

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 ...)

LCIE 02 ATEX 6133X

CE 0081



I M1 G and D
EEx ia I



II 1 G and D
EEx ia IIC T6 or T5



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



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

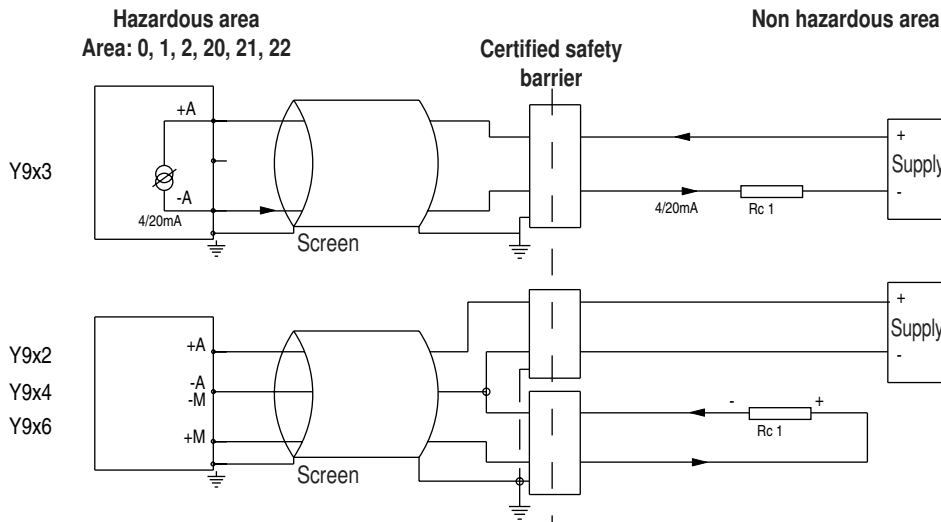
Technical data (20°C)

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...+75°C Ta = +40°C G: T6 D IP65 : T°surface = +80°C Ta = +75°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	<i>Low voltage: 8...28 Vdc (Y913, Y914)</i> 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. <i>Option: -10...+70°C</i>
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) <i>Option: $\pm 0.015\%$ F.S./°C max. (except $P \leq 1$ bar: $\pm 0.025\%$ F.S./°C)</i>
Load impedance (+M / -M)	Y912: ≥ 2.5 kΩ Y913: $R_{\Omega} \leq (U_{supply} - 11)/0.02$; $R_{c min} = 200$ Ω Y913: $R_{\Omega} \leq (U_{supply} - 8)/0.02$ (low voltage option) Y916: $R_{\Omega} \leq (U_{supply} - 6)/0.02$; $R_{c min} = 100$ Ω	Span thermal drift	Typically: $\pm 0.01\%/^{\circ}\text{C}$ / Max.: $\pm 0.015\%/^{\circ}\text{C}$
CE Conformity	CEM Directive 89/336/CE (EN50082-1 and -2, EN50081-1 and -2) with screened cable, screen connected at both ends. Pressure Directive 97/23/CE : 3.3 for $P < 200$ bar and cat 1 for $P \geq 200$ bar. ATEX Directive 94/9/CE (EN50014, EN50020, EN50281-1-1).	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 <i>Many options available</i>
		Protection rating (EN 60529)	Standard: IP65 (DIN connector) <i>Option: IP67 or IP68 (depending on connection)</i>
		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

