Auto-Transfer Rack Power Distribution Unit

Table of Contents

1 Specifications

1.1 Overview

The AT Series Auto-Transfer Power Distribution Units (PDUs) provide automatic transfer switching from primary (Source A) to secondary (Source B) in the event of primary source failure. The PDU automatically transfers back to the primary source when it becomes available. Front mounted LED's indicate availability of power at Source A and Source B. AT Series Auto-Transfer PDUs can optionally be configured with a Geist Current Meter that provides local monitoring and display of each output circuit current.

1.2 Environmental

1.2.1 Temperature

Operating:	10°C (50°F) min	45°C (113°F) max
Storage:	-25°C (-13°F) min	65°C (149°F) max

1.2.2 Humidity

Operating:	5% min	95% max	(non-condensing)
Storage:	5% min	95% max	(non-condensing)

1.2.3 Elevation

Operating:	0 m (0 ft) min	2000 m (6561 ft) max
Storage:	0 m (0 ft) min	15240 m (50000 ft) max

1.3 Electrical

See nameplate for unit ratings.

1.4 Receptacle Ratings

NEMA 5-15R or L5-15R	125 Volts, 15 Amp
NEMA 5-20R or L5-20R	125 Volts, 20 Amp
NEMA 6-20R or L6-20R	250 Volts, 20 Amp
IEC-320 C13	125/250 Volt, 15 Amp (per Receptacle Bank)
IEC-320 C19	125/250 Volt, 20 Amp

1.5 EMC Verification

This Class A device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC and Canadian ICES-003 requirements for units with Current Monitoring Meter: The ferrite core shipped with the unit must be placed around the Ethernet cable close to the PDU.

2 Installation

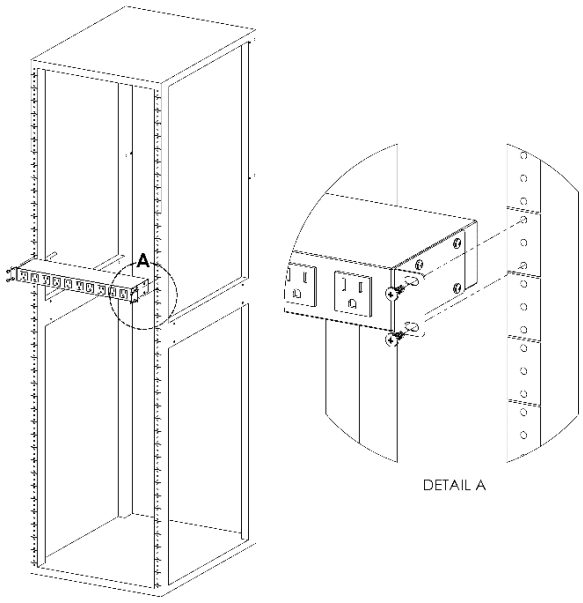
2.1 Instructions

1. Using appropriate hardware, mount PDU to rack (see *Mounting* section for additional instructions).
2. Plug PDU into de-energized, Phase Synchronized branch circuit receptacles.
3. Connect devices into PDU's output receptacles. It is recommended that the devices are turned off until all devices are connected to PDU
4. Turn on branch circuit for Source A to energize PDU.
5. Turn on branch circuit for Source B.
6. Power on devices. Sequential power up is recommended to avoid high inrush current.

2.2 Guidelines

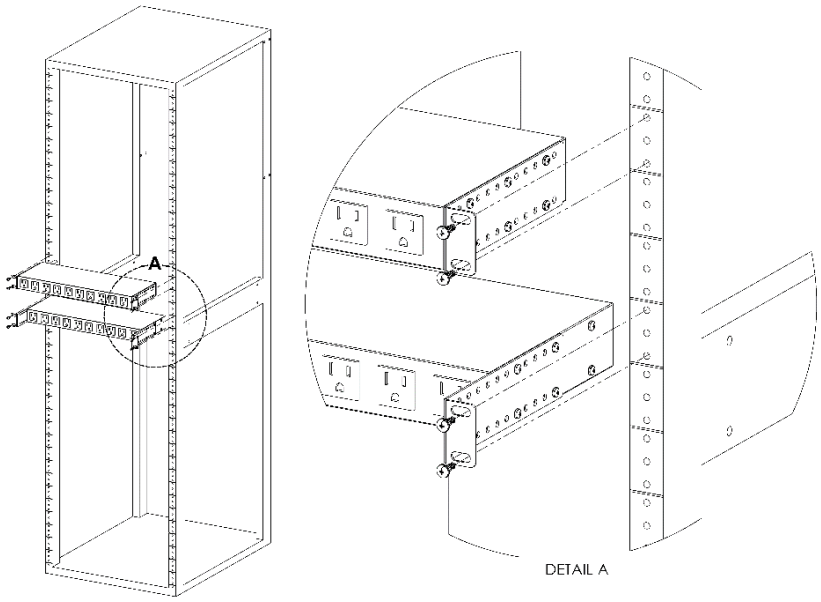
- **Warning:** Source power must be Phase Synchronized, high voltage potential may result in relay failure when sources are not Phase Synchronized.
- Some loads may pull high inrush current when switching power sources. Do not overload ATS to prevent relay failure and tripping branch circuit protection.
- If the PDU is installed in a cabinet the ambient temperature of the rack should be no greater than 45°C.
- Install the PDU such that the amount of airflow required for safe operation of equipment is not compromised.
- Mount the PDU so that a hazardous condition is not achieved due to uneven mechanical loading.
- Follow nameplate ratings when connecting equipment to the branch circuit. Take into consideration the effect that overloading of the circuits might have on over-current protection and supply wiring.
- The PDU relies on the building installation for protection from over-current conditions. A certified overcurrent protection device is required in the building installation. The overcurrent protection device should be sized according to the PDU's nameplate ratings and local/national electrical codes.
- Reliable earthing of rack-mount equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit. The PDU must be connected to an earthed socket-outlet.
- The PDU is intended for Restricted Access Locations only and only qualified service personnel should install and access the PDU.
- For pluggable equipment, install the PDU so that the input plug or appliance coupler may be disconnected for service.
- Sequential power-up of devices powered by the PDU is recommended to avoid high inrush current.
- **Caution:** Disconnect all power cords before servicing.
- The PDU is intended for use with TN or TT power supply systems

