

Digital Panel Meter Features

RS485 MODBUS
Communication
(available in MFM,
VAF and EM Series)

Pulse Output
(24VDC, 100mA)

UL Listed



MFM374-C-CU sample meter.

Faceplate;
IP65 Protection Rating

7 Segment
LED Display

Available Functions;
Voltage, Current,
Power, Energy,
Frequency and
Power Factor
(true RMS values)

Standard DIN sizes (1/4 DIN, 1/8 DIN and 1/16 DIN)

RS485 MODBUS
Communication
(available in MFM,
VAF and EM Series)

Pulse Output
(24VDC, 100mA)

Analog Bar Graph Indicator
for Current Percentage

UL Listed



MFM384-C-CU sample meter.

Faceplate;
IP65 Protection Rating

Modern
LCD Display

Available Functions;
Voltage, Current,
Power, Energy,
Frequency and
Power Factor
(true RMS values)

PART NUMBER	Supply Voltage		Phases		Functions						Display			Pulse Output	RS485 MODBUS Communication	PAGE
	110VAC	85-270VAC	1 Phase	3 Phase	Voltage	Current	Power Factor	Power	Frequency	Energy	LED	LCD	Bar Graph			
MFM384-C-CU		✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	6
MFM383A-CU		✓		✓	✓	✓	✓	✓	✓	✓		✓		✓		6
MFM374-CU		✓		✓	✓	✓	✓	✓	✓	✓	✓			✓		7
MFM374-C-CU		✓		✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	7
VAF36A-110V-CU	✓			✓	✓	✓			✓			✓	✓			8
VAF36A-110V-CU	✓			✓	✓	✓			✓		✓					8
EM368-C-CU		✓		✓			✓	✓		✓		✓		✓	✓	9
MA12-110V-CU	✓		✓			✓					✓					10
MA12-50mV-DC-110V-CU	✓		✓			✓					✓					10
MA12-100mV-DC-110V-CU	✓		✓			✓					✓					10
MA501-110V-CU	✓		✓			✓						✓	✓			11
MA2301-110V-CU	✓			✓		✓						✓	✓			11
MV15-110V-CU	✓		✓		✓						✓					12
MV15-DC-20V-110V-CU	✓		✓		✓						✓					12
MV15-DC-200V-110V-CU	✓		✓		✓						✓					12
MV507-110V-CU	✓		✓		✓							✓	✓			13
MV2307-110V-CU	✓			✓	✓							✓	✓			13
MF16-110V-CU	✓		✓						✓		✓					14
MP14-110V-CU	✓		✓					✓			✓					14

MFM Series (Multi-Function Meters)

FEATURES

- Measurement Functions
 - 3 Ø Voltage (True RMS)
 - 3 Ø Current (True RMS)
 - 3 Ø Power Factor
 - 3 Ø Power (Active, Reactive, Apparent)
 - Energy (Active, Reactive, Apparent)
 - Frequency
- Programmable CT/ PT Primary/ Secondary
- RS485 Modbus RTU Communication
- Single Pulse Output



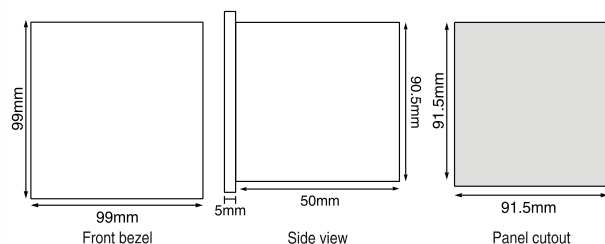
CAT. NO.

