
Maximum input current	Y912-Y914 : 6 mA Y916 : < 25 mA	Zero thermal drift	$\pm 0.025\%$ F.S./°C max. (except $P \leq 1$ bar : $\pm 0.06\%$ F.S./°C) Option : $\pm 0.015\%$ F.S./°C max. (except $P \leq 1$ bar : $\pm 0.025\%$ F.S./°C)
Load impedance (+M / -M)	Y912 : ≥ 2.5 kΩ Y914 : ≥ 1 kΩ Y913 : $R_{\Omega} \leq (U_{supply} - 11)/0.02$ Y913 : $R_{\Omega} \leq (U_{supply} - 8)/0.02$ (low voltage option) Y916 : $R_{\Omega} \leq (U_{supply} - 6)/0.02$	Span thermal drift	Typically: $\pm 0.01\%/^{\circ}\text{C}$ / Max.: $\pm 0.015\%/^{\circ}\text{C}$
CE Conformity	EMC Directive 2004/108/CE in accordance with standards EN61000-6-2, EN61000-6-3, EN 61326-1	Wetted parts	Ceramic + stainless steel 1.4404 (316L) + NBR seal (standard) for ranges ≥ 250 mbar and Viton® for ranges < 250 mbar
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.	Standard connections	Electrical : DIN 43650 connector Pressure : G1/2 Many options available
		Protection rating (EN 60529)	Standard : IP65 (DIN connector) Option : IP67 (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



Baumer

Installation instructions

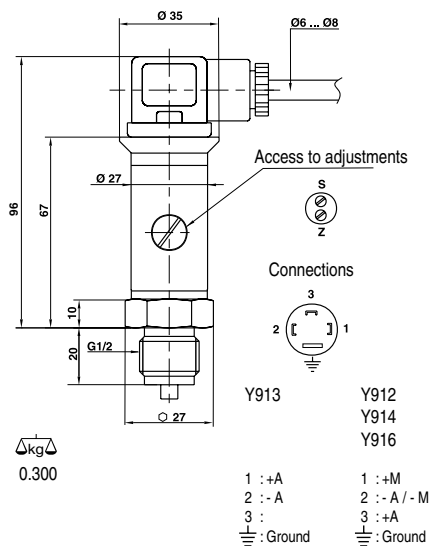


$U_{\max} = 28 \text{ Vdc}$
 $I_{\max} = 120 \text{ mA}$
 $P = 0,8 \text{ W}$
 $C_a > C_i + C_{\text{cable}}$
 $L_a > L_i + L_{\text{cable}}$
 $C_i = 30 \text{ nF (Y913 - Y916)}$
 $C_i = 60 \text{ nF (Y912 - Y914)}$

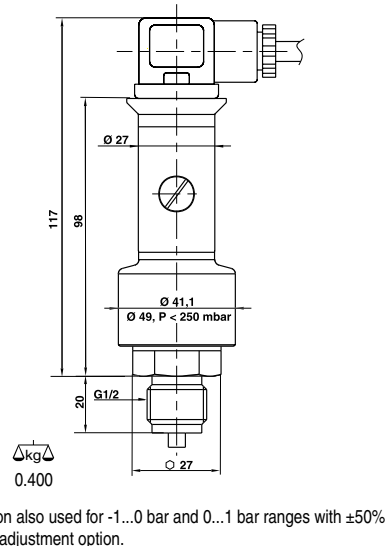
Don't forget the barrier's resistors in the determination of R_{c1} .
In area 0 or 20, the loop calculation of the association transmitter with safety barrier must be approved by notified organism.

Dimensional Drawings (mm) - Mounting Details

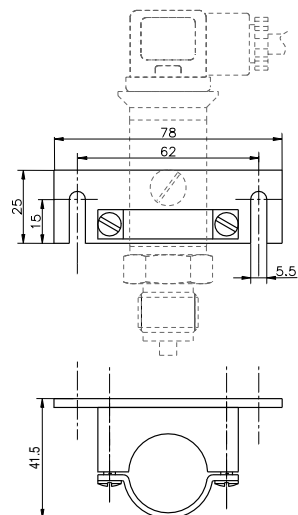
[xx] : dimensions and weight for "P < 1 bar" versions.



