

**Measurement:** Volts, Amps, Amps Demand/Max, Power (real, reactive, apparent), Power Factor, Energy and Frequency (all models). Volts Average/Min/Max, Power Average/Min/Max (real, reactive, apparent), Displacement Power Factor and K-Factor (M3 only). Includes many per-phase & total parameters.

**Local Indication:** Display over 100 electric parameters in over 30 pre-configured screens with up to three display values per screen. All three values of 3-phase parameters are simultaneously displayed. Includes automatic display of engineering units in separate display.

**Port 1:** Optional configurable RS-232/RS-485 serial port or 0-1mA or 4-20mA transducer output (3). All parameters available in network-accessible registers/points.

**Port 2:** Standard RJ45 10BaseT/100BaseTX Ethernet port that can optionally support Modbus or DNP3 TCP/IP. Optional LC 100BaseFX fiber Ethernet port replaces RJ45 port.

**Protocols:** Modbus or DNP3 field selectable for optional serial and/or Ethernet port.

**Display Modes:** Fixed, Scroll, and Fast Forward. Enable/Disable displayable screens via front screen set-up with all network register parameters always available.

**Current Inputs:** Scaling is field selectable to display primary-side values when connected to CTs. Any custom ratios can be written. Field selectable elements. Optional external split core CTs (three) that replace conventional internal CTs are available.

**Voltage Inputs:** Scaling is field selectable to display primary-side values when connected to PTs. Any custom ratios can be written. Field selectable elements. Frequency range 45-65Hz.

**Auxiliary Power Supply:** A universal power supply 48 - 250V dc/55 - 240V ac nominal. An option exists to have the power supply voltage input value monitored and provided as a measurement point for display and/or SCADA output.

**Mechanical:** Three 5-digit, long life, red LED displays, 0.56" high. One 8-character red LED alphanumeric display. 4" round x 6.5" deep case. 4.5" Sq. faceplate.



## M650 Multifunction Meter Family

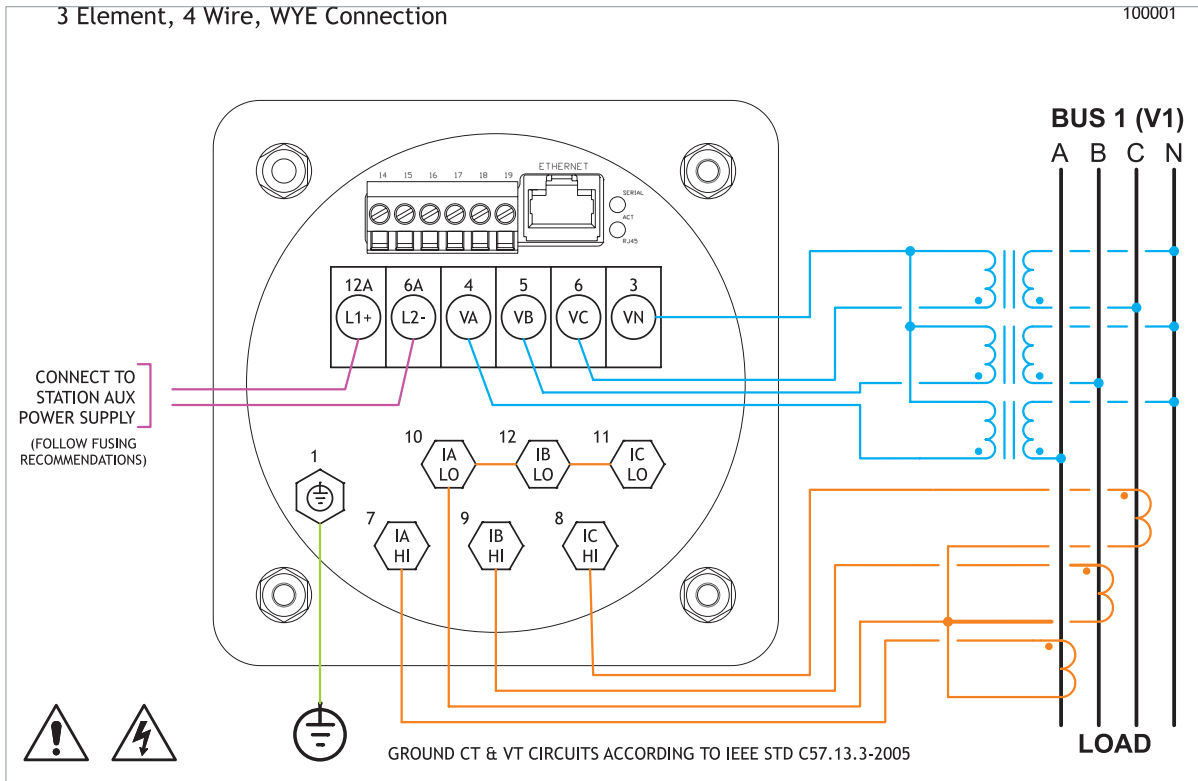
Order Number = Base Model + 4 Option Codes	
Select Base Model	
Meter type:	Base Model
Multifunction Standard 3-Phase, Alphanumeric	M650B3
Multifunction Advanced 3-Phase, Alphanumeric	M650M3

