

Cx Monitor With Rogowski Coil CT's



monitoring services

**INSTALLATION
INSTRUCTIONS OF THE
POWER ANALYZER****WARNING-WARNING-WARNING**

Read and understand this manual before connecting device.

Death, fire or serious injury can occur from using equipment outside of safety ratings or improper use.

Installation must be performed from qualified personnel only. Follow applicable safety work practices, including using the proper personal protective equipment during install.

**ALWAYS POWER DOWN ALL
ELECTRICAL CIRCUITS BEFORE
INSTALLATION**

**SYSTEM MUST BE POWERED FROM GROUNDED RECEPTACLE.
THESE STEPS REQUIRE SYSTEM-TRAINED OR LOCAL QUALIFIED
PERSONNEL ONLY!**

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Specifications are subject to change without notice.

Definitions:

- **WARNING**

This statement is to reinforce the practice of certain conditions may cause physical bodily harm or loss of life.

- **CAUTION**

This statement is to reinforce the practice of certain conditions may cause physical damage to the Cx Monitor, accessories, equipment or property.

SYMBOLS:

THE FOLLOWING ARE (IEC) SYMBOLS ARE USED ON THIS DOCUMENT OR ON THE POWER MONITOR, AND THEIR DEFINITIONS.



This symbol indicates AC or DC voltage or current



This symbol indicates safety ground conductor.



This symbol indicates high voltage. It calls your attention to items or operations that could be dangerous to you and other persons operating this equipment.
Read the message and follow the instructions carefully.



This symbol indicates that caution is necessary when operating the device or control close to where the symbol is placed, or to indicate that the current situation needs operator awareness or operator action in order to avoid undesirable consequences.



WARNING, to avoid electrical shock or fire:



- Before using the power monitor inspect wireless probes, voltage probes, current probes, leads and accessories for mechanical damage or broken plastic and call Rx Monitoring Services Inc. for replacements.
- Wear proper Personal Protective Equipment, including safety glasses and insulated gloves when making connections to power circuits.
- Use only current probes, test leads, and adapters supplied with the power monitor and wireless probes.
- Remove unnecessary voltage leads or accessories that are not in use.
- Make sure the power monitor is properly connected through the power cord to protective earth ground.
- Do not insert foreign objects into connectors, only use approved accessories.
- Never open the power monitor, there are no customer replaceable parts.
- Never use power monitor outside or when condensing water is present.
- Use supplied safety kit and properly lockout circuits under test.
- Hands, boots and the working area must be dry when making connections to power system.
- Do not operate the Power Monitor or probes around volatile gas or vapor.

******* WARNING DO NOT EXCEED SAFETY RATINGS *******

Power Monitor	: CAT III - 600V	Pollution Degree 2
Rope CT's	: CAT III - 1000V	Pollution Degree 2
Clamp CT's	: CAT III - 600V	Pollution Degree 2
Wireless DC	: CAT II - 600V	Pollution Degree 2
Wireless DCx	: CAT II - 150V	Pollution Degree 2

1. Unpack the Power Monitor



Power Monitor

- a. Check the packing list to make sure all of the requested equipment was received.
- b. Position near the connection point to be tested (be sure the Power Monitor is positioned in an area where it will not be dropped or interfered with).
- c. Be sure a 120V-240V receptacle is available for powering the device.

2. Power down system and turn off the power at the main breaker



- a. To ensure safe working conditions make sure to remove voltage from testing source. (Lockout if required)



3. Connect the Voltage Leads:



Connect Voltage Leads

- a. Confirm that the system under test is powered down and that power at the main circuit breaker is off.
- b. Connect the L1, L2 and L3 voltage leads (alligator clip or strip) to the main circuit breaker. Connect the N lead to the Neutral bar (if present), and the G lead to the main chassis or the Ground bar.
- c. Connect the right-angle banana plug end of the voltage leads into their corresponding color-coded ports on the front panel of the Power Monitor.



Connect Banana Leads



Caution: If running Voltage leads out of the panel or system, wrap the “Safety Sleeves” provided in the safety kit around wires at pinch points.

