



MFM383A

Multifunction Meter



Features

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



96 x 96mm

Specifications

Display Specifications

Display	3 rows, LCD with Backlight Lowest 7½ digit for energy display
Digits	4

Input Specifications

Electrical Connection	3Ø - 3 wire, 3Ø - 4 wire, 2Ø - 3 wire, 1Ø - 2 wire
Input Voltage Range	11 to 300V AC (L - N) 19 to 519V AC (L - L)
Input Current Range	Nominal 5A AC (Min - 11mA, Max - 6A)
Frequency	45 to 65Hz
Display Scrolling	Automatic / Manual
Power Consumption	8VA max
Display Reset	Programmable (For energy)
Resolution	For energy : 0.1k, 1k (depending upon CT ratio x PT ratio) For Power, Voltage, Current : Auto Resolution For Power Factor : 0.001
Accuracy	Voltage (L - N / L - L) : ±0.5% of F.S. Current : ±0.5% of F.S. Power Factor : ±0.01 Frequency : ±0.1% For L - N Voltage >20V, For L - L Voltage >35V Power (Active, Reactive, Apparent) : 1% Energy (Active, Reactive, Apparent) : Class 1
Memory Retention	10 years (For energy)
Measuring Parameters	Voltage (L - L / L - N) (Individual / Average), Current (Individual / Average), Frequency, Power Factor (Individual / Total), Active, Reactive & Apparent Power (Individual / Total), Active, Reactive & Apparent Energy (Total)

Output Specifications

Pulse Output	Voltage Range : External 24V DC max Current Capacity : 100mA max Pulse Width : 100ms ±5ms
Communication Interface and Protocol	RS485 and MODBUS RTU
Communication Address	1 to 255
Transmission Mode	Half duplex
Transmission Distance	500 meter maximum
Transmission Speed	300, 600, 1200, 2400, 4800, 9600, 19200 (in bps)
Parity	None, Odd, Even
Stop Bits	1 or 2
Response Time	100ms (max and independent of baud rate)

Auxiliary Supply Specifications

Supply Voltage:	100 to 240V AC, -15% to +12%, 50 / 60 Hz, (±5%)
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Settable Parameters

CT Primary	1 / 5A upto 10kA (Programmable for any Value)
CT Secondary	1 / 5A (Programmable)
PT Primary	100V to 10kV (Programmable for any Value)
PT Secondary	100V to 500V AC (L - L) (Programmable for any Value)

Environmental Specifications

Temperature	Operating Temperature : -10 to 55 C Storage Temperature : -20 to 75 C
Humidity (non - condensing)	Upto 85% RH

Mechanical Specifications

Weight	310gms (11Oz)
Mounting	Panel



Compliance

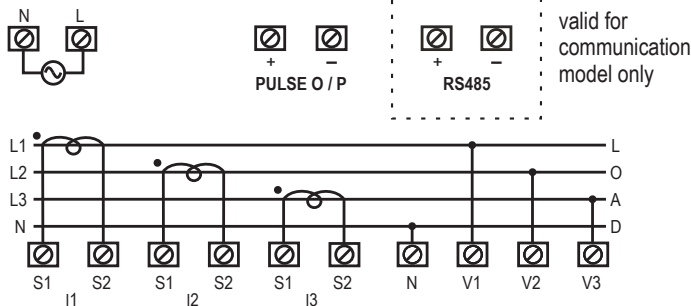
Applicable EMI / EMC Standards

Product Standard : IEC 61326 - 1

Category	Standards compliance	
ESD Immunity	IEC 61000 - 4 - 2	Level IV (Air Discharge : 15kV), (Contact Discharge : -8kV)
Surge Immunity	IEC 61000 - 4 - 5	+ / - 2kV Common Mode, (Line to Ground) + / - 1kV Differential Mode, (Line to Line)
Radiated Susceptibility	IEC 61000 - 4 - 3	Level III, 80 to 1000MHz(10V / m) Level II, 1.4GHz to 2GHz (3V / m) Level I, 2GHz to 2.7GHz (1V / m)
Conducted Susceptibility	IEC 61000 - 4 - 6	Level II (3V / m)
Voltage Dips and Interruptions	IEC 61000 - 4 - 11	Dips : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C) 70% residual voltage / 25 cycles 50Hz / 30 cycles 60Hz (Criteria C) Interruptions : 0% residual voltage / 250 cycles 50Hz / 300 cycles 60Hz (Criteria C)
Conducted Emission	CISPR - 11	
Radiated Emission	CISPR - 11	
Electrical Fast Transient	IEC 61000 - 4 - 4	Level III (2kV)

Terminal Connection

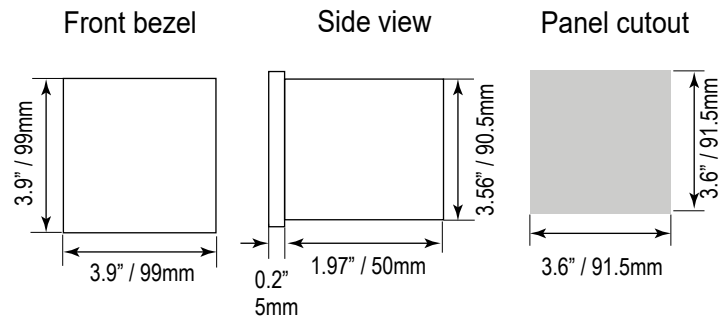
MFM383A / MFM383A-C



IEC Cable Size (mm) : 0.5 to 2.5; Tightening Torque (N - m) : 0.68 to 0.79

UL Cable Size (AWG) : 20 to 14; Tightening Torque (Lb - inch) : 6.018 to 6.992

Dimensions



Ordering Information

Product code	Supply voltage 100 to 240V AC (-15% to +12%)	Output		Certification
		Pulse Output	Comm. (RS485)	
MFM383A	Yes	Yes		
MFM383A-C-CE	Yes	Yes	Yes	CE RoHS
MFM383A-CU	Yes	Yes		CE RoHS & UL