Grid Solutions

MM2 & MM3 TO MM300 RETROFITS

Replace old MM2 and MM3 Relays with the Multilin™ MM300 Motor Management System

Taking advantage of new technologies and the advanced Multilin thermal model for motor protection, the Multilin MM300 Motor Management Systems offer substantial capabilities, flexibility and control functions, as compared to Multilin MM2 and MM3 relays. In particular, GE Vernova's Multilin MM300 Motor Management System devices offer advanced features through the combination of several functions such as advanced communications, automation, control and metering capabilities, all in one device.

The MM300 integrates protection, control, automation, metering, diagnostics, and multiple communication protocols all in a rugged compact device for low voltage motor protection & control applications. Designed for NEMA and IEC Motor Control Centers, the MM300 delivers superior protection and control to extend motor life and maximize process uptime.

Key Benefits

- Full-featured protection for low voltage AC motors
- Advanced automation capabilities for providing customized protection and integrated process control
- Advanced FlexLogic™ reduces requirement for local controllers
- Reduced space requirements through integration of multiple devices
- Enhanced troubleshooting tools including sequence of event records and waveform capture
- Powerful communications including Serial, Ethernet, Profibus, and DeviceNet protocols
- Small form factor and remote display options designed to fit various MCC buckets
- Universal device for all motor power ratings
- No CTs required for less than 5A motor ratings
- Thermistor input to monitor the ambient or motor temperature
- Support for Hand Held Display (HHD) that provides a graphical color local interface allowing local operators to view and change setting files and quickly access relay diagnostic information

Applications

- Low Voltage three phase AC motors
- MCC or stand alone panel mount applications
- Process control and applications requiring Automation or Control i.e. conveyor systems or well recovery pumps
- IEC or NEMA class motors and Motor Control Centers (MCCs)
- System architecture requiring multiple simultaneous communications
- Applications require full-voltage reversing or non-reversing, two-speed, wye-delta open transition, inverter, soft starter or autotransformer motor starting

Protection and Control

- Enhanced Thermal Modeling
- Mechanical Jam & Stalled Rotor
- Undercurrent & Underpower
- Acceleration Time & Current Unbalance
- Ground & Sensitive Ground Fault
- Phase Overvoltage/Undervoltage
- Thermistor & RTD Overtemperature

Automation

- Programmable Flexlogic™ option
- Starter Control & Process Interlocks
- Programmable inputs and outputs
- Undervoltage Auto-restart

Monitoring & Metering

- Metering - current, voltage, power, energy, frequency, RTD & Thermistor
- Oscillography (analog values at 32 samples/cycle and digital states) & Event Recorder (256 events)
- Advanced device health diagnostics

Communications

- Two Wire RS485, RJ45 Ethernet
- Programming Ports - USB, RS485 & Ethernet
- Multiple Protocols (Modbus RTU or TCP/IP, internally or externally powered Profibus, ODVA compliant DeviceNet)

EnerVista™ Software

- Simplify setup and configuration
- Strong document archive/ management system
- Strong maintenance and troubleshooting tool

GE VERNOVA

Products Comparison

Feature Comparison

FEATURE/OPTION	MM3	MM2	MM300
Phase(P)/Auxiliary(X) Undervoltage	X	X	P & X
Underpower	√-Optional	√	√
Undercurrent	√	√	√
Reverse-Phase or Current Unbalance	√	√	√
Incomplete Sequence			√
Thermal Model	√	√	√
RTD Biasing towards Thermal Model			√
Unbalance Biasing towards Thermal Model			√
Overload	√	√	√
Number of Standard Overload Curves	8	8	15
Availability of Custom Overload Curve			
NEMA Compatible Overload Curves	4	4	4 - See Overload Curve Table
Total Number of Standard Overload Curves	12	12	15
Instantaneous Overcurrent, Ground, Neutral, Phase	G/N	G/N	G
Locked Rotor	√	√	√
Time Overcurrent, Ground/ Neutral/Phase	G/N	G/N	G
Power Factor			√
Overvoltage, Neutral/Phase	P	P	P
Voltage Transformer Fuse Failure			√
Phase Reversal			√ - with Expansion Module B
Ground Detector	√	√	√
Starts per hour	√	√	√
Control Power Supply - AC/DC	AC only - 240 V AC Max	AC only - 240 V AC Max	AC - 60 to 300 V AC & DC - 84 V DC to 250 V DC
CT Inputs	250 Amps - w/o Additional CTs	5 or 1 Amp Terminals; direct connection up to 5 A FLA	Combined 1 A/5 A direct connection up to 5 A FLA
Self-Test Failure Contact	√	√	√
Flash Memory	√	√	√

FEATURE/OPTION	MM3	MM2	MM300
Contact Inputs - Programmable - up to	10	10	28 or 29 - Based on Order Code (Max) and Starter Type
Contact Inputs - Fixed	6	6	2 Max - Base on Starter Type
Contact Outputs - Fixed	2	2	2 Max - Base on Starter Type
Contact Outputs - Programmable	2	2	16 or 17 - Based on Order Code (Max) and Starter Type
Virtual Inputs			√ - with Flexlogic (Option 3)
Virtual Outputs			√ - with Flexlogic (Option 3)
Display	√	√	√
Keypad	√	√	√
Remote Display	√	Optional	√
Hand Held Display			√ - Optional
Thermister Connection	√	√	√
Programmable Logic			√
User Programmable LEDs			√
Digital Counters			√
Digital Elements			√
Analog Outputs	1		
Mechanical Jam	√	√	√
Starts per Hour (for Jogging Starts mainly)		√	√
Time between Starts		√	√
Start Inhibit	√	√	√
Restart Block			√
Acceleration Time	√	√	√
Hot Motor RTD Feedback			√
RTD Temperature Trips			√
Stator RTD Alarm			√
Bearing RTD Alarm			√
RTD Broken Alarm			√
RTD Short/Low Alarm			√
Current - RMS	√	√	√

