2F., No.14, Ln. 123, Sec.6, Minquan E. Rd.,
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MFM-3000 Smatr Power Meter

Ethernet-enabled revenue class multifunction meter for power measurement, power quality analysis, and power usage reporting.

Features

- Class 0.5 bi-directional energy and full power parameters measurement.
- Block or Rolling power demand measurement.
- THD, individual harmonics, and sag/swell power quality records.
- Time-of-Use measurement with 4 tariff
- Data logging for alarm, sag, swell events with time-stamped.
- Report generation for daily and monthly power usage including kWh, Demand, peak THD, peak voltage, max/min kW …etc.
- Communication interfaces：Ethernet, RS485, DNP3.0
- Communication protocol: Modbus over TCP/IP for Ethernet, Modbus for RS485.
- Up to 4 channels of re-transmission analog outputs for field integration.
- 12 digital inputs for power system status monitoring.
- 2 digital relays for kWh pulse or alarm outputs.
- Automatic detection of voltage & current wiring
- Multi-language support

Certificate

- LVD Test Report：EN61010-1
- CE Test Report：
  - EN61326 Conducted Emission
  - EN61000-3-2 Harmonic Current Emission
  - EN61000-4-2 Electrostatic Discharge
  - EN61000-4-4 Electrical Fast Transient/Burst
  - EN61000-4-6 Conducted Susceptibility
  - EN61000-4-11 Voltage Dips and Interruption
  - EN61326 Radiated Emission
  - EN61000-3-3 Voltage Fluctuation and Flicker
  - EN61000-4-3 Radiated Susceptibility
  - EN61000-4-5 Surge
  - EN61000-4-8 Power Frequency magnetic Field
- FCC Test Report：Class A and CISPR 22
- Rain and Dust Test Report：Panel IP54

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Specification

Power parameters measure	Current : 3 phase, neutral, accuracy 0.1% Voltage : 3 phase phase-phase, phase-neutral, accuracy 0.1% Frequency : 47-63 Hz Total power : Active, reactive, apparent power, accuracy 0.5% Power per phase : Active, reactive, apparent power, accuracy 0.5% Power factor(True and Fundamental) : Total, per phase
Energy measure	Energy : Active, reactive, apparent energy, accuracy 0.5% Bi-directional energy : Deliver and receive kWh, kVARh, kVAh
Demand measure*	Bi-directional Block/Rolling demand
Power Quality measure*	Harmonic : V, I THD and individual harmonics Sag/Swell : Configurable setting points
Report and event logging*	Report : - Daily report : this day, yesterday - Regular report : this period, last reset Event logging : Sag, swell, alarm logging Load Profile(Optional only in TOU Model)
Display and input/output	Panel display : Mono 128 x 128 STN-LCD Digital input : 12 channel dry contact inputs Digital output : 2 channel relay for alarm or kWh pulse output Analog input* : 4 channel 4-20mA input Analog output : 4 channel 4~20 mA for V, I, kW, kVA, kVAR Voltage connection : not exceed 600 V Current connection : 0~5A Power supply : 86~242 Vac or 100-300VDC
Communication	Primary port : RS485 Modbus protocol Secondary port* : RFID Wireless Secondary RS485 port, DNP3.0(Optional only in TOU Model)
Environmental & Physical	Operation temperature : -10℃to 55℃ Storage temperature : -25℃ to 60℃ Humidity : 20 to 80%RH (non-condensing) Dimensions : 144mm(L) x 144mm(W) x 94mm(H)

*Only in Advance model(Including TOU model)

Ordering Code

MFM-3000-□□□□□□□

- Model
  - Advance with TOU Function
- Secondary Port
  - 0 : No secondary port
  - 1 : RFID Wireless
  - 2 : RS485 With Modbus
  - 3 : DNP3.0
- AI function
  - 0 : Without AI function
  - 1 : With AI function
- AO function
  - 0 : Without AO function
  - 1 : With AO function
- Frequency
  - 0. 60Hz
  - 1. 50Hz
- CT Option
  - 0. None : With interal
  - 1. 10A External, CTΦ10mm, 10mA~10A
  - 2. 60A External, CTΦ10mm, 25mA~60A
  - 3. 120A External, CTΦ16mm, 50mA~120A
  - 4. 200A External, CTΦ24mm, 100mA~200A
  - 5. 1000A External, CTΦ50.8mm, 1~1000A
  - 6. 1000A External, Rogowiski CT
  - 7. 2000A External, Rogowiski CT