YTM101 Seismic Vibration Digital-Transmitter-Monitor

(Acceleration, Velocity, Displacement)

The YTM101 Seismic vibration transmitter-monitor provides a simple and cost-effective solution for monitoring "balance-of-plant" equipment. The YTM101's smart design is extremely reliable with redundancy in power supply inputs and relay outputs. The YTM101 monitor can interface with almost any vibration sensor (accelerometer or velocity transducer).

Applications include:

- ✓ **Motors**
- ✓ **Pumps**
- ✓ **Fans**
- ✓ **Blowers**
- ✓ **Engines**
- ✓ **Compressors**
- ✓ **Centrifuges**
- ✓ **Generators**
- ✓ **Turbines**
- ✓ **Turbochargers**

Module Type：

- ✓ **Acceleration Vibration Monitor Module**
- ✓ **Velocity Vibration Monitor Module**
- ✓ **Displacement Vibration Monitor Module**

Features

Designed with reliability

Redundant power supplies

Dual dry-contact relay outputs

Trip multiply and Bypass

Galvanic isolation for solid signal processing

Power input isolation

Sensor signal conditioning isolation

Relay output isolation

Work with variety of vibration sensors

Accelerometer

Velocity sensor

Low frequency sensor

Electro-magnetic velocity sensor

Backward compatible with TM101

YTM101 can replaceTM101.

Specifications

Electrical

Power:

+24VDC:

20-30VDC, @150mA; Isolation: 1000VDC

220/110VAC:

90-250VAC@50mA; Isolation: 2500VAC

Frequency Response (-3dB):

Nominal Frequency:

2 ~ 3KHz

Low Frequency:

0.5 ~ 100Hz

High Frequency:

10 – 20KHz (peak)

Piezo Sensor Interface:

Sensitivity:

100mV/g

100Mv/in/sec

4mV/μm

or any sensitivity specified

Current Source

Nominal 4mA@24VDC

Seismic Velocity Sensor Interface:

Sensitivity:

User specified for any vibration sensor

Software programmable

Accuracy:

Typical +/-2% FS

Maximum +/-3% FS

Buffered Output:

Original vibration, un-filtered

Impedance:	150Ω
Maximum cable distance:	300m (1000ft)
Sensitivity:	same as the sensor

Local BNC connector

On line CM terminals

Overall Vibration output:

4-20mA:

Source. Output to controller.

Sharing signal ground

Maximum load resistance 500Ω

Alarm Set point:

Range:	5 ~ 100% FS
Accuracy:	±0.1%.

Relays:

Seal:	Epoxy.
Capacity:	0.2A/240VAC,
	0.4A/110VAC
	2.0A/24VDC, resistive load
Relay type:	SPTD
Isolation:	1000VDC

Push Buttons:

SET: System on-site calibration and alarm setting

LED Machine Condition Indicator:

OK: System OK and Digital Transmission indication

ALM (yellow): Vibration over ALERT level

ALM (red): Vibration over DANGER level

BYP: System in BYPASS

RESET/BYPASS:

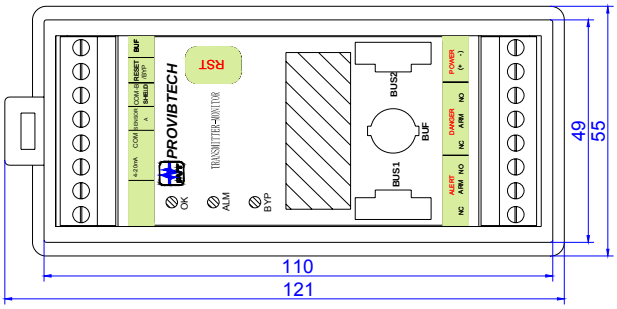
Front panel push button

Remote RESET/BYPASS terminals

Physical

Dimension:

Height:	82mm (3.23″)
	see figure below
Weight:	2.0lb (1.0kg)



Rail Mounting

Environmental

Temperature:

Operation:	-30℃ ~ +70℃
Storage:	-40℃ ~ +100 ℃
Humidity:	90% non-condensing
Case:	Aluminum

YTM391 System Integration Module

YTM391 is a system integration module. Each system must have an YTM391 module only and can have up to 8 YTM modules.

YTM391 Features

- ✓ **Display status of all modules in system.**
- ✓ **Calibrate 4-20mA output and adjust the Alarm and Danger setpoints of all modules in the field.**
- ✓ **Provides remote reset/bypass interface and remote trip multiply interface for all modules in system.**
- ✓ **Provides phase reference interface**

Specifications

Electrical

Power Supply:

+24VDC:
20-30VDC, @150mA; isolation: 1000VDC
220/110VAC:
90-250VAC@50mA; isolation: 2500VAC

BUS

Include phase reference interface and remote reset/bypass interface etc.

OLED Screen：

blue
resolution：128*64

LED Machine Condition Indicator:

OK：System OK indication
ALM (yellow): Vibration over ALERT level
ALM (red): Vibration over DANGER level
BYPASS：System in BYPASS
TRX：Digital transmission active

OK Relays:

Seal:	Epoxy.
Capacity:	0.2A/240VAC,
	0.4A/110VAC
	2.0A/24VDC, resistive load
Relay type:	SPTD
Isolation:	1000VDC

Push Buttons:

SET: Save, confirm or next item
∧/∨: Change numbers, letters, options or the cursor position
＜/＞: Change the cursor position

RESET/BYPASS:

Front panel push-button
Remote RESET/BYPASS terminals

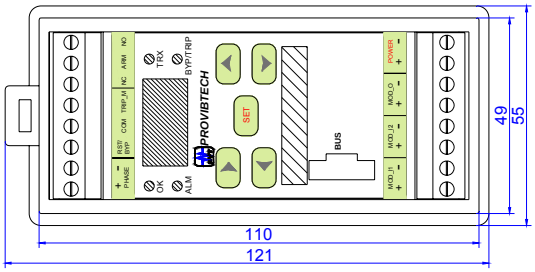
Phase reference interface:

The interface could provide phase reference information to all modules in the system or output signal of phase reference module in system.

Physical

Dimension:

Height:	82mm (3.23″)
	see figure below
Weight:	2.0lb (1.0kg)



Rail Mounting

Environmental

Temperature:

Operation:	-30℃ ~ +70℃
Storage:	-40℃ ~ +100 ℃
Humidity:	90% non-condensing
Case:	Aluminum

Ordering Information

YTM391-BXX-GXX

System Integration Module

BXX: Power Supply
B00*: +24VDC
B03: 90~250VAC

GXX：Mounting
G00*：DIN rail mounting

* Denotes factory default.

Optional Accessories

TM900

Power converter with isolation. Converts 95-250 VAC into 24VDC and is capable of powering up to 7 YTM modules.

BUS Cable

YTM395-08: 70mm Cable, used to connected BUS I nterface of YTM391 to BUS2 interface of YTM or connected BUS1 interface of YTM to BUS2 interface of another YTM.

YTM391 System Installation

Installation – field-wiring diagram