

OFFICIAL MODEL-SPECIFIC GUIDE

Installation Instructions

IC695PSD140

PACSystems RX3i multipurpose DC power supply · field wiring and redundancy

01 VERIFIED CONFIGURATION

Input supply	18 to 30 V DC; 24 V DC nominal
Maximum output	40 W total
Field conductors	One 14 to 22 AWG copper wire per terminal
Terminal torque	0.5 N·m (4.4 in-lb) maximum
Installation environment	Pollution Degree 2

02 DOCUMENTED INSTALLATION SCOPE

- De-energize the module before replacement or field wiring, particularly in hazardous locations.
- Connect positive, negative and common system ground exactly as shown in the manufacturer field-wiring diagram.
- For load sharing or redundancy, use the documented common switching arrangement and keep required supply switches on.

INSTALLATION CHECK

Confirm polarity, grounding, conductor seating and available system power before energizing.

FIELD WIRING AND OVERVOLTAGE PROTECTION

GFK-2377H

Oct 2020

Installation in Hazardous Areas

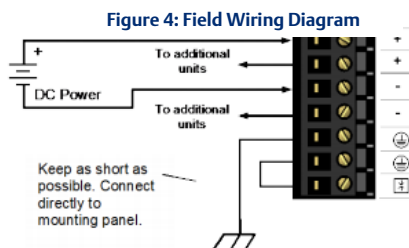
The following information is for products bearing the UL marking for Hazardous Locations or ATEX marking for explosive atmospheres:

⚠ WARNING

- EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2 OR ZONE 2;
- EXPLOSION HAZARD - WHEN IN HAZARDOUS LOCATIONS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES; AND
- EXPLOSION HAZARD - DO NOT CONNECT OR DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NONHAZARDOUS.
- EQUIPMENT LABELED WITH REFERENCE TO CLASS I, GROUPS A, B, C & D, DIV. 2 OR ZONE 2 HAZARDOUS LOCATIONS IS SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C, D, ZONE 2, OR NONHAZARDOUS LOCATIONS ONLY.

Field Wiring: IC695PSD140

Power Source and Ground Connections The wires from the power source and ground connect to the terminals on the Power Supply as shown at right. Each terminal accepts one AWG 14 to AWG 22 wire. When tightening the screw terminals, do not exceed the maximum torque limit of 0.5 N-m (4.4 inch-lbs). Use copper conductors rated 75 degree C minimum.



⚠ WARNING

- If the same external DC power source is used to provide power to two or more power supplies in the system, connection polarity must be identical at each RX3i power supply. A resulting difference in potential can injure personnel or cause damage to equipment. Also, each backplane must be connected to a common system ground.

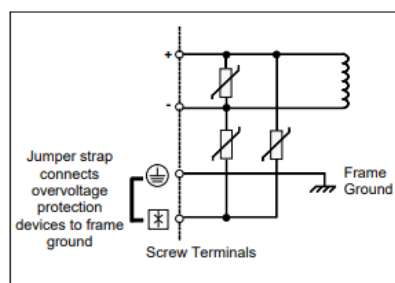
Input Overvoltage Protection

The bottom terminal is normally connected to frame ground with a user-installed jumper as shown at lower right. If overvoltage protection is not required or is supplied upstream, no jumper is required. To Hi-pot test this supply, overvoltage protection must be disabled during the test by removing the jumper. Re-enable overvoltage protection after testing by reinstalling the jumper.

⚠ WARNING

- This power supply is not isolated and is therefore not compatible with floating or positive grounded systems.

Figure 5: Over Voltage Protection



TERMINAL, LOAD-SHARING AND REDUNDANCY WIRING

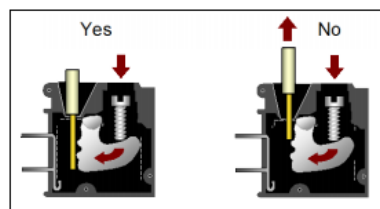
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Power Supply Field Wiring Terminals

Each terminal accepts one AWG 14 to AWG 22 wire. The end of each wire should be stripped at least 9mm (3/8-inch). The terminal can accept a wire that is stripped up to 11 mm (0.433 in) while providing full seating of the insulator. The wire must be fully inserted as shown at left, so that the insulation meets the insulation stop position inside the terminal. Tightening the terminal screw pivots the clamp firmly against the stripped end of the wire, holding it in place. If the wire is not fully inserted as shown at right, tightening the terminal screw could push the wire upward so that it is not connected.

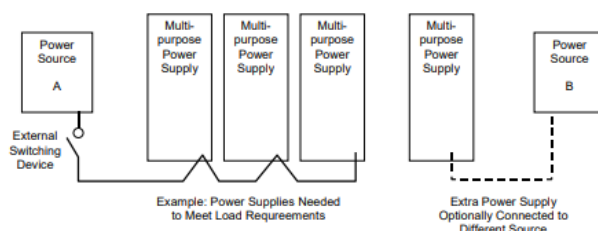
Figure 6: Connecting the Terminals



Connections for Load Sharing

In load-sharing installations, additional Multipurpose Power Supplies above the minimum required for the system load may be wired to the same power source, or a different source.

Figure 7: Load Sharing



Connections for Power Supply Redundancy

Power Supply redundancy can be provided by using one additional Multipurpose Power Supply above the minimum required for the system power load. In this type of installation, all Multipurpose Power Supplies contribute a share of the backplane power and run at a correspondingly reduced load. This results in longer life for the individual power supplies. In addition, should one power supply module fail, system operation is not interrupted. The front panel switch can be used to remove a redundant unit. Note that this type of system does not provide protection against loss of the input power source. If more than power supply is switched off, the remaining power supplies may become overloaded and shut down. An External switching device must be used to remove power from more than 1 power supply at a time in the Power Supply Redundancy mode.

Figure 8: Powersupply Redundancy