MFM384-C-CU

MFM383A-CU

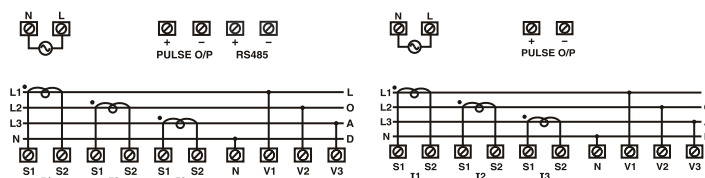
Display		
Display Type	LCD Display with backlight	LCD Display with backlight
Digits	4 rows of 4 digits 1 row of 8 digits for energy display	3 rows of 4 digits 1 row of 7.5 digits for energy display
Bargraph	Bargraph for current percentage	—
Display Scrolling	Automatic/ Manual	Automatic/ Manual
Supply Specification	85 ~ 270 VAC (50/ 60Hz)	85 ~ 270 VAC (50/ 60Hz)
Input Specification		
Electrical Wire System	3 Phase (3/4 wires), 2 Phase (3 wire), 1 Phase (2 wire)	3 Phase (3/4 wires), 2 Phase (3 wire), 1 Phase (2 wire)
Input Voltage Range	11 ~ 300 VAC (Phase to Neutral) 19 ~ 519 VAC (Phase to Phase)	11 ~ 300 VAC (Phase to Neutral) 19 ~ 519 VAC (Phase to Phase)
Input Current Range	10mA ~ 5A (External CT required for current >5A)	10mA ~ 5A (External CT required for current >5A)
Frequency	45 ~ 65Hz	45 ~ 65Hz
Parameter Resolution		
Energy	0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M	0.01k, 0.1k, 1k depending on CT ratio x PT ratio
Power, Voltage, Current	Auto resolution	Auto resolution
Power Factor	0.001	0.001
Accuracy Class		
Voltage (L-N, L-L), Current	+/- 0.5% of Full-Scale Value	+/- 0.5% of Full-Scale Value
Power Factor	+/-1%	+/-1%
Frequency	0.1 Hz +/- 0.1 Hz	0.1 Hz +/- 0.1 Hz
Active, Reactive, Apparent Power	1%	1%
Active, Reactive, Apparent Energy	Class 1	Class 1
Output Specifications		
Pulse Output	1	1
Pulse Voltage	24 VDC max.	24 VDC max.
Pulse Current	100mA max.	100mA max.
Pulse Duration	100ms +/-5ms	100ms +/-5ms
Communication	RS485 MODBUS Communication	—
Programmable Parameters		
CT Primary	1A/ 5A ~ 10,000A (Programmable for any value)	1A/ 5A ~ 10,000A (Programmable for any value)
CT Secondary	1A/ 5A (External CT must be connected for current >5A)	1A/ 5A (External CT must be connected for current >5A)
PT Primary	100V ~ 500 kV (any value)	100V ~ 10 kV (any value)
PT Secondary	100V ~ 500 VAC (any value)	100V ~ 500 VAC (any value)
Environmental Specifications		
Temperature	Operating: -10°C~55°C, Storage: -20°C~ 75°C	Operating: -10°C~55°C, Storage: -20°C~ 75°C
Humidity	Up to 85% RH	Up to 85% RH
Protection Level	IP65 for Faceplate	IP65 for Faceplate
Physical Specifications		
Size	1/4 DIN, 96 mm x 96 mm	1/4 DIN, 96 mm x 96 mm
Weight	0.70 lbs (318g)	0.70 lbs (318g)
Terminal Size Acceptability and Torque	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)

DIMENSIONS



MFM Series

TERMINAL CONNECTIONS



MFM384-C-CU

MFM383A-CU

FEATURES

- Measurement Functions
 - 3 Ø Voltage (True RMS)
 - 3 Ø Current (True RMS)
 - 3 Ø Power Factor
 - 3 Ø Power (Active, Reactive, Apparent)
 - Energy (Active, Reactive, Apparent)
 - Frequency
- Programmable CT/ PT Primary/ Secondary
- RS485 Modbus RTU Communication
- Single Pulse Output



Please
contact Altech
for UL status.



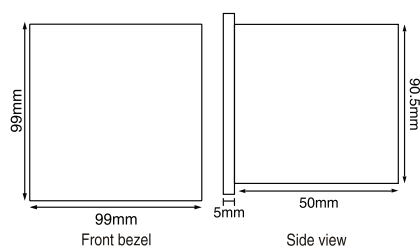
CAT. NO.