3 Mounting



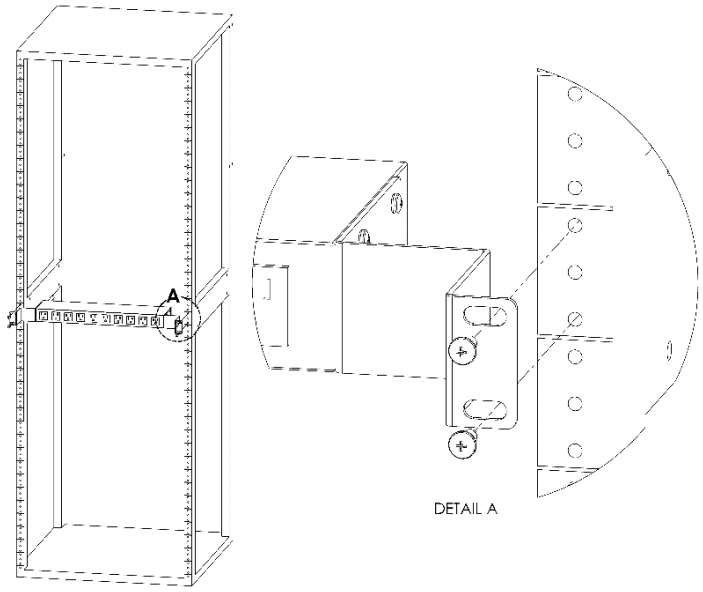
Flush Mount Brackets (FM)

Using flush mount brackets, attach PDU to rack as shown



Adjustable Mount Brackets (AM)

Using adjustable mount brackets, attach PDU to rack as shown



23" Conversion Mounting Brackets (23-RM)

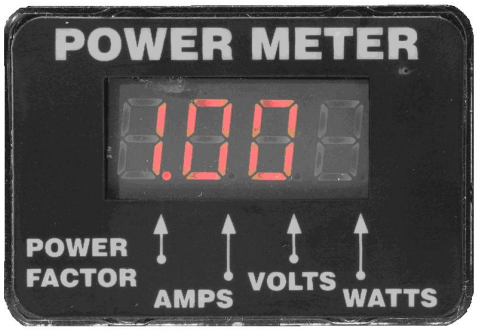
Using conversion mounting brackets, attach 19” PDU to 23” rack as shown

4 Optional Local Monitoring

4.1 Power Meter

The Geist PM-1 power meter is a low-power, high accuracy meter capable of measuring true RMS Current, Voltage, Power, and Power Factor. These values are individually shown on an easy to read, 4-digit LED Display, which continuously scrolls through the four different measured values. Each one of these displayed parameters is defined below. The Power Meter will automatically begin cycling through the displayed values when the PDU is connected to AC Mains power.

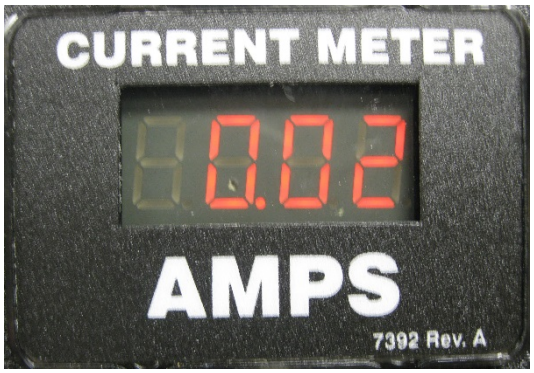
- Current: PDU output current draw measured in true RMS Amps
- Voltage: PDU output voltage measured in true RMS Voltage
- Power: PDU output power measured in Watts – referred to as real or active power
- Power Factor: Ration of real PDU output power to apparent PDU output power



Power Meter Display

4.2 Current Meter

The Geist CM-1 current meter is a low-power, high accuracy meter capable of measuring true RMS Current. The value of current is continuously shown on an easy to read, 4-digit LED Display. The Current Meter will automatically begin to display value of output current when the PDU is connected to AC Mains power.



Current Meter Display

5 Service/Tech Support

5.1 Service and Maintenance

No service or maintenance is required. Do not attempt to open the PDU or you may void the warranty. No serviceable parts inside. It is recommended that power be removed from the unit before installing or removing any equipment.

5.2 More Technical Support

Email: support@geistglobal.com
Or contact your distributor.

Americas

- 1 888 630 4445

Europe and Middle East

- From within the UK 0845 026 3853
- From abroad +44 845 026 3853

Asia

- English +1 888 630 4445 (US number)
- Chinese +86 755 8663 9505

6 Table of Figures

7 Revision History

Revision	Date	Notes	Approved By
1.0	2/17/2011	Original Published Version	BP
1.1	6/22/2012	Changed Logo and web address	SR
2.0	7/25/2014	Changed EM40 Display Page and company's name	QN
3.0	1/31/2017	Removed EM and PM3 meter information	SC