

Datasheet

- 2 Modules mini size
- LCD display with backlit
- Voltage input 5-1000V DC
- Current input 75mV/60mV/45mV
- Record 12 months kWh information
- Bi-directional measurement
- Pulse output
- Rs485 Modbus RTU
- Multi-tariffs (RTC)
- Current overload alarm
- Class 1.0 accuracy
- ETL certified

Eastron DCM230 series DC energy meters are designed for measuring and monitoring in DC systems. 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-tariff version has a RTC equipped inside, it can provide multi-tariff 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	1,10,100,1000imp/kWh
Pulse Duration	60, 100, 200ms
Display	LCD
Max. Reading	999999.9kWh
Modbus	
Bus type	RS485(semi-duplex)
Protocol	Modbus RTU
Baud rate	1200/2400/4800/9600/19200(optional)bps
Address range	1-247
Max. Bus loading	64pcs
Communication distance	1000M
Parity	EVEN/ODD/NONE
Stop bit	1 or 2
Response time	≤100ms
Accuracy	
Voltage	0.5%
Current	0.5%
Active energy	1%
Power	1%
Housing	
Altitude	2000m
Connections	Screw terminals
Mounting	Snap-on 35mm rail
Housing material	Self-extinguishing UL94V-0

Performance criteria	
Operating humidity	≤ 90%, no condensing
Storage humidity	≤ 95%, no condensing
Operating temperature	-25°C - +55°C / -40°C - +70°C
Storage temperature	-40°C - +70°C
Reference temperature	23°C±2°C
International category	CAT II
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	
AC Aux. Power Supply	85-276V AC (DCM230-1)
Power Consumption	≤1W/5VA
DC Aux. Power Supply	9-40V DC (DCM230-2)
Power Consumption	≤1W
Terminals capacity	
RS485/Pulse/Aux. supply	0.5-1.5mm ²
Load	0.5-1.5mm ²
Screw torque	
RS485/Pulse/Aux. supply	0.2Nm
Load	0.2Nm

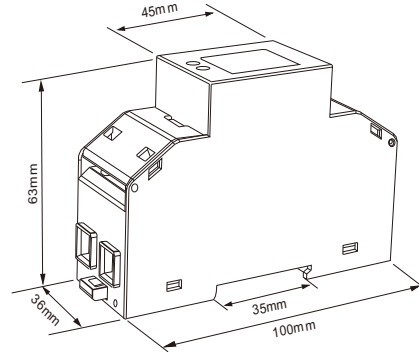
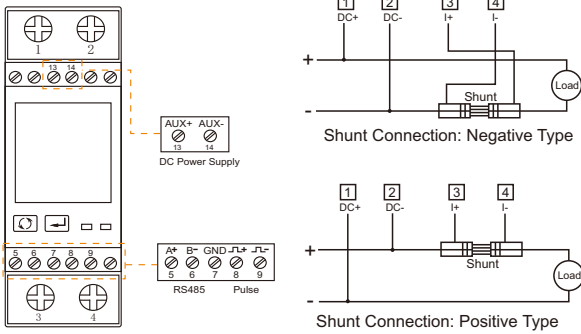
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Wiring Configuration

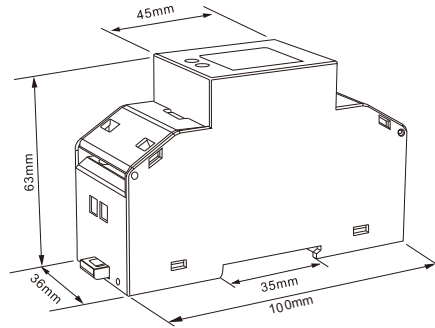
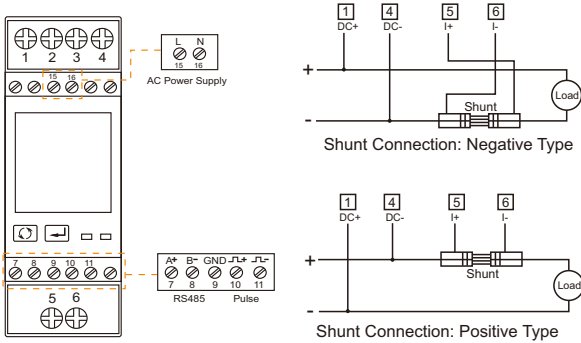
Dimension Drawing

DCM230-1



Height 100mm
Width 36mm
Depth 63mm

DCM230-2



Height 100mm
Width 36mm
Depth 63mm

Ordering Options

Meter Type	Description of Meter
DCM230-1	85-276V AC power supply, 50/60Hz, Backlighted LCD display, pulse output, RS485 Modbus RTU, 45mV/60mV/75mV shunt, 5-1000VDC input, resettable active energy. Measures kWh, W, V, A, Imp_kWh, Exp_kWh etc.
DCM230-2	9-40V DC power supply, 50/60Hz, Backlighted LCD display, pulse output, RS485 Modbus RTU, 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
- Conforms to UL Std.:** 61010-1, 61010-2-030
- Certified to CSA Std.:** C22.2 No.61010-1, 61010-2-030

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