4. Connect the Current Probes



For Phases (3 Wire ProSys 3,000 & 6,000)



For Neutral & or Ground (1 Wire ProSys)



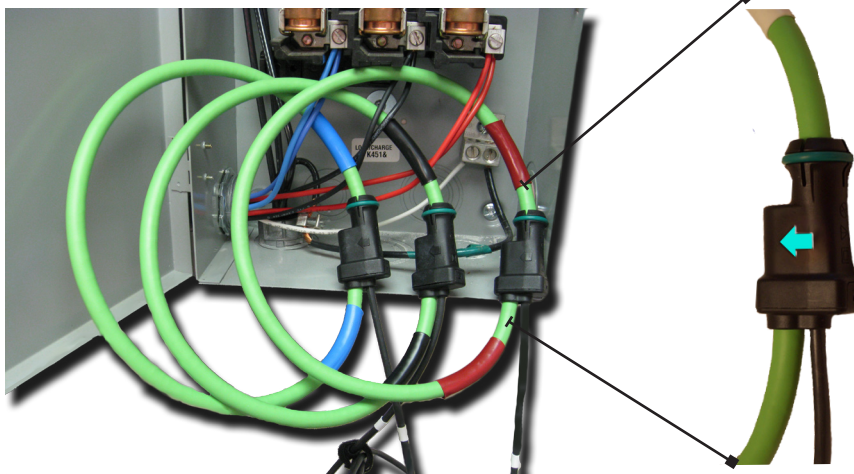
For Phases, N & Ground (Singles, Gen2 10,000A)

- a. Please note that connecting the current probes is a crucial part of the data gathering process. Please make sure you connect them to ensure that all supporting data is gathered.
- b. Connect the current probes around L1, L2, L3, N & G (or all applicable phases) and make sure that there is only one phase in each current probe.
- c. Make sure that each current probe is encompassing the correct phase and that the direction of the arrow on the probe is pointing toward the load.
- d. Plug the connector end of the current probes into their corresponding ports on the front of the Power Monitor (to the right of the color-coded voltage ports).



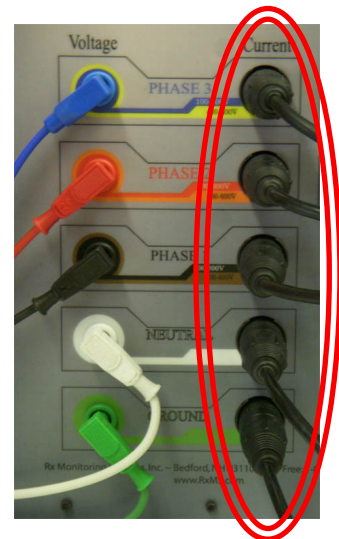
Caution: If running the CT wires out of the panel or system, wrap the “Safety Sleeves” provided in the safety kit around wires at pinch points.

