

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, optional, 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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Intrinsically safe pressure transmitter for process and energy industries

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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

 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

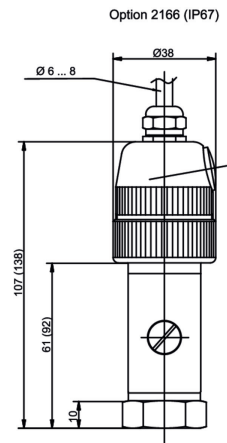
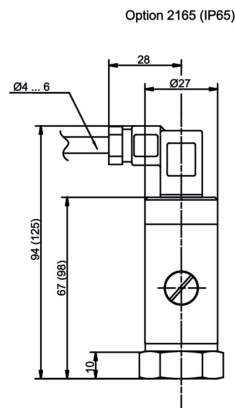
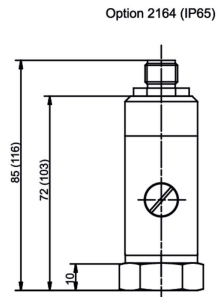
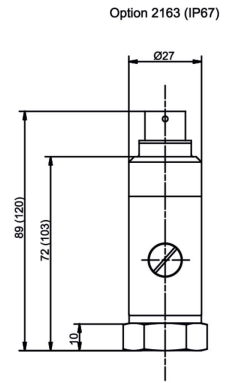
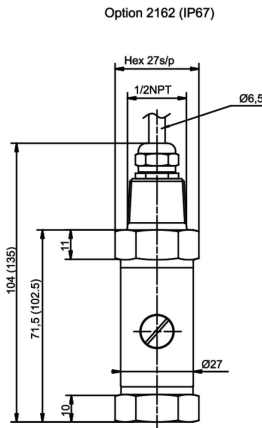
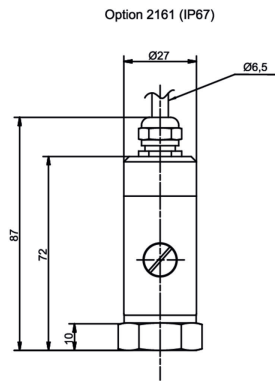
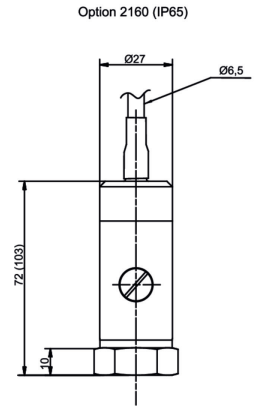
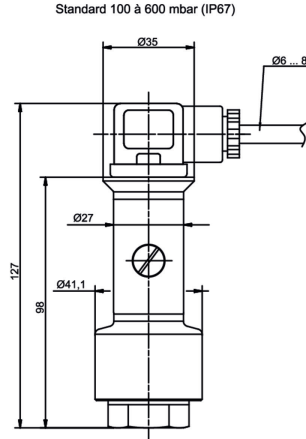
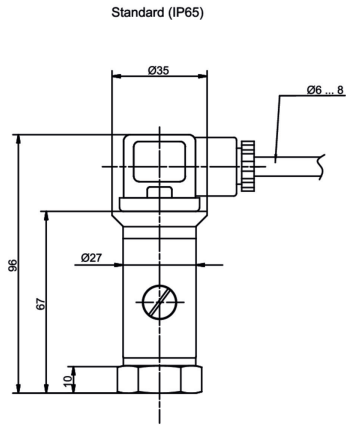
 EMC EN 61000-6-2
 EN 61000-6-3
 EN 61326-1

Operating conditions

Measuring range (bar)		Proof pressure (bar)	Burst Pressure (bar)
0.1	0.16	0.4	0.5
0.25	0.4	1	1.3
-1 ... 0	-1 ... 0,6	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

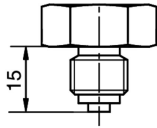
Dimensional drawings (mm)

Housing

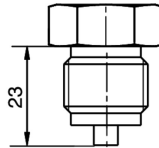


Dimensional drawings (mm)

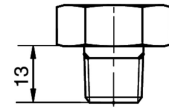
Process connection



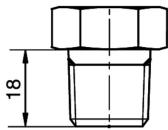
G30-02
G 1/4 B EN 837-1 (BCID: G30)



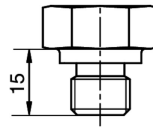
G31-3
G 1/2 B EN 837-1 (BCID: G31)



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



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



G50-06
G 1/4 A DIN 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 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
Sealing														
NBR														3
EPDM														5
FKM														9

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Ordering information

Ordering key - Configuration possibilities see website

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

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Ordering information

Ordering key - Configuration possibilities see website

Y91 - # . # . # . ### . # 2164 ##### 2153

Span and M.R. adjustment

Non-accessible adjusting

2153