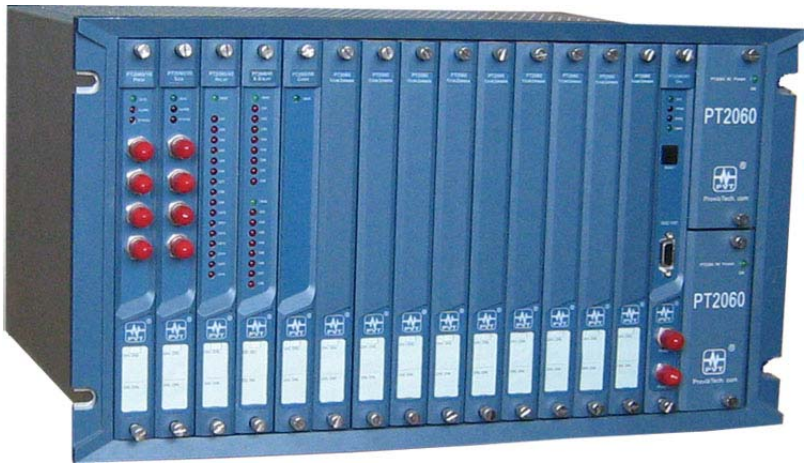
PT2060 Monitor

PT2060/90 POWER Power Supply Module

User Manual

Installation, Operation, Maintenance



ProvibTech, Inc. 11011 Brooklet Drive, Suite 360, Houston, Texas 77099, USA

Phone: +1-713-830-7601, Fax: +1-281-754-4972, Email: pvt@provibtech.com , Web: www.provibtech.com

Contents

Receiving Inspection and Handling Guide

Inspection

Check the devices for possible damage that may have occurred from improper transport. Damages in transit must be recorded on the transport documents. All claims for damages must be claimed without delay against the shipper and before the installation.

Handling and Storing Considerations

PT2060 should be handled with care during unpacking and installation. Damage to PT2060 is typically caused by rough handling, shock, or electrostatic discharge (ESD).

Be aware of the following precautions when unpacking and handling PT2060 Rack or any module.

- ✓ Please have attention about the sharp corners/sides of the rack to avoid any of injuries during the installation, transporting and un-installation.
- ✓ All circuit boards and electronic modules associated with this rack contain components which are susceptible to damage caused by electrostatic discharge. It should be necessary to discharge any static electricity from yourself and your clothing before handling the rack.
- ✓ Whenever the module is not installed in a system, always keep it in the protective antistatic bag.

Module Introduction

General Information

ProvibTech's PT2060/90 POWER supply module will provide system power to the PT2060/99 system rack and all modules installed in the system rack. The power module accepts the following power supply inputs: 24VDC, 110VDC, 110VAC and 220VAC.

If redundancy is required two PT2060/90 power supply modules are needed. The power supply module is a half-height module, meaning PT2060/90 modules will fit in one slot. The PT2060/90 POWER module should be installed in the first slot from the right. If only one module is used it should be installed in the top half slot.

PT2060/90 will supply power to all the process modules. The power module can accept most power supplies in the field and converts them to voltages acceptable for use by other PT2060 modules.

It is highly recommend to utilize UPS power supply for reliable monitoring operation.

Figure 1

Specifications

Electrical

Power inputs:

- 24 VDC:
  - From 20 to 30VDC @16A
- 110VDC:
  - From 88 to 140VDC @6A
- 110VAC:
  - From 85 to 132VAC. Frequency from 47Hz to 63 Hz @6A
- 220VAC:
  - From 175 to 264VAC. Frequency from 47Hz to 63Hz @4A

LED Indicators:

- OK: green

Approvals:

- CE;
- CSA:
  - Non-incendive, class I, div.2, Grps.ABCD, T4@Ta= -40℃ to +75℃
  - Certificate Number: 2011996

Environmental

Temperature:

Operation: -20℃ ~ +65℃

Storage: -40℃ ~ +85℃

Humidity:

95% non-condensing

Physical

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

Dimensions:

120mm (4.7in)×49.5mm (1.9in)

A maximum of two PT2060/90 modules can be installed per PT2060/99 System Rack. The location of these modules is the first slot on the right side of the system rack, with one module installed on the top and the other installed on the bottom of the slot.