FEATURE/OPTION	MM3	MM2	MM300
Voltage 3-ph Reading			√- Based on Order Code
RTDs			√
Three Phase Active Power	√	√	√
Three Phase Reactive Power			√
Three Phase Apparent Power			√
Three Phase Active Energy	√	√	√
Three Phase Reactive Energy			√
Three Phase Apparent Energy			√
Demand			√
Frequency Display			√
Analog Inputs	1	1	

FEATURE/OPTION	MM3	MM2	MM300
Event Recorder			256 Events
Motor Historical data	√	√	√
Pre-Trip Values	√	√	√
Learned Motor Parameters	√	√	√
Oscillography - Waveform Capture			√
Datalogger			√
Interface Program	√	√	√
RS-232 Serial Communication			√ - with a DB-9 to RJ-45 Cable
RS-485 Port	√	√	√

Starter Type Comparison

STARTER TYPE	MM3	MM2	MM300
Full Voltage Non-Reversing Starter	√	√	√
Full Voltage Reversing Starter	√	√	√
Two-Speed Starter	√	√	√
Wye - Delta Open Transition Starter	√	√	√
Wye - Delta Closed Transition	√	√	√ - For configuration information, consult regional sales team or factory directly
Inverter Starter - VFD & VSD - Variable Frequency Drives/Variable Speed Drives			√
Soft Starter	√	√	√
Autotransformer Open Transition Starter	√	√	√
Autotransformer Closed Transition Starter	√	√	√
Customer Starter - Provided to match Other Non-popular Starter Types			√ - For configuration information, consult regional sales team or factory directly
Slip Ring Starter	√	√	√ - For configuration information, consult regional sales team or factory directly
Part Winding Starter	√	√	√ - For configuration information, consult regional sales team or factory directly
Duty/Stand-by Starter	√	√	√ - For configuration information, consult regional sales team or factory directly

** Note: With certain Starter Types, the Undervoltage Autorestart feature may not available in MM300.*

For further details on the MM300 Motor Management System, visit GE Vernova's web site at https://www.gevernova.com/grid-solutions/automation/protection-control-metering where you can download the MM300 brochure with complete order codes, the MM300 instruction manual, and details about the EnerVista suite of setup and monitoring software tools.

Overload Curve Comparison

CURVE NUMBERS												
MM2	1	2	3	4	5	6	7	8	Class 10	Class 15	Class 20	Class 30
MM3	1	2	3	4	5	6	7	8	Class 10	Class 15	Class 20	Class 30
MM300	1	2	3	4	7	9	12	15	4	6	8	12

ANSI Device Numbers & Functions

MM3

DEVICE#	FUNCTION
49/51	Three Phase Overload Protection
46	Phase Unbalance Welded/ Open Contactor
50G/51G	Ground Fault Trips
48	Stalled Rotor Protection
	Display kW and kWh
37	Undercurrent/Underpower
59	Overvoltage
27	Undervoltage

MM2

DEVICE#	FUNCTION
49	Overload
46	Phase Unbalance (Single-phase welded/ open contactor)
50G/51G	Ground Fault
51R	Locked Rotor/Stalled Rotor
49	Hot Winding (thermistor)
37	Undercurrent/Underpower
27P	Undervoltage
59P	Overvoltage

MM300

DEVICE#	FUNCTION
27AUX	Undervoltage - Auxiliary Input
27	Undervoltage - Three Phase
37	Undercurrent/Underpower
38	Bearing Temperature RTD
46	Current Unbalance
47	Voltage Phase Reversal
49	Thermal Overload
50G	Ground Instantaneous Overcurrent
51G	Ground Time Overcurrent
51R	Locked/Stalled Rotor/ Mechanical Jam

For a feature comparison of all available GE Vernova Protection & Control devices, visit our selector guide at:
www.gevernova.com/grid-solutions/multilin/selector

MM2 to MM300 Ordering

	MM2	*	*	*	*		MM300 Matching Order Codes
Base Unit	MM2					Basic unit	MM300
Mounting		PD				Panel Mount with display (only when both option 1 and 2 are selected	G: Graphical Control Panel with USB
		C				Chassis Mount (Black Box)	X: No control panel or display
Option 1			1			Option 1 : Example: MM2-C-0-2-120/240 Process control (4 inputs), 10 programmable switch inputs, 2 extra electromechanical relays (Aux1 and Aux2), 4 to 20 mA input, Undervoltage Autorestart, Diagnostics (16 inputs total)	Suggested order code based on the example: MM300-GEHS-1-C-A-C-C-X-X S: RS485 Modbus RTU (standard) 1: Standard control & event recorder + undervoltage autorestart C: 2 × 10 A Relay form A + 6 × Digital Input 60 – 300 VAC A: 3-phase current and thermal O/L, undercurrent, single phase underpower (18 inputs total) Note: An analog input option is not available with MM300
Option 2				2		Option 2: Examples: MM2-PD-1-2-120/240 MM2-C-1-0-120/240 Process control (6 inputs), 2 programmable switch inputs, Enhanced protection, power (kW), thermistor, 2nd contactor control, (8 inputs total)	Suggested order code for both examples: MM300-GEHS-1-C-A-C-X-X-X S: RS485 Modbus RTU (standard) 1: Standard control & event recorder + undervoltage autorestart C: 2 × 10 A Relay form A + 6 × Digital Input 60 – 300 VAC A: 3-phase current and thermal O/L, undercurrent, single phase underpower (12 inputs total) Note: An analog input option is not available with MM300
Control Power					120 240	120 V AC Control Voltage 240 V AC Control Voltage	H: 60 – 300 - VAC (80 – 250 VDC) H: 60 – 300 - VAC (80 – 250 VDC)

*Notes: If **MOD 603** - ESD (Emergency Shut Down Relay) is used in the MM2, then the MM300 Order Code should include Flexlogic (option 3), and Expansion Modules D and E. Other MM2 and MM3 MODs may be available for MM300 units. Please contact the factory for more information.*

