



Instruction Manual

Rack In-Line Power
Measurement Unit

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Specifications

Overview

The L Series products are In-Line Power Monitoring Units intended for connection between an AC Mains circuit and a Power Distribution Unit (PDU). The In-Line Power Monitoring Units are designed to be powered by a single phase AC input circuit and have an outlet or output cord and connector body for connection to an external device (such as a PDU). The In-Line Power Monitoring Units are rated from 12 to 32 Amps depending on the unit's configuration. In-Line Power Monitoring Units can be configured with a Geist Local Current Meter Power Meter to perform the monitoring functions.

Environmental

Temperature

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

Humidity

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

Elevation

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

Electrical

See nameplate for unit ratings.

Detachable Power Supply Cords

L Series In-Line Power Monitoring Units may optionally be configured with an AC Inlet for connection to AC Mains power. Use only detachable power supply cords of the appropriate size and type, as stated below, with the unit. Use only with light PVC sheathed flexible cords (according to IEC 60227) or ordinary tough rubber-sheathed flexible cords (according to IEC 60245) that terminate in an attachment plug meeting local/national code requirements.

For Global units use a minimum 1.5 mm² nominal conductor cross-sectional area detachable power supply cord with ratings of 300 V and 75 °C. The power supply cord cable designation should be H03VV-F, H03VVH2-F, or better.

For North American units use a minimum 14 AWG power supply cord with ratings of 300 V and 75 °C. The power supply cord cable designation should be SJT or better.

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.

Installation

Instructions

1. Using appropriate hardware, mount In-Line Meter to rack
2. Plug In-Line Meter into de-energized branch circuit receptacle.*
3. Connect external device to the In-Line Meter's output outlet or connector.
4. Turn on branch circuit to energize the In-Line Meter.
5. Power on external device.

* Branch Circuit should be sized based on the In-Line Meter's nameplate electrical rating. For North American units, the branch circuit should have a current rating equal to 125% of the unit's nameplate current rating. For Global units, the branch circuit should have a current rating equal to the unit's nameplate current rating.

Guidelines

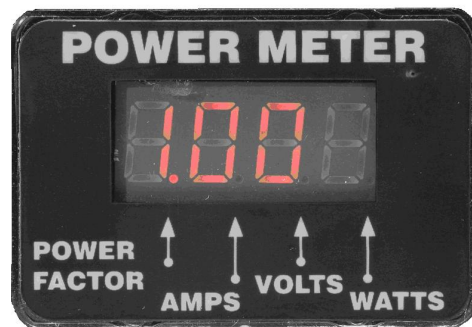
- If the In-Line Meter is installed in a cabinet the ambient temperature of the rack should be no greater than 45°C.
- Install the In-Line Meter such that the amount of airflow required for safe operation of equipment is not compromised.
- Mount the In-Line Meter so that a hazardous condition is not 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 overcurrent protection and supply wiring.
- The In-Line Meter relies on the building installation for protection from overcurrent conditions. A certified overcurrent protection device is required in the building installation. The overcurrent protection device should be sized according to the In-Line Meter'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 In-Line Meter must be connected to an earthed socket-outlet.
- The In-Line Meter is intended for Restricted Access Locations only and only qualified service personnel should install and access the In-Line Meter.
- For pluggable equipment, install the In-Line Meter so that the input plug or appliance coupler may be disconnected for service.
- **Caution:** Disconnect all power cords before servicing.
- The In-Line Meter is intended for use with TN, TT, or IT power supply systems

Optional Local Monitoring

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 In-Line Meter is connected to AC Mains power.

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

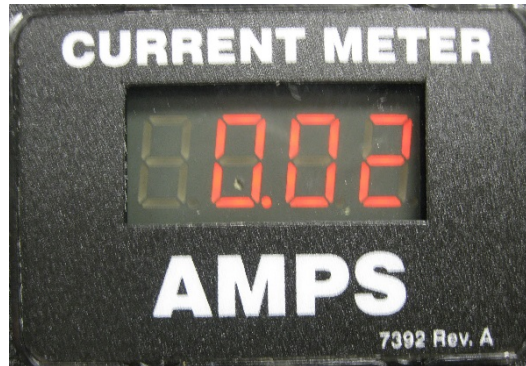


Power Meter Display

* Real power is the power in a circuit that is transformed from electric to non-electric energy, while apparent power is the total power supplied to the circuit.

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 In-Line Meter is connected to AC Mains power.



Current Meter Display

Service/Tech Support

Service and Maintenance

No service or maintenance is required. Do not attempt to open the In-Line Meter 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.

More Technical Support

<http://geistglobal.com>

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

Email: support@geistglobal.com or contact your distributor
 Technical Support Form: <http://www.geistglobal.com/Tech-Support>

Revision History

Revision	Date	Notes	Approved By
1.0	6/17/2009	Original Published Version	BP
1.1	7/1/2009	Added Link Speed Information	BP
1.2	6/29/2010	Updated Current Monitoring Meter Name	BP
2.0	7/28/2014	Changed logo, company name, email, and web address	QN
3.0	5/30/2017	Remove Current Monitoring and CM-3	GY



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