Weight:

1.0 kg (2.0 lbs)

PT2060/90 Operation

Views of the Front Panel

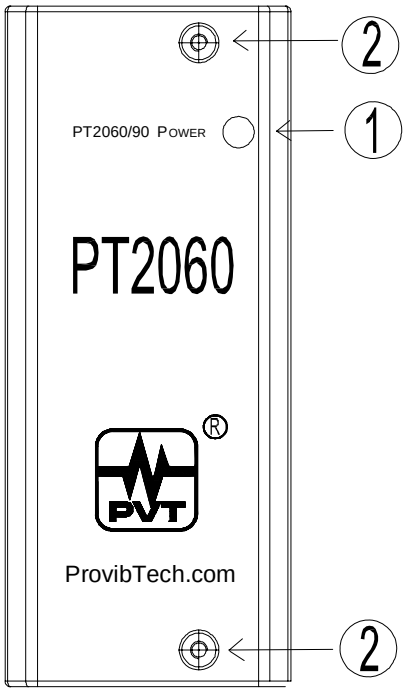


Figure 2

√ OK LED

On: when the PT2060/90 module works well.

√ Fixing Screw

It is used to fix the front panel of the PT2060/90(De-energize before mounting the power supply).

PT2060/90 Field-wiring Diagram

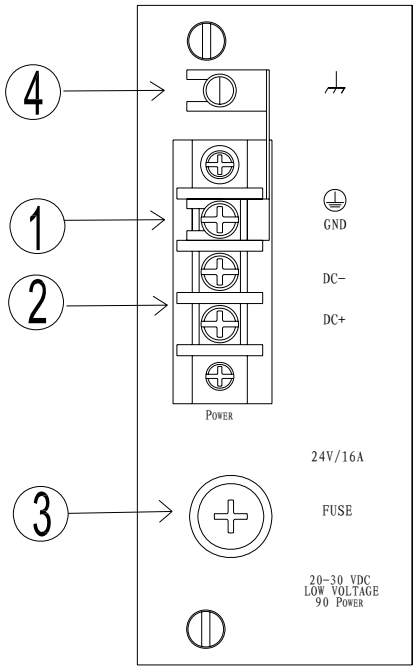


Figure 3

√ GND (Power)

The metal connection from power line ground to system case ground should always be connected to protect the case from floating off ground. Unless there is already a connection between earth ground and PT2060 case.

√ POWER INPUT

Input voltage, it could connect with 24VDC, 110VDC, 110VAC and 220VAC according to the back panel label. Refer to the following field-wiring diagram for connection options.

√ FUSE

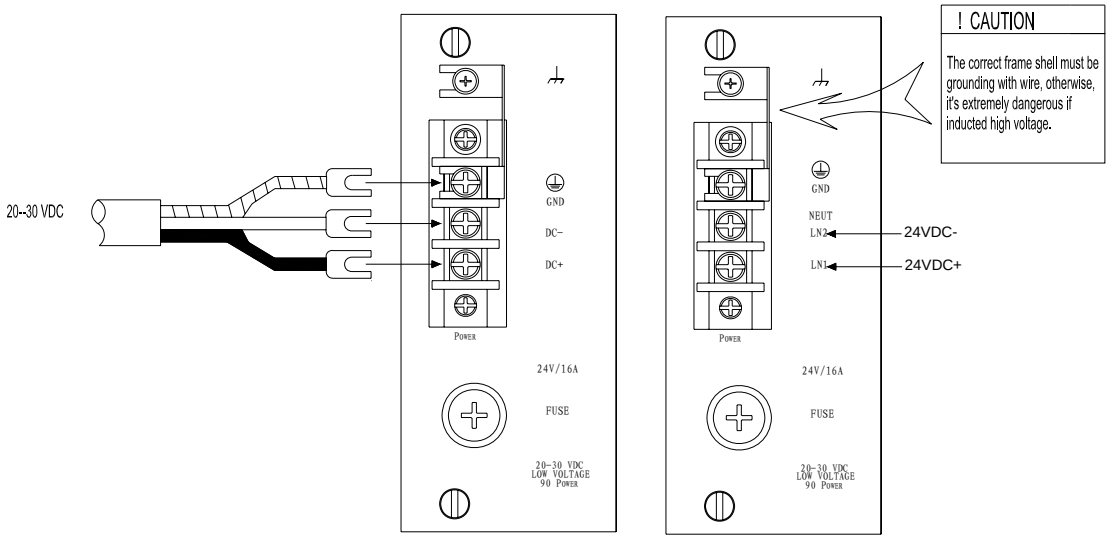
24VDC	24V/16A
110VAC	110V/6A
110VDC	110V/6A
220VAC	220V/4A