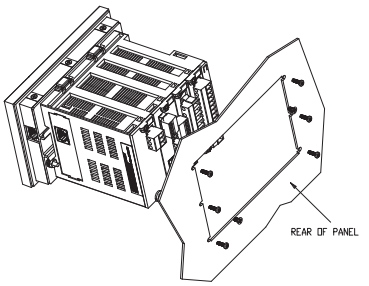
Sample Order Codes

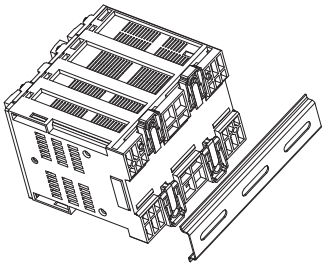
MM2 ORDER CODE	MM300 ORDER CODE
MM2-C-1-0-120/240 (14 inputs)	MM300-XEHS-1-C-A-C-C-X-X
MM2-C-0-2-120/240 (8 inputs)	MM300-XEHS-1-C-A-C-X-X-X
MM2-PD-1-2-120/240 (16 inputs)	MM300-GEHS-1-C-A-C-C-X-X

MM2 Option Comparison

	STANDARD	OPTION 1 ADDS	OPTION 2 ADDS
Protection & Control	OVERLOAD (49/51) PHASE UNBALANCE (46) WELDED/OPEN CONTACTOR	UNDERVOLTAGE AUTO RESTART	GROUND FAULT (50G/51G), RAPID TRIP LOCKED/STALLED ROTOR (48) OVERTEMPERATURE THERMISTOR (49) UNDERCURRENT/UNDERPOWER (37) OVERVOLTAGE (59)/ UNDERVOLTAGE (27)
Inputs	4 Control 2 Programmable	8 Programmable 1 Analog	2 Control Thermistor Input
			Single-phase voltage input for kW and kWh
Relays Mounting Configurations	Contactor control (A)	Auxiliary 1 and 2	Contactor control (B)
	Chassis Mount	Chassis Mount	Chassis Mount
		Panel mount with display available when both options are ordered	

The MM300 can be mounted on a standard panel mount or DIN rail mount (or screw mount for high vibration environments). When replacing an MM2 unit, a panel mount is suggested.





MM3 to MM300 Ordering

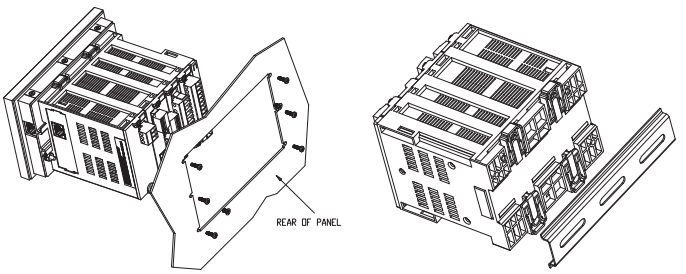
	MM3	*	*	*	*		MM300 Matching Order Codes
Base Unit	MM3					Basic unit	MM300
Option 1		1				1: Basic Unit Example: MM3-1-E-W-240 Protection: Three Phase Overload Protection, Phase Unbalance, Welded/Open Contactor, Ground Fault Trips, Stalled Rotor Protection Display kW and kWh, Undercurrent/Underpower, Overvoltage, Undervoltage Inputs: 4 Control Inputs, 2 Programmable Inputs Relays: Contactor A, Aux 1, Aux 2 or ESD Relay	Suggested order code based on the example: MM300-GEHS-S-C-A-C-E-X (Any MM300 with one Expansion Module C meets all input requirements.) C: 2 × 10 A Relay form A + 6 × Digital Input 60 – 300 VAC Note: An analog input option is not available with the MM300
Option 2			2			2: Full Unit Example: MM3-2-E-N-120 Protection: Three Phase Overload Protection, Phase Unbalance, Welded/Open Contactor, Ground Fault Trips, Stalled Rotor Protection Display kW and kWh, Undercurrent/Underpower, Overvoltage, Undervoltage Inputs: 6 Control Inputs, 10 Programmable Inputs, Thermistor Input, Analog-in Input, Analog Output Relays: Contactor A, Contactor A , Aux 1, Aux 2 or ESD Relay	Suggested order code based on the example: MM300-XEHS-S-C-A-C-C-E-X (Any MM300 with three Expansion Module C options meets all input requirements.) C: 2 × 10 A Relay form A + 6 × Digital Input 60 – 300 VAC Note: An analog input option is not available with the MM300
				E		E: ESD (Emergency Shut Down) Relay ESD is used to determine whether a STOP is due to an Emergency. The ESD relay can only be energized and de-energized via terminals 34 & 35. The MM3 determines an ESD stop by monitoring the status of the ESD relay and the motor contactors via feedback into the Contactor A Status and Contactor B Status terminals. If either of the motor contactors drop out at the same time as the ESD de-energizes, an ESD stop occurs and the MM3 displays the message "ESD STOP". The ESD Output can be set as "Latched" or "Unlatched".	In MM300, output latching is achieved through Flexlogic programming. The MM300 Order Code should include Flexlogic (option 3), and Expansion Modules D and E. For example: MM300-GEHS-3-C-A-C-C-E-D 3: Standard control & event recorder + undervoltage autorestart + waveform capture & datalogger + FlexLogicTM D: 4 × 10A form-C relays (Expansion Slot C) E: 2 × 10A form-A relays and six (6) 20 to 60V DC digital Inputs (Expansion Slot D) Note: An analog input option is not available with the MM300
				A		A: Auxiliary 2 Relay Example: MM3-1-A-W-240 The AUX 2 relay can be internally energized by the MM3, or externally energized by applying a +24 V DC signal to these terminals. Correct polar ity is required. In an MM300, there is no direct way to energize an output relay by applying 24 V DC Voltage. Instead this is achieved by using a DC Input whose closure results in closing an output relay.	Suggested order codes based on the example: MM300-GEHS-S-C-A-C-C-E-D If AUX2 Relay is externally operated MM300-GEHS-S-C-A-C-C-D-X If AUX2 Relay is internally operated For an external wet (24 V DC) Aux 2 Relay, use Expansion Module E. If the Aux 2 is internally operated (by the MM3 CPU), Expansion Module D is adequate. Note: An analog input option is not available with the MM300
Display				W N		W: With Local Display W: With Local Display	G: Graphical Control Panel with USB X: No control panel
Control Power					120 240	20 VAC Control Voltage 240 VAC Control Voltage	H: 60 – 300 - VAC (80 – 250 VDC) H: 60 – 300 - VAC (80 – 250 VDC)