b. Connect CT's to Panel

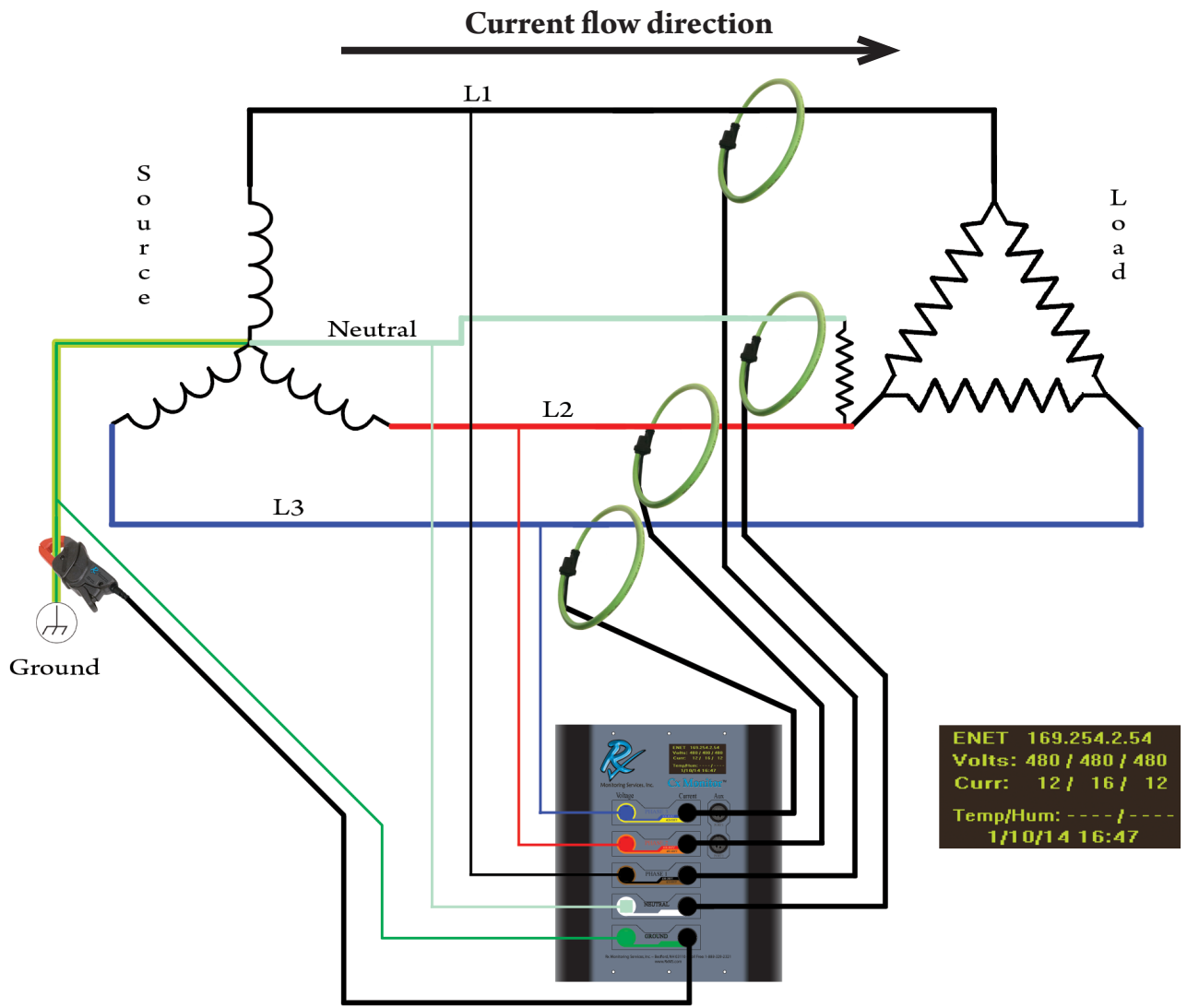


c. Arrow direction to load

d. Connect 3 Pin Plugs

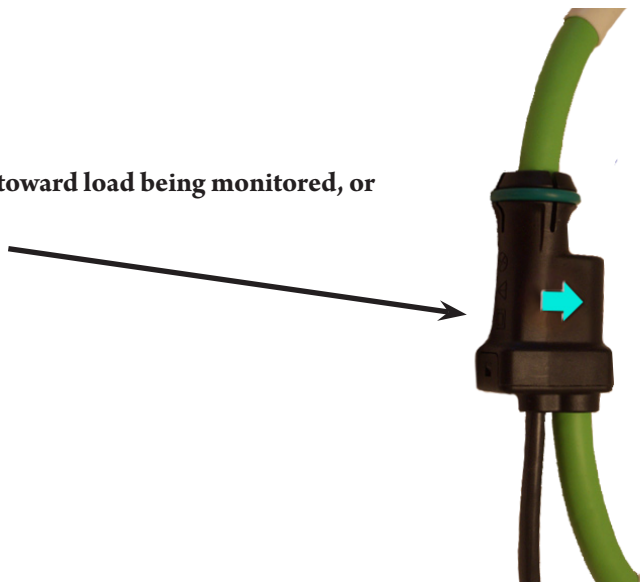


Connection Diagram:



Important:

Arrow on CT's must point toward load being monitored, or the direction of current flow.



5. Check Current Probe Settings

Note : Steps 5 & 6 are for the 3,000A and 6,000A probes only.

Current Probes Settings: Phases and Neutral will have the same settings.

For Phases & Neutral Testing:

Make sure the rope probe dial is set to either 3,000A (1mV/A) or 6,000A (0.5mV/A).

For Ground Current Testing:

Use either the clamp-on current probe or use the Neutral single wire rogowski probe and change the setting to **300A (10mV/A)**.



