Baumer
Passion for Sensors

Pressure sensor

Y91 - Configurator

Y91-#.#.#.###.#

Overview

- Robust stainless steel housing
- Intrinsically safe version (LCIE 02 ATEX 6133X)
- Applications: Chemical, pneumatic, energy, industrial gas



Picture similar

Technical data

Performance characteristics	
Pressure type	Absolute Relative (gauged)
Compensated temperature range	-10 … 55 °C
Long term stability	0.2 % FSR/a
Max. measuring span	600 bar
Measuring range	-1 … 600 bar
Standard error of measurement (BFSL)	≤ ± 0.3 % FSR Including non-linearity, hysteresis and non-repeatability according BFSL ≤ ± 1 % FSR , for P ≤ 1 bar and P= 600 bar ≤ ± 1 % FSR , zero point error ≤ ± 1 % FSR , span error P > 1 Bar ≤ ± 2 % FSR , span error P ≤ 1 Bar
Min. measuring span	0.1 bar
Rise time (10 ... 90 %)	≤ 3 ms
Temperature coefficient	≤ ± 0.25 % FSR/10 K , zero point P > 1 bar ≤ ± 0.6 % FSR/10 K , zero point P ≤ 1 bar ≤ ± 0.15 % FSR/10 K , measuring range > 1 bar ≤ ± 0.3 % FSR/10 K , measuring range ≤ 1 bar
Process conditions	
Process temperature	-40 … 100 °C
Process pressure	Refer to section "Process conditions"
Process connection	
Connection variants	Refer to section "Dimensional drawings"
Wetted parts material, process connection	AISI 316L (1.4404)
Wetted parts material, membrane	Ceramic, 96% AL2O3

Process connection	
Wetted parts material, gasket	NBR CR, optional EPDM, optional EPDM O-rings are conform to 3-A Sanitary Standard 18-03 Class II, EPDM gaskets are conform to 3-A Sanitary Standard 18-03 Class I (8% milk fat max.) FKM, optional, gaskets require a minimum ambient temperature of -20 °C and a minimum medium temperature of -25 °C
Ambient conditions	
Operating temperature range	-40 … 70 °C
Storage temperature range	-40 … 85 °C
Degree of protection (EN 60529)	IP 65 IP 67
Shock (EN 60068-2-27)	25 falls from 1 m onto concrete floor
Vibration (sinusoidal) (EN 60068-2-6)	1.5 mm p-p (10 … 58 Hz), 20 g (58 Hz … 2 kHz)
Output signal	
Current output	4 … 20 mA
Voltage output	0 … 10 V 1 … 5 V
Load resistance	R = (Uver - 11 V)/20 mA, with current output > 2.5 kΩ, with voltage output > 1 kΩ, with voltage output (1...5V)
Insulation resistance	> 100 MΩ , 500 V DC
Housing	
Style	Compact transmitter
Overall size	Refer to section "Dimensional drawings"
Material	AISI 304 (1.4301)
Electrical connection	
Connector	DIN EN 175301-803 A (DIN 43650 A), 4-pin (standard) M12-A, 4-pin

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Technical data

Electrical connection	
Cable gland	PG7
Cable outlet	1.5 m, 3-wire, shielded
Power supply	
Voltage supply range	11 … 28 V DC , with current output 14 … 28 V DC , with voltage output
ATEX I M1 Ex ia I Ma	
Please note	For the application in Ex zone you have to respect the conditions mentioned in the ATEX Type Examination Certificate (LCIE 02 ATEX 6133).You will find the relevant certificates and instructions at www.baumer.com
Maximum values for barrier selection, Ui	28 V
Maximum values for barrier selection, Ii	120 mA
Maximum values for barrier selection, Pi	800 mW
Internal capacitance, Ci	30 nF , 4 ... 20 mA 60 nF , 1 ... 5 V / 0 ... 10 V
Internal inductance, Li	0 µH
ATEX II 1 G Ex ia IIC T5 / T6 Ga	
Please note	For the application in Ex zone you have to respect the conditions mentioned in the ATEX Type Examination Certificate (LCIE 02 ATEX 6133).You will find the relevant certificates and instructions at www.baumer.com
Maximum values for barrier selection, Ui	28 V

