



PT2060/10 PROX Proximity Module

ProvibTech's PT2060/10 PROX proximity module is a (4) channel module which processes the incoming signal from the proximity probe system, compares it with the alarm set-point and outputs the appropriate status information for the following vibration measurements:

- ✓ Radial vibration: monitoring shaft vibration, single or dual XY **(4 channels)**
- ✓ Axial/ Thrust position: monitoring shaft thrust position, with 5mm, 8mm, and 11 mm proximity probes **(4 channels)**
- ✓ Eccentricity: **(2 channels)**
- ✓ Differential expansion: **(4 channels)**
- ✓ Low-frequency vibration: **(4 channels)**
- ✓ Speed and zero speed: **(2 channels)**

The PT2060/10 PROX module has the ability to be grouped into (2) groups. Each group can be programmed independently and used for different functions. For example, channel one and channel two can be a XY measurement for radial shaft vibration and channels three and four can be programmed to measure eccentricity.

The PT2060/10 PROX module is designed to work with virtually any proximity probe systems (including from other manufacturers). Proximity probe systems which are compatible with the PT2060/10 Prox module include: TM0105, TM0180, TM0110, TM0120, 3000, 7200, 3300 and 3300XL series of proximity probe systems with the following probe tip sizes: 5mm, 8mm, 11mm, 25mm, and 50mm.

The PT2060/10 PROX module also provides additional information such as GAP voltages, module status, alarm status, alarm history and system events. This information can be accessed via Modbus or the configuration software.



The PT2060/10 PROX module is also equipped with local status indication. There are three LEDs which display the status of the monitoring channels.

- ✓ OK/TX LED indicates that both the module and the proximity probe systems in the field are working
- ✓ Alarm LED indicates the current alarm status of the module.
- ✓ Bypass LED indicates the channels have been programmed to be in the Bypass mode.



Specifications

Electrical

Power supply:

Internally converted by the rack power supply module

8.0W total typical for this module

Signal Input:

Up to four proximity probes

Input impedance: > 20K Ω

Sensitivity:

8mm and 5mm probes: 8.0 mV/ μ m (200mV/mil)

11mm probes: 4.0 mV/ μ m (100mV/mil)

25mm probes: 0.8 mV/ μ m (20mV/mil)

35mm probes: 0.8 mV/ μ m (20mV/mil)

Radial Vibration Signal Conditioning:

Frequency Response:

4 to 4.0 kHz (240 to 240,000rpm), \pm 3dB

Accuracy:

< \pm 1% FS @25°C

Thrust Position Signal Conditioning:

Accuracy:

< \pm 0.1% FS @25°C

Eccentricity Signal Conditioning:

Frequency Response (30 pulses per revolution):

0.0167 to 20.0Hz (1 to 1,200rpm), \pm 3dB

Accuracy:

< \pm 1% FS @25°C

Differential Expansion Signal Conditioning:

Accuracy:

< \pm 0.1% FS @25°C

Speed/Zero Speed Signal Conditioning:

Frequency Response:

0.5 to 10 KHz (pulses)

Accuracy:

The greater of \pm 0.01% FS or +/- 2 rpm @25°C

Low Frequency Oscillation Signal Conditioning:

Frequency Response:

0.5 to 100Hz (30 to 1,200rpm), \pm 3dB

Accuracy:

< \pm 1% FS @25°C

Static and Status Values:

Each of the options for this monitor module has been defined with static values. Those values can be accessed via the 4-20mA output or from the digital communication protocols

Radial Vibration:

Direct (peak to peak), GAP, OK, Alert, Danger, Bypass, Trip-multiply

Thrust Position:

Direct, GAP, OK, Alert, Danger, Bypass

Differential Expansion:

Direct, GAP, OK, Alert, Danger, Bypass

Eccentricity:

Peak to Peak, GAP, OK, Alert, Danger, Bypass

Speed:

Direct, GAP, OK, Alert, Danger, Bypass

Overall in 4-20mA Output:

Proportional to monitor full-scale; each channel has its own overall vibration output. The short of the 4-20mA will not affect system performance.

Maximum Load:

300 Ω .

Resolution:

Less than 0.33% FS

Buffered Output:

On the front panel, each channel has one BNC connector. The output is the unfiltered raw signal.

Output Impedance:

150 Ω

Transducer Power:

-24VDC, current limited. Less than 50mA on each channel.

Alarm:

Alarm set-point:

Each channel has two alarm set-points which can be field adjusted from 0 to 100% FS.

Set-point accuracy:

Better than 0.5% FS

Set-point repeatability:

Within 0.5% FS

Alarms:

Normally latching or normally non-latching



PT2060 Monitor

Electrical continued

Alarm delay:

Alert delay can be set from 1 to 60 seconds with a time interval of 1 second.

Danger delay can be set from 1 to 60 seconds with time interval of 1 second.

Danger delay also includes a 0.1 second option.

LED Indicators:

OK/TX: green. on, off, flash

Alarms: red

Bypass: red

CE Marks

Each monitor module will have CE approval in terms of EMC conformity.

Environmental

Temperature:

Operation: -20°C to +65°C

Storage: -40°C to +85°C

Humidity:

95% non-condensing

Physical

Each module comes with two components- the front panel assembly and the back panel assembly.

Dimensions:

241mm (9.5in) X 24.5mm (0.96in)

Mounts in any of the 14 remaining slots. Slots 15 and 16 of system rack are reserved for the Power Supply and SIM modules.

Weight:

1.0 kg (2.0 lbs)

Order Information

PT2060/10-AX

AX: Back panel IO module

A0: Basic IO module

Back Panel Connectors Layout