MFM374-C-CU

MFM374A-CU

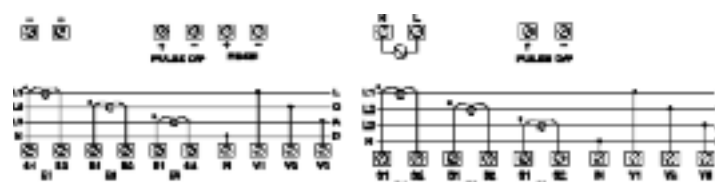
Display		
Display Type	7 Segment LED Display	7 Segment LED Display
Digits	3 rows of 4 digits 8 digits for energy display	3 rows of 4 digits 8 digits for energy display
Bargraph	-	-
Display Scrolling	Automatic/ Manual	Automatic/ Manual
Supply Specification	85 ~ 270 VAC (50/ 60Hz)	85 ~ 270 VAC (50/ 60Hz)
Input Specification		
Electrical Wire System	3 Phase (3/4 wires), 2 Phase (3 wire), 1 Phase (2 wire)	3 Phase (3/4 wires), 2 Phase (3 wire), 1 Phase (2 wire)
Input Voltage Range	11 ~ 300 VAC (Phase to Neutral) 19 ~ 519 VAC (Phase to Phase)	11 ~ 300 VAC (Phase to Neutral) 19 ~ 519 VAC (Phase to Phase)
Input Current Range	10mA ~ 5A (External CT required for current >5A)	10mA ~ 5A (External CT required for current >5A)
Frequency	45 ~ 65Hz	
Parameter Resolution		
Energy	0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M	0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M
Power, Voltage, Current	Auto resolution	Auto resolution
Power Factor	0.001	0.001
Accuracy Class		
Voltage (L-N, L-L), Current	+/- 0.5% of Full-Scale Value	+/- 0.5% of Full-Scale Value
Power Factor	+/-1%	+/-1%
Frequency	0.1 Hz	0.1 Hz
Active, Reactive, Apparent Power	1%	1%
Active, Reactive, Apparent Energy	Class 1	Class 1
Output Specifications		
Pulse Output	1	1
Pulse Voltage	24 VDC max.	24 VDC max.
Pulse Current	100mA max.	100mA max.
Pulse Duration	100ms +/-5ms	100ms +/-5ms
Communication	RS485 MODBUS Communication	-
Programmable Parameters		
CT Primary	1A/ 5A ~ 10,000A (Programmable for any value)	1A/ 5A ~ 10,000A (Programmable for any value)
CT Secondary	1A/ 5A (External CT must be connected for current >5A)	1A/ 5A (External CT must be connected for current >5A)
PT Primary	100V ~ 500 kV (any value)	100V ~ 10 kV (any value)
PT Secondary	100V ~ 500 VAC (any value)	100V ~ 500 VAC (any value)
Environmental Specifications		
Temperature	Operating: -10°C~55°C, Storage: -20°C~ 75°C	Operating: -10°C~55°C, Storage: -20°C~ 75°C
Humidity	Up to 85% RH	Up to 85% RH
Protection Level	IP65 for Faceplate	IP65 for Faceplate
Physical Specifications		
Size	1/4 DIN, 96 mm x 96 mm	1/4 DIN, 96 mm x 96 mm
Weight	0.71 lbs (320g)	0.71 lbs (320g)
Terminal Size Acceptability and Torque	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)

DIMENSIONS



MFM Series

TERMINAL CONNECTIONS



MFM374-C-CU

MFM374A-CU

VAF Series (Volt-Ampere-Frequency Meters)

FEATURES

- Measurement Functions
 - 3 Ø Voltage (True RMS)
 - 3 Ø Current (True RMS)
 - Frequency
 - RPM
 - Run Hour
- Programmable CT Primary, PT Primary/Secondary



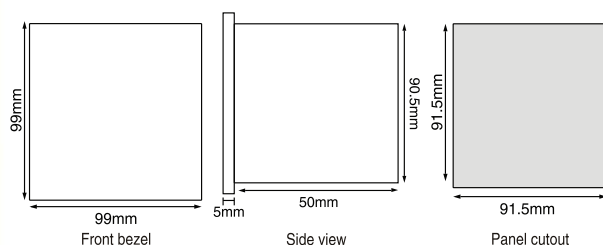
CAT. NO.

