

# DCEM SERIES DC ENERGY METER

DC ENERGY METER



## Introduction

DCEM series DC energy meter is mainly used to monitor the DC circuit, which can measure the basic power, demand, extreme value of the DC circuit, and measure the combined electric energy. Moreover, it can measure DC current and DC system electrical parameters. All DC metering device is with RS485 communication interface and the accuracy class is 0.5.

DC metering offered by Blue Jay includes DCEM-7MS, DCEM-5MC, DCEM-96S and DCEM-3MS. It can track the performance of DC systems on multiple parameters. They are used in conjunction with DC shunts or DC transformers, widely used in communication base stations, solar panels, car charging piles, and DC panel.

## Main Features

- Small and portable, easy to install.
- Powerful data acquisition and processing functions.
- Ultra-clear screen display, clearly view the measurement results.
- Fast response, rapid measurement of current or voltage changes.
- High precision for accurate current, voltage and resistance measurements.
- High voltage shock resistance reaches level 4; surge anti-interference to level 3.
- Electrostatic discharge immunity reaches level 3; electrical fast transient burst immunity reaches level 4.

## Application



## Ordering Information

| Model    | Current signal  | Voltage signal                   | Access                           | Screen         | Dimension      |
|----------|---|----------------------------------|----------------------------------|----------------|----------------|
| DCEM-7MS | Directly input default 10ADC<br>(Optional 1mA, 20mA,<br>100mA, 1A/5A) | Typical 100V,<br>Max up to 600V  | Directly access<br>/ external CT | /              | 120*110.5*50mm |
| DCEM-5MC | Hall CT input,<br>default 0-4VDC                                      | Typical 300V,<br>Max up to 1000V | CT                               | Dot matrix LCD | 89*128*41mm    |
| DCEM-96S | Shunt input,<br>default 75mV  | Typical 300V,<br>Max up to 600V  | Shunt                            | Segment LCD    | 96*96*75mm     |
| DCEM-3MS | Shunt input,<br>default 75mV  | Typical 300V,<br>Max up to 1000V | Shunt                            | Segment LCD    | 50*104*63mm    |

## Technical Characteristics

| Model                               | DCEM-7MS  | DCEM-5MC      | DCEM-96S                              | DCEM-3MS      |
|-------------------------------------|---|---------------|---------------------------------------|---------------|
| <b>Working power</b>                |   |               |                                       |               |
| Power supply                        | 9~30 VDC  | 85~265 VDC/AC | 85~265 VDC/AC                         | 85~265 VDC/AC |
| Power consumption                   | ≤4VA  | ≤4VA          | < 5VA                                 | ≤4VA          |
| <b>Measurement</b>                  |   |               |                                       |               |
| Impedance                           | > 2 KΩ/V  | >1 KΩ/V       | >1 KΩ/V                               | >1 KΩ/V       |
| Overload                            | Measurement: 1.2 times Instantaneous: 2 times/10s                   |               |                                       |               |
| Channel                             | 8 Channels  | 4 Channels    | 1 Channel                             | 1 Channel     |
| Accuracy<br>(depends on transducer) | U / I :0.2%fs,<br>P :0.2%fs,<br>Energy :0.5%fs                      | 0.5 class     | 1.0fs for enegyer,<br>0.5fs for other | 0.5%fs        |
| <b>Safety</b>                       |   |               |                                       |               |
| Insulation resistor                 | >100MΩ  |               |                                       |               |
| Pressure resistance                 | Input and Power>2KV; Input and Output>2KV; Power and Output>2KV     |               |                                       |               |
| <b>Other</b>                        |   |               |                                       |               |
| Communication                       | RS485 MODBUS-RTU  |               |                                       |               |
| Storage environment                 | -30~75°C  |               |                                       |               |
| Working environment                 | -25~55°C ,Altitude ≤2000m, 98%RH, no condensation, no corrosive gas |               |                                       |               |