



GE Power Management Control System



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Technical Note #44

GE Power Management Control System

MDP Integration Questions

- [Description](#)
 - Software
 - Hardware
- [Operation](#)
- [Product Support](#)
- [Operator Interfaces](#)
- [F A Q's](#)
- [App Notes](#)
- [Download Area](#)
- [Manuals](#)

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Subject: Answers to questions frequently asked by those integrating MDP relays.

Applies To: MDP Modbus relays in any system which gathers data from them.

Where do I find the register map for the Modbus MDP?

The Modbus MDP follows the same map as for the Commnet version through the Modbus Concentrator. This is in the Modbus Concentrator Protocol Reference GEH-6508.

What are the settings on the Modbus Communications Card for the MDP?

The baud rate switch is the same as for the EPM:

Switch 4:

Baud Rate Slider 3 Slider 4

1200	ON	ON
2400	OFF	ON
9600	ON	OFF
19,200	OFF	OFF

The devices selection switches are:

Switch 4:

device Slider 1 Slider 2

EPM	ON	ON
MDP	ON	OFF

The address setting is made on the back of the MDP. The 3 rotary address switches on the communications card are not used.

How do I tell what communications the relay has?

A relay coming from the factory will indicate the communications with the catalog number. The first number after the "MDP" indicates communications as follows:

- 2 - Commnet
- 3 - Modbus
- 4 - 232

- 5- Proprietary RS485.

If I want to power up the MDP on a bench what terminals do I use?

The 48-125 VDC version (indicated on front and by an MDP xx2 catalog number) can be power using 120V AC power. Hot is wired to stud 20 and neutral is wired to stud 10. A ground wire should be connected to the ground stud of the unit.

What terminals are used for communications?

The 8 terminal connections block is used for communications. Pin 1 is Commnet Positive and Modbus Positive, Pin 2 is Commnet Negative, Pin 3 is Modbus Negative. Terminals are labeled left to right looking at the back of the relay.

How is the Communications Card installed?

The installation instructions are on page 8 and 9 of the MDP manual. This is repeated here for convenience:

1. To install a communications upgrade card or replace an existing card, begin by removing the relay from the case. Refer to Figures 14-19 during the following procedure.

2. Before continuing, connect an approved wrist grounding strap to ground, to discharge any static electricity in your body that could damage the electronics of the MDP relay. A wrist strap is provided with the communications card kit. The wrist strap must provide a safe high resistance to ground.

3. Remove four screws attaching the nameplate settings board and the NOMEX insulation paper to the relay cradle. Note that there are four metal spacers between the nameplate and the settings board. Do not lose them or let them fall into the relay assembly. Carefully place the settings board on top of the cradle to expose the communications card's SIMM socket located on the lowest board (digital input / communications board).

4. To expose the SIMM socket located on the lowest board, carefully push down on the board to disengage the board spacers. (Figure 14) (Do not try to remove the board from the cradle.)

Replacing Existing Board

4a. For Replacement Only (Skip to Step 5 if installing card for the first time).

If you are replacing an existing SIMM card, then the old one needs to be removed! Start by simultaneously pushing outwards the catches on either side of the SIMM board, while lifting the board to a 45 degree angle. This will release the board.

Installing New Board

5. Remove the communications card from its protective packaging. Insert the card into the SIMM socket at a 45 degree angle to the socket with the integrated circuits facing up. Push the card down until it snaps in the socket and the latches on either side of the board catch above the new board (Figure 16).

6. Re-assemble the MDP relay by engaging the board spacers of the lowest board (digital input / communications board) into the processor board above it. (Figure 18) Align the NOMEX shield on the solder side of the settings board. Take on screw and spacer at a time and push the screw through the nameplate, spacer, settings board and NOMEX.

NOTE: The NOMEX protects the ribbon cable from the leads on the settings board.

Tighten the screw just enough to hold the assembly in place until all four screws are aligned. When all the screws are aligned, tighten them with gentle pressure so that the board is mounted evenly.

Set the communications address (on the back of the cradle) before restoring the cradle to the case.

Keywords

MDP, Communications Card

Related Notes

none

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