

### Datasheet

- 4 Modules mini size
- LCD display with backlight
- Voltage input 5-1000V DC
- Current input 75mV/60mV/45mV
- Record 12 months kWh information
- Bi-directional measurement
- 2 channels
- Current overload alarm
- Class 1.0 accuracy
- Pulse output
- RS485 Modbus RTU
- Multi-tariffs (RTC)

The DCM232 series DC energy meters are designed for measuring and monitoring in DC systems, esp for the DC EV chargers with 2 output interfaces. The din rail DC energy meters can measure of important DC parameters: voltage, current, power and energy etc. It also supports Bi-directional measurement with pulse output. All data in the meter are accessible via RS485 Modbus RTU. The meter has two versions working with AC or DC power supply. Input voltage range up to 300, 600, 1000V DC, and current inputs are flexible with DC shunt and current sensors. The multi-tariffs version has a RTC equipped inside, it can provides multi-tariffs information and monthly records.



## Specification Table

| Specification                   |                                    |
|---------------------------------|------------------------------------|
| Input Voltage Range             | 5-1000V DC / 5-600V DC / 5-300V DC |
| Internal power consumption      | ≤ 0.5VA                            |
| Shunt                           | 75/45/60mV                         |
| Input Current Power consumption | ≤ 0.1VA                            |
| Shunt primary                   | 1- 2000A                           |
| Pulse Output                    | 1,10,100,1000,10000imp/kWh         |
| Pulse Duration                  | 60, 100, 200ms                     |
| Display                         | LCD                                |
| Max. Reading                    | 999999.9kWh                        |

| Modbus                 |   |
|------------------------|---|
| Bus type               | RS485(semi-duplex)                      |
| Protocol               | Modbus RTU                              |
| Baud rate              | 2400/4800/9600(optional)/19200/38400bps |
| Address range          | 1-247                                   |
| Max. Bus loading       | 64pcs                                   |
| Communication distance | 1000M                                   |
| Parity                 | EVEN/ODD/NONE                           |
| Stop bit               | 1 or 2                                  |
| Response time          | ≤30mS                                   |

| Accuracy      |      |
|---------------|------|
| Voltage       | 0.5% |
| Current       | 0.5% |
| Active energy | 1%   |
| Power         | 1%   |

| Terminals capacity      |                        |
|-------------------------|------------------------|
| RS485/Pulse/Aux. supply | 0.5-1.5mm <sup>2</sup> |
| Load                    | 0.5-1.5mm <sup>2</sup> |

| Screw torque            |       |
|-------------------------|-------|
| RS485/Pulse/Aux. supply | 0.2Nm |
| Load                    | 0.2Nm |

| Performance criteria                              |                            |
|---|----------------------------|
| Operating humidity                                | ≤ 90%, no condensing       |
| Storage humidity                                  | ≤ 95%, no condensing       |
| Operating temperature                             | -25°C - +55°C              |
| Storage temperature                               | -40°C - +80°C              |
| Reference temperature                             | 23°C±2°C                   |
| International category                            | CAT III                    |
| Mechanical environment                            | M1                         |
| Electromagnetic environment                       | E2                         |
| Degree of pollution                               | 2                          |
| Protection against penetration of dust and water  | IP51(indoor)               |
| Insulating encased meter of protective class      | II                         |
| Electrostatic discharges                          | 8kV contact / 15kV air gap |
| Electromagnetic HF fields                         | IEC 61000-4-3              |
| Electrical fast transients AC (Aux. Power Supply) | 4kV                        |
| Surge (Aux. Power Supply)                         | 4kV                        |
| Radiated & conducted emissions                    | EN 55022                   |

| Auxiliary power supply |          |
|------------------------|----------|
| DC Aux. Power Supply   | 9-40V DC |
| Power Consumption      | ≤1W      |

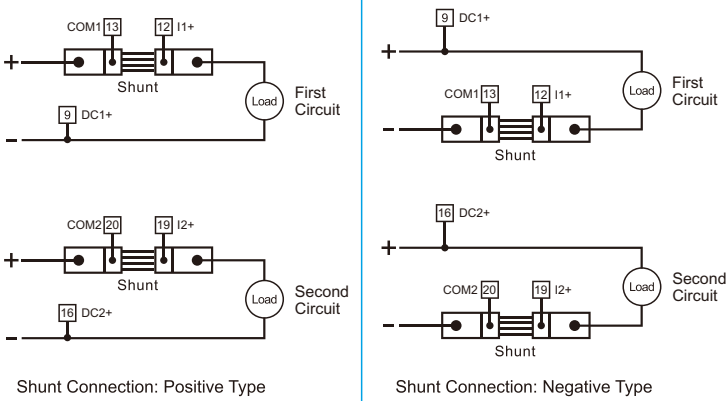
| Multi-tariff  |               |
|---------------|---------------|
| Tariffs       | 4             |
| Time segments | 8             |
| Clock error   | <0.5s per day |

| Housing          |                            |
|------------------|----------------------------|
| Altitude         | 2000m                      |
| Connections      | Screw terminals            |
| Mounting         | Snap-on 35mm rail          |
| Housing material | Self-extinguishing UL94V-0 |

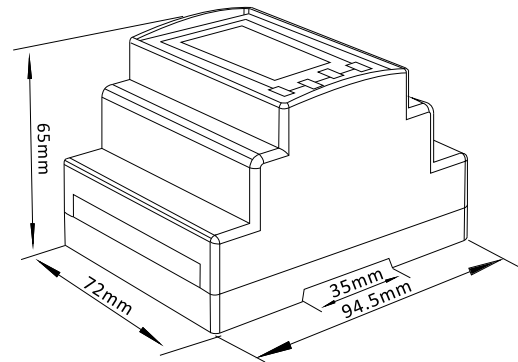
For more information on these products, please contact our sales team on 86 0573 83698881 or email [sales@eastrongroup.com](mailto:sales@eastrongroup.com)

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## Wiring Configuration



## Dimension Drawing



Height 94.5mm  
Width 72mm  
Depth 65mm

## Ordering Options

| Meter Type | Description of Meter  |
|------------|---|
| DCM232     | 9-40V DC power supply, 50/60Hz, Backlighted LCD display, 2 pulse outputs, RS485 Modbus RTU, double channels , 45mV/60mV/75mV shunt, 5-1000VDC input, resettable active energy. Measures kWh, W, V, A, Imp_kWh, Exp_kWh etc. |

## Conformity References

**Electromagnetic Compatibility:** EN 61326-1:2013 & EN 61326-2-3:2013

**Low Voltage Directive:** EN 61010\_1:2010+A1:2019 & EN 61010-2-30:2010