Select Option Codes		
Optional Features	Price Adder	Option Codes
<b>Power Supply</b>		
48-250V dc/55-240V ac	NO	U
48-250V dc/55-240 ac with monitoring (M3 only)	YES	P
<b>Signal Input Range</b>		
120V ac, 0-1 Amps	NO	1
120V ac, 0-5 Amps	NO	5
120V ac, 0-5 Amps Split Core CT (3)	YES	C
<b>Port 1</b>		
None (N/A with Signal Input Range Option C)	NO	0
Serial (Programmable RS-232/RS-485)	YES	1
Transducer (Three 4-20mA passive)	YES	2
Transducer (Three 0-1mA active)	YES	3
<b>Port 2</b>		
Service Only RJ45	NO	0
Ethernet RJ45 10/100Mb protocols enabled	YES	1
Fiber Ethernet LC 100Mb, protocols enabled (N/A with Signal Input Range Option C)	YES	2

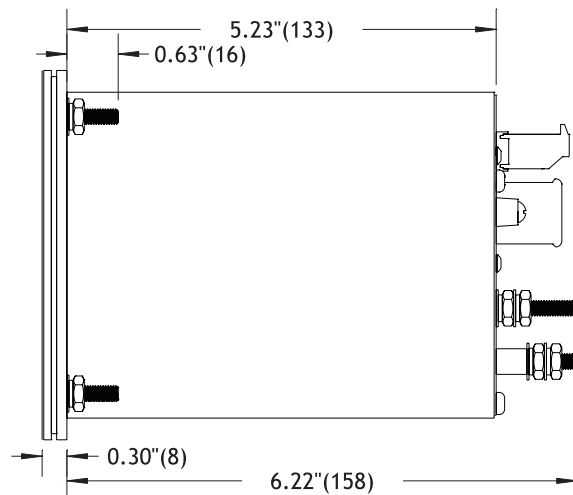
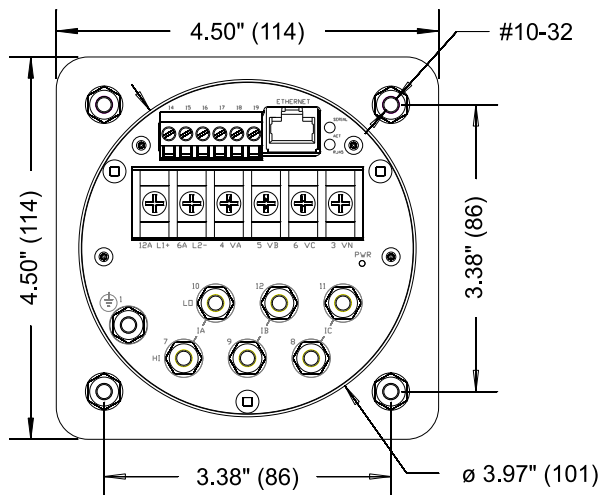
*Build order number by choosing base model number and then one new option code selection for each option type. An example: M650M3U510*

*Note: Default ratios (5:5 CT and 1:1 PT) will be provided.*

Optional Accessory for Mounting Split-Core CT		
Optional Feature	Price Adder	Option Codes
End Mount	YES	BRKTMX5XCTEND
Side Mount	YES	BRKTMX5XCTSIDE



Connections to M650 meters are simple and each M650 meter can accommodate all wiring configurations. Shown above is the 3 Element, 4 Wire Wye configuration (see M650 User Manual for other configurations).



**Contact:**