√ GROUND (System case)

Refer to item 1 for details

1. 24VDC (Low Voltage DC Power Supply)

Use the Low Voltage DC Power Supply when the rack is powered by low voltage DC (20 to 30 VDC).

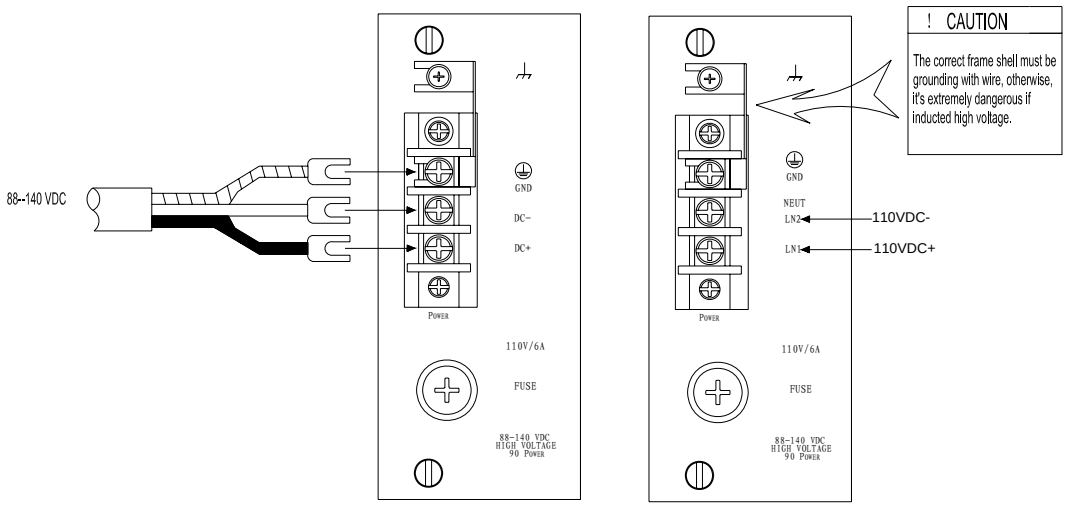


Old version

Figure 4

2. 110VDC (High Voltage DC Power Supply)

Use the High Voltage DC Power Supply when the rack will be powered by high voltage DC (88 to 140 VDC).



Old version

Figure 5

3. 110VAC (Low Voltage AC power Supply)

Use the Low Voltage AC Power Supply when the rack will be powered by low voltage AC (85 to 132 VAC rms).