ATEX II 1 G Ex ia IIC T5 / T6 Ga	
Maximum values for barrier selection, Ii	120 mA
Maximum values for barrier selection, Pi	800 mW
Internal capacitance, Ci	30 nF , 4 ... 20 mA 60 nF , 1 ... 5 V / 0 ... 10 V
Internal inductance, Li	0 µH
ATEX II 1 D Ex ia IIIC T80°C / T105°C Da	
Please note	For the application in Ex zone you have to respect the conditions mentioned in the ATEX Type Examination Certificate (LCIE 02 ATEX 6133).You will find the relevant certificates and instructions at www.baumer.com
Maximum values for barrier selection, Ui	28 V
Maximum values for barrier selection, Ii	120 mA
Maximum values for barrier selection, Pi	800 mW
Internal capacitance, Ci	30 nF , 4 ... 20 mA 60 nF , 1 ... 5 V / 0 ... 10 V
Internal inductance, Li	0 µH
Compliance and approvals	
EMC	EN 61000-6-2 EN 61000-6-3 EN 61326-1

Operating conditions

Measuring range (bar)				Proof pressure (bar)	Burst Pressure (bar)
0.1	0.16			0.4	0.5
0.25	0.4	0.6		1	1.3
-1 … 0	-1 … 0,6	0 … 1	0 … 1,6	3	6
-1 … 1,5	0 … 2,5			4	7
-1 … 3	0 … 4			8	12
-1 … 5	0 … 6			12	18
-1 … 9	0 … 10			20	30
-1 … 15	0 … 16			32	48
-1 … 24	0 … 25			50	75
-1 … 39	0 … 40			80	120
	0 … 60			120	180
	0 … 100			200	300
	0 … 160			320	480
	0 … 250			500	480
	0 … 400			600	800
	0 … 600			800	1000

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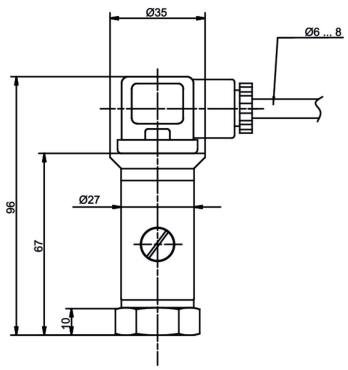
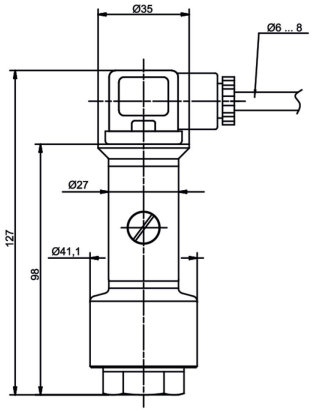
Dimensional drawings (mm)

Housing

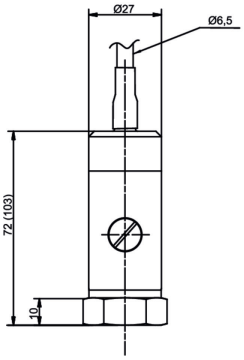
Standard (IP65)



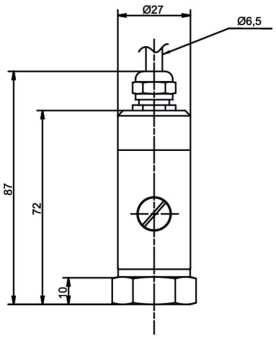
Standard 100 à 600 mbar (IP67)



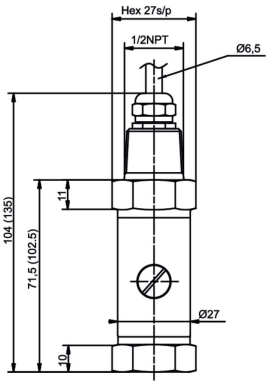
Option 2160 (IP65)



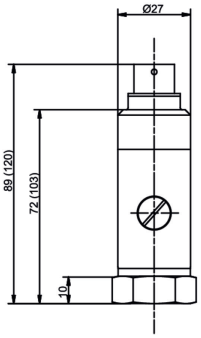
Option 2161 (IP67)



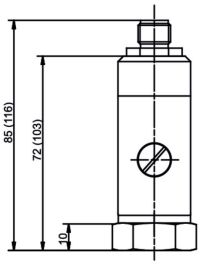
Option 2162 (IP67)



Option 2163 (IP67)



Option 2164 (IP65)



