

## Q How do I set the phase overcurrent to 3.75?

- A**
1. Look at the front upper left side of the MDP at Phase Pickup TOC.
  2. There is a minimum value  $x$  given in the equation  $x + (\text{num})$ . This number is 1.5, 0.5, or 0.3, depending on the MDP model number.
  3. Below the Pickup TOC label are 5 DIP switches. Every DIP switch moved to the right will add to the minimum pickup value. If the minimum pickup value is 1.5 A, then switch the second and third switches to the right to add their values; i.e.,  $1.5 + 0.75 + 1.5 = 3.75$  A. Other MDP settings operate in the same manner.

## Q Does the MDP measure RMS?

- A**
- No. The MDP was not designed to measure RMS. The relay was designed to sample the peak value every millisecond. After 10 samples, the largest sampled value is used to compute and display the current. Using this sampling technique, the relay detects harmonics and adds them onto the fundamental.

## Q Do I have breaker status and how to I connect the 52b wire?

- A**
1. To check if you have breaker status, examine the model number shown on the faceplate. If the model number is MDP0\*\*\*\*\*, then the relay does not have communications or breaker status.
  2. If the model number is anything other than MDP0\*\*\*\*\*, then the MDP has breaker status.
  3. To use breaker status, connect the two terminals from the breaker to the MDP terminals CP-7 and CP-8.
  4. When voltage is applied to the relay, the display (F0) will read **CL**, indicating the breaker is closed.
  5. If voltage is removed from the relay, the display (F0) will read **OP**, indicating the breaker is open.

## Q How do I check my last trip current and time?

- A**
1. Check to see if one of the six TRIP TARGETS LEDs is on.
  2. Locate the reset lever on the lower left corner. Toggle until **F9** (Last Trip Time) is displayed.
  3. The last trip time is stored in F9. It will display 0.01 to 199 seconds
  4. If Phase A tripped, toggle through to **F5**. The display shows the current in multiples of pickup. If F5 shows **2.0**, then multiply that value by the phase pickup to obtain the secondary current level.

A

**Q** Why can't I reset the relay?**A** The relay will not reset while it is picked up. Check the pickup light in the upper left corner next to the ready light. If the pickup light is on, it will not reset until current levels are below the pickup point.**Q** How do I set Definite Time?**A** Examine the front lower right-hand corner of the MDP faceplate, under CURVE SELECTION. There are four time selections shown for 2, 4, 6, and 8 seconds. The diagram correlates to the positions of the three DIP switches under CURVE. Once one of the definite time switches is selected under CURVE, the TIME DIAL (above CURVE on the faceplate) is used as a multiple of the definite time. The equation for computing the definite time is:

$$\text{Time} = \frac{\text{Definite Time} \times \text{TIME DIAL}}{10}$$

For example, to set a definite time of 3.2 seconds:

1. Move the three switches under CURVE to the left, indicating the 8 second DT.
2. Compute the equation and solve for x:  $8x/10 = 32 \Rightarrow x = 4$ .
3. Under TIME DIAL, move the first, second, and third switches to the right to add to 4 seconds.
4. The relay is now set to trip in 3.2 seconds

**Q** Why is the green READY light flashing?**A** The green READY light flashes following a settings change. The relay will continue to flash for three minutes until it accept changes. Settings can be accepted faster by holding the reset lever up for five seconds. This resets the relay and stops the flashing.


B.1 REVISION HISTORY

Table B-1: REVISION HISTORY

MANUAL P/N	MDP REVISION	RELEASE DATE	ECO
GEK-100604	---	---	---
GEK-100604A	---	---	---
GEK-100604B	---	---	---
GEK-100604C	A	---	---
GEK-100682 replaces GEK-100604C	A	February 1995	---
GEK-100682A	A	March 1995	---
GEK-100682B	B	August 1996	---
GEK-100682C	D	March 1997	---
GEK-100682D	D	September 8, 2000	MDP-003

B.2 ADDITIONS TO MDP MANUAL

Table B-1: ADDITIONS TO MDP MANUAL GEK-100682D

PAGE IN GEK-100682C	ADDITION (to GEK-100682D)
Title	Added GE Power Management contact information on title page.
Title	Added ISO-9000 registration seal.
4	Figure 1-1: SINGLE LINE DIAGRAM
5	Added phase current ranges to ORDER CODES (NOMENCLATURE) table
5	Figure 1-2: TYPICAL WIRING DIAGRAM
7	Added the following text to the SPECIFICATIONS:  <b>DIGITAL INPUT</b> Voltage Range: 38.5 to 250 V AC 24 to 250 V DC Frequency Range: 40 to 70 Hz
12	Added the following warning:   <b>DO NOT CHANGE SETTINGS WHILE THE MDP IS IN OPERATION AND ITS PROTECTIVE ELEMENTS IN USE. TAKE THE RELAY OUT OF SERVICE BEFORE MAKING ANY SETTING CHANGES.</b>
---	Added MODBUS PROTOCOL chapter
---	Added FREQUENTLY ASKED QUESTIONS Appendix
---	Added REVISION HISTORY Appendix
---	Added WARRANTY page, website information, and INDEX

## B.3 CHANGES TO MDP MANUAL

Table B-1: MAJOR UPDATES FOR MDP MANUAL GEK-100682D

Page (100682C)	Change	From	To (in GEK-100682D)
Title	Updated	"GEK-100682C"	"GEK-100682D"
5	Corrected	In the Nomenclature Table: "24-48 VDC (19 to 60 VDC) 48-125 VDC/AC (38-150 VDC/AC) 35-120 AC 110-250 VDC (88-285 VDC) 85-240 AC"	"24 to 48 V DC 48 to 125 V DC, 35 to 120 V AC 110 to 250 V DC, 85 to 240 V AC"
6	Modified	"Nominal Frequency: 25/50/60 Hz"	"Nominal Frequency: 25 to 70 Hz"
17	Corrected	In headings for Table 5: INVERSE TIME: column 3 – "Long Time Very Inverse" column 4 – "Extremely Inverse" column 5 – "Inverse"	Table 5-1: INVERSE OPERATING TIMES column 3 – "Very Inverse" column 4 – "Long Time Inverse" column 5 – "Extremely Inverse"
18	Updated	"MDP4XXXXXXCA RS232"	"MDP4xxxxxxDA – RS232"
18	Updated	"MDP5XXXXXXCA RS485"	"MDP5xxxxxxDA – RS485"

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### **GE POWER MANAGEMENT RELAY WARRANTY**

General Electric Power Management Inc. (GE Power Management) warrants each relay it manufactures to be free from defects in material and workmanship under normal use and service for a period of 24 months from date of shipment from factory.

In the event of a failure covered by warranty, GE Power Management will undertake to repair or replace the relay providing the warrantor determined that it is defective and it is returned with all transportation charges prepaid to an authorized service centre or the factory. Repairs or replacement under warranty will be made without charge.

Warranty shall not apply to any relay which has been subject to misuse, negligence, accident, incorrect installation or use not in accordance with instructions nor any unit that has been altered outside a GE Power Management authorized factory outlet.

GE Power Management is not liable for special, indirect or consequential damages or for loss of profit or for expenses sustained as a result of a relay malfunction, incorrect application or adjustment.

For complete text of Warranty (including limitations and disclaimers), refer to GE Power Management Standard Conditions of Sale.

The latest product information for the MDP Digital Time Overcurrent Relay is available on the Internet via the GE Power Management home page:

<http://www.GEindustrial.com/pm>



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