VAF36A-110V-CU

VAF39A-110V-CU

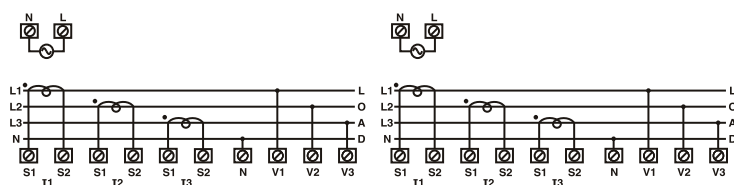
Display		
Display Type	LCD Display with backlight	7 Segment LED Display
Digits	3 rows of 3 digits	3 rows of 3 digits
Bargraph	Bargraph for current percentage	—
Display Scrolling	Automatic/ Manual	Automatic/ Manual
Supply Specification	110 VAC +/- 20% (50/60Hz)	110 VAC +/- 20% (50/60Hz)
Input Specification		
Electrical Wire System	3 Phase (3/4 wires)	3 Phase (3/4 wires)
Input Voltage Range	11 ~ 300 VAC (Phase to Neutral) 19 ~ 519 VAC (Phase to Phase)	11 ~ 300 VAC (Phase to Neutral) 19 ~ 519 VAC (Phase to Phase)
Input Current Range	20mA ~ 6A (External CT required for current >5A)	20mA ~ 6A (External CT required for current >5A)
Frequency	45 ~ 65Hz	45 ~ 65Hz
Parameter Resolution		
Current	0.01, 0.1, 1 A/KA	0.01, 0.1, 1 A/KA
Voltage	0.1 V/KV	0.1 V/KV
RPM	0.1	0.1
Run Hour	0.1 hr (0~99999.9 hr)	0.1 hr (0~99999.9 hr)
Accuracy Class		
Voltage (L-N, L-L), Current	+/- 0.5% of Full-Scale Value, +/- 2 digits	+/- 0.5% of Full-Scale Value, +/- 2 digits
Average Voltage (L-N, L-L), Current	+/-0.5% of Full-Scale Value, +/- 2 digits	+/-0.5% of Full-Scale Value, +/- 2 digits
Frequency	0.1 Hz	0.1 Hz
RPM	+/- 0.5%	+/- 0.5%
Run Hour	+/- 1%	+/- 1%
Output Specifications		
Pulse Output	—	—
Communication	—	—
Programmable Parameters		
CT Primary	5A ~ 10,000A (Programmable for any value)	5A ~ 10,000A (Programmable for any value)
CT Secondary	5A fixed (External CT must be connected for current >5A)	5A fixed (External CT must be connected for current >5A)
PT Primary	100V ~ 500 kV (any value)	100V ~ 500 kV (any value)
PT Secondary	100V ~ 500 VAC (any value)	100V ~ 500 VAC (any value)
Environmental Specifications		
Temperature	Operating: -10°C~55°C, Storage: -20°C~ 75°C	Operating: -10°C~55°C, Storage: -20°C~ 75°C
Humidity	Up to 85% RH	Up to 85% RH
Protection Level	IP65 for Faceplate	IP65 for Faceplate
Physical Specifications		
Size	1/4 DIN, 96 mm x 96 mm	1/8 DIN, 48 mm x 96 mm
Weight	0.79 lbs (357g)	0.79 lbs (357g)
Terminal Size Acceptability and Torque	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)

DIMENSIONS



VAF Series

TERMINAL CONNECTIONS



VAF36A-110V-CU

VAF39A-110V-CU

FEATURES

- Measurement Functions
 - 3 Ø Power (Active, Reactive, Apparent)
 - 3 Ø Power Factor
 - Energy (Active, Reactive, Apparent)
- Programmable CT Primary, PT Primary/Secondary
- RS485 Modbus RTU Communication
- Single Pulse Output

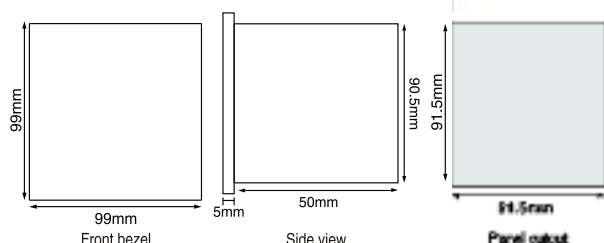


CAT. NO.