Notes: The MM3 the Maximum AC Voltage that can be applied to Input/Output Modules is 380 V AC; In MM300 this limit is 300 V AC.

The MM3 does not have CT Inputs. Instead it sniffs Motor Power Supply through its built-in CT Module. The MM3 CT Module can "sniff" the motor full load amperage up to a maximum of 250 Amps. Therefore, when MM3 is replaced with MM300s, CTs also need to be introduced into the system.

MM2 and MM3 MODs may be available for MM300 units. Please contact the factory for more information.

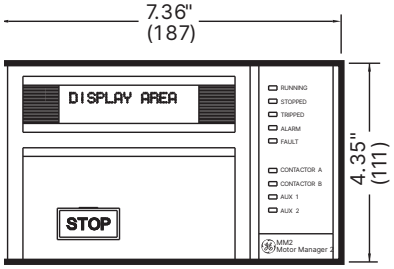
The MM300 can be mounted on a standard panel mount or DIN rail mount (or screw mount for high vibration environments). When replacing an MM3 unit, a DIN rail mount is suggested.



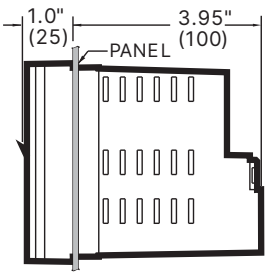
MM2 Dimensions & Mounting

The MM2 is a stand-alone unit with different dimensions for the panel mount and chassis mount options.

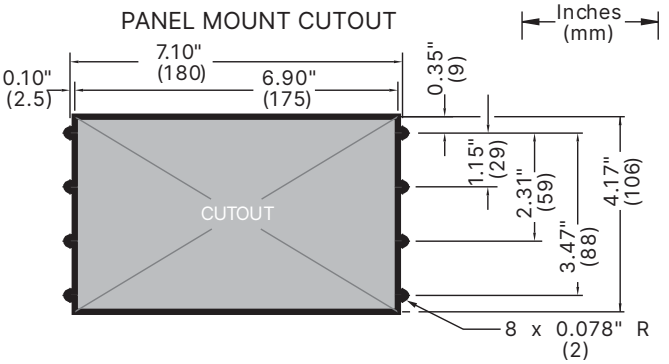
PANEL MOUNT FRONT VIEW

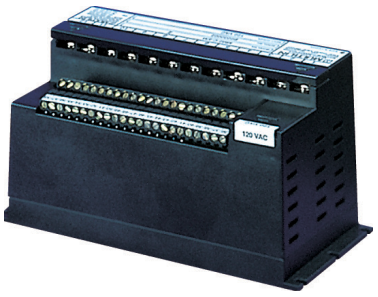


PANEL MOUNT SIDE VIEW



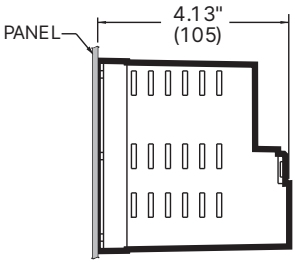
PANEL MOUNT CUTOUT



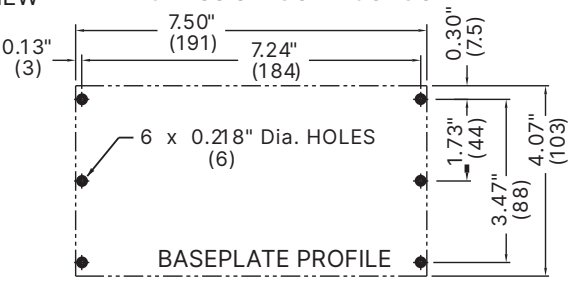


The CHASSIS MOUNT version is a black box which is mounted inside the motor control center (MCC).

