MFM383A

Multifunction Meter



96 x 96mm

Features :

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

Certifications : CE

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	85 to 270V AC / DC

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)

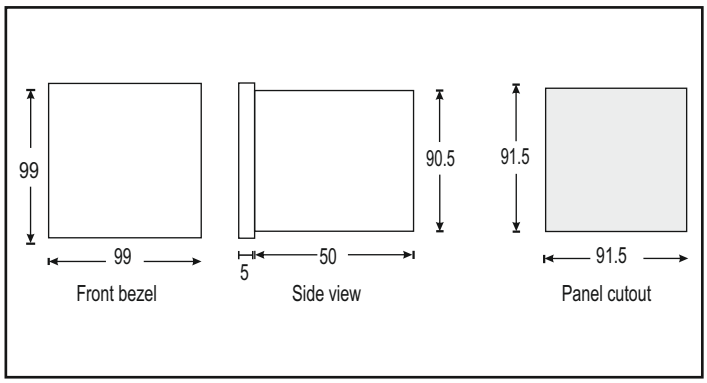
Environmental specifications

Temperature	Operating temperature : -10º to 55ºC Storage temperature : -20º to 75ºC
Humidity (Non - condensing)	Upto 85% RH

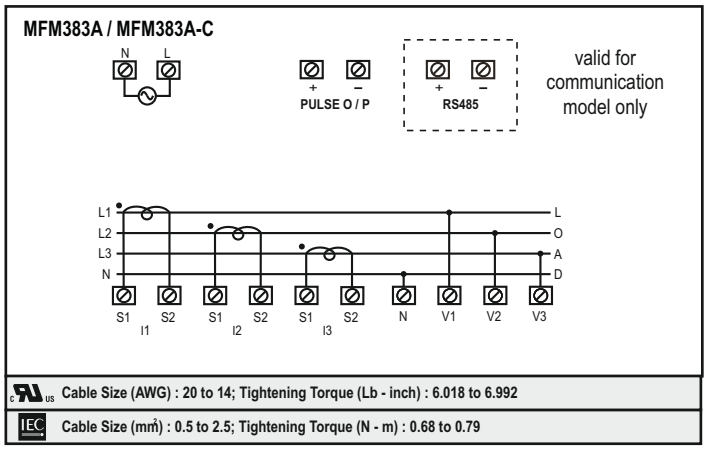
Mechanical specifications

Mounting	Panel
Weight	310gms

Dimensions



Terminal connection



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)

Ordering information

Product code	Supply voltage	Output		Certification	
	85 to 270V AC / DC	Pulse output	Comm. (RS485)		
MFM383A	Yes	Yes	- -	- -	- -
MFM383A-C-CE	Yes	Yes	Yes	CE	- -