

ELECTRICAL SAFETY
POWER QUALITY
ENERGY MANAGEMENT



Single Phase and Three Phase Energy Meter GEM230/GEM630

- Comply with MID EN50470 Class B
- Build in Modbus RTU communication
- 2 tariffs energy counter
- THD harmonics measurement

Single Phase and Three Phase Energy Meter

GEM230/GEM630



Product Description

GEM230/GEM630 Energy Meter is used to record and indicate electrical parameters for electrical network. The GEM230/GEM630 series is a top new-generation intelligent din-rail energy meter, used not only in the electricity distribution system and private metering.

GEM230/GEM630 is an advanced digital single-phase multi-function energy meter, which measures up to 100A direct load or CT Operated 1A/5A. The unit measures active energy, reactive energy, current, voltage, power, power factor, frequency, demand, etc. Bi-directional measurement makes this unit an ideal choice for Solar PV / generation plant measurement. A remote communication port is provided, RS485 Modbus RTU or M-bus EN13757-3 and Communication parameters are password protected in setup mode. User can check data and

Device Features

- Measurement accuracy according to MID Class B
- Direct Connection up to 100A
- CT Operated 1A/5A
- The unit measures active energy, reactive energy, current, voltage, power, power factor, frequency, demand, etc.
- THDV & THDI measurement
- Memory Recording for energy, demand, max demand & max/min record
- Build in Modbus RTU communication
- MID certified
- Multi-tariff

Typical Applications

- Low voltage distribution networks
- Power station
- Generation plant
- Data Center
- Consumer billing
- Retails shop
- Commercial/residential building
- Oil & Gas Plant
- Offshore and marine

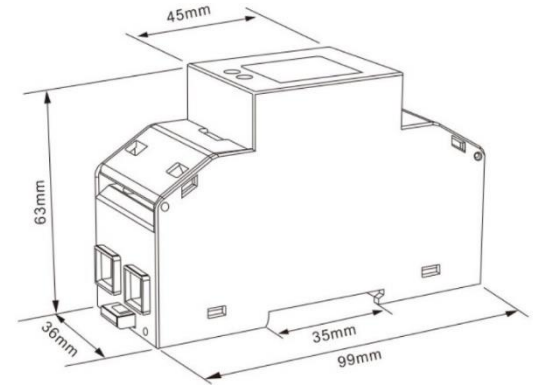
Technical Specification

	Model		
	GEM230-D	GEM630-D	GEM630-CT
Connection Type	1 Phase Direct 100A	3 Phase Direct 100A	3 Phase CT Operated
Nominal voltage(Un)	120V or 230Vac	3x230/400Vac	
Operational voltage	80%~120% of Un		60%~120% of Un
Maximum rated current (Imax)	100A (0.4% Ib-Imax)		5A CT (0.4% Ib-Imax)
Overload	30 Imax for 0.01s		20 Imax for 0.01s
Insulation capabilities			
AC voltage withstand	4KV for 1 minute		
Impulse voltage withstand	6KV-1.2μS		
Operational frequency range	50 or 60Hz		
Internal power consumption	≤ 2W/10VA		
Environment Protection			
Operating humidity	≤ 90%		
Storage humidity	≤ 95%		
Operating temperature	-25°C - +55°C		
Storage temperature	-40°C - +70°C		
Reference temperature	23°C± 2°C		
Installation category	CAT II	CAT III	CAT III
Mechanical environment	M1		
Electromagnetic environment	E2		
Degree of pollution	2		
Protection	IP51(indoor)		
Insulating Class	II		
Electrostatic discharges	8kV contact / 15kV air gap		
Radiated & emissions	EN 55022		
Accuracy class			
Voltage, Current	0.5%		
Frequency	0.2% of mid-frequency		
Power factor	1% of unity (0.01)		
Active Power / Reactive power	±1% of range maximum		
Reactive energy (Varh)	Class 2		
Active energy (Wh)	Class 1		
International standard	IEC 62053-21 / EN50470-1/3		
Accuracy class	Class1/Class B		
Communication			
Bus type	RS485		
Protocol	Modbus RTU		
Pulse output 1	Configurable		
Pulse output 2	1000imp/kWh	400imp/kWh	3200 imp/kWh
Max reading	99999.9 kWh	999999.99 kWh/kVarh	9999999.9 kWh/kVarh

Dimensions & Ordering Code

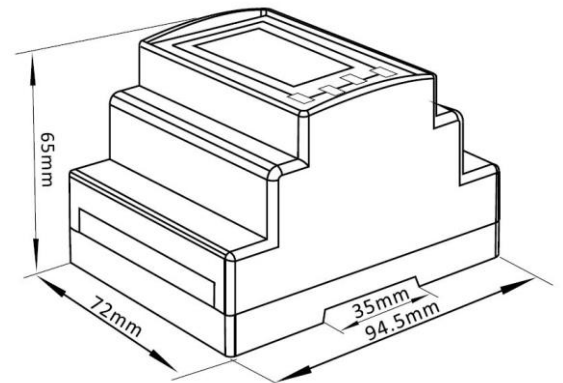
Ordering Code for GEM230 / GEM630

G	Eetarp Product Fixed Code
E	Fixed Code
M	Fixed Code
X	Reserved
M	M = MID Class
X	C = MODBUS RTU M = Mbus
X	5 = RS485
X	1 = 1 Phase Direct 100A 2 = 3 Phase Direct 100A 3 = 3 Phase CT Operated 1/5A
X	1 = Basic (imp/Exp kwh) 2 = Multi-function Meter
X	X = No Pulse Outputs 2 = 2 Pulse Outputs
X	X = No Tariffs 2 = 2 Tariffs 4 = 4 Tariffs
X	1 = 1% 5 = 0.5%



Common GEM230 / GEM630 Variants

Order Number	Type	Features
GEMXMC512221	GEM230-D	1 Phase Direct Connection 100A
GEMXMC522221	GEM630-D	3 Phase Direct Connection 100A
GEMXMC532221	GEM630-CT	3 Phase CT Operated



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