CHASSIS MOUNT SIDE VIEW

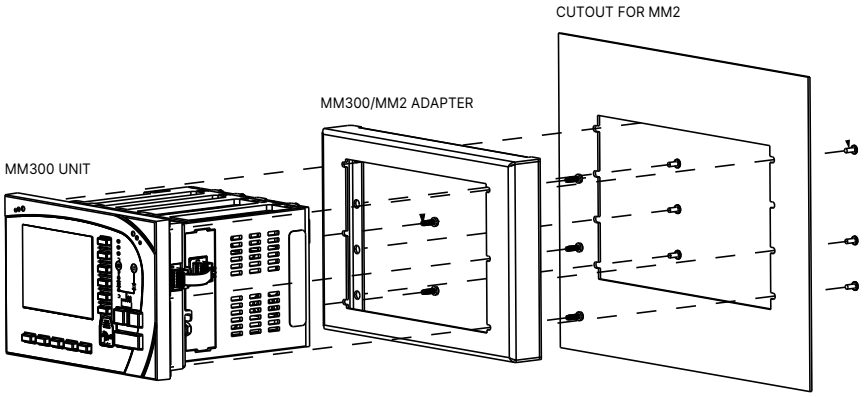


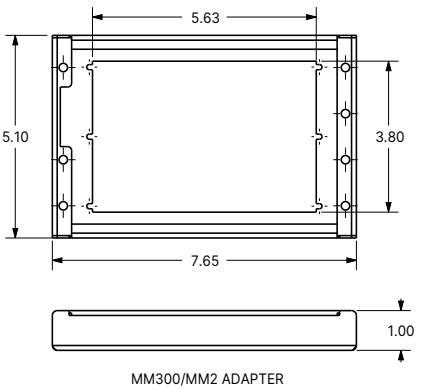
CHASSIS MOUNT CUTOUT

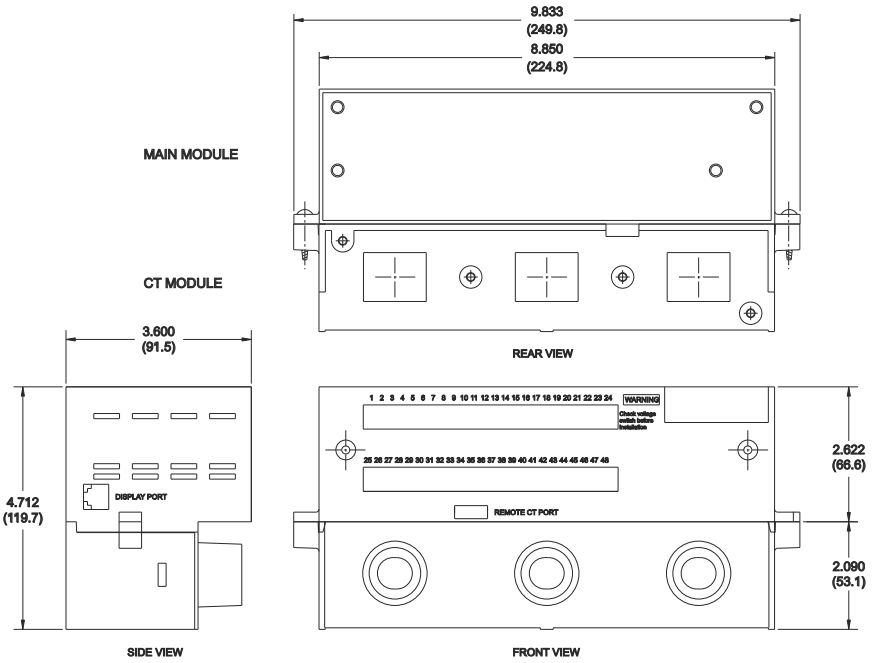


MM2 to MM300 Adapter Plate

An MM2 to MM300 adapter plate for panel mounting is available for MM300 retrofit. Part number: 18M9-0065



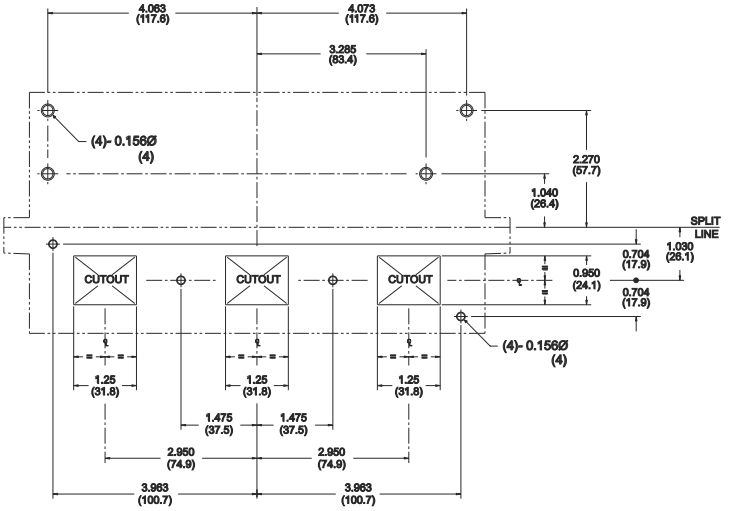


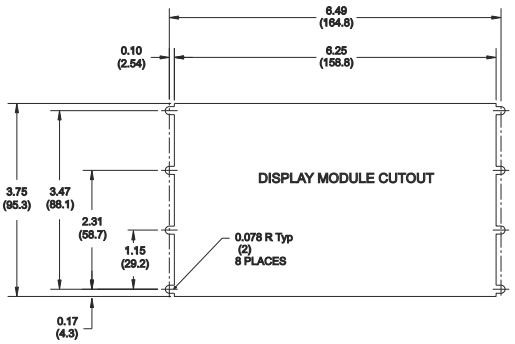


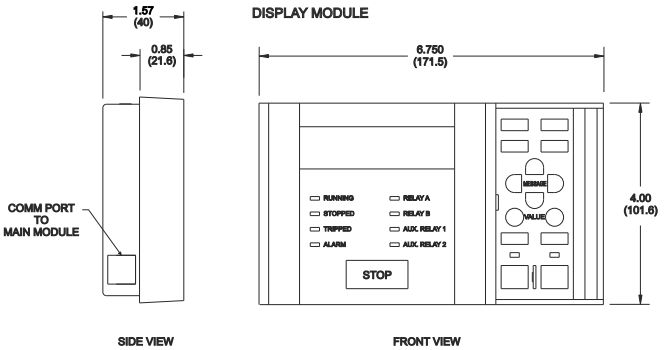
MM3 Dimensions & Mounting

The MM3 stand-alone unit usually sits on its CT Module. When the MM3 is mounted on a standing plate, the CT Module generally stands below it.

The optional display unit (option W) is mounted separately.

