1. Unpack the monitor, antenna and the data/power cable. The 25-pin connector plugs onto the front of the OmniMetrix® monitor. This cable includes wires to power the monitor as well as wires for alarm inputs, relay outputs and analog inputs. Take a moment to inspect all components to verify there is no shipping damage.

2. Place the antenna vertically on the roof of the generator and route the antenna cable into the area of the generator control. The antenna used for transmitting must be installed to provide a separation distance of at least 20 cm from all persons and must not transmit simultaneously with any other antenna transmitters. BE SURE to provide a **drip loop** lower than the monitor to keep water from running down the antenna cable into the monitor connection.

3. Attach the monitor via its magnetic feet, on top of the engine controller or other appropriate location. Horizontal surfaces are best, but the unit may be mounted vertically or even upside down if necessary. *Note: If mounted vertically, install the monitor with the cables down to prevent water from entering the enclosure.*

4. Route the data/power cable to the terminal strip to pick up generator battery power and RS485 data.

5. The monitor connects to the Caterpillar EMCP 4 through a 4-wire connection. Connect the RED wire to generator Battery B+, the BLACK wire to generator Battery B- (GND), the WHITE wire to Modbus Data+ and the GREEN wire to Modbus Data-. For remote start capability, connect the WHITE/YELLOW wire and the WHITE/BROWN wire to the Generator 2-wire Start Terminal.

6. Attach the antenna cable to the front of the monitor and tighten thumb tight.

7. Set up Modbus via the front panel control, using the steps provided on the following page. Be sure to utilize a baud rate of 9600, 8 bits, no parity, and 1 stop bit.

8. Turn on the monitor and confirm that the LEDs light up and blink. If not, check for power on the terminal strip. If, after 5 minutes, the only LED lit is the Power LED, check the antenna mount and cable connection.

9. Allow 15 minutes for the monitor to log into the network and then call OmniMetrix at 770-209-0012 to confirm installation. Access to machine data is through the OmniView® web interface at

   www.omnimetrix.net. Contact OmniMetrix for login instructions and web training.
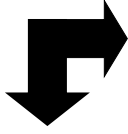

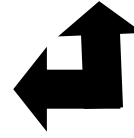25-Pin Data/Power Cable

CAT EMCP 4 Controller
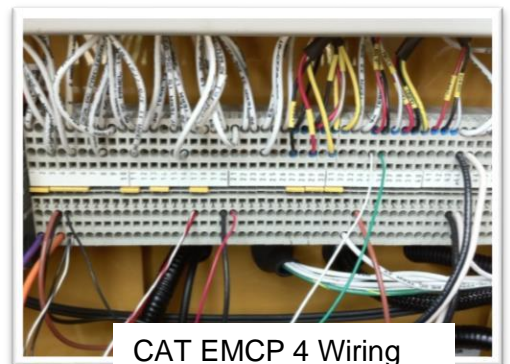
CAT EMCP 4 Wiring

Enabling Modbus Communication (Step 7 continued):

Definitions:

Front Panel Escape Key   Front Panel Enter Key

Steps:
Escape to MAIN MENU.

1. Down Arrow to CONFIGURE, then ENTER key.
2. Down Arrow to SETPOINTS, then ENTER key.
3. Down Arrow to NETWORK, then ENTER key.
4. At Data Link = SCADA, ENTER key.
5. Down Arrow to BAUD RATE, then ENTER key.
6. Up/Down Arrow to set Baud Rate to 9600, the ENTER key.
7. Down Arrow to PARITY, the ENTER key.
8. Up/Down Arrow to set Parity to NONE, then ENTER key.
9. Down Arrow to SLAVE ADDRESS, then ENTER key.
10. Up/Down Arrow to set Slave Address to 1, then ENTER key. (Note: if multiple engines are involved, then each must have a different slave address.)
11. Down Arrow to ENABLE STATUS, then ENTER key.
12. Up/Down Arrow to set ENABLED, then ENTER key.
13. ESCAPE key multiple times to return to main menu.

The EMCP 4 has a timeout option in which it can go into low power mode. In this case, Modbus support ceases. Be sure the EMCP is set up with the low power setting (sleep mode) OFF. This is done under CONFIGURE/SETPOINTS/OTHER…Reduced Power mode DISABLE.

Note: The EMCP 4 controller defaults to NOT allowing Remote Generator set Control via SCADA communications. This setting can be changed from the display under MAIN MENU/CONFIGURE/ALL SETPOINTS/ CONTROL/"AUTO START/STOP"/REMOTE GENSET CONTROL ENABLE STATUS.
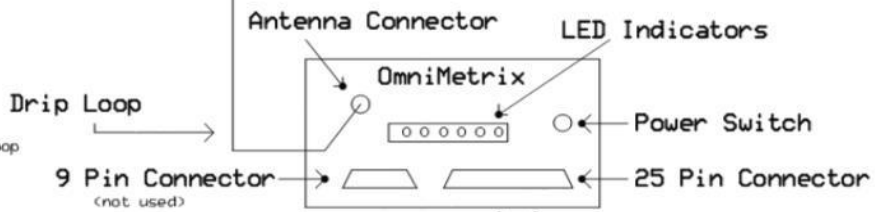
If you have any questions, please call OmniMetrix Tech Support at 770-209-0012 or email at techsupport@omnimetrixconnect.com

Antenna

Install on or near top of genset
OK to install on genset side
if roof is aluminum.

Magnet

Antenna Connector

LED Indicators

OmniMetrix

Power Switch
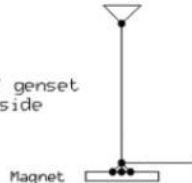
Drip Loop

Be sure to make a drip loop
so rain water cannot
drain down cable into
OMX unit !!!

9 Pin Connector
(not used)

25 Pin Connector

Red Wire
(to genset power)

Black Wire
(to GND terminal)

White Wire
(to Modbus Data+ connection)

Green Wire
(to Modbus Data- connection)

White/Yellow Wire (for 2-wire start)

White/Brown Wire (for 2-wire start)

General Wiring Steps:

1. Install Antenna on or near roof.

2. Connect the Red wire to genset power and Black wire to GND

3. Connect DB25 connector to the OMX unit.

4. Turn on Power Switch on the OMX unit.
   LEDs should begin to flash.
   If not, check power connections with volt meter.

5. Wait 15 minutes for unit to make online connection.
   Call OMX at 770-209-0012 to confirm operation.

OmniMetrix LLC		
G8500 - Caterpillar EMCP 4		
S.J. Foote	Rev 1.0 5/30/2012	2012IM013