

Vibration Sensor

High-accuracy sensor with ac frequency output signal for precision vibration measurement

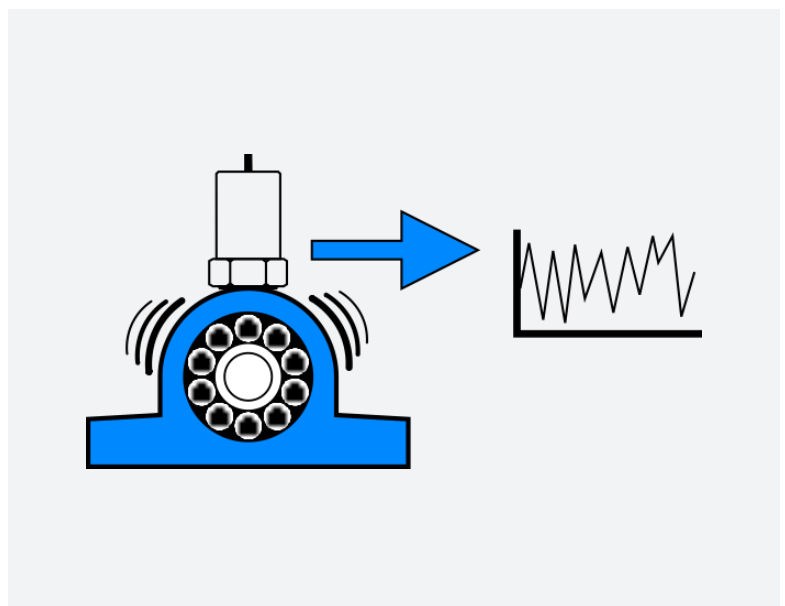
Environments: Vibration condition monitoring • Structural resonance • Shaft imbalance • Machine running indication • Bearing deterioration • Tunnels • Mining • Process plants

Features

- Compact and robust vibration sensors for use in heavy duty industrial applications
- Corrosion resistant stainless steel housing with a choice of convenient mounting options
- Standard ac output signal compliant with industry standard ICP
- Flexible braided cable or 4 pin MS type connector
- Certified Intrinsically Safe for use in Mining - Group I
- Single hole M8 x 8 mm mounting stud or Quickfit bush mounting

Benefits

- Precise measurement - high accuracy conditioned 100 mV/g output
- Choice - single M8 mounting stud or Quickfit bush mounting with a choice of Quickfit mounting bushes
- Cost effective - low cost vibration condition monitoring for general plant duty, motors, pumps, gearboxes, compressors, rotating machinery, machine running/stopped, etc
- Not all vibration is bad. A vibration sensor can indicate that a machine is actually running as it should be and will highlight any drive failure



Functional Overview

The causes of vibration in rotating machinery are numerous

- Imbalance of system
- Misalignment of shafts
- Bent shafts
- Mechanical looseness
- Ineffective mounting structures
- Bearing deterioration
- Loose parts
- Build-up on fan blades
- Chipped blades/rotors
- Gear tooth wear/breakage
- Loss of lubrication

Failure to detect the deteriorating condition of running equipment may result in premature costly repair, or more seriously, in catastrophic equipment failure, resulting in production downtime and consequential safety related issues.

By utilising vibration monitoring, an early warning of impending failure permits preventative maintenance to be instigated.

Trolex **ac frequency output** sensors are designed for use with a wide range of monitoring and analysis equipment. They have been optimised to directly interface with Trolex monitoring and analysis equipment.