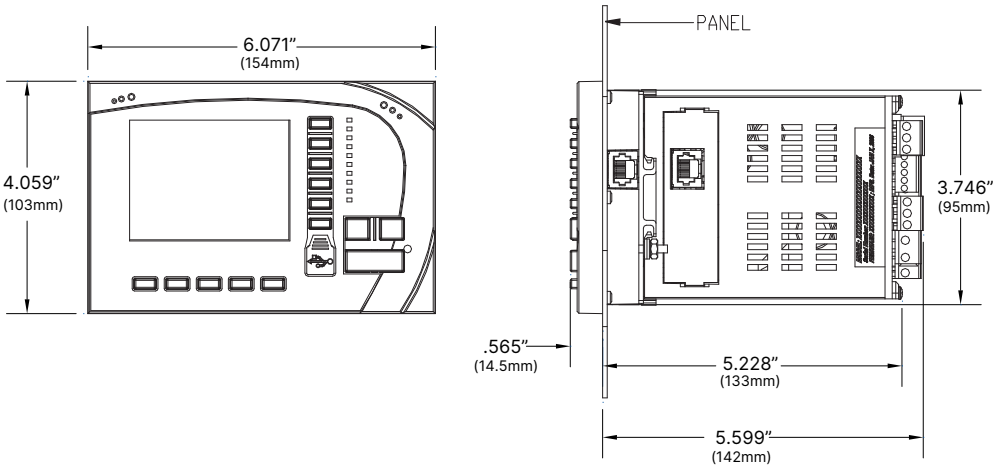






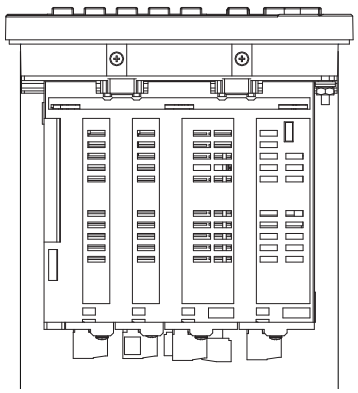
MM300 Dimensions & Mounting

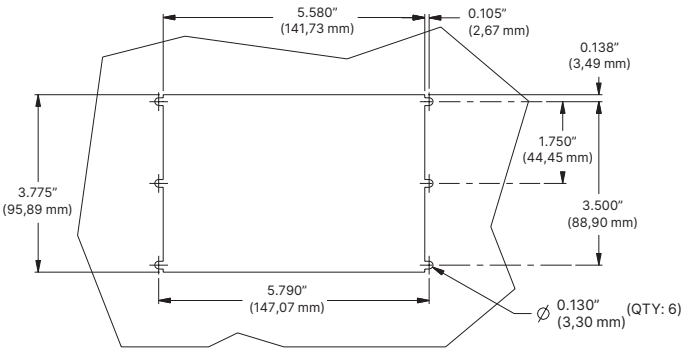
MM300 Panel Mount



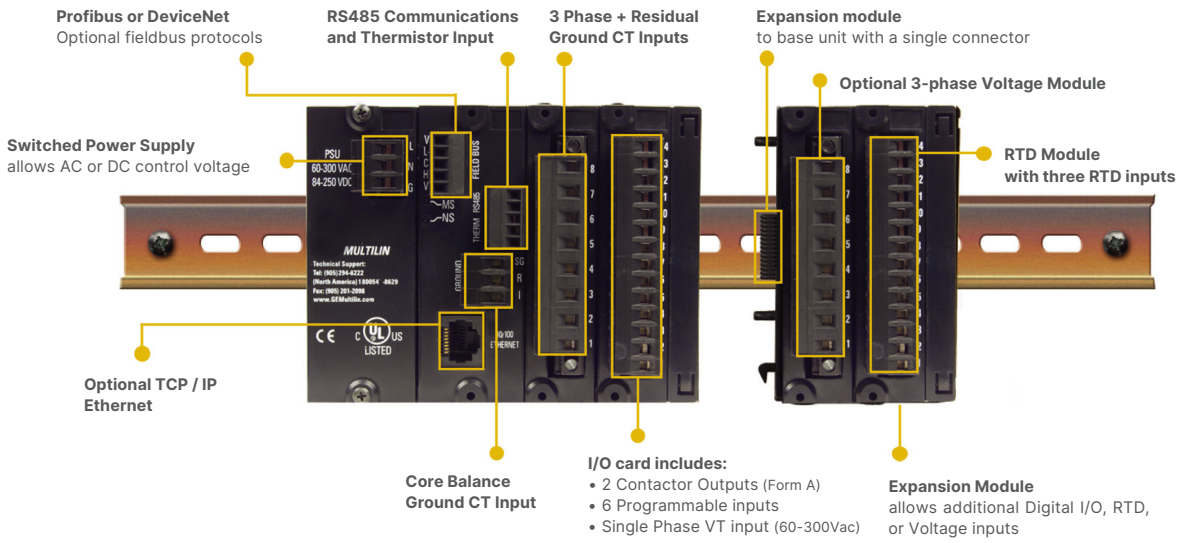
To replace an MM2, an MM300 panel mount is suggested. An MM2 to MM300 adaptor plate is available:

18M9-0065: MM2 to MM300 Adaptor plate





MM300 DIN Rail Mount

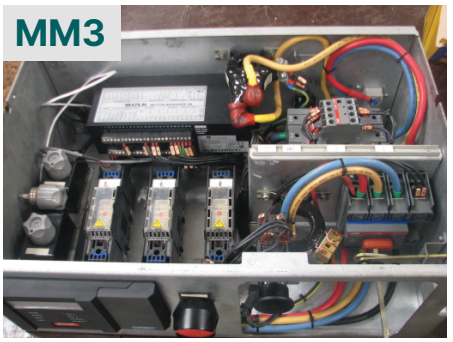


To replace an MM3, an MM300 DIN rail mount is suggested. The DIN rail mount configuration requires a longer Connector cable, available in 3 ft. or 6ft. lengths:

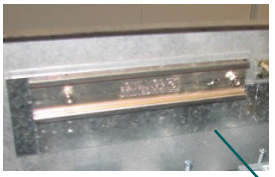
0804-0169: *MM300 3 ft. Connector Cable*
0804-0172: *MM300 6 ft. Connector Cable*

