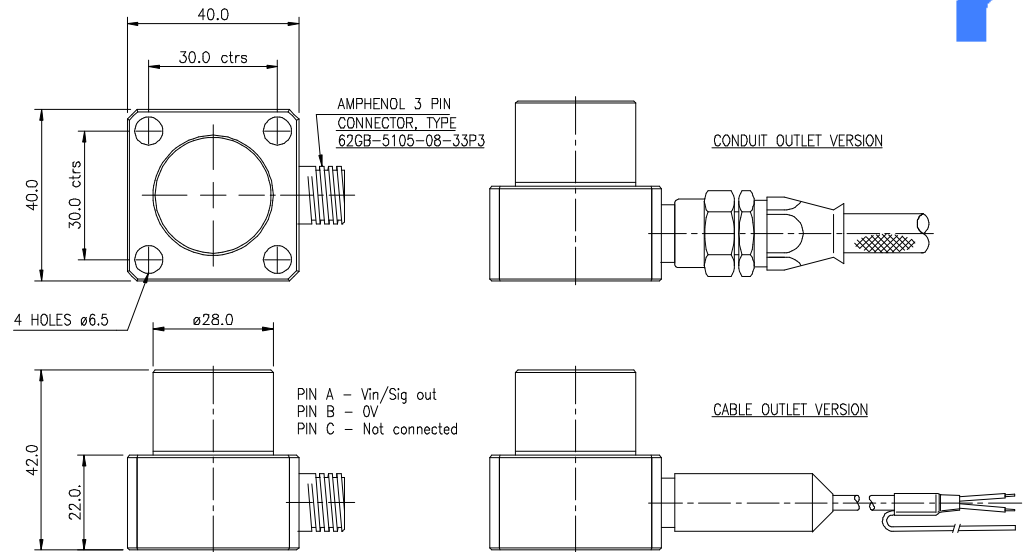


PZCS ACCELEROMETER



- ROBUST INDUSTRIAL DESIGN
- TWO WIRE, CURRENT DRIVEN
- 50 μ A/g OUTPUT
- INTERNAL CHARGE AMPLIFIER
- HERMITICALLY SEALED
- RADIATION RESISTANT OPTION
- FREQUENCY RANGE 2.5Hz to 9KHz
- MOD APPROVED
- INTRINSICALLY SAFE OPTION (EEx ia IIB T5)

The PZCS accelerometer has been designed to meet the rigorous specification and quality requirements for military and naval applications.

It is also ideal for industrial applications requiring a robust yet reasonably small and lightweight transducer with integral electronics.

The accelerometer works on a two wire current loop system, permitting very long interconnecting cables to be used.

The piezo electric sensor, together with the charge amplifier, is contained within a robust, fully sealed stainless steel case having a solid square base with four mounting holes on 30.0 mm centres.

The PZCS is designed for use in hazardous areas and meets the requirements of intrinsic safety for Group II (b) gases (ethylene) when operated with a zener barrier in the safe area.

The PZCS is also suitable for nuclear environments requiring resistance to radiation.

PZCS ACCELEROMETER

SPECIFICATION

Operating voltage	11 to 28 volts D.C.
Operating current	3.8mA (5.0mA max)
Output signal	50 uA/g
Dynamic range	Up to 40g
Frequency range	2.5Hz to 9KHz (3dB points)
Mounted resonant frequency	15KHz
Transverse sensitivity	Less than 2.5%
Amplitude linearity	+/- 1% or better
Temperature sensitivity	Less than 5% up to 120°C
1% per 25°C over range -30°C to +90°C	
Residual electrical noise	Less than 0.1mg (10Hz to 9KHz)
Signal transmission	Two wire system
Environmental	
Acceleration limit :	Vibration 200g pk at 120Hz for 10 mins
	Shock 500g half sine without connector
Temperature :	Operational -27°C to +90°C (Intrinsic version -27°C to +75°C)
	Survival -55°C to +120°C
Humidity	Total water resistance to a depth of
15 metres (Conduit outlet version)	
Pressure	+5 bar
Magnetic sensitivity.....	no measurable output at 0.5mT at 50Hz
Radiation effects	10 ⁸ Rads Gamma, 7.5 x 10 ¹² n/cm/sec – Neutron flux
Hazardous area.....	Baseefa certified: EEx ia IIB T5 (Tamb = 75°C)

ORDERING INFORMATION

PZCS -

A
4

B	C

D	E	F

A Electrical Configuration

4

 - 2 wire current loop device

B Connection Method

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">6</td><td style="text-align: center;">A</td></tr></table>	6	A	Integral Economy PVC Cable (80°C) Unarmoured
6	A		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">6</td><td style="text-align: center;">B</td></tr></table>	6	B	Integral Economy PVC Cable (80°C) Armoured
6	B		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">6</td><td style="text-align: center;">C</td></tr></table>	6	C	Integral Cable (140°C) Unarmoured
6	C		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">6</td><td style="text-align: center;">D</td></tr></table>	6	D	Integral Cable (140°C) Armoured
6	D		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">7</td><td style="text-align: center;">A</td></tr></table>	7	A	Integral Economy Arm'ed Cable/Waterproof Gland
7	A		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">7</td><td style="text-align: center;">B</td></tr></table>	7	B	Integral Economy Unarm'ed Cable/Waterproof Gland
7	B		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">8</td><td style="text-align: center;">E</td></tr></table>	8	E	Integral Connector, 3 pin, circular, threaded
8	E		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">8</td><td style="text-align: center;">F</td></tr></table>	8	F	Integral Connector, BNC
8	F		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">9</td><td style="text-align: center;">C</td></tr></table>	9	C	Integral Cable Unarm'ed/Braided Flexible Conduit
9	C		

C₁ Cable length (Specify in whole metres)

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">2</td></tr></table>	0	2	e.g. = 2m Total length, from TxD to free end
0	2		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">0</td></tr></table>	0	0	for no cable, i.e. connector versions of instrument
0	0		

C₂ Conduit Length Over Cable

For connection method 9 only, excess cable in 0.5m increments

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">2</td><td style="text-align: center;">A</td></tr></table>	0	2	A	e.g. 2m conduit, 0.5m excess cable from free end (Std)
0	2	A		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">2</td><td style="text-align: center;">B</td></tr></table>	0	2	B	e.g. 2m conduit, 0.3m excess cable from free end
0	2	B		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">2</td><td style="text-align: center;">C</td></tr></table>	0	2	C	e.g. 2m conduit, 1.0m excess cable from free end
0	2	C		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">2</td><td style="text-align: center;">D</td></tr></table>	0	2	D	e.g. 2m conduit, 1.5m excess cable from free end
0	2	D		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td><td style="text-align: center;">2</td><td style="text-align: center;">E</td></tr></table>	0	2	E	e.g. 2m conduit, 2.0m excess cable from free end
0	2	E		

D Cable/Conduit End Fitting

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td></tr></table>	0	- No cable/conduit end fitting.
0		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">1</td></tr></table>	1	¼" BSP female
1		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">2</td></tr></table>	2	M16 male
2		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">3</td></tr></table>	3	M20 male
3		

E Output & Frequency band (3dB point)

1

 50µA/g ± 5%

F Hazardous Area Approval

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0</td></tr></table>	0	- Non Intrinsic
0		
<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">1</td></tr></table>	1	- Intrinsically Safe (see restrictions below)
1		

Restrictions for Intrinsically Safe PZCS:

- Only available in 3pin Connector threaded.
- Environmental temperature range -27°C to +75°C

