

BTE2000G.../PTE2000G... - Series

Precision stainless steel pressure transmitters

FEATURES

- 0 ... 0.35 bar to 0 ... 35 bar gage or 0 ... 15 psig to 0 ... 500 psig
- For corrosive media in harsh environments
- 1 ... 6 V or 4 ... 20 mA output
- Field interchangeable
- All welded stainless steel diaphragm construction

SERVICE

Pressure inlet: any liquid, gas or vapor that is compatible with 303 stainless steel.
Housing: 303 SS, protection class, IP67 according to DIN40050¹



Scale: ——— 1cm
————— 1 inch

SPECIFICATIONS

Maximum ratings

Supply voltage (reverse polarity protection)
BTE2...G1... 12 ... 30 V
BTE2...G4...² 12 ... 36 V

Maximum load current
BTE2...G1... only 20 mA

Temperature limits
Storage -55°C to 100°C
Operating -40°C to 100°C
Media -40°C to 125°C
Compensated 0°C to 70°C

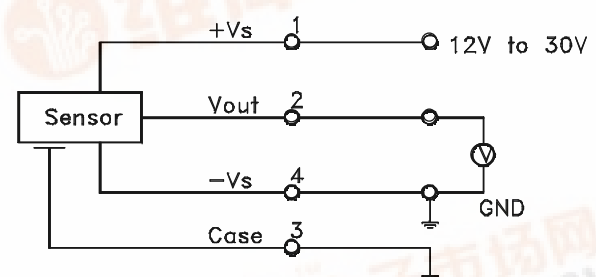
Humidity limits 0 - 100 %RH

Vibration (5 Hz to 500 Hz) 2 g

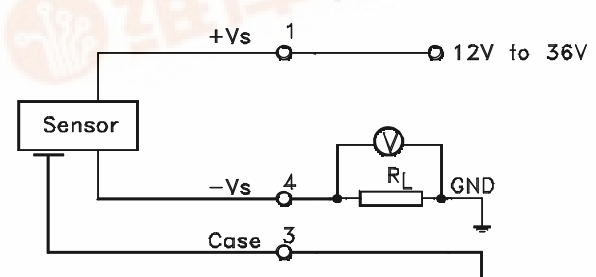
Mechanical shock 50 g

ELECTRICAL CONNECTION

1 - 6V output version



4 - 20 mA output version



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PERFORMANCE CHARACTERISTICS⁵

Device type	Operating pressure	Proof pressure ³	Burst pressure ⁴
BTEM2350G...	350 mbar	1.4 bar	65 bar
BTE2001G...	1 bar	2 bar	
BTE2002G...	2 bar	4 bar	
BTE2005G...	5 bar	13 bar	
BTE2010G...	10 bar	31 bar	340 bar
BTE2020G...	20 bar	31 bar	
BTE2025G...	25 bar	50 bar	
BTE2035G	35 bar	50 bar	
PTE2005G...	5 psig	20 psig	1000 psig
PTE2015G...	15 psig	30 psig	
PTE2030G...	30 psig	60 psig	
PTE2100G...	100 psig	200 psig	5000 psig
PTE2300G...	300 psig	450 psig	
PTE2500G...	500 psig	750 psig	

PERFORMANCE CHARACTERISTICS⁵

1 - 6 V output version (unless otherwise noted, $V_S = 15\text{ V}$, $t_{\text{amb}} = 25^\circ\text{C}$, $R_L > 100\text{ k}\Omega$)

Characteristics	Min.	Typ.	Max.	Unit
Zero pressure offset	0.90	1.00	1.10	V
Full scale span	4.95	5.00	5.05	
Full scale output		6.0		
Thermal effects ⁶ Combined offset and span (0 to 70°C) BTEM.../PTE2005G... BTE.../PTE2015G... to PTE2300G... (-40°C to 0°C, 70°C to 100°C)		± 0.6 ± 0.5 ± 2.0	± 2.5 ± 1.5	%FSO
Non-linearity and hysteresis (BSL) ⁸		± 0.2	± 0.5	
Repeatability		± 0.1		
Long term stability ⁷		± 0.2		
Output noise		± 0.04		
Frequency response		1		ms
Output impedance			50	Ohm
Power supply rejection Offset Span		0.05 0.03		%FSO/V
Power consumption (no load)		100		mW

