

Overview

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


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)	$\leq \pm 0.3$ % FSR Including non-linearity, hysteresis and non-repeatability according BFSL $\leq \pm 1$ % FSR, for $P \leq 1$ bar and $P = 600$ bar $\leq \pm 1$ % FSR, zero point error $\leq \pm 1$ % FSR, span error $P > 1$ Bar $\leq \pm 2$ % FSR, span error $P \leq 1$ Bar
Min. measuring span	0.1 bar
Rise time (10 ... 90 %)	≤ 3 ms
Temperature coefficient	$\leq \pm 0.25$ % FSR/10 K, zero point $P > 1$ bar $\leq \pm 0.6$ % FSR/10 K, zero point $P \leq 1$ bar $\leq \pm 0.15$ % FSR/10 K, measuring range > 1 bar $\leq \pm 0.3$ % FSR/10 K, measuring range ≤ 1 bar

Process conditions

Process temperature	-25 ... 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 (Viton®), optional FKM (Viton®) gaskets require a minimum ambient temperature of -20 °C and a minimum medium temperature of -25 °C
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Ambient conditions

Operating temperature range	-25 ... 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	$R = (U_{ver} - 11 \text{ V}) / 20 \text{ mA}$, with current output $> 2.5 \text{ k}\Omega$, with voltage output $> 1 \text{ k}\Omega$, with voltage output (1...5V)
Insulation resistance	$> 100 \text{ M}\Omega$, 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
Cable gland	PG7

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Technical data

Electrical connection

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

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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

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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	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

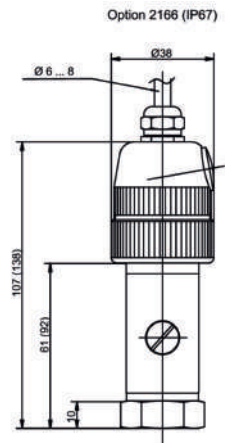
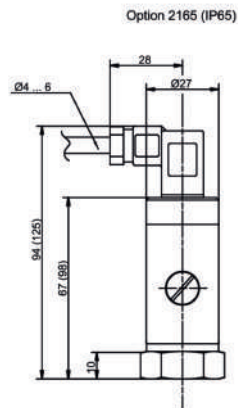
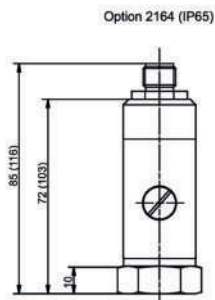
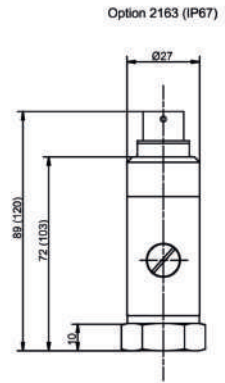
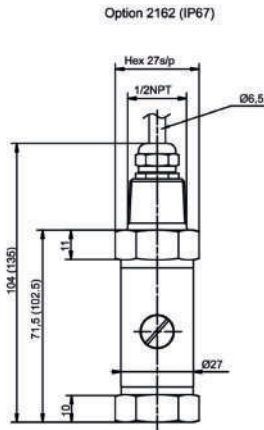
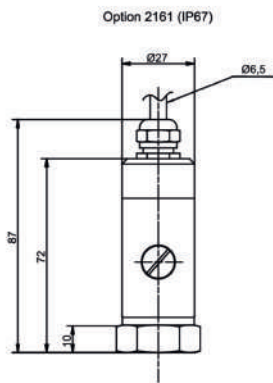
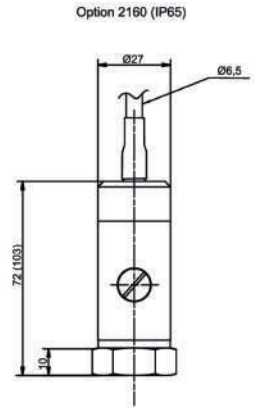
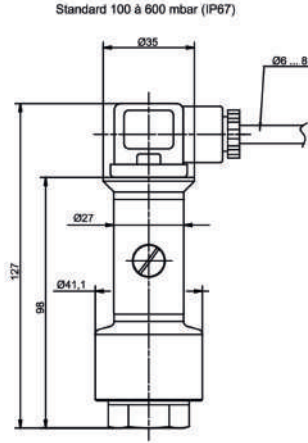
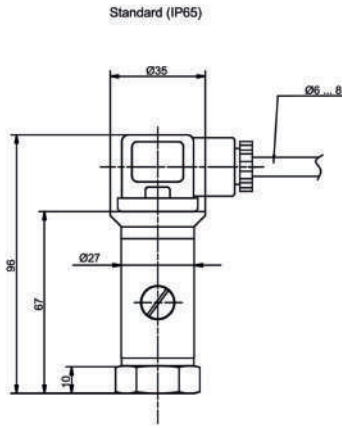
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Dimensional drawings (mm)