Installation instructions



$$U_{\max} = 28 \text{ Vdc}$$

$$I_{\max} = 120 \text{ mA}$$

$$P = 0,8 \text{ W}$$

$$C_a > C_i + C_{\text{cable}}$$

$$L_a > L_i + L_{\text{cable}}$$

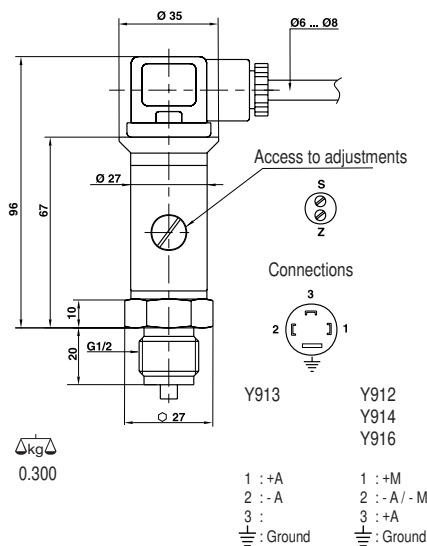
$$C_i = 30 \text{ nF (Y913 - Y916)}$$

$$C_i = 60 \text{ nF (Y912 - Y914)}$$

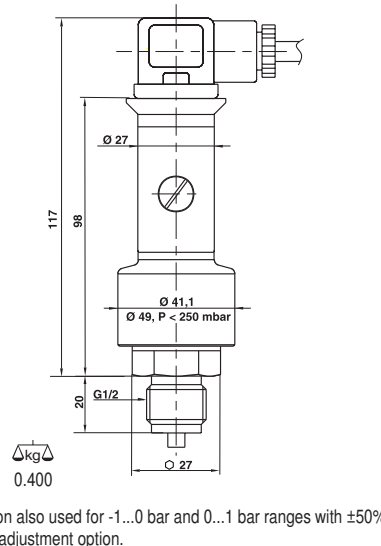
Don't forget the barrier's resistors in the determination of Rc1.
In area 0 or 20, the loop calculation of the association transmitter with safety barrier must be approved by notified organism.

Dimensional Drawings (mm) - Mounting Details

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

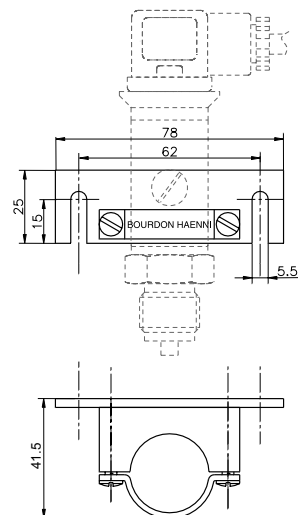


Standard version. P ≥ 1 bar
DIN 43650 plug

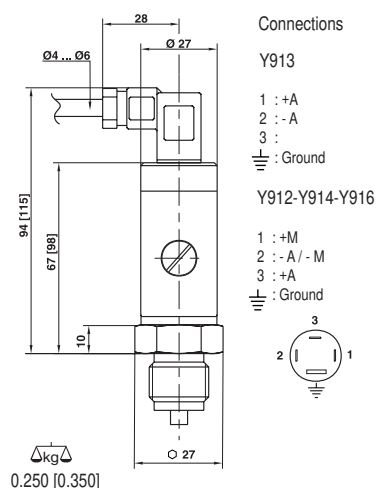


Version also used for -1...0 bar and 0...1 bar ranges with ±50% span adjustment option.

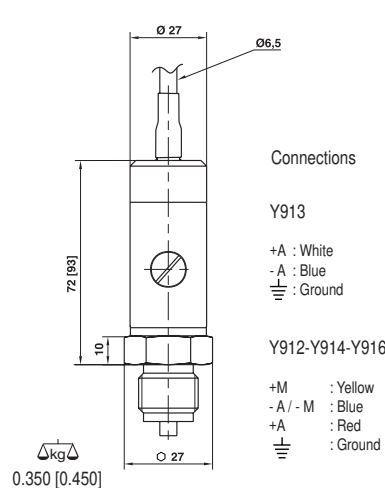
Standard version for P < 1 bar
DIN 43650 plug



