

Wiser™ Power Monitor Wiring Application Guide

INTRODUCTION

This data bulletin includes supplemental wiring information for the application of main and solar circuit current transformers (toroidal-type) used with the Jet/Lun® JIM Panel Meter (RD77724) units of the Wiser™ Power Monitor.

NOTE: A separate power meter and pair of CT's should be installed for the main power circuit breaker and each circuit PV Inverter.

Refer to the manufacturer's instruction bulletin provided with the Panel Meter unit for general installation and wiring instructions and safety precautions.

Contact your Schneider Electric representative for more information on specific applications or system wiring schemes.

SAFETY PRECAUTIONS

This section contains important safety precautions that must be followed before attempting to install or maintain electrical equipment. Carefully read and follow the safety precautions below.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn OFF all power supplying this equipment before working on or inside the equipment.
- Always use a properly rated voltage sensing device to confirm that power is off.
- Replace all devices, doors, and covers before turning on power to this equipment.
- Petroleum-based paints, solvents, or sprays can cause plastic to degrade. Do not allow petroleum-based paints, solvents, or sprays to contact the nonmetallic parts of this product.
- Before starting a wiring installation or addition, consult a local building or electrical inspector for current National Electrical
- Code® requirements. Local codes vary, but are adopted and enforced to promote safe electrical installations. A permit may be needed to do electrical work, and some codes may require an inspection of the electrical work.
- This equipment is not suitable for use in the corrosive environments present in agricultural buildings. See NEC 547 or CEC 2-400.

Failure to follow these instructions will result in death or serious injury.

Before installing the Wiser™ Power Monitor or current transformers (CT's) turn off all power supplying the equipment including power to:

- Main feeder disconnects that supply power to the equipment
- Revenue meters used for isolation - arrange for the utility provider to remove power.

NOTE: If a main feeder disconnect is not present and the revenue meter cannot be used as an isolation device, contact the utility company for removal of power.

- Alternate power sources connected to the equipment.

Always use a properly rated voltage sensing device to confirm that power is off. Apply appropriate lockouts to the disconnecting means. Be sure to provide an alternate light source before beginning the installation procedures.

WIRING THE POWER METER

Read the manufacturer's installation instructions and safety precautions for the Jet/Lun® JIM Panel Meter (RD77724) before attempting to wire the unit.

When supplying power to the Panel Meter, ensure that the phase connected to the Panel Meter's black wire is the same phase being measured by the phase A CT. Similarly, ensure that the phase connected to the Panel Meter's red wire is the same phase being measured by the phase B CT.

Refer to the wiring diagram below for Typical Power metering wiring connections.

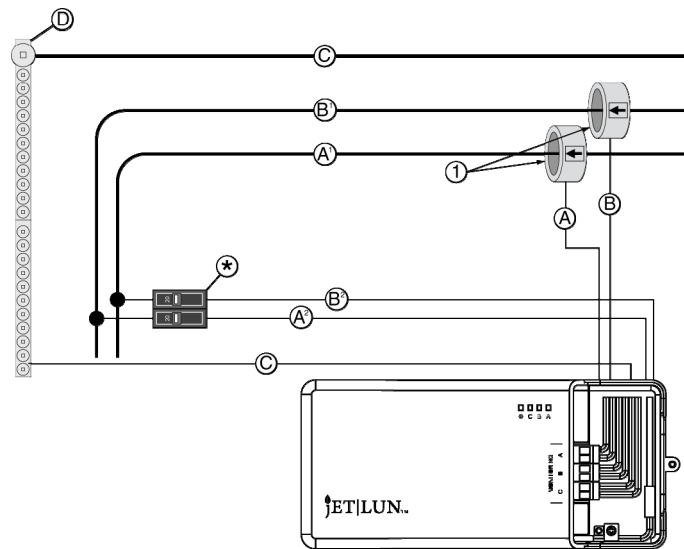
Wiring Diagram

Figure 1: Wiser Panel Meter Wiring

KEY:

- A1. Phase A (LINE)
- B1. Phase B (LINE)
- A2. Phase A (LOAD)
- B2. Phase B (LOAD)
- C. Neutral
- D. Neutral bar

* Single 2-pole circuit breaker or two 20A circuit breakers



INSTALLING MAIN CURRENT TRANSFORMERS (CT)

Install CT's at incoming main power source wires. Verify that the CT's orientation arrows point in the direction of current flow. See the figure, "Main CT Mounting Orientation" below.