EM368-C-CU

Display		
Display Type		LCD Display with backlight
Digits		8 digits
Bargraph		—
Display Scrolling		Automatic
Supply Specification		85 ~ 270 VAC (50/ 60Hz)
Input Specification		
Electrical Wire System		3 Phase (3/4 wires)
Input Voltage Range		11 ~ 300 VAC (Phase to Neutral) 19 ~ 519 VAC (Phase to Phase)
Input Current Range		10mA ~ 5A (External CT required for current >5A)
Frequency		45 ~ 65Hz
Parameter Resolution		
Energy		0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M, 10M
Power		Auto resolution
Power Factor		0.01
Accuracy Class		
Power Factor		+/-1%
Active, Reactive, Apparent Power		+/-1%
Active, Reactive, Apparent Energy		Class 1
Output Specifications		
Pulse Output		1
Pulse Voltage		24 VDC max.
Pulse Current		100mA max.
Pulse Duration		100ms +/-5ms
Communication		RS485 MODBUS Communication
Programmable Parameters		
CT Primary		1A/ 5A ~ 10,000A (Programmable for any value)
CT Secondary		1A/ 5A (External CT must be connected for current >5A)
PT Primary		100V ~ 500 kV (any value)
PT Secondary		100V ~ 500 VAC (any value)
Environmental Specifications		
Temperature		Operating: -10°C~55°C, Storage: -20°C~ 75°C
Humidity		Up to 85% RH
Protection Level		IP65 for Faceplate
Physical Specifications		
Size		1/4 DIN, 96 mm x 96 mm
Weight		0.69 lbs (312g)
Terminal Size Acceptability and Torque		20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)

DIMENSIONS



EM Series

TERMINAL CONNECTIONS



EM368-C

MA12 Series (LED Ampere Meters)

FEATURES

- Measurement Function
 - **1 Ø Current (True RMS)**
- Programmable CT Primary / Shunt Setting
- AC version (CT Type)
- DC version (Shunt Type, External Shunt (50mV/100mV) is required for measurement.)
- 4 Digit LED Display



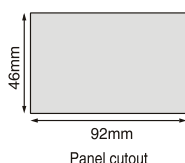
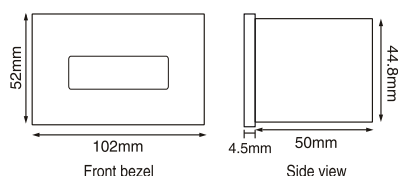
MA12-50mV-DC-110V-CU MA12-100mV-DC-110V-CU

CAT. NO.

MA12-110V-CU

Display	MA12-110V-CU	MA12-50mV-DC-110V-CU MA12-100mV-DC-110V-CU
Display Type	7 segment LED display	7 segment LED display
Digits	4 digits	4 digits
Bargraph	—	—
Display Range	0 - 4960A	0 - 4960A
Supply Specification	110 VAC +/-20% (60Hz)	110 VAC +/-20% (60Hz)
Input Specification		
Electrical Wire System	1 Phase (2 wire)	1 Phase (2 wire)
Measurement Type	AC, CT Type (External CT required for current > 5A)	DC, Shunt Type (External shunt is required for current > 5A)
Shunt Size	—	50mV (MA12-50mV) 100mV (MA12-100mV)
Input Current Range	50mA ~ 5A (External CT required for current >5A)	50mA ~ 5A (External shunt required for current >5A)
Frequency Range	45 ~ 65Hz	45 ~ 65Hz
Parameter Resolution		
Current	0.001, 0.01, 0.1, 1A (depending on CT Primary)	0.001, 0.01, 0.1, 1A (depending on shunt setting)
Sampling Rate	3 samples / sec.	3 samples / sec.
Accuracy Class		
Current	+/- 0.5% of Full-Scale Value	+/- 0.5% of Full-Scale Value
Output Specifications		
Pulse Output	—	—
Communication	—	—
Programmable Parameters		
CT Primary / Shunt Setting	5, 10, 20, 30, 40, 50, 60, 75, 80, 100, 150, 200, 250, 300, 400, 500, 600, 800, 1000, 1200, 1500, 1600, 2000, 2500, 3000, 4000	5, 10, 20, 30, 40, 50, 60, 75, 80, 100, 150, 200, 250, 300, 400, 500, 600, 800, 1000, 1200, 1500, 1600, 2000, 2500, 3000, 4000
CT Secondary	5A fixed (External CT must be connected for current >5A)	—
Environmental Specifications		
Temperature	Operating: -10°C~55°C, Storage: -20°C~ 75°C	Operating: -10°C~55°C, Storage: -20°C~ 75°C
Humidity	Up to 85% RH	Up to 85% RH
Protection Level	IP65 for Faceplate	IP65 for Faceplate
Physical Specifications		
Size	1/8 DIN, 48 mm x 96 mm	1/8 DIN, 48 mm x 96 mm
Weight	0.37 lbs (170g)	0.37 lbs (170g)
Terminal Size Acceptability and Torque	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)