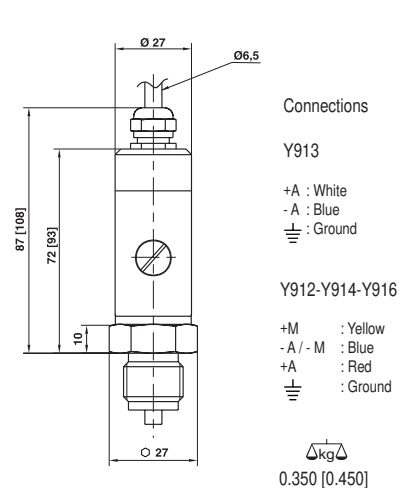
Option : Stainless steel surface mounting brackets



DIN 43650C micro plug (8 mm)



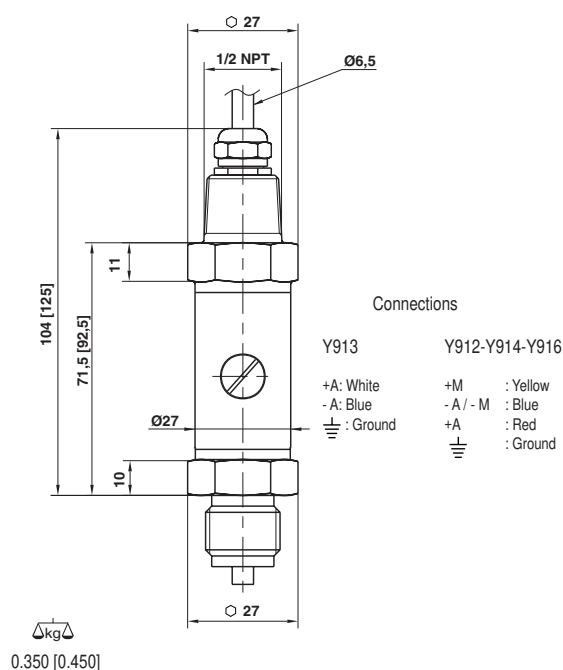
Pig tail (length 1.5 m)



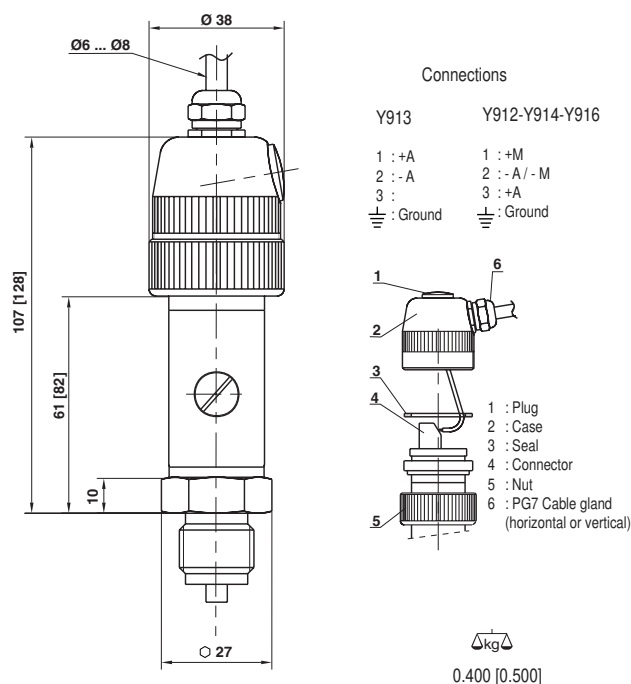
Pig tail (length 1.5 m) + PG7 Cable gland

Dimensional Drawings (mm) - Mounting Details

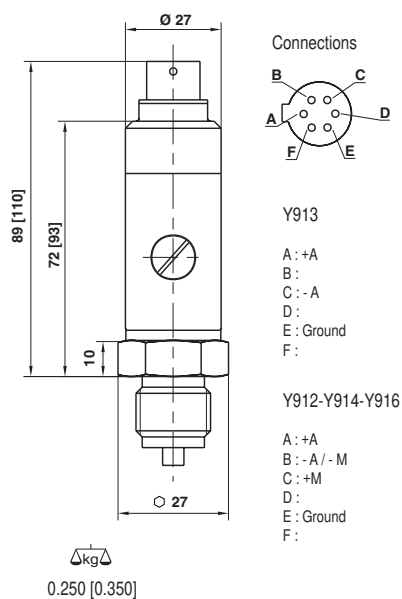
[xx] : dimensions and weight for "P < 1 bar" versions.



