

## TrueGuard-PRO<sup>™</sup> Kohler DEC550 Modbus

- Unpack the monitor, antenna and the data/power cable. The 25 pin connector plugs onto the front of the OmniMetrix<sup>®</sup> 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.
- 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 through the cable entry on the bottom of the generator control.
- 5. To utilize the Modbus capabilities of the DEC550, connect the OMN white (Data+) and green (Data-) wires to connector P20 as shown in the photo. If a Kohler Annunciator is already connected to this block, you will have to choose between the OmniMetrix monitor and the annunciator. The DEC550 will not support both simultaneously, possibly requiring a hardwire connection to the Relay Driver outputs. The DEC550 Relay Driver board is typically mounted outside the generator control housing, sometimes in the area of the main alternator.
- 6. Attach the antenna cable to the front of the monitor, and tighten thumb tight.
- 7. 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.
- 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<sup>®</sup> web interface at <u>www.omnimetrix.net</u>. Contact OmniMetrix for login instructions and web training.



Data / Power Cable



Kohler DEC550 Control



DEC550 Modbus (RS485) Connection



DEC 550 Relay Driver Output Terminal Strip as installed in generator cabinet

Wiring Table		
OMN WIRE	Function	Kohler Termination
Red	Power In (9-30 Vdc)	42A or other Genset B+
Black	Ground	2
White	RS485+	Data+ P20
Green	RS485-	Data- P20

Table 1 - DEC550 Modbus Wiring

## **MODBUS SETUP:**

## The image on the right is the DEC550 Keypad.

- Note that the 7 and 8 keys share duties with YES and NO entries.
- MENU RIGHT and MENU DOWN terms are used to describe the keys with right and down arrows.
  - 1. Press the **RESET MENU** button.
  - 2. Press **14** and **ENTER** to start **PROGRAMMING** mode.
  - 3. Press **MENU DOWN** to show 'LOCAL'. The default is 'LOCAL ... NO'. Press the **YES** key to display 'LOCAL ... **YES**'. Press **ENTER**.
  - 4. The unit will display 'ENTER CODE' for password. Enter the default value of '0' (zero), and press ENTER.
  - 5. Press RESET MENU.
  - 6. Press **13** and **ENTER** to go to the **COMMUNICATIONS** menu.
  - 7. Press MENU DOWN to go to PROTOCOL.
  - 8. Press MENU RIGHT to switch from 'KBUS' to 'Modbus'.
  - 9. Press **MENU DOWN** to show '**MODBUS ONLINE** ... **YES**'. If YES is not displayed, press the **YES** key and **ENTER**.
  - 10. Press MENU DOWN to 'CONNECTION SINGLE YES'.
  - 11. Press MENU DOWN to 'PRIMARY PORT'. Press the MENU RIGHT key to switch between 'RS232' and 'RS485'. Set the RS485 value to 'YES' if not already set.
  - 12. Press **MENU DOWN** to '**ADDRESS** ... **1**'. This is the default. 13. Press **MENU DOWN** to '**BAUD**'. Press the **MENU RIGHT** key
  - to switch between '9600' and '19200', the default. Choose '9600' and press YES.
  - 14. Press RESET MENU.
  - 15. Press **14** and **ENTER** to return to **PROGRAMMING** Mode.
  - 16. Press **MENU RIGHT** twice for '**PROGRAMMING MODE** ... **OFF** ... **NO**'. Press the **YES** key and **ENTER** to exit **PROGRAMMING** mode.
  - The control will display 'ENTER CODE' for the password. Enter
    '0' (zero), and press ENTER. The Programming Mode LED should now go out.
  - 18. Press the **RESET MENU** key. The process is complete.



If you have any questions, please call OmniMetrix Tech Support at 770-209-0012 or email at techsupport@omnimetrix.net.