

MIW II DIRECTIONAL POWER PROTECTION SYSTEM

Revision 4.01 Release Note

GE Publication Number: GER-4083

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Overview

Summary

- Affected product: MIW II Directional power protection system.
- Date of release: November 3, 2006
- Firmware revision: 4.01
- Manual revision: GEK-113308

Release Summary

GE Multilin has introduced the MIW II, the next generation of the MIW Directional Power Protection System. The MIW II has access security features to protect the relay against unintended operations. The front panel has a bright 2-line LCD and a five-button keypad. Power protection elements in this MIW II have

The MIW II is recommended for generator applications where control of power flow is a priority. GE Multilin also encourages customers to upgrade from the MIW to the new MIWII Power Relay to take advantage of the new features.

Release Details

Protection Features

Power protection elements

The MIW II offers directional power protections elements (32RP) (32_x). Customers have the choice of either three independent power elements in MIWII1000 or four independent power elements in MIWII2000. Each power element can be configured to protect against active, reactive or apparent power for forward/reverse directional power.

Impedance element

Loss of excitation is detected via an impedance element (40) in the MIWII1000.

Fuse failure elements

The VT Fuse Failure feature, element (60), detects fuse failure for three situations:

- Breaker closed and positive sequence voltage (V1) level below an established value
- Very low positive sequence voltage with the presence of some positive sequence current
- By comparing the ratio between the negative and positive voltage components (V2/V1).

Security

The MIW II offers directional power protections elements (32RP) (32_x). Customers have the choice of either three independent power elements in MIWII1000 or four independent power elements in MIWII2000. Each power element can be configured to protect against active, reactive or apparent power for forward/reverse directional power.

Access security features

Setting changes, either by keypad and display or by communications, are password protected to provide added security from tampering by unauthorized people.

User Interface

Keypad and display

A five-button keypad allows access to MIW II relay information and settings changes. Measured actual value data, information on the last five trip conditions (fault reports), and relay settings are shown on the 16x2 character LCD display.

The keypad also includes the functionality to modify the contrast of the display.

Ordering code

The ordering code corresponding to MIW II relays is:

POSITION	MIWII	-	0	0	0	E	0	0	-	0	0	DESCRIPTION
6												Protection Elements:
		1										Directional Power / Loss of field
		2										Directional Power
13												Power Supply:
								LO				24-48 Vdc (Range: 19~58 Vdc)
								HI				110-250 Vdc (Range: 88~300 Vdc) 110-230 Vac (Range: 88~264 Vac)

Software Updates

The EnerVista MII Setup software version 2.00 has been enhanced to support the new MIW II. The following newly introduced features provide better support for customer during the operation:

- Display of the instruction manuals by pressing F1 key in the computer.
- The Turkish and Russian languages have been added.
- Enhancement in the firmware upgrade.

Instruction Manual Updates

The following have been added or changed in the MIWII Directional Power Protection System instruction manual. GE publication number GEK-113308:

- Hardware differences (appearance of the front panel).
- New ordering code.
- Power elements information.
- Security features.

Upgrade Option

The newly designed MIW II Directional Power Protection System maintains an identical footprint to the previous generation MIW.

The MIWII2000 version has some power element functionality differences to the MIW.

The memory map in the MIW II is different from that of the MIW.