

GM-EM-1P-DirC-LoRa-MID

LoRaWAN Electricity Meter



- Single-phase 100A direct connection
- MID certified
- High accuracy, Class 1/ Class 0.5
- Multi-parameter measurements
- Bi-directional measurements for kWh and kVh
- Configurable pulsed output
- Built-in LoRaWAN communication
- Confirmations / offline detection available
- Support auto-upload mode for uploading data to back server actively
- Auto-resume mode for sudden power off of the gateway
- Download / upload time interval can be set or adjusted
- Wide range of LoRa bands (EU868/AS923/CN433/CN470/AU915/US902 MHz, etc.)



GM-EM-1P-DirC-LoRa-MID measures and displays the characteristics of single-phase two wire (1p2w) supplies, including kWh, kVArh, kW, kVAr, kVA, PF, Frequency, Voltage, Current, dmd, THD etc.

Supports Max.100A direct connection, saving on installation costs for external CTs. Maximum demand current can be measured over periods of up to 60 minutes.

This unit has a built-in LoRaWAN module which allows long-range wireless communication. Two pulse outputs are available for real-time energy measurement.

Maximum of 6 parameters can be sent using LoRaWAN payloads.



Specification	
Nominal Voltage (Un)	120V or 230V AC
Operational Voltage	80%~120% of Un
Insulation Capabilities	
-AC Voltage Withstand	4kV for 1 minute
-Impulse Voltage Withstand	6kV ~ 1.2μs
Basic Current (Ib)	10A
Maximum Rated Current (Imax)	100A
Operational Current Range	0.4% Ib-Imax
Over Current Withstand	30 Imax for 0.01s
Operational Frequency Range	50 or 60Hz
Internal Power Consumption	<2W/10VA
Pulse Output 1	10000imp/kWh (configurable)
Pulse Output 2	1000imp/kWh
Max Reading	99999.99kWh

Performance Criteria	
Operating Humidity	<90%
Storage Humidity	<95%
Operating Temperature	-25 ~ + 55 degrees
Storage Temperature	-40 ~ + 70 degrees
Reference Temperature	23 + 2 degrees
International Standard	IEC 62053-21 / EN50470-1/3
Accuracy Class	Class 1 / Class B
Installation Category	CAT II
Mechanical Environment	M1
Electromagnetic Environment	E2
Degree of Pollution	2
Protection against penetration of dust and water	IP51 (indoor)
Insulation enclosed meter of protective class	II
Electrostatic Discharges	8kV contact / 15kV air gap
Electromagnetic HF Fields	IEC 6100-4-3
Electrical Fast Transients	4kV
Surge	4kV
Radiated & Conducted Emissions	EN55022

Accuracy	
Voltage , Current	0.5%
Frequency	0.2% of mid-frequency
Power Factor	1% of unity (0.01)
Active power, Apparent power	+1% of range maximum
Reactive power	+1% of range maximum
Reactive energy (VArh)	Class 2
Active energy (Wh)	Class 1

Communications	
Interface standard and protocol	LoRaWAN specification 1.0.2
Frequency	EU868/AS923/AU915/US902/CN470/CN433
LoRaWAN Classes	Class C
Auto-upload	Max. 20 parameters
Auto-upload Interval	Configurable
Activation Way	OTAA or ABP
Output Power	13dBm in transmission
Coding Format	ASCII
Communication Distance	1500M in an open area

Pulse Output	
Pulse Output	2
Pulse output type	Passive
Pulse Output 1	Configurable
Pulse Width	200 / 100 (default) / 60ms
Pulse Output 2	1000imp/kWh

Compatible with the GoMonitor Cloud Platform

