



469 FIRMWARE REVISION HISTORY

GE Multilin, 215 ANDERSON AVENUE, MARKHAM, ONTARIO, CANADA L6E 1B3, TEL: (905) 294-6222, FAX: (905) 201-2098

| FIRMWARE REVISION | BRIEF DESCRIPTION OF CHANGES | STARTING SERIAL# | RELEASE DATE | ECO# |
|---|--|------------------|---------------|---------|
| 283.000 <div style="border: 1px solid black; border-radius: 10px; padding: 2px; display: inline-block;">CURRENTLY IN PRODUCTION</div> | <ul style="list-style-type: none"> Modified code to prevent real time clock stopping | A3030616 | March 25/03 | 469-302 |
| 282.000 | <ul style="list-style-type: none"> Main code and boot code modified for use with new LCD display module. Relays with boot code revisions 30G220A0.000 and higher, are incompatible with firmware versions earlier than 30G282A8.000. Corrected energy accumulators (MWh, Mvarh, and Mvarh) rollover bug – they will now display 0 when rolling over. Simulation Stopped events are now logged when simulation is exited due to a trip. It is now possible to change the settings for S13 Test Output Relays and S13 Analog Output Testing when a simulation mode is active. Removed all references to SR and Multilin in display messages. | A3021565 | March 22/02 | 469-275 |
| 281.000 | <ul style="list-style-type: none"> The Communications Passcode functionality has been enhanced such that the communication port setpoint access is independent from the digital Access Switch. Due to component obsolescence, new hardware has been released, which will make relays with boot code revisions 30F211A0.000 and higher, incompatible with firmware versions earlier than 30F281A8.000. | A30113002 | December 4/01 | 469-264 |
| 280.000 | <ul style="list-style-type: none"> Increased the power metering ranges. Real Power (kW) and Reactive Power now meter up to +/- 99999, Real Power (hp) and Apparent Power now meter up to 65535. Modified the Auxiliary RS485 port interrupt priority such that it now has a lower priority relative to other more critical interrupts. Motor Start is now logged as an event in the event recorder. | A3011362 | May 30/01 | 469-251 |
| 261.000 | <ul style="list-style-type: none"> Added routine to accommodate future hardware change. Changed range of Motor Name Plate voltage to 36KV. | A3090164 | January 22/99 | 469-145 |



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| 260.000 | <ul style="list-style-type: none"> • Increased starting differential delay to 60 sec. • Changed the VT ratio from 150:1 to 300:1 • Overvoltage level now upto 120% or rated. • OFF setting was added to U/V alarm/trip pickup. • Cyclic load averaging (mod 006) made part of standard release. • Enhanced start inhibit (mod 008) made part of standard release. • Torque (mod 005) made part of standard release. • Added conversion between SI (Nm) and Imperial (ftlb) units for torque. • Forced Relay operation added. • Communications passcode added. • Phase rotation now selectable for speed2 motor application. • Allocated memory map for Time Broadcasting (standard address on all Multilin units). • Modbus function 01 & 02 added. Function 01: Output Relay Coil status. Function02: Digital input status. • Cooltime constant range changed to 1000 min. • Time between starts range changed to 1000 min. • Last motor start statistics | A3086224 | October 16/98 | 469-126 |
| 252.000 | <ul style="list-style-type: none"> • Auto relay reset for spurious interrupts removed | A3072814 | July 23/97 | 469-070 |
| 251.000 | <ul style="list-style-type: none"> • First version that can only be for A8 size flash memory units • Display update/averaging setpoint added to allow adjustment of display update interval • Single VT operation now selectable • Waveform capture now enhanced to allow up to 64 cycles or more than 1 trace to be captured • Reduced voltage start timer range increased • Digital input selections added for: capture trace, simulate pre-fault, fault and pre-fault to fault • Keypad reset only selection added for relays • Underfrequency and undervoltage reaction time sped up to less than 100ms • Short circuit trip level minimum reduced to 2xCT • Differential current element now has separate starting and running levels and times • RTD high alarm setpoints added for all RTDs • Pulse output added for kWh, kvarh, negative kvarh and motor running hours • Analog input differential feature added for dual motor drive applications • MWhrs and analog input differential added to analog output selections • Simulation mode now effects waveform capture • Phasor measurements for I and V added to actual values | A3072559 | June 26/97 | 469-062 |



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| 243.000 | <ul style="list-style-type: none"> • RTD # sequencing corrected | A3061268 | Nov 18/96 | 469-049 |
| 242.000 | <ul style="list-style-type: none"> • 2SPEED ACCEL heading changed to SPEED2 ACCEL • RTD trip now corrected to show Unlatched or Latched or Off selections. | A3061186 | Nov 01/96 | 469-042 |
| 241.000 | <ul style="list-style-type: none"> • Power Factor Trip and Alarm now individually settable for Lead and Lag levels or OFF | Upgrades | Sept 07/96 | 469-041 |
| 240.000 | <ul style="list-style-type: none"> • Unbalance pickup setpoint lowered to 4% • Trip coil supervision now possible on open and/or closed breakers • Trips now selectable as OFF, LATCHED or UNLATCHED | Upgrades | Sept 02/96 | 469-040 |
| 230.000 | <ul style="list-style-type: none"> • User definable memory map added • K factor range increased to 0-19 • Modbus function 5 commands now also perfumed by function 16 • Digital counter rollover at 1,000,000,000 added • Fahrenheit Modbus addresses now read writable in degrees F • Comm. port monitor feature added • 013F memory address now assigned to Hottest Stator RTD • Access jumper and passcode now ignored by front comm. port • Lamp test feature by holding down help key added • Overreach filter for GF and SC added • Start timers added to memory map 04A3 to 04A7 • Voltage dependent curve intersect entry change to prevent incorrect slope • Relay info (sn# etc.) added to memory map 0020 to 0065 • Reverse power feature added | A3050643 | June 01/96 | 469-031 |
| 222.000 | <ul style="list-style-type: none"> • Analog output setpoint ranges reinitialized upon power up. | A3050271 | Jan 29/96 | 469-027 |
| 220.000 | <ul style="list-style-type: none"> • First release of firmware to be compatible with the 469 PC program. • Trip coil supervision: Starter status included in condition for alarm • Overvoltage maximum level changed from 1.25 to 1.10. • RTD bias check added so min, center and Max are in proper relationship of magnitudes. • Memory map address for date changed. • Acceleration timer upper limit changed to 250 to match manual. | A3050161 | Nov 30/95 | 469-023 |



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| 210.000 | <ul style="list-style-type: none">• Introduction of 2M flashes. A4 type is for updating 1M flash. A8 type is for 2M flash.• Added serial communication control.• Added trip relay assignment for reduced voltage, incomplete sequence and overload.• Tachometer range changed to 100-7200RPM.• Eliminate default RTD names.• Over/Under frequency ranges modified for 25Hz systems.• Power Systems setpoints added: Phase sequence and system frequency located here.• Demand/Hours changed to +/- | A3050089 | Oct 02/95 | 469-017 |
| 201.000 | <ul style="list-style-type: none">• Serial number made non-overwritable | A3050072 | Aug 03/95 | 469-009 |
| 200.000 | <ul style="list-style-type: none">• This version of PLD, Flash and Boot code was used in the first production units to leave Multilin | A3050028 | July 31/95 | 469-002 |