Selection Guide of YTM Modules

Model Number	YTM301	YTM302	YTM305	YTM201	YTM202	YTM205	YTM101	YTM391
	Radial Vibration	Axial Position	Speed/ Phase Reference	Radial Vibration	Axial Position	Speed/ Phase Reference	Case Vibration	system integration
Vibration Measurements								
Radial Vibration	●			●				
Axial Position		●			●			
Speed/ Phase Reference			●			●		
Case Vibration							●	
Compatible TM Module								
TM301	●							
TM302		●						
TM502			●					
TM201				●				
TM202					●			
TM501						●		
TM101							●	
Sensor Interfaces								
Accelerometer							●	
Velocity Transducer							●	
Proximity Probe	●	●	●	●	●	●		
Works Without Probe Driver	●	●	●					
Works With Probe Driver				●	●	●		
Outputs								
4-20mA Output	●	●	●	●	●	●	●	
Relay Output	●	●	●	●	●	●	●	●
Buffered Output	●	●	●	●	●	●	●	
Features								
Push Button Setup								●
Screen Display								●
Power-Up Inhibit	●	●	●	●	●	●	●	
System OK Checking	●	●	●	●	●	●	●	●
Warranty- 1 years	●	●	●	●	●	●	●	●

● = Complete Offering

YTM301/YTM302/YTM305 Proximity Digital Transmitter-Monitor

(Shaft Vibration, Thrust Position and Speed)

The YTM301/YTM302/YTM305 digital vibration transmitter monitor is ideal for monitoring machine vibration using proximity probes. The monitor contains redundant relay outputs and 4-20mA transmission, it can interface to a PLC or DCS system. The monitor works without probe driver. Using Provibtech's unique technology, the monitor can interface with almost any proximity probe system without hardware changes.

Applications include:

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

Module Type：

- ✓ **Vibration Monitor Module**
- ✓ **Thrust Position Monitor Module**
- ✓ **Speed Monitor Module**
- ✓ **Phase Reference Monitor module**

Features

- ✓ **Interface with almost any manufacture's proximity probe system**
- ✓ **Works without probe driver**
- ✓ **4-20mA output**
- ✓ **Measure shaft vibration, thrust position, or speed**
- ✓ **Dual alarms (SPDT)**
- ✓ **LED indication of system OK, Alert , Danger, and Bypass**
- ✓ **Local and remote RESET/BYPASS and Trip-multiply**
- ✓ **Buffered Output for condition monitoring**
- ✓ **Aluminum case for RFI/EMI reduction**

Specifications

Electrical

Power Supply:

+24VDC:

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

220/110VAC:

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

Frequency Response (-3dB):

Nominal frequency: 2 ~ 4.0KHz

Low frequency: 0.5 ~ 100Hz

Proximity probe Interface:

Sensitivity:

5mm and 8mm probe: 8 mV/μm (200 mv/mil)

11mm probe: 4 mv/μm (100 mv/mil)

Accuracy:

Typical +/-2% FS

Maximum +/-3% FS

Buffered Output:

Original, un-filtered signal

Impedance: 150Ω

Maximum cable distance: 300m (1000ft)

Sensitivity: same as the sensor

Local BNC connection and terminal block

4-20mA Output:

4-20mA, sourced (loop power not required)

Maximum load resistance: 380Ω

Alarm Setup:

Range: 0 ~ 100% FS.

Accuracy: ±0.1%.

Relays:

Seal: Epoxy

Capacity: 0.2A/240VAC, 0.4A/110VAC or 2.0A/24VDC, resistive load

Relay type: SPTD

Isolation: 1000VDC

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

Trip Multiply:

Short Trip/Multi terminal to COM terminal on YTM391

System alarm level will increase by a factor of 2 (YTM301 only).

