



469 Motor Management Relay Release notes

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Overview

Summary

- Affected products: 469 Motor Management Relay
- Date of release: July 6, 2005
- Firmware revision: 5.00
- Hardware revision: I
- Boot code revision: 4.00

Release summary

GE Multilin has released a new generation of 469 Motor Management Relays with Ethernet and DeviceNet connectivity. The relay can record up to 256 events in the event recorder and up to 128 cycles of oscillography capture, providing a better understanding of system conditions in the case of a fault. The EnerVista 469 Setup software has enhanced settings file features, including the ability to protect against accidental changes in the settings file by locking it with the relay serial number.

The new 469 relay offers direct connectivity to the most popular networks in the industry, as well as security features that increase reliability and ease of use. The new firmware revision is 5.00; the new hardware revision is I.

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Release details

New features

Communications: 10-BaseT Ethernet connectivity has been added

10-BaseT Ethernet connectivity has been added to the 469 relays. This feature allows customers to communicate with relays via Ethernet. The order code has been modified to incorporate the Ethernet option. The Ethernet connection is at the back of the relay through the RJ45 connector – refer to the 469 Instruction Manual for additional details on the Ethernet physical connection.

The Ethernet specifications are as follows:

Version 2.0/IEEE 802.3
 10-BaseT: RJ45 connection
 Modbus TCP/IP

To ensure optimal relay response times, the typical connection timeout for the master device should be set as indicated in the following table:

TCP/IP sessions	Timeout setting
up to 2	2 seconds
up to 4	3 seconds

New setpoints have been added for Ethernet communications under the **S1 469 SETUP** **COMMUNICATIONS** settings menu:

PATH: SETPOINTS **S1 469 SETUP** **COMMUNICATIONS**

COMMUNICATIONS		SLAVE ADDRESS: 254	<i>Range: 1 to 254 in steps of 1</i>
MESSAGE		COMPUTER RS485 BAUD RATE: 9600	<i>Range: 300, 1200, 2400, 4800, 9600, 19200</i>
MESSAGE		COMPUTER RS485 PARITY: None	<i>Range: None, Odd, Even</i>
MESSAGE		FRONT PORT RS232 BAUD RATE: 19200	<i>Range: 300, 1200, 2400, 4800, 9600, 19200</i>
MESSAGE		IP ADDRESS: 0.0.0.0	<i>Range: standard IP address format</i>
MESSAGE		SUBNET IP MASK: 255.255.255.000	<i>Range: standard IP address format</i>
MESSAGE		GATEWAY IP ADDRESS: 0.0.0.0	<i>Range: standard IP address format</i>

The Ethernet connection status is available under the **A1 STATUS** **NETWORK STATUS** actual values menu:

PATH: ACTUAL VALUES **A1 STATUS** **NETWORK STATUS**

NETWORK STATUS		Ethernet Lnk Con Dia Status [■] [■] []	<i>Range: refer to the 469 Instruction manual</i>
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Communications: DeviceNet network connectivity has been added

DeviceNet network connectivity has been added to the 469 relays to allow customers to incorporate the relay into a DeviceNet network as a slave. The order code has been modified to include the DeviceNet option. Typical data that can be retrieved from the 469 relays include: relay status, currents and voltages, motor starting data, and RTD values. The following connection types are permitted: Polled, Explicit Messages, and Change of State.

The DeviceNet connection is located at the back of the relay through a 5-pin terminal block – refer to the 469 Instruction Manual for additional details on the DeviceNet physical connection. **The 469 relays are ODVA certified.**

New setpoints have been added for DeviceNet communications under the **S1 469 SETUP** >> **COMMUNICATIONS** menu:

PATH: SETPOINTS > S1 469 SETUP >> COMMUNICATIONS

■ COMMUNICATIONS [▷]			SLAVE ADDRESS: 254	Range: 1 to 254 in steps of 1
MESSAGE			COMPUTER RS485 BAUD RATE: 9600	Range: 300, 1200, 2400, 4800, 9600, 19200
MESSAGE			COMPUTER RS485 PARITY: None	Range: None, Odd, Even
MESSAGE			FRONT PORT RS232 BAUD RATE: 19200	Range: 300, 1200, 2400, 4800, 9600, 19200
MESSAGE			DEVICENET MAC ID: 1	Range: 0 to 63
MESSAGE			DEVICENET BAUD RATE: 125K	Range: 125K, 250K, 500K

The DeviceNet connection status is available under the **A1 STATUS** >> **NETWORK STATUS** actual values menu:

PATH: ACTUAL VALUES > A1 STATUS >> NETWORK STATUS

■ NETWORK STATUS [▷]			DEVICENET PORT: Not powered	Range: Not powered, operational, Data size error, Unrecoverable fault, Minor fault
MESSAGE			DEVICENET LINK: Not online	Range: Not online, Online connected, Online disconnected, Critical failure, Connection timeout
MESSAGE			EXPLICIT CONNECTION: Nonexistent	Range: Nonexistent, Configuring, Established, Time-out, Deferred Delete
MESSAGE			POLLED I/O CONNECTN: Nonexistent	Range: Nonexistent, Configuring, Established, Time-out, Deferred Delete
MESSAGE			COS CONNECTION STATUS: Nonexistent	Range: Nonexistent, Configuring, Established, Time-out, Deferred Delete

Order Code: new models and options have been added

The order code has changed to introduce the Ethernet and DeviceNet options as indicated below.

Table 1: 469 Order Codes

469 – * – * – * – *						
Base Unit	469					469 version 5.00 release
Phase Current Inputs	P1					1 A phase CT secondaries
	P5					5 A phase CT secondaries
Control Power	LO					25 to 60 V DC; 20 to 48 V AC at 48 to 62 Hz
	HI					88 to 300 V DC; 70 to 265 V AC at 48 to 62 Hz
Analog Outputs	A1					Four (4) 0 to 1 mA analog outputs
	A20					Four (4) 4 to 20 mA analog outputs
Display						Basic display
						Enhanced display, larger LCD
						Enhanced with Ethernet (10Base-T)
						Enhanced display with DeviceNet

Modified features

Firmware release 5.00 has been redesigned to accommodate the new hardware design. This release is not backwards compatible with versions 4.00 and lower.

Event records and oscillography capture have been enhanced. The event recorder now records **256** events and the waveform capture records **128** cycles.

For version 5.00, two new files are being released:

main code: 30I500A8.000

boot code: 30I400A0.000

EnerVista software changes

The EnerVista 469 Setup software version 5.00 has been redesigned to support Ethernet and the new hardware. The following features are introduced with this release:

- Support for 469 firmware versions 2.4x, 2.5x, 2.6x, 2.8x, 2.9x, 4.0x and 5.0x
- Enhanced offline settings file features to include Rename settings file, duplicate settings file and compare settings file features.
- Offline Serial number locking feature.

Instruction manual changes

The following changes have been made to the instruction manual:

- The new order code has been added.
- Added Ethernet and DeviceNet setpoints to the **S1 469 SETUP** page.
- Added connectivity status to the actual values.
- Installation details for the Ethernet and DeviceNet options have been added.
- Instructions on the number of Modbus TCP/IP sessions have been added.
- Number of events and waveform capture specifications have been changed.
- Type Test list has been updated with the latest standards.