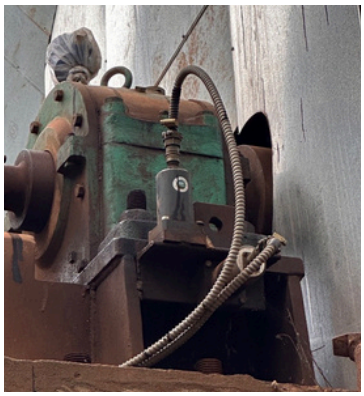
IRD Mechanalysis® Limited

The Vibration People®

VIBRATION TRANSMITTER

IRD7100 MPT with IRD544M - Online Monitoring of Vibration



Overview

IRD Mechanalysis Limited (a.k.a. IRD) is a Global **Condition Monitoring Solutions** provider **since 1962**. Headquartered in India, IRD has provided countless Vibration Based Condition Monitoring Solutions to the World via its Portable Instruments and Online Systems.

Among the vast range of Solutions offered - IRD also has **Vibration Transmitters** that can be mounted in the field **near the Machine** being Monitored. These Transmitters (IRD7100 MPT) can work with Inductive Velocity Output Vibration Sensors (IRD544M) and can provide per channel - display of Live Vibration, 4-20 mA output, 0-5 V DC output, Alarm and Trip Relay Contacts, and Signal OK Relay Contacts. The Alarm and Trip setpoints are configurable via Trimpots. This combination of IRD544M Vibration Sensor with IRD7100 MPT Vibration Transmitter provides for **decades of Trouble-Free Vibration Monitoring 24 x 7, 365 days**

Features

- **Rugged and Sturdy** IRD544M Vibration Sensor - a Self-Generating Inductive Velocity type Vibration Sensor - the original design in use since 1962. Will never become obsolete. **42.52 mV/mm/sec +/- 10%** Nominal Sensitivity and can withstand **-40 to +260 Deg C ambient temperature**
- Mounting Pads and Bolts provided as per site requirements
- Connecting cable between IRD544M and IRD7100 MPT provided of length as per site requirement. Minimum 1 meters and maximum 1000 meters without repeater (most common length is 10 meters)
- Vibration Transmitter IRD7100 MPT can be Wall-Mounted or Panel Mounted out in the field. Enclosure can be **IP65 rated Al Die Cast OR IP65 rated Polycarbonate** - as per Site requirement
- Full Scale Range is Factory Set. Can be in Velocity mm/s RMS or mm/s pk OR Displacement microns pk or microns pk-pk (Imperial Units on request. Most common and stock option is 0-25 mm/sec RMS)
- Vibration Transmitter IRD7100 MPT can be 1 Channel, 2 Channel or 4 Channel (most common is 2 Channel)
- **Industry Standard Outputs** - Galvanically Isolated 4-20 mA output per channel, 0-5 V DC output per channel, OK Relay per channel, 2 Sets Alarm Relay Contacts per Channel and 2 Sets Trip Relay Contacts per Channel (Setpoint Configurable). MODBUS RTU Output available on Request
- **Made in India** with After-Sales Service available via Service Center in India
- Supervision of Erection and Commissioning of System along with Training to User provided as a standard offering
- National Traceable Calibration certificate with **5-Point Calibration** check provided for both Sensor and Transmitter

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IRD Mechanalysis Limited, E8-14, Bhumi World Industrial Park, Thane - 421311, Maharashtra, India

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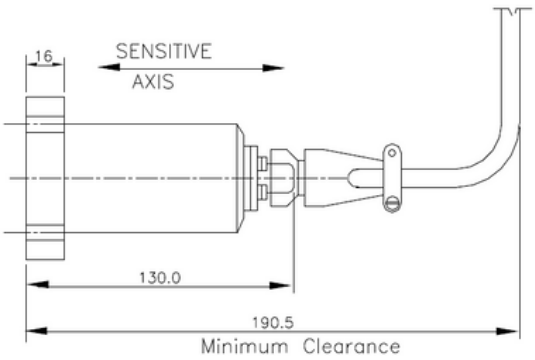
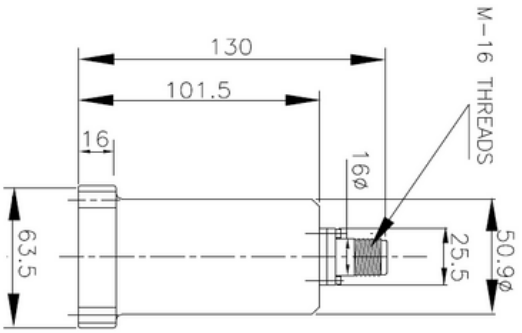
Specifications

