Y91

pressure transmitter

Main features

- Robust stainless steel housing
- Intrinsically safe version (LCIE 02 ATEX 6133X)
- Available with optional Marine approval (Bureau Veritas Marine)

Applications

- Chemical
- Pneumatic
- Energy
- Shipbuilding
- Industrial gas

IP 65 IP 67

Main characteristics

Measuring range	-1 ... 0 bar up to 0 ... 600 bar
Long term stability	0.2% FS / Year
Accuracy (20 °C) (linearity, hysteresis and repeatability according Best Fit Straight Line)	≤ ± 0.3% FS (BFSL)

Technical specifications

Measuring principle	Thick film on ceramic
Measuring ranges	-1 ... 0 bar up to 0 ... 600 bar
Type of pressure	Relative / Absolute
Accuracy (20 °C) (linearity, hysteresis and repeatability according Best Fit Straight Line)	≤ ± 0.3% FS (BFSL) ≤ ± 0.6% FS (BFSL) for P ≤ 60 mbar and P= 600 bar
Error of zero point	≤ ± 1% FS
Error of span	≤ ± 1% FS
Zero thermal drift	≤ ± 0.25% FS/10 K (P > 1 bar) ≤ ± 0.60% FS/10 K (P ≤ 1 bar)
Span thermal drift	≤ ± 0.15% FS/10 K (P > 1 bar) ≤ ± 0.15% FS/10 K (P ≤ 1 bar)
Long term stability	0.2% FS / Year
Response time (10 … 90%)	≤ 3 ms
Process connections	See page 3

Environment

Temperature	
Storage	-40 ... + 85°C
Compensated range	-10 ... + 55°C
Medium	-25 ... +100°C
Ambient	-25 ... + 70°C
Protection rating	IP65 (EN 60529) up to IP67 depending on electrical connection
Vibration IEC60068-2-6	1.5 mm p-p (10 – 55 Hz), 20 g (55 Hz – 2 KHz)
Shock IEC60068-2-27	25 falls from 1 m on concrete ground

Electrical specification

Output signal / Power supply	4 … 20 mA / 11 … 28 VDC 0…10 V / 14 … 28 VDC
Load impedance	
Current ouput	$R_\Omega = (U_{supply}$-11 V) / 20 mA
Voltage output	> 2.5 KΩ
Insulation resistance	>100 MΩ at 500 VDC
Electrical connections	See page 3

Material

Process connection and housing	SS 1.4404 AISI 316L
Diaphragm	Ceramic (96% Al_2O_3)
Sealing	NBR, EPDM, CR, FFKM or FKM (Viton®)
Cable	PVC

ATEX

I M1	Ex ia I Ma
II 1 G D	Ex ia IIC T6 or T5 Ga
II 1 G D	Ex ia IIIC T80°C or T95°C Da IP6X
Barrier data	Ui ≤ 28 V Ii ≤ 120 mA Pi ≤ 800 mW
Capacity (current output)	Ci ≤ 30 nF
Capacity (voltage output)	Ci ≤ 60 nF

Ambient temperature Ta

Ta = +40°C	G: T6	D IP65: Surface temperature = +80°C
Ta = +70°C	G: T5	D IP65: Surface temperature = +95°C
		(G = Gas, D = Dust)

For the application in Ex zone you have to respect the conditions mentioned in the ATEX Type Examination Certificate (LCIE 02 ATEX 6133X).
You find the certificates and manuals under http://www.baumer.com/

Approvals

CE conformity	EMC directive 2004/108/CE in accordance with EN 61000-6-2, EN 61000-6-3, EN 61326-1 (Tab.2) Pressure directive 97/23/CE

Measuring ranges and overpressure safety

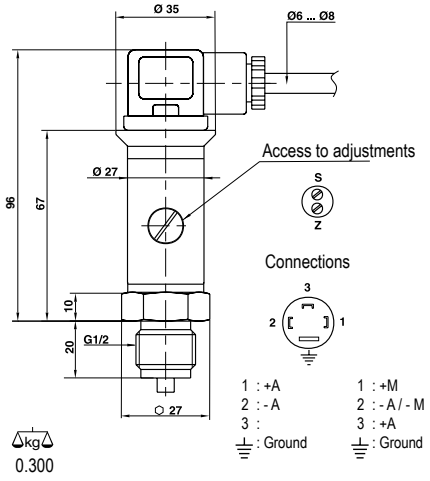
	Pressure in mbar						
Pressure range	0 ... 25 0 ... 40	0 ... 60	0 ... 100 0 ... 160	0 ... 250 0 ... 400 0 ... 600			
Over pressure	110	275	500	1000			
Burst pressure	200	500	1000	2000			

	Pressure in bar						
Pressure range	-1 ... 0 -1 ... 0.6 0 ... 1 0 ... 1.6	-1 ... 1.5 0 ... 2.5	-1 ... 3 0 ... 4	-1 ... 5 0 ... 6	-1 ... 15 0 ... 16	-1 ... 24 0 ... 25	-1 ... 39 0 ... 40
Over pressure	3	4	8	12	32	50	80
Burst pressure	6	7	12	18	48	75	120

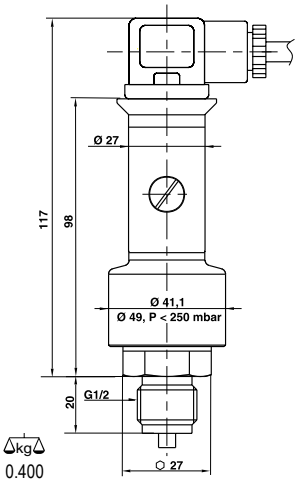
	Pressure in bar					
Pressure range	0 ... 60	0 ... 100	0 ... 160	0 ... 250	0 ... 400	0 ... 600
Over pressure	120	200	320	500	600	800
Burst pressure	180	300	480	600	800	1000