**FOR MEASURING
GROUND
CURRENT
SET TO
300A(10mV/A)
ONLY**



Single-Wired Rogowski Probe

OR

Clamp-On Current Probe

6. Connect Current Probe Power Supply

- a. Plug current probe power supply into Power Monitors Aux 2 Port.
- b. Plug barrel connector from current probe power supply into current probe DC input jack on left side. (LEDs should illuminate for a moment)



a.



b.

7. Connect the Temperature & Humidity Probe (If Supplied)



- a. Hang the Temp/Hum probe at a minimum height of 6 feet (if possible), and make sure it is not positioned near a door, window, or ventilation unit.
- b. Plug into the Port 1 under AUX on the front of the Power Monitor.

8. Power up the Cx Monitor



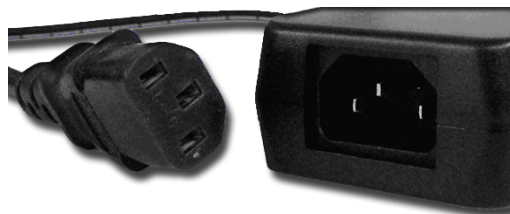
Caution - Always use a grounded receptacle



- a. Plug power cord into grounded receptacle
- b. Plug the supplied IEC cord into the external DC power supply.
- c. Plug the male external DC power supply plug into the Power Monitor.



DC Power Supply

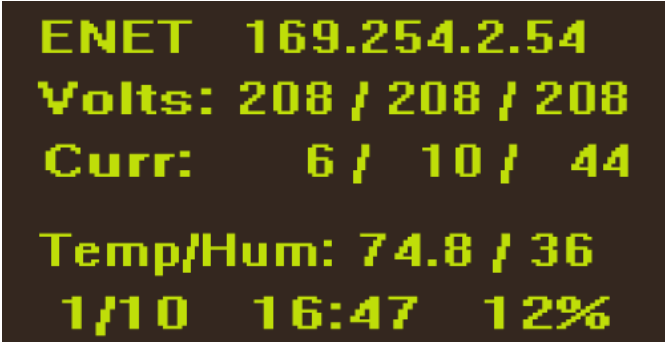


b. Connect IEC



c. Plug In Barrel

9. Power up load circuit and system



Sample Reading

The LCD screen will illuminate when the Power Monitor is on. In about 30 seconds, the LCD screen will show real-time, voltage, current and temperature / humidity readings as well as the Date/Time the monitor is set to and the percent of storage used.

LCD screen will display...

Volts: ### / / For single phase with black
Curr: L1 / / lead connected only.

Volts: ### / / For single phase two pole with
Curr: L1 / L2 / black and red leads connected.

Volts: ### /### /### For 3 phase with black, red,
Curr: L1 / L2 / L3 and blue leads connected

10. Fill out Site Info and Detailed Site Log

Site Information Sheet

- a. Please make sure you fully complete the RxMS Site Information sheet with the detailed information of the site and equipment being monitored.
- b. Make sure you leave the Detailed Site Log that was provided with the Power Monitor with your customer. Ask them to record any system events or errors that will help RxMS correlate gathered data to any issues you may be having with your system.

Detailed Site Log

- c. Place the “Electrical Test In Progress” tag on the system under test (either on the main disconnect, panel or wires) so it is not disturbed during the monitoring period.
- d. Please contact RxMS at 1-888-329-2321 or email “support@rxms.com” once you have installed the Power Monitor.

11. Uninstall the Power Monitor and ship back to RxMS



Shipping Return Label

- a. Power down load and the main power.
- b. Unplug the power cord from the Power Monitor.
- c. Disconnect all probes from the Power Monitor.
- d. Pack all equipment in provided shipping case.
- e. Attach the enclosed return label and ship equipment back to RxMS.
- f. Please contact RxMS at 1-888-329-2321 or email “support@rxms.com” once you have dropped off or FedEx has picked up the Power Monitor.

Cx Monitor With Rogowski Coil CT's

STATEMENTS, NOTICES AND LIABILITY INFORMATION

FCC Part 15 Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the affected equipment and the panel receiver to separate outlets, on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

STATEMENT OF FAULTLESSNESS:

The information in this manual has been reviewed for accuracy at the time of writing. No responsibility can be assumed by Rx Monitoring Services Inc. for inaccuracy or changes that have taken place since production. The "Cx Monitor Installation Manual" is for informational purposes only and is subject to change without notice.

LIABILITY:

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