

ECM905 Multifunction Power Meter



Description

ECM905 three phase multifunction energy statistical meter is high accuracy of class 0.5S and used for measuring true rms four quadrant multi-rate energy. It's suit for various voltage "level of power system.voltage level of power system."

ECM905 offer kinds of historical data records allowing users to check the daily four quadrant multi-rate energy of last 31days and also check the monthly four quadrant multi-rate energy of last 12 months. All historical data can be read from the panel or RS485 communication port. Beside a RS485 COM port, ECM905 provides 2 pulse outputs to get energy value. Users can use these channels to set up smart energy metering network. The connection mode of pluggable terminals of ECM905 is easy to install and maintain. Especially, the wiring of current input adopts securing fixed mode to avoiding danger of disconnection.

Feature

- Suit for LV/ HV voltage system
- Measurement of bidirection four quadrant energy
- Accuracy of active energy is class 0.5, according to IEC62053-22
- Large high-contrast LCD, user-friendly and easy handing.
- Password protect
- RS485 communication port, support MODBUS-RTU protocol
- Two optical isolation pulse output
- Static and record historical energy data
- Pluggable terminals, easy to install and maintain.

Parameters

Instantaneous, RMS value

Current (I, In)
Phase to neutral and phase to phase voltage (U_{L-N}, U_{L-L})
Frequency (F)
Total and per phase active, reactive and apparent power (ΣP , ΣQ , ΣS , 3P, 3Q, 3S)
Total and per phase power factor (ΣPF , 3PF)

Input/Output

Two optical isolation pulse output(kwh, kvarh)

Meters

Active and reactive energy 4 quadrants (Imp kWh, Exp kWh, Imp kvarh, Exp kvarh)

Communication

RS-485 MODBUS Protocol

Optional Functions

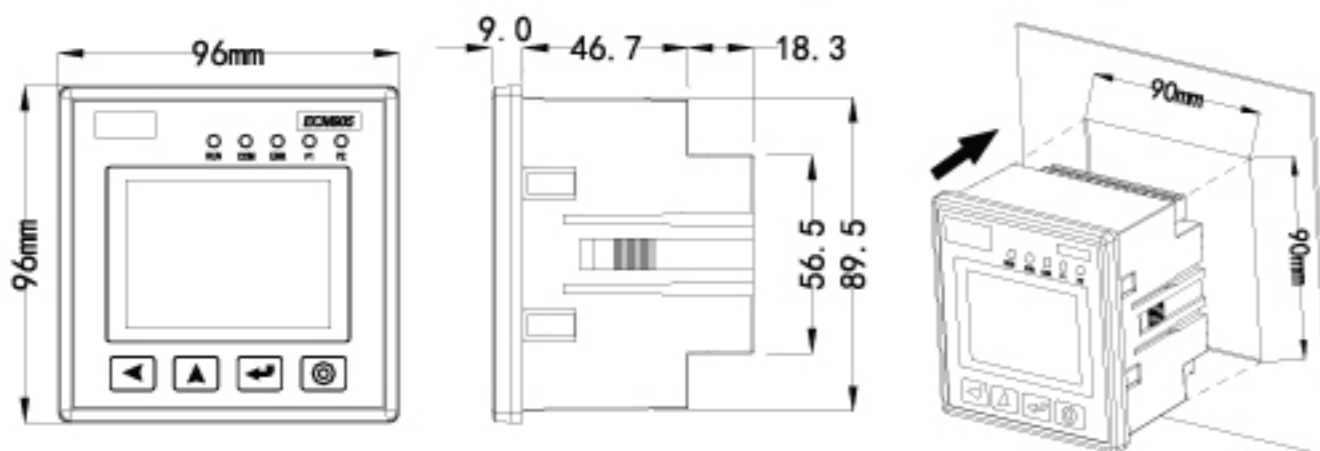
Statistics of multi-tariff energy: 8 periods of time, 4 different tariff
Record historical energy value: (kWh & kvarh) data of the past 31 days/ 12 months
One RS485 communication port: support Modbus-RTU protocol

Electrical Characteristic

Current measurement	
CT primary	5 to 9,999 A
CT secondary	1 or 5A
Overload capacity	1.2 times of rated
Voltage measurement	
Direct measurement	22 to 500V
PT Ratio (primary/secondary)	1 to 4999
PT primary	0 - 500 kV
PT secondary	57.7/100V
Power measurement	
Per phase	0 - 100 MW/var/VA
Total	0 - 100 MW/var/VA
Power factor measurement	
Measurement range	-1.000 - + 1.000
Frequency measurement	
Measurement range	45-65Hz
Energy measurement	
Metering range	0 - $\pm 99,999,999.9$ kWh, kvarh
Accuracy	
Current	0.2%
Voltage	0.2%
Power	0.5%
Power factor	0.5%
Frequency	0.2%
Active energy	IEC62053-22 Class 0.5S
Reactive energy	IEC62053-23 Class 2

Auxiliary power supply	
Voltage	85-265 VAC/45-65 Hz, 100-300 VDC
Power consumption	< 3VA
Communication	
Link	RS-485
Protocol	MODBUS-RTU
MODBUS Speed	4,800, 9,600 bauds
Pulse outputs	
Number of output	2
Impulse output(secondary)	1,000-9,900 imp/kwh, kvarh
Impulse duration (width)	50ms
Environment	
Operating temperature	-20°C to +60°C
Storage temperature	-30°C to +70°C
Relative humidity	5% to 95%, non-condensing

Dimension and Installation (Unit : mm)



Type	panel mounting
Dimension WxHxD without option module	96 x 96 x 65
Cut-out dimension	89.5 x 89.5
Display type	LCD
Weight	500g

Order Information

ECM905 - □ - □	
① ②	
① : Auxiliary Function	
F	Statistics of multi-tariff energy
D	Record historical energy value
C	One RS485 communication port
② : Measurement Parameter	
V1	Rated Voltage/Current Input : 57.7/100V, 5A
V2	Rated Voltage/Current Input : 57.7/100V, 1A
V3	Rated Voltage/Current Input : 220/380V, 5A
V4	Rated Voltage/Current Input : 220/380V, 1A

Standards

IEC62053-22 Class 0.5S	Active energy class
IEC62053-23 Class 2	Reactive energy class
IEC61000-4-2, Level 4	Electrostatic discharge immunity test
IEC61000-4-3, Level 3	Radiated immunity test
IEC61000-4-4, Level 4	Electrical fast transient/burst immunity test
IEC 61000-4-5, Level 4	Surge immunity test (1.2/50 μ s-8/20 μ s)
EN55022, Class B	Conducted emissions
EN55022, Class B	Radiated emissions