4 - 20 mA output version (unless otherwise noted, $V_S = 15\text{ V}$, $t_{\text{amb}} = 25^\circ\text{C}$, $R_L = 100\text{ Ohm}$)

Characteristics	Min.	Typ.	Max.	Unit
Zero pressure offset	3.9	4.0	4.1	mA
Full scale span	15.8	16.0	16.2	
Full scale output		20.0		
Thermal effects ⁶ Combined offset and span (0 to 70°C) BTEM.../PTE2005G... BTE.../PTE2015G... to PTE2300G... (-40°C to 0°C, 70°C to 100°C)		± 0.6 ± 0.5 ± 2.0	± 2.5 ± 1.5	%FSO
Non-linearity and hysteresis (BSL) ⁸		± 0.2	± 0.5	
Repeatability		± 0.1		
Long term stability ⁷		± 0.2		
Output noise		± 0.04		
Frequency response (10% to 90%)		1		ms
Power supply rejection Offset Span		0.05 0.03		%FSO/V
Power consumption ($I_L = 20\text{ mA}$)		260		mW

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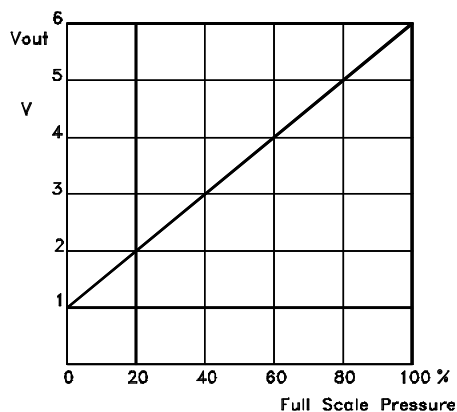
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ELECTROMAGNETIC CAPABILITY⁹

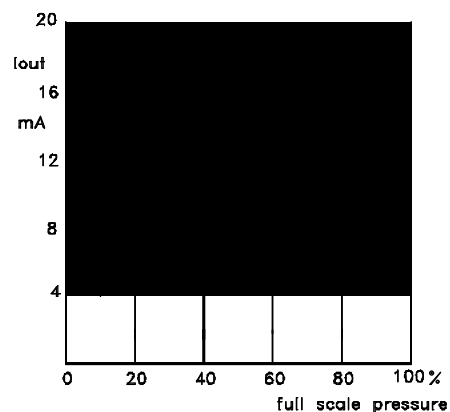
	Test conditions	Interference
Radiated, radio frequency electromagnetic field immunity (RFI)	IEC801-3: Grade 3 10V/m, 1MHz to 1000 MHz unmodulated and 80% modulated	<1% FSO
Electrical fast transient/burst immunity (EFT)	IEC 801-4: Grade 3 ±2 kV	<1% FSO
Electrostatic discharge immunity (ESD)	IEC 801-2: Grade 3 ±8 kV, contact discharge	<1% FSO

OUTPUT CHARACTERISTIC

1 - 6 V output version

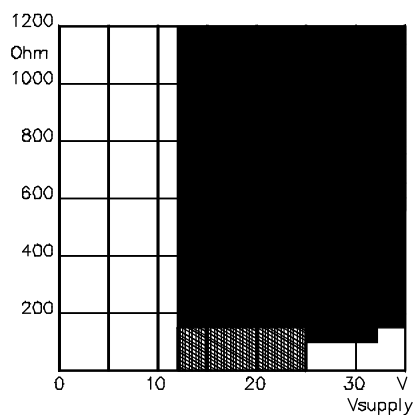


4 - 20 mA output version



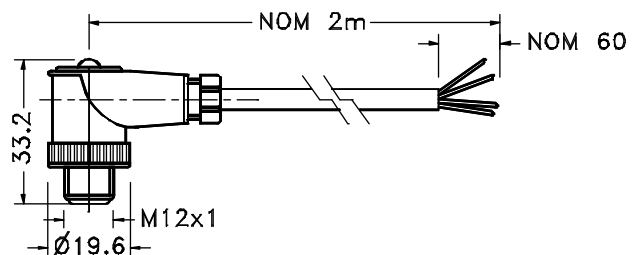
LOAD LIMITATION

4 - 20 mA output version



RECOMMENDED CABLE/CONNECTOR ACCESSORY

for Connector version, Order number ZK000101, other cable length on special request.



