

# DCEM SERIES DC ENERGY METER

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## Introduction

The DCEM Series DC energy meters are designed for monitoring DC circuits, providing measurement of key parameters including power, demand, peak values, and accumulated energy. All models feature RS485 communication and offer accuracy class 0.5.

The Bluejay DCEM range includes DCEM-4MS, DCEM-7MS, DCEM-5MC, DCEM-96S, and DCEM-3MS. Compatible with DC shunts and Hall effect current transformers, they are widely used in telecom base stations, solar PV systems, EV charging stations, and DC distribution panels.

## Main Features

- Small and portable, easy to install;
- Powerful data acquisition and processing functions;
- High-definition display, clearly view the measurement results;
- Fast response, rapid measurement of current or voltage changes;
- Rapid 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                   | Measurement channel | Access                           | Appearance Info               |
|----------|--|----------------------------------|---------------------|----------------------------------|-------------------------------|
| DCEM-4MS | Shunt input: 0-75mV<br>or<br>Hall CT input:5-500A                    | Typical 100V,<br>Max up to 1000V | 2 Channels          | Shunt/ CT                        | Segment LCD<br>72*94.5*48.5mm |
| DCEM-7MS | Directly input default: 10A<br>(Optional 1mA, 20mA,<br>100mA, 1A/5A) | Typical 100V,<br>Max up to 600V  | 8 Channels          | Directly access<br>/ external CT | No screen<br>120*110.5*50mm   |
| DCEM-5MC | Hall CT input,<br>default 0-4VDC                                     | Typical 300V,<br>Max up to 1000V | 4 Channels          | CT                               | Dot matrix LCD<br>89*128*41mm |
| DCEM-96S | Shunt input,<br>default 75mV   | Typical 300V,<br>Max up to 600V  | 1 Channels          | Shunt                            | Segment LCD<br>96*96*75mm     |
| DCEM-3MS | Shunt input,<br>default 75mV   | Typical 300V,<br>Max up to 1000V | 1 Channels          | Shunt                            | Segment LCD<br>50*104*63mm    |

## Technical Characteristics

| Model                | DCEM-4MS   | DCEM-7MS   | DCEM-5MC  | DCEM-96S  | DCEM-3MS  |
|----------------------|--|--|---|-----------|-----------|
| <b>Working power</b> |  |  |   |           |           |
| Power supply         | 85-265Vac/dc, 45-65Hz<br>DC 20-60V Optional  | 9~30 VDC   | 85-265Vac/dc, 45-65Hz<br>DC 20-60V Optional       |           |           |
| Power consumption    | ≤4VA   |  |   |           |           |
| <b>Measurement</b>   |  |  |   |           |           |
| Impedance            | >1 KΩ/V  | > 2 KΩ/V   | >1 KΩ/V   |           |           |
| Overload             | Measurement: 1.2 times Instantaneous: 2 times/10s                                    |  |   |           |           |
| Channel              | 2 Channels   | 8 Channels   | 4 Channels  | 1 Channel | 1 Channel |
| Accuracy             | U / I :0.5%fs,<br>P :0.5%fs,<br>Energy: class 1.0                                    | U / I :0.2%fs,<br>P :0.5%fs,<br>Energy: class 0.5                                    | U / I :0.5%fs,<br>P :0.5%fs,<br>Energy: class 1.0 |           |           |
| <b>Safety</b>        |  |  |   |           |           |
| Insulation resistor  | >100MΩ   |  |   |           |           |
| Withstand voltage    | Input and power supply>4kV;<br>input and output>4kV;<br>power supply and output>4kV. | Input and power supply>2kV;<br>input and output>2kV;<br>power supply 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.                 |  |   |           |           |