Dimensions (mm)

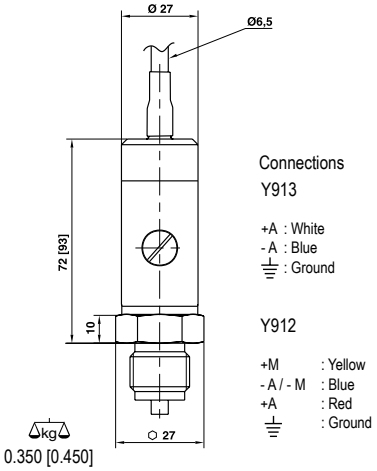
Standard version for P ≥ 1 bar
DIN 43650 plug
IP 65



Standard version for P < 1 bar
DIN 43650 plug
IP 65

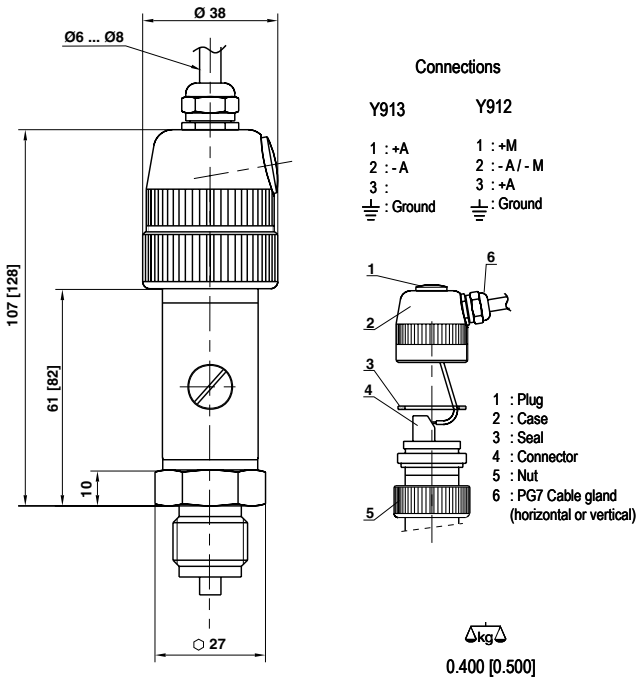


Pig tail (length 1.5 m)
IP 65

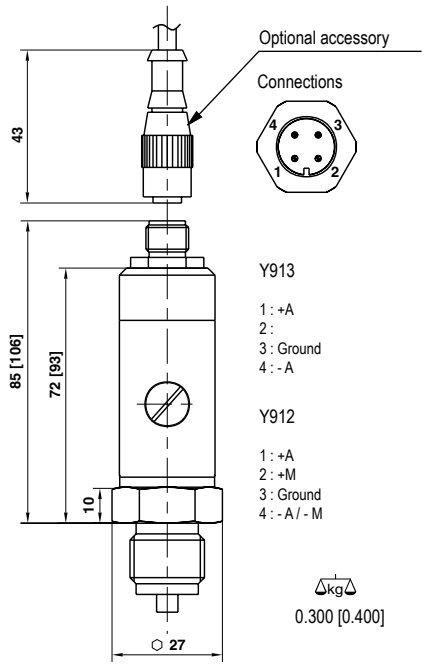


Version also used for -1...0 bar and 0...1 bar ranges with ±50% span adjustment option.

Terminal strip outlet + screwed cap
IP 67



M12, 4 contacts plug
IP 65



Ordering details Y91

		Y91	_	x	.	x	.	x	.	xxx	.	x	/	xxxx
Model														
Pressure transmitter		Y91												
			_											
Output signal														
0...10 V				2										
4...20 mA				3										
					.									
Process connection														
G¼ EN 837						2								
G½ EN 837						3								
¼ NPT						5								
½ NPT						6								
M20x150						9								
							.							
Sealing														
NBR	P ≥ 250 mbar							3						
CR	1 bar ≤ P < 250 mbar							4						
EPDM								5						
FFKM (Chemraz® 505)	1 bar ≤ P < 250 mbar							7						
FKM (Viton®)								9						
									.					
Pressure range and unit in bar														
0...0.025	Only pressure type relative									N05				
0...0.04	Only pressure type relative									N06				
0...0.06	Only pressure type relative									N07				
0...0.1	Only pressure type relative									N08				
0...0.16	Only pressure type relative									N09				
0...0.25	Only pressure type relative									N10				
0...0.4	Only pressure type relative									N11				
0...0.6	Only pressure type relative									N12				
0...-1	Only pressure type relative									B59				
-1...0.6	Only pressure type relative									B72				
-1...1.5	Only pressure type relative									B74				
-1...3	Only pressure type relative									B76				
-1...5	Only pressure type relative									B77				
-1...9	Only pressure type relative									B79				
-1...15	Only pressure type relative									B81				
-1...24	Only pressure type relative									B82				
-1...39	Only pressure type relative									B1L				
0...1										B15				
0...1.6										B16				
0...2.5										B18				
0...4										B19				
0...6										B20				
0...10										B22				
0...16										B24				
0...25										B26				
0...40										B27				
0...100										B31				
0...160										B33				
0...250										B35				
0...400										B38				
0...600										B39				
											.			
Kind of pressure														
Relative												R		
Absolute												A		
													/	
Output connection														
DIN 43650, 4 pins														
Shielded cable (1.5 m)														2160
M12, 4 pins														2164
Terminal strip outlet + screwed cap														2166
Terminal strip outlet + cap with M20x150 thread and gland														2167