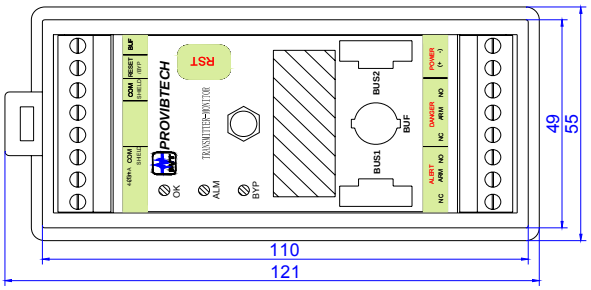
Physical

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

YTM201/YTM202/YTM205 Proximity Digital Transmitter-Monitor

(Shaft Vibration, Thrust Position and Speed)

The YTM201/YTM202/YTM205 digital vibration transmitter monitor is ideal for monitoring machine vibration using proximity probes. The monitor contains redundant relay outputs and 4-20mA transmission, it can interface to a PLC or DCS system.

Applications include:

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

Module Type：

- ✓ **Vibration Monitor Module**
- ✓ **Thrust Position Monitor Module**
- ✓ **Speed Monitor Module**
- ✓ **Phase Reference Monitor module**

Features

- ✓ **Interface with almost any manufacture's proximity probe system**
- ✓ **4-20mA output**
- ✓ **Measure shaft vibration, thrust position, or speed**
- ✓ **Dual alarms (SPDT)**
- ✓ **LED indication of system OK, Alert , Danger, and Bypass**
- ✓ **Local and remote RESET/BYPASS and Trip-multiply**
- ✓ **Buffered Output for condition monitoring**
- ✓ **Aluminum case for RFI/EMI reduction**

Specifications

Electrical

Power Supply:

+24VDC:

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

220/110VAC:

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

Frequency Response (-3dB):

Nominal frequency: 2 ~ 4.0KHz

Low frequency: 0.5 ~ 100Hz

Proximity probe Interface:

Sensitivity:

5mm and 8mm probe: 8 mV/μm (200 mv/mil)

11mm probe: 4 mv/μm (100 mv/mil)

25mm probe: 0.787 mv/μm (20 mv/mil)

Accuracy:

Typical +/-2% FS

Maximum +/-3% FS

Buffered Output:

Original, un-filtered signal

Impedance: 150Ω

Maximum cable distance: 300m (1000ft)

Sensitivity: same as the sensor

Local BNC connection and terminal block

4-20mA Output:

Dual 4-20mA, sourced (loop power not required)

Maximum load resistance: 380Ω

Alarm Setup:

Range: 0 ~ 100% FS.

Accuracy: ±0.1%.

Relays:

Seal: Epoxy

Capacity: 0.2A/240VAC, 0.4A/110VAC or 2.0A/24VDC, resistive load

Relay type: SPTD

Isolation: 1000VDC

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

Trip Multiply:

Short Trip/Multi terminal to COM terminal on YTM391

System alarm level will increase by a factor of 2.

(YTM201 only)

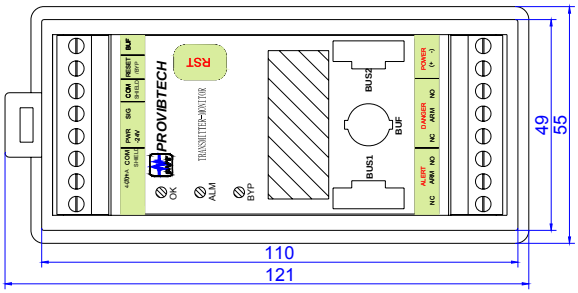
Physical

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

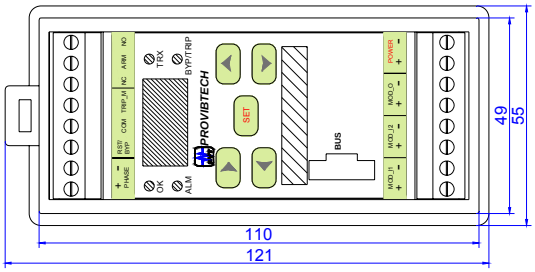
Phase reference interface:

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