Vibration Sensor IRD544M

Nominal Sensitivity	42.52 mV/mm/s +/- 10%
Frequency Response	25 to 1000 Hz
Transverse Response	Less than 5%
Isolation	Signal Insulated from Case
Orientation	Any (Horizontal and Vertical is Best)
Mounting	4 x Holes 7.15 mm dia on 2 x 2 Centers
Connector	2 Pin MIL Spec
Operating Range	-40 to +260 Deg C
Housing	IP65
Weight	700 grams approx
Dimensions	63.5 (L) x 63.5 (W) x 130 (H) mm overall
Construction	Aluminium, Hard Anodised





Vibration Transmitter IRD7100 MPT

Enclosure MOC	Al Die Cast or Polycarbonate (Client Choice)
Enclosure Rating	IP65 rated when Lid properly closed and Glands in use or plugged
Enclosure Dimension	Depends on MOC Selection. Typically 230 x 200 x 110 mm OR 300 x 300 x 170 mm for 2 Channel variant
Cable Entry/Exit	Via Cable Glands (typically PG11 with other sizes on request)
Power Input	Available for both 230 V AC Input OR 24 V DC Input (Client choice)
Power Consumption	24W for 2 Channel
Display	3 1/2 Digit 7 Segment

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Vibration Transmitter IRD7100 MPT

Full Scale Range	Velocity or Displacement. Pre-Order in mm/s RMS or mm/s pk or microns pk or microns pk-pk (Imperial Units on request). Max Amplitude possible 100 mm/s RMS for velocity and 1000 microns pk-pk for displacement (most common Stock option is 0-25 mm/s RMS
Frequency Response	5 Hz to 2,500 Hz +/- 5%
4-20 mA Output	Galvanic Isolated. Linear over Full Scale Range. 250 Ohms Max Resistance
0-5 V DC Output	Linear over Full Scale Range. 1000 Ohms Max Resistance
Alarm Relay Contacts	2 Sets Contacts rated 5A resistive @ 230V AC, Normally De-Energised per Channel with Configurable Setpoint. Set-point Adjustable between 5% and 100% of full scale via Trim-pot within Enclosure. Automatically resets when the signal level falls below the set point
Trip Relay Contacts	2 Sets Contacts rated 5A resistive @ 230V AC, Normally De-Energised per Channel with Configurable Setpoint. Set-point Adjustable between 5% and 100% of full scale via Trim-pot within Enclosure. Automatically resets when the signal level falls below the set point
OK Relay Contacts	1 set of OK Relay Contact (NO and C) per channel. Independent Reed Relay. Contact Rating 0.25 A resistive @ 28 V DC. When > 5% of the Full Scale signal is attained - the relay gets energized
Buffered Output	Available for each channel on Lid via BNC Female. 1:1 Buffered Output of Raw Signal. BNC is protected using Dust Cap
Operating Temperature	0 to 65 Deg C Ambient
Storage Temperature	-18 to +65 Deg C Ambient
Humidity	95% non-condensing when Lid closed and glands sealed/plugged to ensure IP65 ingress protection
Type Tests	Has Passed below Type Tests as per relevant IEC Standards: • Seismic Test • Dry Heat and Damp Heat • Electrostatic Discharge • Radiated Susceptibility • Conducted Emission • ESD Surge • Radiated Emission

To place an Order - please contact sales@irdmech.com for a Quote or call us on +91-2248972000 (Monday to Saturday, 9 AM to 6 PM IST). Factory Located at IRD Mechanalysis Limited, E8-14, Bhumi World Industrial Park, Thane - 421311, Maharashtra, India

Disclaimer: IRD Mechanalysis Limited reserves the right to change specifications for continuous improvement without prior notice.