DIMENSIONS



MA12 Series

TERMINAL CONNECTIONS



MA12-110V-CU (CT Type)



MA12-mV-DC-110V-CU (Shunt Type)

230 VAC versions also available, please consult Altech.

FEATURES

- Measurement Functions
 - 1 Ø Current (True RMS)
 - 3 Ø Current (True RMS)
- Integrated selector switch for phase selection (MA2301)
- LCD Display with Backlight
- Bargraph Indicator



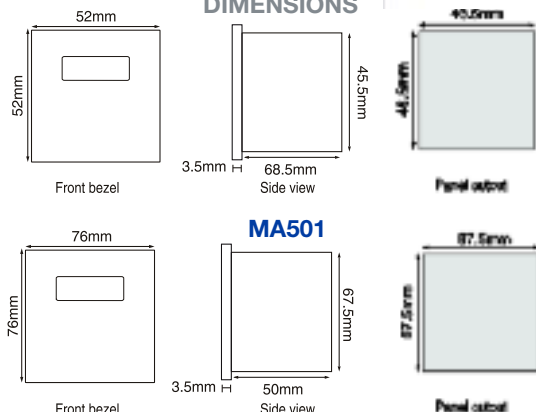
CAT. NO.

MA501-110V-CU

MA2301-110V-CU

Display		
Display Type	LCD display with backlight	LCD display with backlight
Digits	4 digits	4 digits
Bargraph	Analog bargraph indicator	Analog bargraph indicator
Display Range	0 ~ 6200A	0 ~ 6200A
Display Scrolling	—	manual phase selector switch
Supply Specification	110 VAC +/-20% (60Hz)	85 ~ 270 VAC (50/ 60Hz)
Input Specification		
Electrical Wire System	1 Phase (2 wire)	3 Phase/4 wire
Measurement Type	AC, CT Type (External CT required for current > 5A)	AC, CT Type (External CT required for current > 5A)
Input Current Range	50mA ~ 5A (External CT required for current >5A)	50mA ~ 5A (External CT required for current >5A)
Frequency Range	45 ~ 65Hz	45 ~ 65Hz
Parameter Resolution		
Current	0.001, 0.01, 0.1, 1A (depending on CT Primary)	0.001, 0.01, 0.1, 1A (depending on CT Primary)
Sampling Rate	3 samples / sec.	3 samples / sec.
Accuracy Class		
Current	+/- 0.5% of Full-Scale Value	+/- 0.5% of Full-Scale Value
Output Specifications		
Pulse Output	—	—
Communication	—	—
Programmable Parameters		
CT Primary	5, 10, 20, 30, 40, 50, 60, 75, 80, 100, 125, 150, 200, 250, 300, 400, 500, 600, 800, 1000, 1200, 1500, 1600, 2000, 2250, 2500, 3000, 4000, 5000	5, 10, 20, 30, 40, 50, 60, 75, 80, 100, 125, 150, 200, 250, 300, 400, 500, 600, 800, 1000, 1200, 1500, 1600, 2000, 2250, 2500, 3000, 4000, 5000
CT Secondary	5A fixed (External CT must be connected for current >5A)	5A fixed (External CT must be connected for current >5A)
Environmental Specifications		
Temperature	Operating: -10°C~55°C, Storage: -20°C~ 75°C	Operating: -10°C~55°C, Storage: -20°C~ 75°C
Humidity	Up to 85% RH	Up to 85% RH
Protection Level	IP65 for Faceplate	IP65 for Faceplate
Physical Specifications		
Size	1/16 DIN, 48 mm x 48mm	72 mm x 72 mm
Weight	0.25 lbs (113g)	0.40 lbs (163g)
Terminal Size Acceptability and Torque	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)

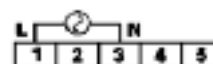
DIMENSIONS



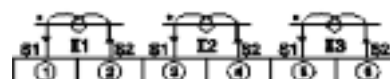
MA501

MA2301

TERMINAL CONNECTIONS



MA501-110V-CU



MA2301-110V-CU

230 VAC versions also available, please consult Altech.

MV15 Series (LED Voltage Meters)

FEATURES

- Measurement Function
 - 1 Ø Voltage (True RMS)
- 3 Digit LED Display



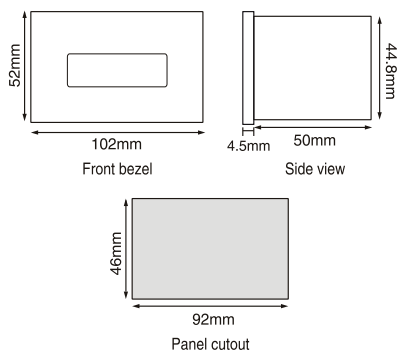
MV15-DC-20V-110V-CU MV15-DC-200V-110V-CU

CAT. NO.