MM3 to MM300 Retrofit Example

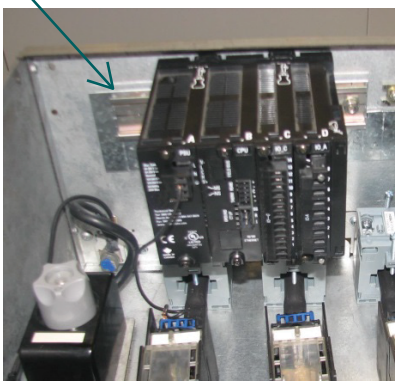
MM3



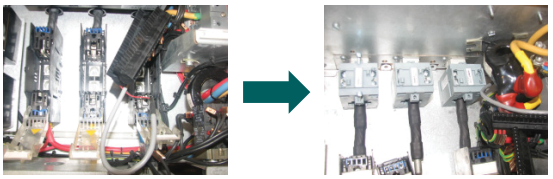
Once the MM3 unit is removed, a supporting plate is installed in the chassis using the existing MM3 mounting holes. A DIN rail is then installed to support the MM300



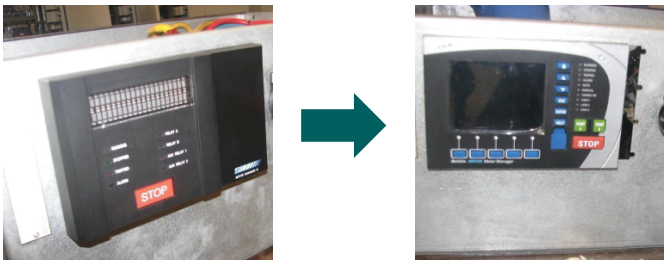
The new MM300 unit is mounted on the DIN rail. No new holes are required in the chassis.



New external CTs are installed in the conductor assembly, replacing the built-in MM3 CTs.



The MM300 graphic display is mounted in the existing MM3 display cutout. A blanking plate adjusts the cutout size.



MM300

The retrofit MM300 awaits electrical connection.

- No modifications or new holes in chassis
- No changes to the terminal BUS connections and outgoing feeder

Terminal Mappings MM2 to MM300

MM2 TERMINAL TYPE	MM2 #	MM2 TERMINAL NAME	MM300 EQUIVALENT TERMINAL	MM300 TERMINAL LOCATION
Phase CT Inputs	MM300 Terminal Location	Phase A - 5 Amps CT Input	D1	IO_A - CT Input Module
	2	Phase A - 1 Amp CT Input	D1	
	3	Phase A - CT Common	D2	
	4	Phase B- 5 Amps CT Input	D3	
	5	Phase B- 1 Amp CT Input	D3	
	6	Phase B - CT Common	D4	
	7	Phase C - 5 Amps CT Input	D5	
	8	Phase C - 1 Amp CT Input	D5	
	9	Phase C - CT Common	D6	
Zero sequence Ground Fault CTs	10	5 Amps Ground CT Input	N/A - Not Available in MM300	N/A
	11	50 : 0.025 Sensitive Ground CT Input	I - CBCT Terminals	CPU
	12	Ground CT Common (Non-Polarity Side)	R - Do Not Ground this Terminal, if a CBCT is used	CPU
Grounding	13	Safety Ground	Power Supply Ground Terminal	Power Supply Module
	14	Surge Ground	SG - Surge Ground Terminal	CPU Module
Voltage Input	15	Polarity Side of the VT Connection	C13 - Polarity Side of the AC Voltage Connection - (LIVE)	FIRST IO_C Module
	16	Non-polarity Side of the VT Connection	C12 - Non-Polarity Side of the AC Voltage Connection - (NEUTRAL)	FIRST IO_C Module
Thermister Connection	17	Thermister +	Thermister +	CPU
	18	Thermister -	Thermister -	
Analogue Input	19	Analogue Input - Positive Terminal	N/A	Not Available in MM300
	20	Analogue Input - Negative Terminal	N/A	
Analogue Input	21	24 V DC Supply - Positive	N/A	Not directly available. Can be configured with Expansion module E and Flexlogic (Option3)
	22	24 V DC Supply - Negative	N/A	
Programmable Relay - 02	23	Normally Closed Output Relay Contact of Programmable Relay - 02	F7	IO_D Module - Contact Output 3
	24	Common Leg of the programmable Relay - 02	F8	
	25	Normally Open Output Relay Contact of Programmable Relay - 02	F9	
Programmable Relay - 01	26	FIRST Normally Closed Output Relay Contact of Programmable Relay - 01	F1	IO_D Module - Contact Output 1
	27	Common Leg of the FIRST Output Relay of Programmable Relay - 01	F2	
	28	FIRST Normally Open Output Relay Contact of Programmable Relay - 01	F3	
	29	SECOND Normally Closed Output Relay Contact of Programmable Relay - 01	F4	IO_D Module - Contact Output 2
	30	Common Leg of the SECOND Output Relay of Programmable Relay - 01	F5	
	31	SECOND Normally Open Output Relay Contact of Programmable Relay - 01	F6	
Contactor B	32	Live Terminal of the Contactor B Coil	C4	FIRST IO_C Module
	33	Neutral Terminal of the Contactor B Coil	C3	

Terminal Mappings MM2 to MM300 (Cont'd)