Technical Information

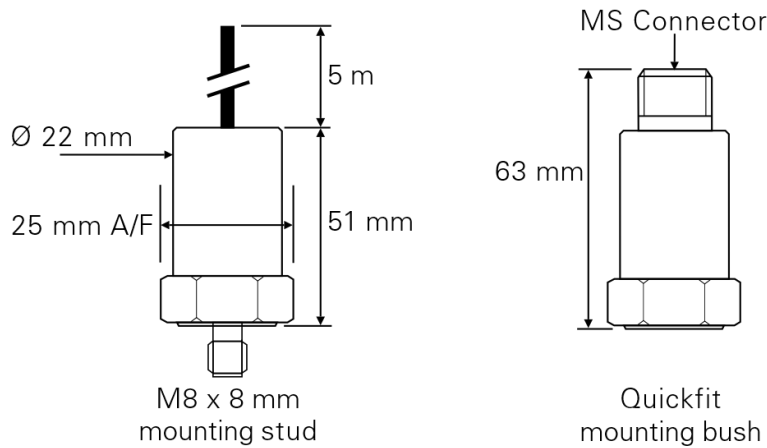
TX5633	
Output data:	ac frequency output proportional to vibration
Sensing principle:	Piezo-electric
Frequency response:	1 Hz to 10 kHz
Sensitivity:	100 mV/g (nominal at 80 Hz)
Mounted resonance:	18 kHz (nominal)
Housing material:	Stainless steel
Operating temperature:	-55 to +110°C
Protection classification:	IP67
Mounting:	M8 x 8 mm mounting stud or Quickfit bush
Supply voltage:	12 V dc
Supply current:	0.5 to 8 mA
Electrical connections:	5 m single core co-axial cable insulated with screen and overbraid armour or 4 pin MS connector

Electrical Information

Underground Mining Ex ia - Group I

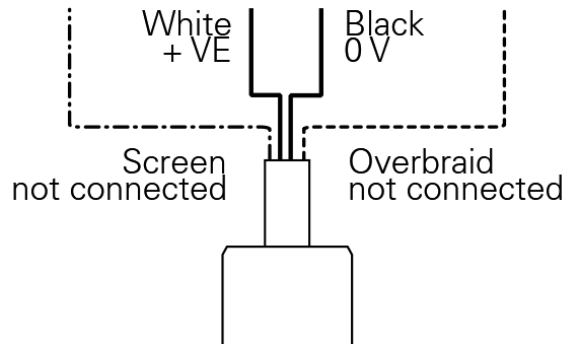
Output signal:	100 mV/g ac
Supply voltage:	12 V dc
Terminal parameters:	U _i - 16.5 V
Supply current:	2 wire line powered

Dimensions

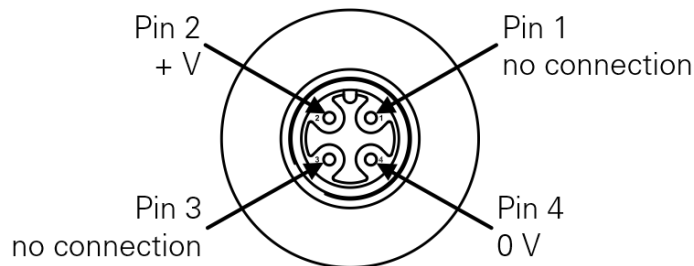


Electrical Connections

Cable Output Option



4 Pin MS Type Connector Option



Order Reference

Vibration Sensor with ac Output

Underground Mining Ex ia - Group I

TX5633

Options

When ordering please specify the Electrical Connection **and** Mounting options you require

Electrical Connection Options

When ordering, please specify:

- .11 for **Cable output option** version eg TX5633.11 or
- .12 for **MS electrical connector** version eg TX5633.12

Mounting Options

When ordering, please specify:

- .21 for **M8 mounting stud**, eg TX5633.12.21 or
- .22 for **Quickfit mounting bush** eg TX5633.11.22

Accessories

TX5630.11

Quickfit M8 mounting bush

TX5630.12

Quickfit adhesive mounting bush

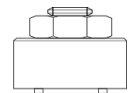
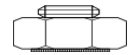
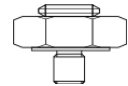
TX5630.13

Quickfit magnetic mounting bush

Please contact the Trolex Sales Team for further information and advice:

+44 (0)161 483 1435

sales@trolex.com





TX5633 Data Sheet

Certifications



Europe ATEX

Ex Certificate number:

Ex Certification codes:

Baseefa 08ATEX0336

I M1 Ex ia I Ma (-55°C ≤ Ta ≤ +110°C)



International IECEx

Ex Certificate number:

Ex Certification codes:

IECEX BAS 08.0117

Ex ia I Ma (-55°C ≤ Ta ≤ +110°C)



Australia

Ex Certificate number:

Ex Certification codes:

IECEX TSA 09.0035X

Ex ia I (-55°C ≤ Ta ≤ +110°C)



Russia GOST-R

Ex Certificate number:

Ex Certification codes:

POCC GB.ГБ05.В03982

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