24VDC Power Supply

February 2010 GFK-1515B

Preinstallation Check

Carefully inspect all shipping containers for damage. If any equipment is damaged, notify the delivery service immediately. Save the damaged shipping container for inspection by the delivery service. After unpacking the equipment, record all serial numbers. Save the shipping containers and packing material in case it is necessary to transport or ship any part of the system.

Specifications

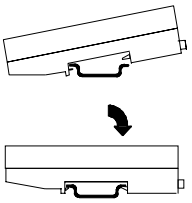
Input Voltage	18 to 30 VDC, 24 VDC nominal	
Input Power	11 W	
Holdup Time	10ms	
Inrush Current	20A maximum at 24VDC 25A maximum at 30VDC	
Output Voltage	5VDC, 3.3VDC	
Protection	Short circuit, overload, reverse polarity	
Output Current	Standard Power Supply (model # n01)	Enhanced Power Supply (model # n02)
Total	1.5 A* maximum	1.5 A* maximum
3.3VDC Output	0.25 A maximum	1.0 A maximum
5VDC Output	(1.5A - $I_{3.3V}$) max.	(1.5A - $I_{3.3V}$) max.

* The total output current should not exceed 1.5A. For example, if 3.3V @ 0.25A is required, 1.25A is available on the 5V output.

Installing a Power Supply Booster Carrier (optional)

The power supply can be installed on a CPU or NIU module, or on a Power Supply Booster Carrier. To install a booster carrier, follow the guidelines below.

Installing the Carrier on a DIN Rail



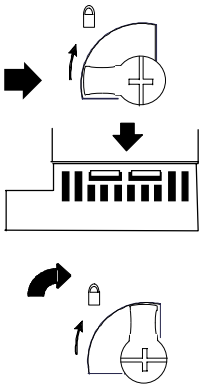
Connecting carriers must be installed on the same section of 35mm x 7.5mm DIN rail. The rail must have a conductive (unpainted) finish for proper grounding. For best resistance to vibration, the DIN rail should be installed on a panel using screws spaced approximately 6 inches (5.24cm) apart.

The carrier snaps easily onto the DIN rail. No tools are required for mounting or grounding to the rail.

Removing the Carrier from the DIN Rail

1. If the carrier is attached to the panel with a screw remove the screw.
2. If the carrier is installed between other carriers, it will be necessary to move the other carriers along the DIN rail to disengage the mating connectors on both sides of the carrier being removed.
3. Slide the carrier along the DIN rail away from the other modules until the connector disengages.
4. With a small flathead screwdriver, pull the DIN rail latch tab outward while tilting the other end of the module down to disengage it from the DIN rail.

Installing the Power Supply

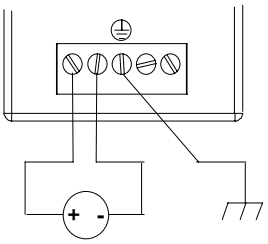


The power supply module installs on a CPU or NIU module or on a Power Supply Booster Carrier. The latch on the power supply must be in the unlocked position, as illustrated.

Align the connectors and the latch post and press the power supply module down firmly, until the two tabs on the bottom of the power supply click into place. Be sure the tabs are fully inserted in the slots as shown.

Turn the latch to the locked position to secure the power supply.

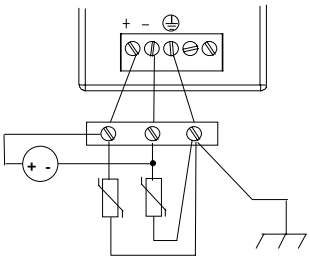
Installing Power and Ground Wiring



Connect an appropriate source of 24VDC to the power supply. Terminals accommodate one AWG #14 (avg. 2.1mm^2 cross section) to AWG #22 (avg. 0.36mm^2 cross section) wire, or two wires up to AWG #18 (avg. 0.86mm^2 cross section). Use copper wire rated for 90 degrees C. When inserting two wires in the same position, the wires must be the same size and type (solid or stranded).

Connect the ground terminal to the conductive mounting panel with a 10cm (4-inch) maximum length of AWG #14 (avg. 2.1mm^2) or larger wire. Use hardware such as star washers to ensure ground integrity.

Installing Suppression at the Power Lines



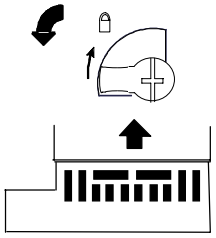
For agency compliance, external MOV suppression is required from both the positive and negative input to frame ground or at the power line input of a system enclosure.

MOV protection across the inputs is provided on the supply and not necessary to add externally.

The axial-leaded ZA series of MOVs from Harris is often used. The 20mm size, model V36ZA80 rated at 160 joules should be able to handle most line transients. Measurement of actual transients may be required in extreme cases to decide what MOV to use.

Removing the Power Supply

Exercise care when working around operating equipment. Devices may become very hot and could cause injury.



1. Remove power.
2. Turn the latch to the unlocked position as illustrated.
3. Press in the tabs on the lower edge of the power supply.
4. Pull the power supply straight off.