Figure 2: Main CT Mounting Orientation

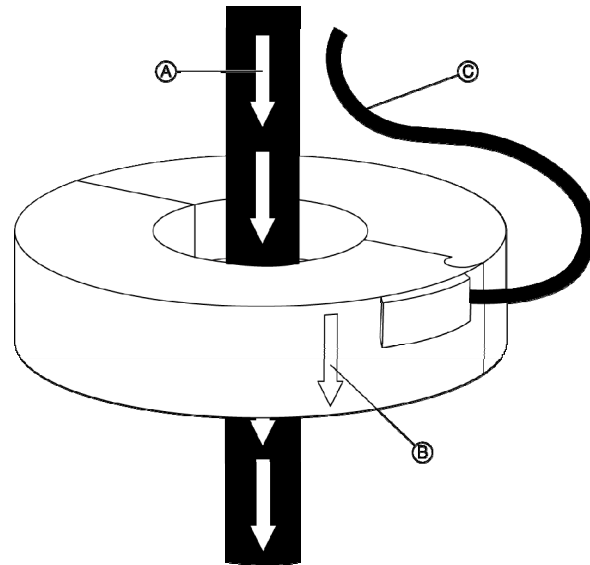
KEY:

A. Power source cable and power flow

B. Mounting orientation indicator arrow

C. CT Analog signal cable

NOTE: The CT orientation indicator arrow and the flow of power should be in the SAME direction for Main CTs.



INSTALLING SOLAR CURRENT TRANSFORMERS

Install a set of CTs at the Solar Inverter breaker. Verify that the CT's orientation arrows point towards the PV Inverter (away from the circuit breaker).

Figure 3: Solar CT Orientation

KEY:

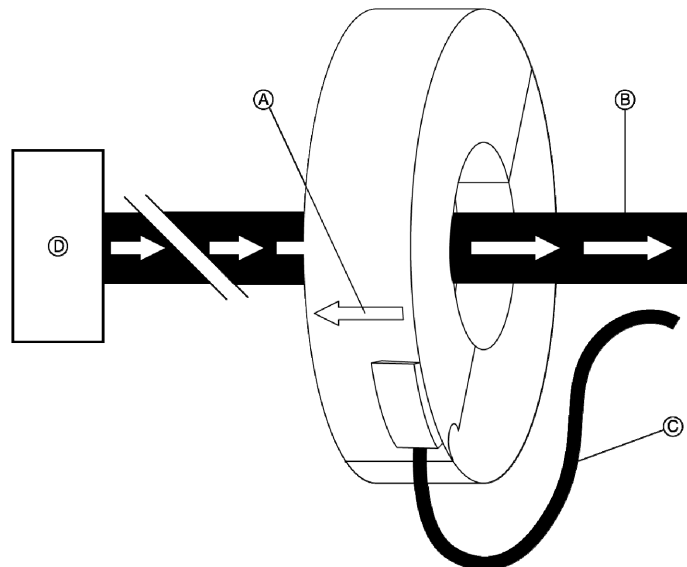
A. Mounting orientation indicator arrow

B. Power source cable and power flow to the PV Inverter circuit breaker

C. CT analog signal cable

D. PV Inverter

Note: The CT orientation arrows should point towards the PV Inverter (away from the circuit breaker).



VERIFYING THE LED INDICATORS

The Panel Meter unit has LED indicators representing phase and Zigbee wireless communications. The diagram below shows the order in which the LEDs appear on the front cover of the Panel Meter unit.

Figure 4: Wiser Panel Meter Label

KEY:

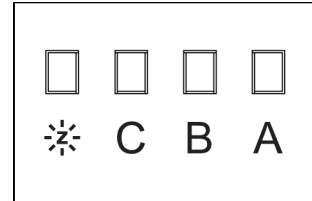
(Left to Right)

z. Zigbee communications

C. Phase C

B. Phase B

A. Phase A



- Both the A and B LEDs should be similar in color.
- Orange for Solar CT's
- Green for Main CT's (Typical)
NOTE: Mains could be orange if alternate generation source is providing energy back to the utility.
- Green for Load CT's
- Zigbee communications: The Network LED turns solid green for approximately 15 seconds upon power up, then it starts blinking amber.

RECORDING MAC ADDRESS (EUI) AND INSTALL CODE

Record the Panel Meter MAC address (EUI-Extended Unique Identifier) and Install Code located on the label (included with the Power Meter). Retain the recorded number in a safe location for future use (e.g. write it on the instruction bulletin cover). Attach the adhesive backed label to the inside of the panelboard door for easy reference.

Figure 5: Wiser Panel Meter Label

Model: RD77724 Ver. 05-05
P/N: A2-777240-PR203-21
FCC ID: X5QRD77720
Input: 100-240 V50-60Hz
S/S: 111 2000 1470
EUI: C8D2 C100 000 12F5
Install Code: C8D2 C100 0000 12F5 EEC6

CUSTOMER SUPPORT AND SERVICE

Contact the Customer Information Center for technical support by phone at 1-888-320-9158 or e-mail at Support@wiserenergy.com.

Contact your local Schneider Electric service representative for repairs or service to your network.

You may also find helpful information on our web site at www.Schneider-Electric.us.

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