Bulletin 1404 Series B Ethernet Communications

Introduction

Please read this document before using the Powermonitor 3000 Series B with Ethernet optional communications. Keep this document with the other Bulletin 1404 publications.

Series B Ethernet communications provides a number of significant improvements in functionality, including higher data rates, network demand interval synchronization and SNTP time synching, plus increased reliability.

An important difference is that the Series B supports ONLY CIP communications (EtherNet/IP), while Series A supported both CSP (PCCC) and CIP.

IMPORTANT	Please give particular attention to the messaging and software version compatibility information in the table. If you are replacing a Series A Ethernet Powermonitor 3000 with a Series B unit, you may need to upgrade software or modify the communications programming of your controller ladder programming or client application to re-establish communications.

Table 1 Series A and Series B Comparison

Function	Series A (Comms FRN 2.01 or 2.02)	Series B
Communications protocol	CSP (PCCC) and/or EtherNet/IP	EtherNet/IP only Encapsulated PCCC (Comms FRN 1.22 or later)
Protocol select	Yes	N/A
Bootp support	Yes	No
Data rate	10 Mbps	10/100 Mbps
Web page	Fixed web page	Configurable web page
Flash upgradeable	Uses special loader	Uses ControlFlash
LED indicators	Link, RX, TX	LNK, ACT, STATUS`
Network Demand Synch	No	Yes
SNTP capable	No	Yes
I/O Communications	No	Yes
CIP Generic messaging	Yes	Yes
PLC-5 Typed CIP messaging	Yes	Yes
CIP Data Table messaging	Yes	Yes, Comms FRN 1.21 or later

Table 1 Series A and Series B Comparison

Function	Series A (Comms FRN 2.01 or 2.02)	Series B
SLC 500 Typed CIP messaging	Yes	Yes, Comms FRN 1.21 or later
RSPower32 support	2.10 and later	2.40 and later
RSEnergyMetrix support	Yes	Yes
RSEnergy support	2.00.13 (CSP only)	No, upgrade to RSEnergyMetrix

Application Considerations

Replacing a Series A Powermonitor 3000 with a Series B Unit

The following considerations apply if you replace an existing Series A Powermonitor 3000 with a Series B unit, presuming that the Series A unit was configured in the default dual-stack CSP/CIP communications protocol or in the CSP-only protocol.

RSLinx Loss of Communications

When a device is initially configured in the RSLinx Ethernet Devices driver, it sets up a connection using the CSP protocol. RSLinx will not recognize a Powermonitor 3000 Series B device which communicates using the CIP protocol.

FIX: Remove the Powermonitor 3000's IP address from the RSLinx Ethernet Devices driver and close the driver configuration. Open the driver configuration again and re-enter the Powermonitor 3000's IP address. RSLinx will now communicate with the device using the CIP protocol. The device may appear as an unknown device in RSWho until the EDS file is updated.

RSPower32 Loss of Communications

FIX: After fixing the RSLinx driver, install RSPower32 version 2.4. Version 2.4 is available for customers in support from the Rockwell Software upgrades site, or you may request a copy by emailing *pemssupport@ra.rockwell.com* with shipping instructions and your software serial number. After upgrading the RSPower32 software, delete the exiting device from RSPower32 and reconfigure it as a Series B unit with EtherNet/IP communications.

TIP	You may need to save the RSPower32 project file, close the RSPower32 application, close the RSPower32 server and restart RSPower32 in order to establish communications with the Series B Powermonitor 3000.

IMPORTANT	You must include the IP address of the Powermonitor in the RSLinx Ethernet Devices driver before you configure the device in RSPower32.

PLC-5 and SLC 500 Message Instructions Loss of Communications

The Series B Ethernet units support only CIP generic and PLC-5 typed messaging. Series A supported CSP messaging, as well as EtherNet/IP messaging including CIP generic, PLC-5 typed, SLC 500 typed and CIP Data Table Typed.

FIX: Refer to EtherNet/IP (CIP) Protocol in Chapter 4 of the Powermonitor 3000 User Manual, publication 1404-UM001 for multi-hop PLC-5 typed message setup to an EtherNet/IP Powermonitor 3000. Change the existing message type to one supported by the Series B Ethernet Powermonitor 3000 (CIP generic or PLC-5 Typed).

RSEnergyMetrix (version 1.00.00) Loss of Communications

FIX: Fix the RSLinx driver on the RSEnergyMetrix server as described above. RSEnergyMetrix will begin to log data from the Series B Powermonitor 3000.

TIP	RSEnergyMetrix Manager Version 1.00.00 supports logging of tags from Series B Powermonitor 3000 units, but RSEnergyMetrix RT does not support the Series B Powermonitor 3000. RSEnergyMetrix Version 1.10.00 provides full support of the Series B Powermonitor 3000 on EtherNet/IP.

RSLinx DDE/OPC Links

You may configure RSLinx DDE/OPC links to the Series B Powermonitor 3000 with version 1.21 communications firmware. Select PLC-5 or SLC 5/03+ as the processor type in the Data Collection tab in the topic setup dialog.

RSView32 Direct Device Tags Loss of Communications

The Series A Powermonitor 3000 supported RSView32 device tags using PLC-5 (enhanced) or SLC 500 (enhanced) data table addressing.

FIX: You may set up RSPower32 or RSLinx OPC server topics to the Powermonitor 3000 and then configure OPC tags to the Powermonitor data. Alternately, you may use a programmable controller as a data concentrator and create tags to the controller data table.

New Installations

Please refer to the Installation Manual, publication 1404-IN007 and the User Manual, publication 1404-UM001, found on the CD included with the Powermonitor 3000 Series B.

You may also obtain copies of the manuals from the Automation Bookstore (www.theautomationbookstore.com) or from Manuals Online (www.ab.com/manuals/power).

Upgrading Communications Firmware

The communications firmware in the Series B Powermonitor 3000 is field upgradeable using ControlFlash. Please contact Rockwell Automation Technical Support for availability of firmware upgrades.

Obtaining Support

You may obtain product support by telephoning Rockwell Automation Technical Support at 440/646-3434.