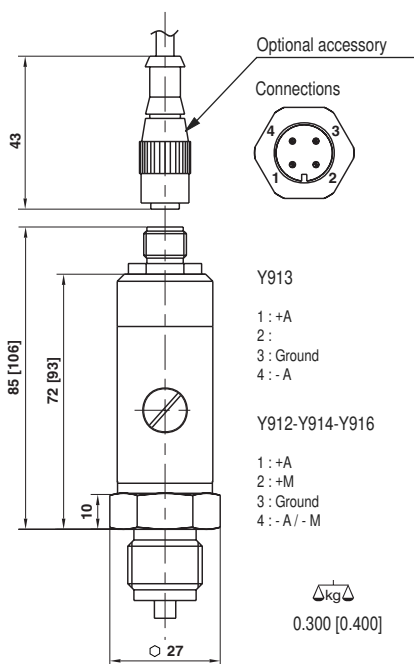
Pig tail cable outlet with 1/2 NPT male (length 1.5 m)



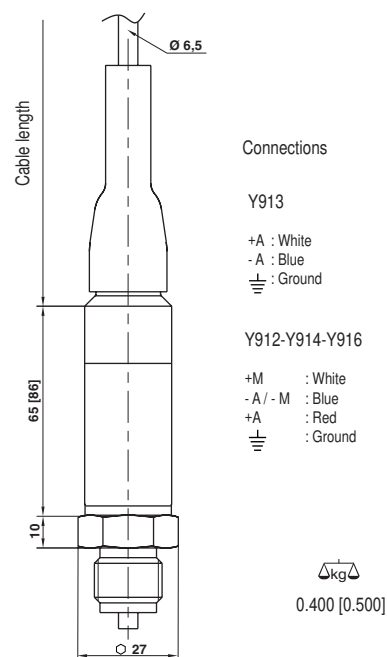
terminal strip outlet + screwed cap



6 contacts HE302 plug



M12, 4 contacts plug



Submersible cable (length 1.5 m)

Options

Uncoded Options (have to be listed after the code)

Degreased
 Lightning protection
 Marine version
 Low supply voltage⁽¹⁾
 Compensated temperature range (-10...+70°C)
 Zero thermal drift: ±0.015% of range/°C max.
 Span adjustment ±10% of range
 Span adjustment ±50% of range (except for ranges ≤ 0...+0.25 bar and 0...+600 bar)
 Calibration of sensor with certificate: Q1060
 Thread locking
 Other hydraulic connections
 Additional length of cable
 Stainless steel surface mounting brackets
 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⁾)
 Pig tail (1.5 m) (IP65)
 Pig tail (1.5 m) + PG7 cable gland (IP65, IP67 ⁽³⁾)
 Pig tail cable outlet with 1/2 NPT male (1.5 m) (IP65)
 Terminal strip outlet + screwed cap (IP65, IP67)
 6 contacts HE302 plug (IP65)
 M12, 4 contacts plug (IP65)
 Submersible cable (IP68 version ⁽⁴⁾)

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

⁽⁴⁾ IP68 : prolonged 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	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 - Y910

Y91xxxxxx-xxxx	
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
Sensor seal	6' digit
NBR (Nitril) standard	3
CR (Neoprene) (P ≥ 250 mbar)	4
EPDM (P ≥ 250 mbar)	5
Kalrez® (P ≥ 1 bar)	7
FKM (Viton®)	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
Option	
See data sheet "1 day delivery" options	-xxxx

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

1 day delivery time for the codes in bold type