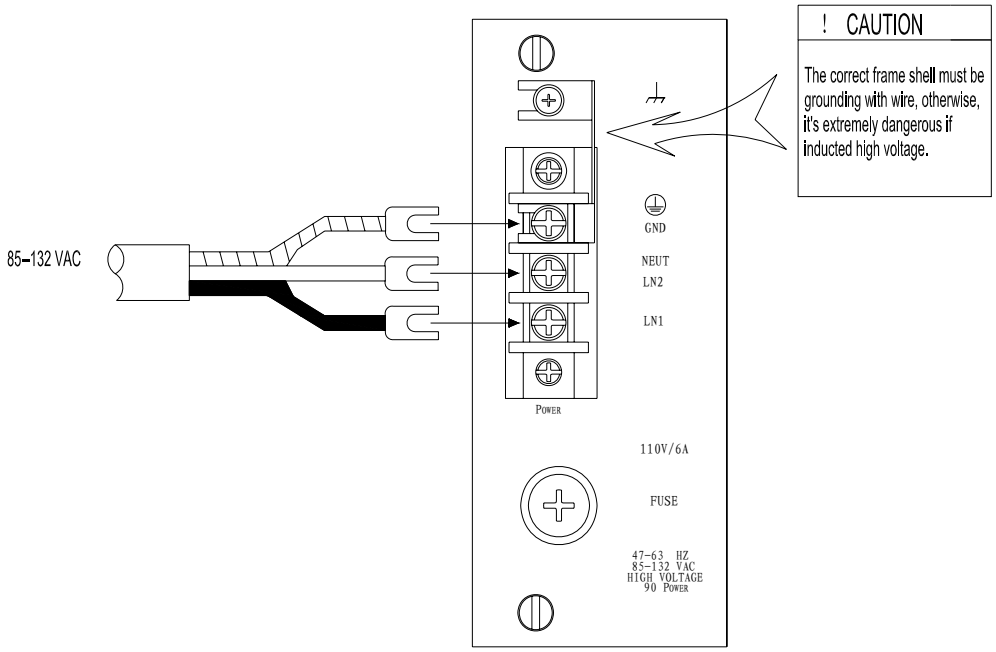


Figure 6

4. 220VAC (High Voltage AC power Supply)

Use the High Voltage AC Power Supply when the rack will be powered by high voltage AC (175 to 264 VAC rms).

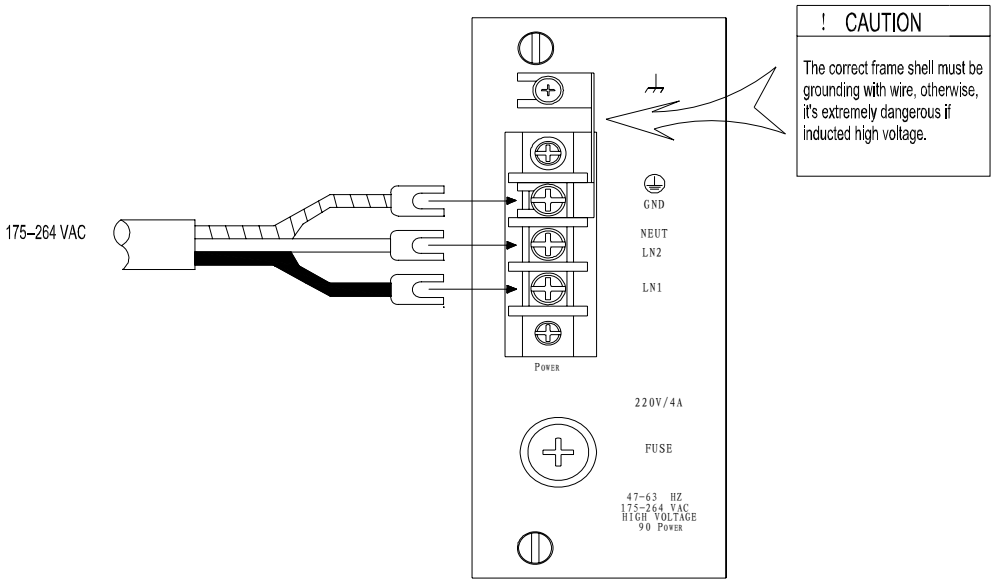


Figure 7

Ground consideration

In order to avoid the grounding in loop, the system has to supply a single grounding, the power supplied a switch and control system ground there. The two switches have to be fixed at the same position, if mounting two powers. The switch default setting is “ON” to short the COM and the case. If the system is grounded at another location, you need to be sure the switch is “OFF”.