MM2 TERMINAL TYPE	MM2 #	MM2 TERMINAL NAME	MM300 EQUIVALENT TERMINAL	MM300 TERMINAL LOCATION
Contactor A	34	Live Terminal of the Contactor A Coil	C2	FIRST IO_C Module
	35	Neutral Terminal of the Contactor A Coil	C1	
Control Power	36	Control Power Supply - Live	Live Connection to the Power Supply	Power Supply Module
	37	Control Power Supply - Neutral	Neutral Connection to the Power Supply	
ModBus Connection Terminals	38	RS485 Connection - Shield	Shield Connection	RS-485 ModBus Connection CPU
	39	RS485 Connection - Positive Wire	(+) - Terminal	
	40	RS485 Connection - Negative Wire	(-) - Terminal	
Programmable Switch Inputs/Interlocks	41	Interlock - 01	E5	Second IO_C Module
	42	Interlock - 02	E6	
	43	Interlock - 03	E7	
	44	Interlock - 04	E8	
	45	Interlock - 05	E9	
	46	Interlock - 06	E10	
	47	Interlock - 07	G6	Third IO_C Module
	48	Interlock - 08	G7	
	49	Interlock - 09	G8	
	50	Interlock - 10	G9	
Fixed Switch Inputs	51	STOP Input	10	First IO_Module
	52	START A	C9	
	53	START B	C8	
	54	Isolator Status	C7	
	55	Contactor A - Status	C5	
	56	Contactor B - Status	C6	
	57	Switch Common	C13 - Polarity Side of the AC Voltage Connection - (LIVE)	
	58	Switch Common	C13 - Polarity Side of the AC Voltage Connection - (LIVE)	

Note: Equivalent terminals are based on the following MM300 order code: **MM300-G-E-H-S-3-C-A-C-D-C-E**

Terminal Mappings MM3 to MM300

MM2 TERMINAL TYPE	MM2 #	MM2 TERMINAL NAME	MM300 EQUIVALENT TERMINAL	MM300 TERMINAL LOCATION
Interlocks	1	Interlock - Input - 01	E5	SECOND IO_C Module
	2	Interlock - Input - 02	E6	
	3	Interlock - Input - 03	E7	
	4	Interlock - Input - 04	E8	
	5	Interlock - Input - 05	E9	
	6	Interlock - Input - 06	E10	
	7	Interlock - Input - 07	G5	THIRD IO_C Module
	8	Interlock - Input - 08	G6	
	9	Interlock - Input - 09	G7	
	10	Interlock - Input - 10	G8	

Terminal Mappings MM3 to MM300 (Cont'd)

MM2 TERMINAL TYPE	MM2 #	MM2 TERMINAL NAME	MM300 EQUIVALENT TERMINAL	MM300 TERMINAL LOCATION
Fixed Switch Inputs	11	Stop	C10	FIRST IO_C Module
	12	Start A	C9	
	13	Start B	C8	
	14	Isolator Status	C7	
	15	Contactor A Status	C5	
	16	Contactor B Status	C6	
Thermister Connection	17	Thermister +	Thermister +	CPU
	18	Thermister -	Thermister -	CPU
Zero Sequence Sensitive Ground CT Connection	19	Polarity Side Terminal - Zero Sequence Sensitive Ground CT Connection	I	CPU
	20	Non-Polarity Side Terminal - Zero Sequence Sensitive Ground CT Connection	R - Do Not Ground this Terminal, if a CBCT is used	CPU
Control Power	21	Earth Safety	Ground Terminal of the PSU	Power Supply Module
Control Power	22	Earth Surge	Ground Terminal of the PSU	
Control Power	23	Control Power Supply - Neutral	Neutral Connection to the Power Supply	
Control Power	24	Control Power Supply - Live	Live Connection to the Power Supply	
ModBus Connection Terminals	25	RS485 Connection - Positive Wire	(+) - Terminal	RS-485 ModBus Connection CPU
	26	RS485 Connection - Negative Wire	(-) - Terminal	
	27	RS485 Connection - Shield	Shield Connection	
Analogue Input	28	Analogue Input - Positive Terminal	N/A	Not available in MM300
	29	Analogue Input - Negative Terminal	N/A	
	30	Analogue Input - Shield	N/A	
Analogue Output	31	Analogue Output - Positive Terminal	N/A	Not available in MM300
	32	Analogue Output - Negative Terminal	N/A	
	33	Analogue Output - Shield	N/A	
Programmable Relay - 02 - External Coil	34	24 V DC Supply - Positive	N/A	Not available in MM300
	35	24 V DC Supply - Negative	N/A	
Programmable Relay - 02	36	Normally Closed Output Relay Contact of Programmable Relay - 02	F5	IO_D Module - Normally Closed Output Relay Contact of Contact Output 2
	37	Normally Closed Output Relay Contact of Programmable Relay - 02	F6	
	38	Normally Open Output Relay Contact of Programmable Relay - 02	F5	IO_D Module - Normally Open Output Relay Contact of Contact Output 2
	39	Normally Open Output Relay Contact of Programmable Relay - 02	F4	
Programmable Relay - 01	40	Normally Closed Output Relay Contact of Programmable Relay - 02	F8	IO_D Module - Normally Closed Output Relay Contact of Contact Output 2
	41	Normally Closed Output Relay Contact of Programmable Relay - 02	F9	
	42	Normally Open Output Relay Contact of Programmable Relay - 02	F8	IO_D Module - Normally Open Output Relay Contact of Contact Output 2
	43	Normally Open Output Relay Contact of Programmable Relay - 02	F7	
Contact Output - 01	44	Live Terminal of the Contactor B Coil	C4	FIRST IO_C Module
	45	Neutral Terminal of the Contactor B Coil	C3	

Terminal Mappings MM3 to MM300 (Cont'd)

MM2 TERMINAL TYPE	MM2 #	MM2 TERMINAL NAME	MM300 EQUIVALENT TERMINAL	MM300 TERMINAL LOCATION
Contact Output - 02	46	Live Terminal of the Contactor A Coil	C2	FIRST IO_C Module
	47	Neutral Terminal of the Contactor A Coil	C1	
Control Power	48	Safety Ground Terminal	Ground Terminal of the PSU	Power Supply Module

Note: Equivalent terminals are based on the following MM300 order code : **MM300-G-E-H-S-3-C-A-C-D-C-E**

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GE Vernova has developed a Professional Services Process . The process is comprehensive, application specific, and includes customer collaboration for successful project implementation. GE Vernova's Professional Services Process is based on a common set of building blocks, utilized and tailored for each customer's unique communication network requirements. While GE Vernova uses well documented and repeatable processes, we realize that flexibility is also key to accommodate our customer's specific requirements and needs unique to their environment.

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