MV15-110V-CU

Display	MV15-110V-CU	MV15-DC-20V-110V-CU MV15-DC-200V-110V-CU
Display Type	7 segment LED Display	7 segment LED Display
Digits	3 digits	3 digits
Bargraph	—	—
Display Range	0 - 516V	0 - 516V
Supply Specification	110 VAC +/-20% (60Hz)	110 VAC +/-20% (60Hz)
Input Specification		
Electrical Wire System	1 Phase (2 wire)	1 Phase (2 wire)
Input Voltage Range	50 ~ 516 VAC	0 ~ 20 VDC (MV15-20V) 0 ~ 200 VDC (MV15-200V)
Frequency	50/60 Hz	50/60 Hz
Input Impedance	1 MΩ (+/-5%)	1 MΩ (+/-5%)
Parameter Resolution		
Voltage	1V	1V
Sample Rate	3 samples / sec.	3 samples / sec.
Accuracy Class		
Voltage	+/- 0.5% of Full-Scale Value	+/- 0.5% of Full-Scale Value
Output Specifications		
Pulse Output	—	—
Communication	—	—
Programmable Parameters	—	—
Environmental Specifications		
Temperature	Operating: -10°C~55°C, Storage: -20°C~ 75°C	Operating: -10°C~55°C, Storage: -20°C~ 75°C
Humidity	Up to 85% RH	Up to 85% RH
Protection Level	IP65 for Faceplate	IP65 for Faceplate
Physical Specifications		
Size	1/8 DIN, 48 mmx 96 mm	1/8 DIN, 48 mmx 96 mm
Weight	0.38 lbs (170g)	0.38 lbs (170g)
Terminal Size Acceptability and Torque	20-14 AWG (0.5 - 2.5mm²), 6-7 lb-in. (0.68 - 0.79Nm)	20-14 AWG (0.5 - 2.5mm²), 6-7 lb-in. (0.68 - 0.79Nm)

DIMENSIONS



MV15 Series

TERMINAL CONNECTIONS



MV15-110V-CU (AC Type)



MV15-DC-20V-110V-CU (DC Type)
MV15-DC-200V-110V-CU (DC Type)

230 VAC versions also available, please consult Altech.

FEATURES

- Measurement Functions
 - 1 Ø Voltage (True RMS)
 - 3 Ø Voltage (True RMS)
- Integrated selection switch for Phase Selection (MV2307)
- LCD Display with Backlight
- Bargraph Indicator



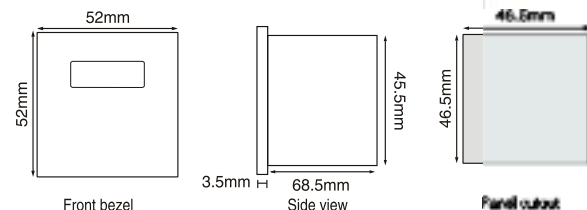
CAT. NO.