Included in delivery !

Pin Connection

Pin	Flying lead ends
1	brown
2	green
3	white + shield
4	yellow

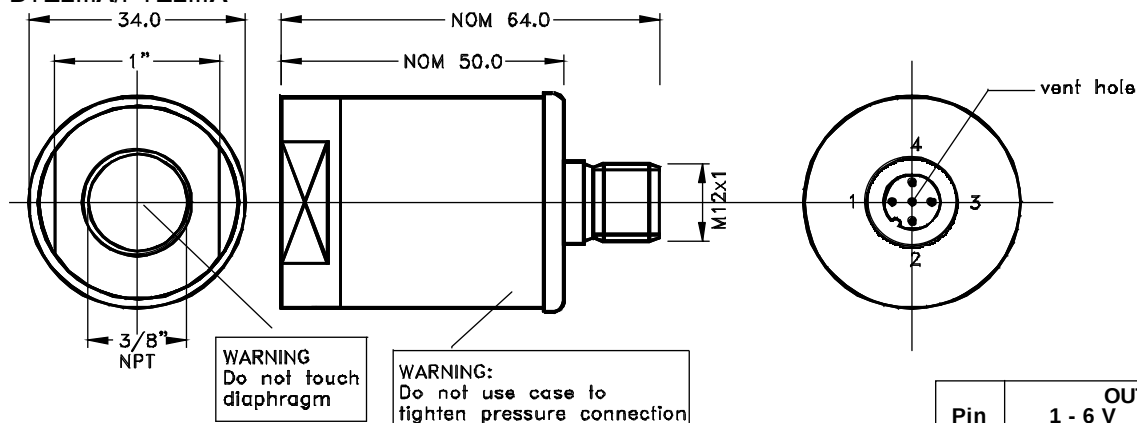
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OUTLINE DRAWING

Connector version

BTE2...A/PTE2...A

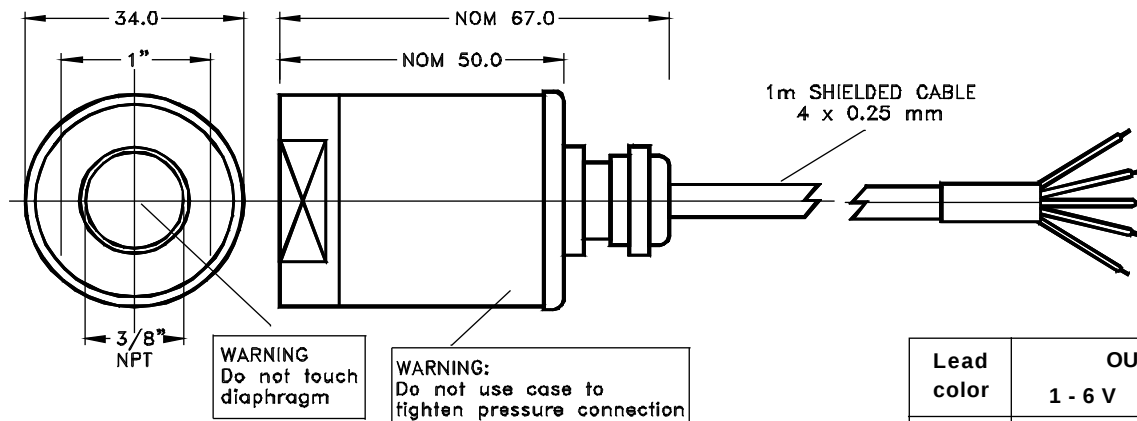


Pin	OUTPUT	
	1 - 6 V	4 - 20 mA
1	+Vs	+Vs
2	Vout	NC
3	Case	Case
4	-Vs	-Vs

Mass: typ. 190g

Cable version

BTE2...C/PTE2...C



Lead color	OUTPUT	
	1 - 6 V	4 - 20 mA
blank	shield	shield
brown	+Vs	+Vs
white	case	case
green	Vout	NC
yellow	-Vs	-Vs

