



LM10 Modular Low Voltage Motor Protection

Revision 1.70 Release Notes

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Overview

Summary

GE Multilin releases version 1.70 of LM10 firmware that introduces new features and enhancements to the LM10 Modular Low Voltage Motor Protection. Highlights of this release include:

Metering

- Increased Power Metering Range
- Leading Power Factor Metering
- Current Input Metering

Protection

- Ground Fault Protection
- Overload Trip Reset

Enhanced Communications

- DeviceNet COS
- Polling Groups

This document contains the release notes for the 1.70 release of the LM10 Modular Low Voltage Motor Protection.

- Affected product: LM10 Modular Low Voltage Motor Protection
- Date of release: August 16, 2007
- Firmware revision: 1.70

The version 1.70 release is compatible with the EnerVista LM10 Setup software versions 2.50 and higher and is backwards compatible with all earlier firmware versions (1.40 ~1.60)

In the following change descriptions, a revision category letter is placed to the left of the description. Refer to the Appendix at the end of this document for additional details.

LM10 Modular Low Voltage Motor Protection

E

Increased Power Metering Range

The Power Metering range of the LM10 has been increased to offer a wider range. This range has been increased up to 6553.5 kW. Under certain conditions kW rollover would occur if the maximum settings were enabled for both the C.T.'s and P.T.'s. With firmware version 1.70 this issue has been corrected.

E

Leading Power Factor Metering

The Power Factor metering of the LM10 has been improved to allow metering of power factor for both leading and lagging power factors.

E

Current Channel Input

Current channel interference has been eliminated, thus allowing a higher degree of accuracy for current metering. Channel 'noise' and 'ghost' current at times appear would appear if there were no current inputs to the relay. With the release of firmware version 1.70 this has been eliminated.

E

Ground Fault Protection

Ground fault protection has been improved to eradicate nuisance tripping caused during certain operational conditions. Nuisance tripping would occur, at times, if the relay was energized and the motor was started at the same time and if the tripping time delay was set less than 0.1 seconds. The aforementioned issue has been corrected to eliminate ground fault nuisance tripping.

E

Overload Trip Reset

The LM10 can be reset without the need to recycle the relay control power in cases where LM10 trips for the motor load current exceeding 8 times FLA. In cases where the motor load exceeds 8 times FLA the cooling time must elapse and the LM10 can be reset from PDU or remotely without cycling power.

N

Contactors switch input status in DeviceNet COS & polling

Contactors input switch status has been added to the DeviceNet COS and polling motor status byte. With the addition of this feature the LM10 can provide contactors input status through polling and COS.

N

Polling Groups

Polling Group 4 has been added to the LM10. With the addition of polling group 4 this enables the LM10 firmware version 1.70 to be compatible with firmware version 1.40.

Polling groups 2 and 3 have been enhanced to include the following switch input status within the motor status byte. Motor Run 1, Motor Run 2, Motor Stop and Reset have been added to these polling groups to allow for greater flexibility and information.

For further information please refer to LM10 Instruction Manual (GEK-106642D)

Change categories

This document uses the following categories to classify the changes.

Table 1: Revision categories

Code	Category	Comments
N	New feature	A separate feature added to the relay. Changes to existing features even if they significantly expand the functionality are not in this category
G	Change	A neutral change that does not bring any new value and is not correcting any known problem
E	Enhancement	Modification of an existing feature bringing extra value to the application
D	Changed, incomplete or false faceplate indications	Changes to, or problems with text messages, LEDs and user pushbuttons
R	Changed, incomplete or false relay records	Changes to, or problems with relay records (oscillography, demand, fault reports, etc.)
C	Protocols and communications	Changes to, or problems with protocols or communication features
M	Metering	Metering out of specification or other metering problems
P	Protection out of specification	Protection operates correctly but does not meet published specifications (example: delayed trip)
U	Unavailability of protection	Protection not available in a self-demonstrating way so that corrective actions could be taken immediately
H	Hidden failure to trip	Protection may not operate when it should
F	False trip	Protection may operate when it should not
B	Unexpected restart	Relay restarts unexpectedly

The revision category letter is placed to the left of the change description.

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