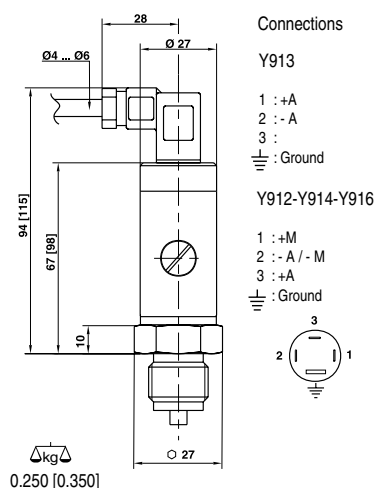
Standard version. $P \geq 1$ bar
DIN 43650 plug



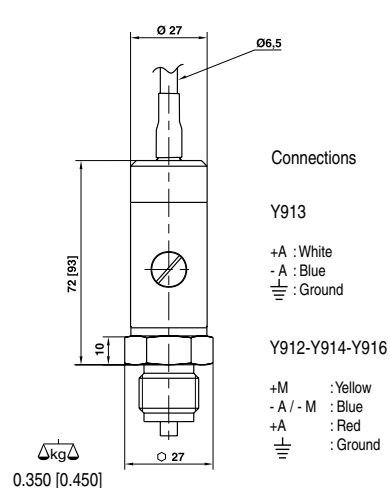
Standard version for P < 1 bar
DIN 43650 plug



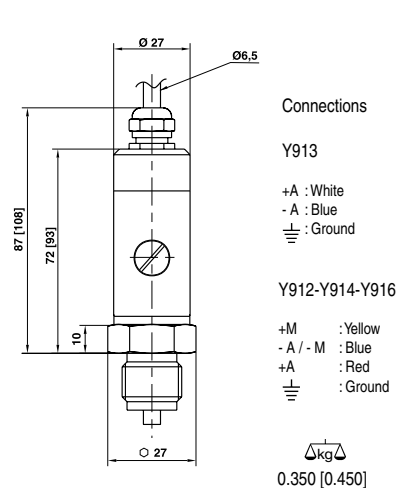
Option : Stainless steel surface mounting brackets



DIN 43650C micro plug (8 mm)



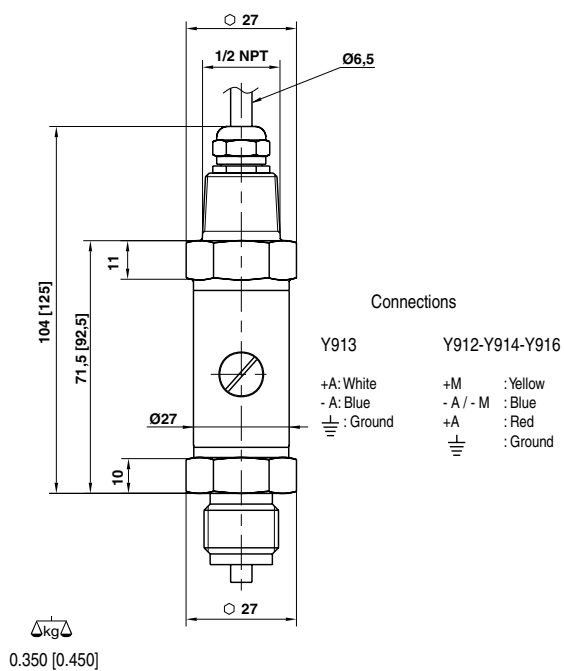
Pig tail (length 1.5 m)