MV507-110V-CU

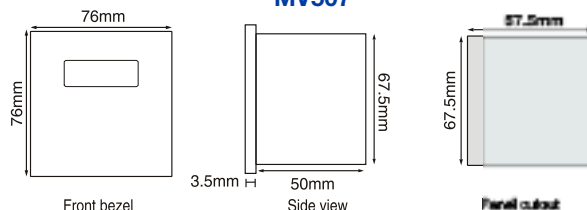
MV2307-110V-CU

Display		
Display Type	LCD display with backlight	LCD display with backlight
Digits	3 digits	3 digits
Bargraph	Analog style bargraph indicator	Analog style bargraph indicator
Display Range	0 - 516V	0 - 516V
Display Scrolling	-	manual phase selector switch
Supply Specification	110 VAC +/-20% (60Hz)	110 VAC +/-20% (60Hz)
Input Specification		
Electrical Wire System	1 Phase (2 wire)	3 Phase/4 wire
Input Voltage Range	50 ~ 516 VAC	50 ~ 516 VAC
Frequency	60 Hz	60 Hz
Input Impedance	1 MΩ (+/-5%)	1 MΩ (+/-5%)
Parameter Resolution		
Voltage	1V	1V
Sample Rate	3 samples / sec.	3 samples / sec.
Run Hour		
Accuracy Class		
Voltage	+/- 0.5% of Full-Scale Value	+/- 0.5% of Full-Scale Value
Output Specifications		
Pulse Output	-	-
Communication	-	-
Programmable Parameters	-	-
Environmental Specifications		
Temperature	Operating: -10°C~55°C, Storage: -20°C~ 75°C	Operating: -10°C~55°C, Storage: -20°C~ 75°C
Humidity	Up to 85% RH	Up to 85% RH
Protection Level	IP65 for Faceplate	IP65 for Faceplate
Physical Specifications		
Size	1/16 DIN, 48 mm x 48mm	72 mm x 72 mm
Weight	0.36 lbs (165g)	0.43 lbs (194g), 0.45 lbs (206g)
Terminal Size Acceptability and Torque	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)	20-14 AWG (0.5 - 2.5mm ²), 6-7 lb-in. (0.68 - 0.79Nm)

DIMENSIONS

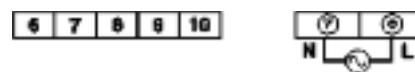


MV507



MV2307

TERMINAL CONNECTIONS



MV507



MV2307

230 VAC versions also available, please consult Altech.

MF16 Series (Frequency Meter) - MP14 Series (Power Factor Meter)

FEATURES

- Measurement Function
 - Frequency (MF16)
 - Power Factor (MP14)
- 4 Digit LED Display



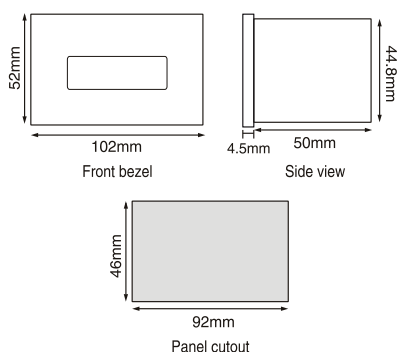
CAT. NO.

MF16-110V-CU

MP14-110V-CU

Display		
Display Type	7 segment LED Display	7 segment LED Display
Digits	4 digits	4 digits
Bargraph	—	—
Display Range	45.00 ~ 65.00 Hz	-1.000 ~ +1.000
Supply Specification	110 VAC +/- 20% (60Hz)	110 VAC +/- 20% (60Hz)
Input Specification		
Electrical Wire System	1 Phase (2 wire)	1 Phase (2 wire)
Input Current Range	—	0.25 ~ 6A
Frequency Range	45 ~ 65 Hz	50/60Hz
Parameter Resolution		
Frequency	0.01 Hz	—
Power Factor	—	0.001
Accuracy Class		
Frequency	+/- 0.05Hz	—
Power Factor	—	+/- 0.05% +/- 2 digits
Output Specifications		
Pulse Output	—	—
Communication	—	—
Programmable Parameters	—	—
Environmental Specifications		
Temperature	Operating: -10°C~55°C, Storage: -20°C~ 75°C	Operating: -10°C~55°C, Storage: -20°C~ 75°C
Humidity	Up to 85% RH	Up to 85% RH
Protection Level	IP65 for Faceplate	IP65 for Faceplate
Physical Specifications		
Size	1/8 DIN, 48 mmx 96 mm	1/8 DIN, 48 mmx 96 mm
Weight	0.37 lbs (170g)	0.37 lbs (170g)
Terminal Size Acceptability and Torque	20-14 AWG (0.5 - 2.5mm²), 6-7 lb-in. (0.68 - 0.79Nm)	20-14 AWG (0.5 - 2.5mm²), 6-7 lb-in. (0.68 - 0.79Nm)

DIMENSIONS

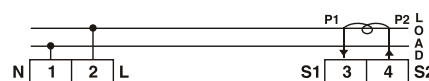


MF / MP Series

TERMINAL CONNECTIONS

N	L
1	2

MF16-110V-CU



MP14-110V-CU

230 VAC versions also available, please consult Altech.