Multifunction Meter

MFM376+



96 x 96mm

Features:

- 3Ø True RMS (Voltage, Current)
- 3Ø Power (Active, Reactive, Apparent)
- 3Ø Energy (Active, Reactive, Apparent) (Import / Export), Total
- 3Ø Power factor (Average, Individual, Displacement PF)
- Min / Max demand Power & Current
- Neutral current
- Run Hour, RPM & Auxiliary interrupts
- Digital input
- % unbalance for Voltage and Current
- %THD Upto 31 level

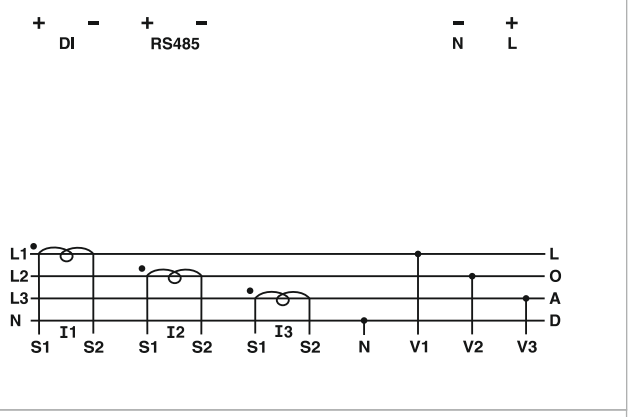
Certifications: CE

Technical specifications

Display specifications	
Display	7 segments LED, 3 rows
Digits	4 digits
Digit height	0.49"
Resolution	For Energy: 0.001k (auto resolution)
	For Power, Voltage, Current: Auto resolution
	For Power factor: 0.001
	For Frequency: 0.01 Hz
Input specifications	
Type of measurement	True RMS
Sampling rate	100 Samples / Cycle
Electrical connections	3Ø - 3 wire (Delta), 3Ø - 4 wire (Wye), 1Ø - 2 wire (L-L), 1Ø - 2 wire (L-N)
Data update rate	1 sec
Input - Voltage	
PT primary	100V to 999kV (programmable for any value)
PT secondary	100 to 500V (programmable)
Voltage nominal	20 to 347V AC(L-N), 35 to 600V AC (L-L)
Measured V with full range	11 to 300V AC [L-N], 19 to 519V AC [L-L]
Impedance	≥0.8MΩ
Frequency range	45-65Hz
VA burden	<0.2VA at 300V AC [L-N] / Phase
Input current	
CT ratings primary	1A to 32760A (programmable for any value)
CT ratings secondary	1/5A (programmable)
Current nominal	5A
Measured current with over range	10mA to 6A
Short circuit withstand capacity	120A for 1 sec
Frequency range	45-65Hz
VA burden	0.5VA at 5A / Phase

Measurement accuracy	
Accuracy	Voltage (L-N / L-L): ±0.5% of full scale
	Current: ±0.5% of full scale
	Power factor: ±0.01
	Frequency: ±0.05% For L - N Voltage >20V, For L - L Voltage >35V
	Power (Active - ±0.5%, Reactive - ±1%, Apparent - ±0.5%)
	Energy (Active - Class 0.5S, Reactive - Class 1, Apparent - Class 0.5S)
Output specifications	
Device ID & Parity	1 to 247 & None, Odd, Even
Protocol & Interface	RS485 and MODBUS RTU
Transmission mode	Half duplex
Data types	Float and Integer
Transmission distance	500m maximum
Transmission speed	300, 600, 1200, 2400, 4800, 9600, 19200 (in bps)
Stop bits	1 or 2
Isolation	2kV RMS
Mechanical specifications	
Weight	260 gm approx.
Material	PC RAL 7035 GREY
IP degree of protection	Front IP65, Back IP20
Torque at terminals	0.68 N-m to 0.79 N-m
Wire gauge at terminals	20 to 14 AWG; 75 °C
Mounting position	Vertical
Auxiliary supply specifications	
Supply voltage	40 to 300V AC/DC, 45-65Hz
Power consumption	<6VA / 2W
Environmental specifications	
Operating temperature	-10 °C to 55 °C (14 °F to 140 °F)
Storage temperature	-20 °C to 75 °C (-4 °F to 167 °F)
Humidity	Up to 85% RH (non - condensing)
Altitude	Up to 2000 meters (6561 ft.)
Measurement category	CAT III
Pollution degree	2

Terminal connections



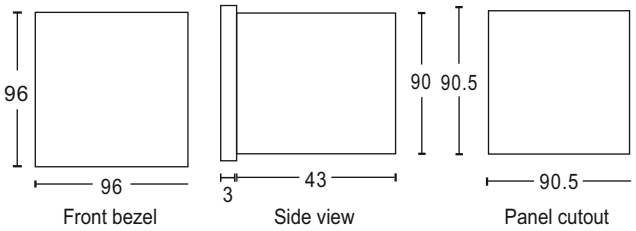
Cable Size (AWG) : 20 to 14; Tightening Torque (Lb - inch) : 6.018 to 6.992

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

Compliance

Applicable EMI / EMC Standards	
Product standard : IEC 61326-1 Edition 3.0	
Category	**Standards compliance**
Electrostatic discharge	IEC 61000 - 4 - 2
Immunity to electromagnetic RF fields	IEC 61000 - 4 - 3
Conducted immunity	IEC 61000 - 4 - 6
Immunity to magnetic fields	IEC 61000 - 4 - 8
Immunity to voltage dips and interruptions	IEC 61000 - 4 - 11
Fast transient	IEC 61000 - 4 - 4
Immunity to surge waves	IEC 61000 - 4 - 5
Conducted and radiated emissions	CISPR-11
Safety standards	
IEC61010 Edition 3.0 CAT III, Protection class II	

Dimensions (All are in mm)



Ordering information

Product code	Supply voltage	Output		Certification
		Pulse output	Comm. (RS485)	
MFM376-C-D-CE-CL05-Plus	40 to 300V AC/DC	YES	YES	CE