



## PT2060/53 O-SPEED Over Speed Module

ProvibTech's PT2060/53 O-SPEED over speed module processes the incoming sensor signal, compares it with the alarm set-point and outputs the appropriate status information. The PT2060/53 over speed module accepts both proximity probe and magnetic sensor signal inputs.

### Voting

The PT2060/53 O-SPEED module can be configured as a two out of two or two out of three voting system with the addition of one or two more PT2060/53 O-SPEED modules.

### Redundancy Requirement

If redundancy is required to reach the maximum system reliability the PT2060/53 requires a redundant power supply and a redundant PT2060/43 redundant relay module.

The PT2060/53 O-SPEED module also provides additional information such as, module status, alarm status, alarm history and system events. This information can be accessed via Modbus or the configuration software.

The PT2060/53 O-SPEED 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 each module

Signal Input:

- Input impedance:
  - > 20K $\Omega$
- Input voltage range:
  - +10 to -24VDC

Input frequency:

- < 99,999 rpm
- 1 to 255 pulse/revolution
- Start at 0.0167Hz (1rpm) for proximity probes
- Start at 3.3Hz (200rpm) for magnetic pickup

Sensors:

- Proximity probes
- Magnetic pickups



### Electrical Continued

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:

300Ω

Accuracy:

+/-0.1rpm (< 100rpm)

+/- 1.0rpm (> 100 and < 10,000rpm)

0.01% (> 10,000 and < 99,999rpm)

Threshold:

Auto: > 1.0 V pk-pk

Manual: > 0.5 V pk-pk. Trigger level can be programmed from -23.9VDC to +9.9VDC

Hysteresis:

0.2 - 2.5 V user selectable

Alarm Time Delay:

< 30ms for frequency over 300Hz

Rack Space:

Total four slots for a overspeed protection system.

Buffered Output:

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

Output impedance: 150 Ω

Proximity Transducer Power:

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

Alarm:

Alarm set-point:

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

Set-point accuracy:

+/-1 rpm

LED Indicators:

OK/TX: green

Alarms: red

Bypass: red

Relays:

Seal: Epoxy.

Capacity: 2A/240VAC or 2A/24VDC, resistive load

Relays Continued:

Relay type: SPDT

Isolation: 1000VDC

CE Marks

The monitor module will have a CE approval with 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.

For triple redundancy the PT2060/99 system rack has the flexibility to be segregated into three groups: slot 1-4, slot 5-8 and slot 9-12. Note: For each group, the relay module has to be mounted on the first slot on the right.

Weight:

1.0 kg (2.0 lbs)



**Order Information**

**PT2060/53-AX**

AX: Back panel IO module

A0: Basic IO module

**Back Panel Connectors Layout**