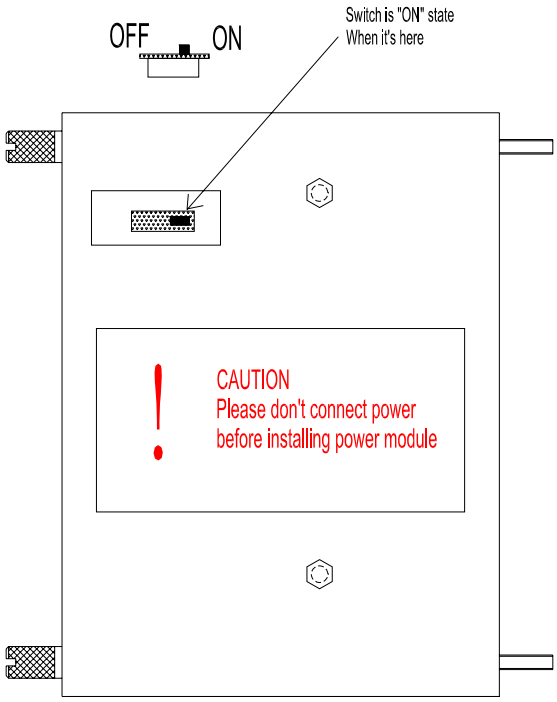


Figure 8

Warning

Please don’t replace fuse or power supply module and don’t disconnect equipment unless power has been switched off or the area is known to be non-hazardous！

Maintenance

Instruction

User should not open the PT2060/90 POWER Power Supply Module and repair the components inside. The maintenance here means to check the module working status and determine whether it is in a good condition. If it has something abnormal, user could change a new one.

The maintenance period is very important. Usually, a yearly maintenance is OK. If the machine works in an extraordinary environment, user should shorten the maintenance interval according to the reality.

The extraordinary here means,

- ✓ PT2060 is used to monitor critical equipment
- ✓ PT2060 works in high temperature, humid and corrosive environment.

Troubleshooting

This section describes how to troubleshoot a problem with the Power Supply Module.

⚠ **Warning**
AC power connected voltage is present. This voltage could cause shock, burns or death.

⚠ **Warning**
Power Supply shield may be hot when the rack is operating at high temperatures.

⚠ **Warning**
High voltage may be present on the Power Supplies for several minutes after removal from the rack.

LED Fault Conditions

If the Power Supply OK LED is off, check the following items:

1. Verify that the correct voltage is connected to the back-panel.
2. Verify that the installed back-panel matches the installed front-panel.
3. Check to see if the fuse on the back-panel has blown. If the fuse is blown, replace it. A blown fuse may be due to:

- √ Severe over voltage on the back-panel.
- √ A fault within the PT2060 Power Supply.

4. If steps 1 through 3 do not solve the problem, the Power Module may be damaged. Please Contact Provibtech Corporation.

Other Information

Ordering Information

Each PT2060/90 power supply module is consists of two boards, front panel and back panel. There are four type of front panel and back panel according to different applications, So, please make your orders using the code listed below.

PT2060/90-AX-BX

AX: Top-half power supply
- A0: None
- A1: 175 – 264VAC
- A2: 85 - 132VAC
- A3: 88 - 140VDC
- A4: 20- 30VDC

BX: Bottom-half power supply (required for redundancy)
- B0: None
- B1: 175 – 264VAC
- B2: 85 - 132VAC
- B3: 88 - 140VDC
- B4: 20 - 30VDC

Accessories

There are several accessories for selecting:

PT2060-009000: PT2060/90 Front panel (175 – 264VAC)
PT2060-009001: PT2060/90 Back panel (175 – 264VAC)
PT2060-009002: PT2060/90 Front panel (85 - 132VAC)
PT2060-009003: PT2060/90 Back panel (85 - 132VAC)
PT2060-009004: PT2060/90 Front panel (88 - 140VDC)
PT2060-009005: PT2060/90 Back panel (88 - 140VDC)
PT2060-009006: PT2060/90 Front panel (20 - 30VDC)
PT2060-009007: PT2060/90 Back panel (20 - 30VDC)
PT2060-009008: PT2060/90 Fuse 220V/4A (175 – 264VAC)
PT2060-009009: PT2060/90 Fuse 110V/6A (85 - 132VAC, 88 - 140VDC)
PT2060-009010: PT2060/90 Fuse 24V/16A (20 - 30VDC)
PT2060-009011: Front blank Panel
PT2060-009012: Back blank Panel

Examination

The encapsulation of PT2060 can protect modules from all kind of damage. As soon as the reception, user should examine the conducts whether it is damaged and whether it is caused by transportation. Please contact the carrier, if it happened.

If no damage is found and the system does not work properly, please check the user manual first. If the problem can not solve, please contact the closer ProvibTech office.