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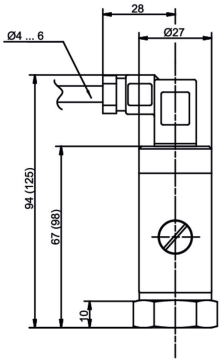
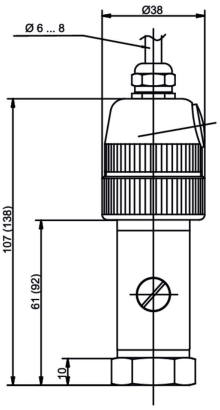


Option 2166 (IP67)



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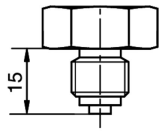
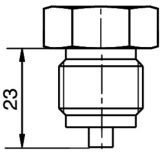
Dimensional drawings (mm)

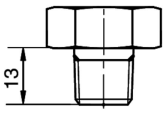
Process connection



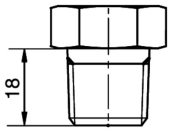
G30-02
G 1/4 B EN 837-1 (BCID: G30)



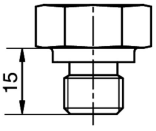
G31-3
G 1/2 B EN 837-1 (BCID: G31)



N01-5
1/4-18 NPT (BCID: N01)



N02-6
1/2-14 NPT (BCID: N02)



G50-06
G 1/4 A DIN EN ISO 1179-2 (3852-E) (BCID: G50)

Ordering information

Ordering key - Configuration possibilities see website

	Y91	-	#	.	#	.	#	.	###	.	#	2164	####	2153
Product														
	Y91													
Output signal														
4 ... 20 mA			3											
0 ... 10 V			2											
1 ... 5 V			4											
Process connection														
G 1/4 A DIN EN ISO 1179-2 (3852-E) (G50)					B									
G 1/4 B EN 837-1 (G30)					2									
G 1/2 B EN 837-1 (G31)					3									
1/4-18 NPT (N01)					5									
1/2-14 NPT (N02)					6									

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Ordering information

Ordering key - Configuration possibilities see website

	Y91	-	#	.	#	.	#	.	###	.	#	2164	####	2153
Sealing														
NBR							3							
EPDM							5							
FKM							9							
Measuring range														
0 ... 1 bar (EN)									B15					
0 ... 1,6 bar (EN)									B16					
0 ... 2.5 bar (EN)									B18					
0 ... 4 bar (EN)									B19					
-1 ... 39 bar (EN)									B1L					
0 ... 6 bar (EN)									B20					
0 ... 10 bar (EN)									B22					
0 ... 16 bar (EN)									B24					
0 ... 25 bar (EN)									B26					
0 ... 40 bar (EN)									B27					
0 ... 60 bar (EN)									B29					
0 ... 100 bar (EN)									B31					
0 ... 160 bar (EN)									B33					
0 ... 250 bar (EN)									B35					
0 ... 400 bar (EN)									B38					
0...600 bar (EN)									B39					
-1 ... 0 bar (EN)									B59					
-1 ... 0,6 bar (EN)									B72					
-1 ... 1,5 bar (EN)									B74					
-1 ... 3 bar (EN)									B76					
-1 ... 5 bar (EN)									B77					
-1 ... 9 bar (EN)									B79					
-1 ... 15 bar (EN)									B81					
-1 ... 24 bar (EN)									B82					
0...15 psi (ANSI)									H15					
0...20 psi (ANSI)									H1C					
0...30 psi (ANSI)									H17					
0...60 psi (ANSI)									H19					
0...100 psi (ANSI)									H21					
0...160 psi (ANSI)									H22					
0...200 psi (ANSI)									H23					
0...300 psi (ANSI)									H25					
0...400 psi (ANSI)									H26					
0...600 psi (ANSI)									H27					
0...1000 psi (ANSI)									H30					
0...1500 psi (ANSI)									H31					
0...3000 psi (ANSI)									H34					
0...6000 psi (ANSI)									H38					
0...9000 psi (ANSI)									H39					
Kind of pressure														
Relative (gauged)											R			
Absolute											A			
Electrical Connection														
M12-A, 4-pin												2164		

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Ordering information

Ordering key - Configuration possibilities see website

	Y91	-	#	.	#	.	#	.	###	.	#	2164	####	2153
Span adjustment														
± 10 % span and zero adjustmen													2151	
± 50% (except for measuring range ? 0 …+25mbar and 0 … +600 bar)													2152	
Span and M.R. adjustment														
Non-accessible adjusting														2153

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