Mass: typ. 190g

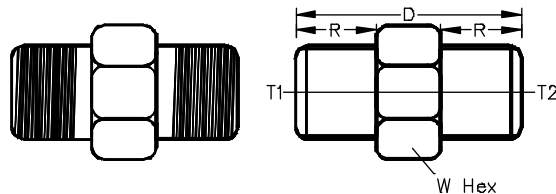
Dimensions in mm

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OPTIONAL PIPE FITTING DRAWINGS

Part No.	Thread		W Hex	D		R		Maximum working pressure (psig)
	Male T1	Male T2		in.	mm.	in.	mm.	
SFIT62	3/8 NPT	1/8 NPT	3/4	1.27	32.3	0.56/0.38	14.2/9.7	7200
SFIT64	3/8 NPT	1/4 NPT	3/4	1.45	37.0	0.56	14.2	7200
SFIT68	3/8 NPT	1/8 BSP	3/4	1.45	37.0	0.56	14.2	7200



Material: Stainless Steel 316

Specification Notes (for all devices)

1. IP67 protection is given with locked connector.
2. The minimum supply voltage is directly proportional to the load resistance seen by the transmitter. For more details see the [load limitation](#) diagrams.
3. Proof pressure is the maximum pressure which may be applied without causing damage to the sensing element.
4. The package features a stainless steel diaphragm which is dead ended into a small through hole. The media will therefore be contained until this extreme burst pressure limit is exceeded.
5. The package is an all-sealed housing. For proper function, the gage port is vented to the atmosphere through the connecting cable. Thus, the cable end must have access to the ambient pressure.
6. Temperature tested and guaranteed from 0°C to 70°C relative to 25°C. All specifications shown are relative to 25°C.
7. Change in output after one year or one million pressure cycles.
8. Linearity refers to the Best Straight Line fit measured for offset pressure, full scale pressure and 1/2 full scale pressure.
9. Test are in accordance with EN50082-2, Jan. 93.

ORDERING INFORMATION

Operating pressure	Part number			
	1 - 6 V output		4 - 20 mA output	
	Connector version	Cable version	Connector version	Cable version
0 - 0.35 bar	BTEM2350G1A	BTEM2350G1C	BTEM2350G4A	BTEM2350G4C
0 - 1 bar	BTE2001G1A	BTE2001G1C	BTE2001G4A	BTE2001G4C
0 - 2 bar	BTE2002G1A	BTE2002G1C	BTE2002G4A	BTE2002G4C
0 - 5 bar	BTE2005G1A	BTE2005G1C	BTE2005G4A	BTE2005G4C
0 - 10 bar	BTE2010G1A	BTE2010G1C	BTE2010G4A	BTE2010G4C
0 - 20 bar	BTE2020G1A	BTE2020G1C	BTE2020G4A	BTE2020G4C
0 - 25 bar	BTE2025G1A	BTE2025G1C	BTE2025G4A	BTE2025G4C
0 - 35 bar	BTE2035G1A	BTE2035G1C	BTE2035G4A	BTE2035G4C
0 - 5 psig	PTE2005G1A	PTE2005G1A	PTE2005G4A	PTE2005G4C
0 - 15 psig	PTE2015G1A	PTE2015G1C	PTE2015G4A	PTE2015G4C
0 - 30 psig	PTE2030G1A	PTE2030G1C	PTE2030G4A	PTE2030G4C
0 - 100 psig	PTE2100G1A	PTE2100G1C	PTE2100G4A	PTE2100G4C
0 - 300 psig	PTE2300G1A	PTE2300G1C	PTE2300G4A	PTE2300G4C
0 - 500 psig	PTE2500G1A	PTE2500G1C	PTE2500G4A	PTE2500G4C

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