Housing



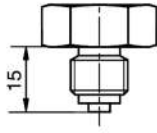
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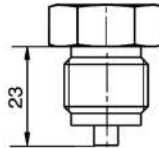
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Dimensional drawings (mm)

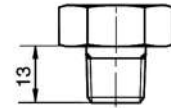
Process connection



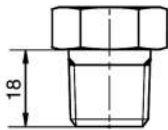
G30-2
G 1/4 B EN 837-1 (BCID: G30)



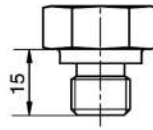
G31-3
G 1/2 B EN 837-1 (BCID: G31)



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



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



G50-B
G 1/4 A DIN 3852-E (BCID: G50)

Ordering information

Ordering key - Configuration possibilities see website

	Y91	-	#	.	#	.	#	.	###	.	#	####	####	2153
Product	Y91													
Output signal														
4 ... 20 mA														3
0 ... 10 V														2
1 ... 5 V														4
Process connection														
G 1/4 A DIN 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
M20 × 1.5 ISO 261 / ISO 965 (M08)														9

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Ordering information

Ordering key - Configuration possibilities see website

	Y91	-	#	.	#	.	#	.	###	.	#	####	####	2153
Sealing														
NBR														
EPDM														
FFKM (Chemraz®)														
FKM (Viton®)														
CR (Neoprene)														
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...100 kPa (EN)														D15
0...160 kPa (EN)														D16
0...250 kPa (EN)														D18
0...400 kPa (EN)														D19
-100...3900 kPa (EN)														D1L
0...600 kPa (EN)														D20
0...1000 kPa (EN)														D22
0...1600 kPa (EN)														D24
0...2500 kPa (EN)														D26
0...4000 kPa (EN)														D27
0...6000 kPa (EN)														D29
0...10000 kPa (EN)														D31
0...16000 kPa (EN)														D33
0...25000 kPa (EN)														D35
0...40000 kPa (EN)														D38
0...60000 kPa (EN)														D39
-100...0 kPa (EN)														D59
-100...60 kPa (EN)														D72
-100...150 kPa (EN)														D74
-100...300 kPa (EN)														D76

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Ordering information

Ordering key - Configuration possibilities see website

	Y91	-	#	.	#	.	#	.	###	.	#	####	####	2153
-100...500 kPa (EN)									D77					
-100...900 kPa (EN)									D79					
-100...1500 kPa (EN)									D81					
-100...2400 kPa (EN)									D82					
0...1 kg/cm2 (EN)									F15					
0...1,6 kg/cm2 (EN)									F16					
0...2,5 kg/cm2 (EN)									F18					
0...4 kg/cm2 (EN)									F19					
-1...39 kg/cm2									F1L					
0...6 kg/cm2 (EN)									F20					
0...10 kg/cm2 (EN)									F22					
0...16 kg/cm2 (EN)									F24					
0...25 kg/cm2 (EN)									F26					
0...40 kg/cm2 (EN)									F27					
0...60 kg/cm2 (EN)									F29					
0...100 kg/cm2 (EN)									F31					
0...160 kg/cm2 (EN)									F33					
0...250 kg/cm2 (EN)									F35					
0...400 kg/cm2 (EN)									F38					
0...600 kg/cm2 (EN)									F39					
-1...0 kg/cm2 (EN)									F59					
-1...0,6 kg/cm2 (EN)									F72					
-1...1,5 kg/cm2 (EN)									F74					
-1...3 kg/cm2 (EN)									F76					
-1...5 kg/cm2 (EN)									F77					
-1...9 kg/cm2 (EN)									F79					
-1...15 kg/cm2 (EN)									F81					
-1...24 kg/cm2 (EN)									F82					
0...15 psi (ANSI)									H15					
0...30 psi (ANSI)									H17					
0...60 psi (ANSI)									H19					
0...20 psi (ANSI)									H1C					
-30Hg...600 psi (ANSI)									H1L					
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					
-30HG...60 psi (ANSI)									H2C					
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					
-30HG...0 (ANSI)									H59					
-30HG...15 psi (ANSI)									H73					
-30HG...30 psi (ANSI)									H75					
-30HG...100 psi (ANSI)									H78					
-30HG...150 psi (ANSI)									H79					
-30HG...220 psi (ANSI)									H81					

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Ordering information

Ordering key - Configuration possibilities see website

	Y91	-	#	.	#	.	#	.	###	.	#	###	###	2153
-30HG...300 psi (ANSI)									H82					
0...100 mbar (EN)									N08					
0...160 mbar (EN)									N09					
0...250 mbar (EN)									N10					
0...400 mbar (EN)									N11					
0...600 mbar (EN)									N12					
Kind of pressure														
Relative (gauged)													R	
Absolute													A	
Electrical Connection														
Cable outlet, length: 1.5 m														2160
Cable outlet with PG7 gland, length: 1.5 m														2161
Cable outlet with 1/2 NPT male thread, length: 1.5 m														2162
HE302 socket plug, 6-pin														2163
M12-A, 4-pin														2164
DIN 43650 C micro plug														2165
Connection head + cap with PG7 cable gland														2166
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