

# E-POWER

## ECM700 Series

### Multifunction Power Meters

ECM725

➔ ECM700



Harmonics

SOE

Modbus / Profibus

Digital I/O

Analog Output

Demand

E-Power Technology Ltd.

<http://www.e-powertech.ca>

# ECM700 Multifunction Power Meter

## Description

The ECM700 series three phase multifunction power meters are suit for up to 220kV system.

The compact device is designed for monitoring and displaying electric parameters include voltage, current, active power, reactive power, power factor, frequency, active energy and reactive energy.

Additional, ECM700 is user-configurable enable users to add extendable DI/DO modules. The auxiliary functions (SOE, TOU, harmonic analysis, dual-RS485 com) are so powerful enough to satisfy different applications.



## Feature

- Large STN LCD screen, high brightness
- Compact design with real-time measurements
- Optional DO/DI modules.
- Auxiliary SOE, TOU, 31st harmonic analysis
- External CT and PT programmable
- Programmable Setpoints system
- RS485 communication/ MODBUS protocol

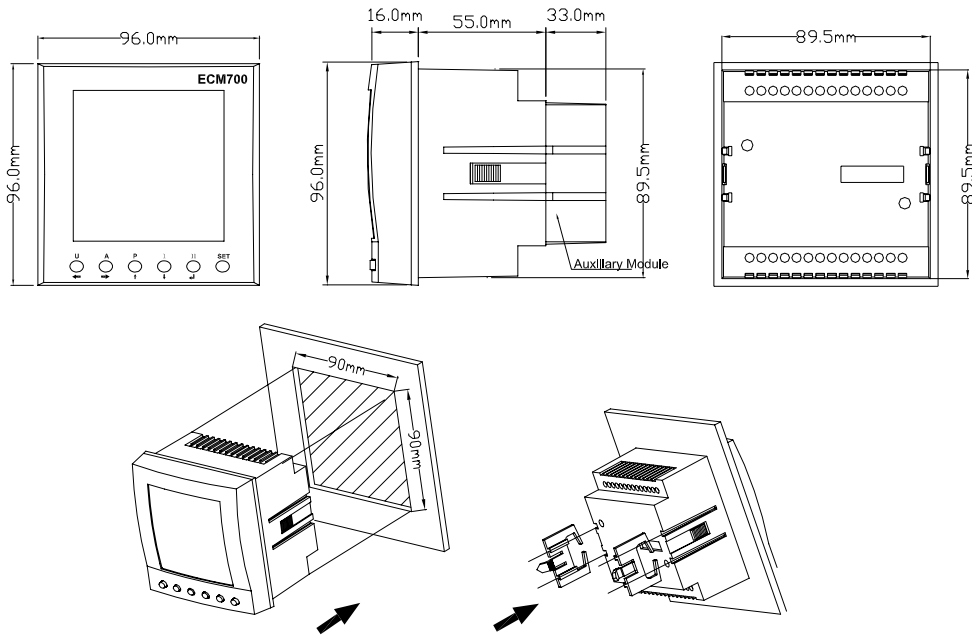
## Application

- Control panels
- Power quality analysis
- Energy management system
- Building management system

## Performance Index

- Standard: DLT721-2000, IEC61000-4
- Accuracy:
  - Voltage: 0.2%
  - Current: 0.2%
  - Power: 0.5%
  - Active energy: class 1
- Power loss < 3VA
- Power frequency withstand voltage:  
AC2kV/ min. ~1mA Input--Output--Power
- Insulation resistance > 50M
- Impulse withstand voltage:  
5kV (peak), 1.2/50uS
- Input range:
  - Current: AC 0~5A
  - Voltage: 0~220VAC
  - Frequency: 50/ 60Hz
- Overload capability:  
120% of rated current or voltage
- Status input: up to 8 routes, provide 30VDC power supply if it is dry contact
- Relay output: up to 4 routes, node capacity is 220VAC/5A, or 30VDC/5A
- Harmonic analysis:  
31<sup>st</sup> odd component for voltage,  
31<sup>st</sup> odd component for current
- Communication:  
RS485 port/ MODBUS protocol  
Baud rate: 2400/ 4800/ 9600/ 19200bps  
Address: 1~ 247
- Electrical fast transient/burst immunity test:  
IEC61000-4-4, Level 4
- Surge immunity test:  
IEC61000-4-5, Level-3
- Electrostatic discharge immunity test:  
IEC61000-4-2, Level 4
- Operating temperature: -20~ 70
- Storage temperature: -40~85
- Humidity: 5~95%, non-condensing

## Dimension and Installation



## Order Information

**ECM700-- -- -- --**

: Module Structure

<b>N</b>	Basic Module
<b>A</b>	Basic Module + 4 Status Inputs (Dry Contact) + 4 Relay Outputs Ports
<b>B</b>	Basic Module + 8 Status Inputs (Dry Contact) + 2 Relay Outputs Ports
<b>C</b>	Basic Module + 4 Status Inputs (External Voltage Required) + 4 Relay Outputs Ports
<b>D</b>	Basic Module + 8 Status Inputs (External Voltage Required) + 2 Relay Outputs Ports
<b>E</b>	Basic Module + 2 Pulse Outputs + 2 Analog Outputs (4-20mA)

: Auxiliary Function

<b>H</b>	Up to 31 <sup>st</sup> Harmonic Analysis
<b>T</b>	Clock and SOE (Event Log) Function
<b>F</b>	TOU (Time- of- Use)
<b>M</b>	Two RS485 Communication Ports

: Measurement Parameter

<b>V1</b>	Rated Voltage/ Current Input: 57.7/ 100V, 5A
<b>V2</b>	Rated Voltage/ Current Input: 57.7/ 100V, 1A
<b>V3</b>	Rated Voltage/ Current Input: 220/ 380V, 5A
<b>V4</b>	Rated Voltage/ Current Input: 220/ 380V, 1A

: Analog Port

<b>AI</b>	One 4-20mA Analog Input
<b>AO</b>	One 4-20mA Analog Output

### Notes:

1. Basic functions: Measure 3-phase current/ voltage/ neutral current, 3-phase active power/ reactive power/ total active power/ total reactive power, frequency, 3-phase power factor/ total power factor, active energy/ reactive energy. It contains one RS485 communication port originally.
2. Optional measuring functions: 3-phase apparent power, total apparent power, apparent energy, demand function.
3. Analog port –AI and –AO can't be selected together. If select "F", "T" should be selected also.

# Typical Connection