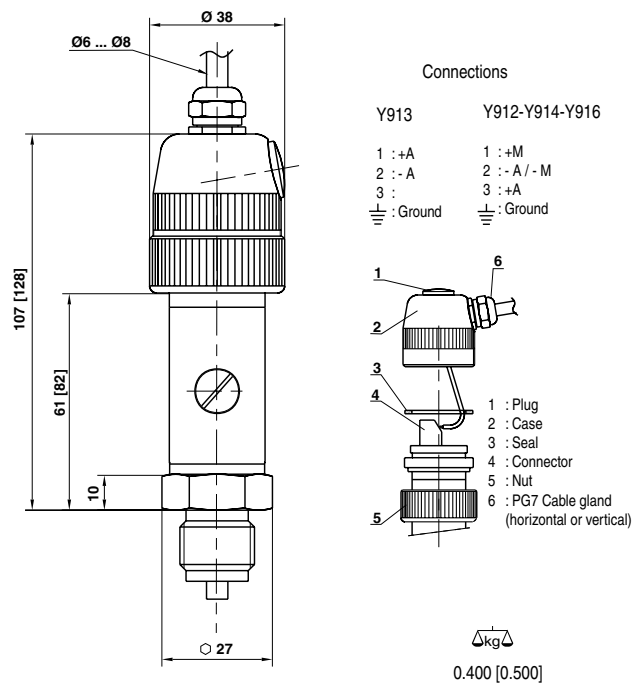
Pig tail (length 1.5 m) + PG7 Cable gland

Dimensional Drawings (mm) - Mounting Details

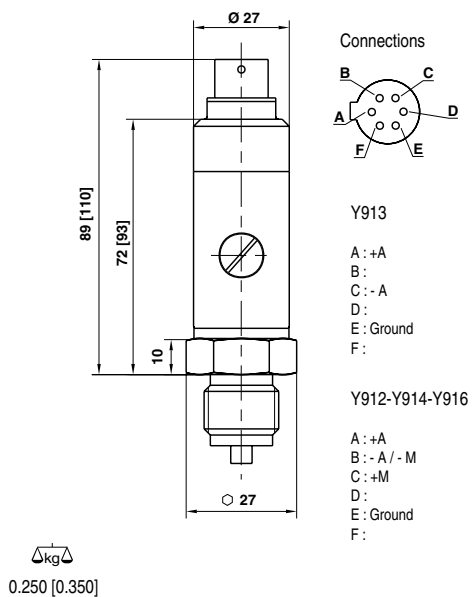
[xx] : dimensions and weight for "P < 1 bar" versions.



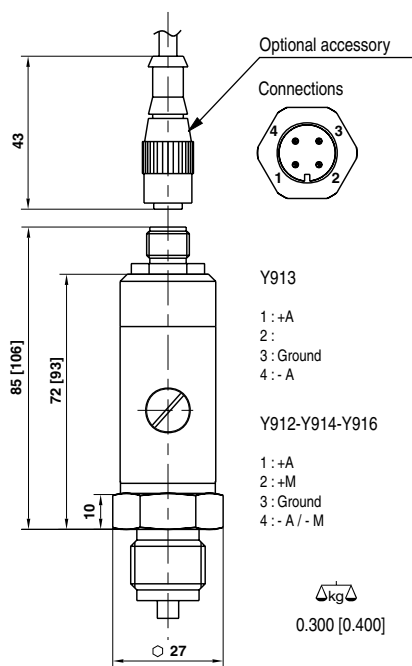
Pig tail cable outlet with 1/2 NPT male (length 1.5 m)



terminal strip outlet + screwed cap



6 contacts HE302 plug



M12, 4 contacts plug

Options

Specific cleaning (gas application). **Code 0829**

Drinking water application. **Code 0619**

Oxygen application. **Code 0765**

Lightning protection. **Code 0809**

Marine version. **Code 0808**

Low supply voltage⁽¹⁾ - **Code 2181**

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 $\leq 0 \dots +0.25$ bar and $0 \dots +600$ 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**

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**

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

Measuring Ranges

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

Ordering Details - Y910

Y91xxxxxx	
Model	1'...3' digit
Intrinsically safe	Y91
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
M20x150	9
Sensor seal	6' digit
NBR (Nitril) standard except (P < 250 mbar)	3
CR (Neoprene) except (P < 250 mbar)	4
EPDM	5
FFKM Chemraz® 505 1 bar $\leq$ P $\leq$ 250 bar	7
FKM (Viton®)	9
Viton® is a registered trademark of DuPont Dow Elastomers	
Pressure range	7'...9' digit
See codes in tables	xxx
Pressure type	10' digit
Absolute	A
Gauge	R

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

code	Range in mbar			
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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