

Datasheet

- CE, UKCA and MID certified in the UK(SGS0534)
- Overall system accuracy class B (1%)
- Phase sequence indication
- Built in RS485 RTU Modbus output
- Total harmonic Distortion up to 31st level
- Single load option 3 phase 4 wires or 3x1 phase circuits (SDM630MCT-ML-1)
- Dual load option 2x3 phase 4 wires or 6x1 phase circuits (SDM630MCT-ML-2)
- Tri load option 3x3 phase 4 wires or 9x1 phase circuits (SDM630MCT-ML-3)
- Quad load option 4x3 phase 4 wires or 12x1 phase circuits (SDM630MCT-ML-4)
- Up to 124x3 phase 4 wires channels or 372x1 phase channels on one Modbus network (32 SDM630MCT)



SDM630MCT-ML is a new multi-function energy meter designed by Eastron for multi-channels measurements.

The meter can work with 1p2w, 1p3w, 3p3w and 3p4w electricity grid, and it provides all important electrical

parameters: voltage, current, power, PF, THD, frequency, demand, energy etc. By using plug-in connectors, the meter provides an easy click solution saving 80% installation time and avoiding wiring mistakes. It can be used as 4x three phase energy meters or 12x single phase energy meters.

100mA/100mV secondary external CT is required to work with the meter. The meter is equipped with a RS485 communication port by using 2x RJ45 connectors. Modbus RTU protocol is adopted for remote reading and programming. The meter has a big backlit LCD showing data and uses 4 touch buttons in front for data checking and programming.

Specification Table

Specification	
Nominal voltage(Un)	3x230/400 V ac
Operational voltage	80% - 120% of Un
Aux.power supply	85~276V AC or 120~380V DC
Insulation capabilities	
- AC voltage withstand	4KV for 1 minute
- Impulse voltage withstand	6KV-1.2pS
Rated current (Imax)	100mA/100mV CT input
Operational current range	0.4% Ib-Imax
Over current withstand	20 Imax for 0.5s
Operational frequency range	50 or 60Hz
Power consumption per phase	≤ 2W/10VA
Pulse output indicator	LED
Pulse output rate	3200 imp/kWh
Display	LCD
Max reading	99999999 kWh/kVarh

Modbus	
Bus type	RS485(semi-duplex)
Protocol	Modbus RTU
Baud rate	2400/4800/9600/19200/38400bps
Address range	1-247
Max. Bus loading	64pcs
Communication distance	1000M
Parity	EVEN/ODD/NONE
Data bit	8
Stop bit	1

Performance criteria	
Operating humidity	≤ 90%, no condensing
Storage humidity	≤ 95%, no condensing
Operating temperature	-25°C - +55°C
Storage temperature	-40°C - +70°C
Reference temperature	23°C± 2°C
International standard	IEC 62053-21 / EN50470-1/3
Accuracy class	Class1/Class B
Installation 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
Radiated & conducted emissions	EN 55022

Accuracy	
Voltage, Current	0.5%
Frequency	0.2% of mid-frequency
Power factor	1% of unity (0.01)
Active power , Apparent power	±1% of range maximum
Reactive power	±1% of range maximum
Reactive energy(Varh)	Class 2
Active energy (Wh)	Class 1

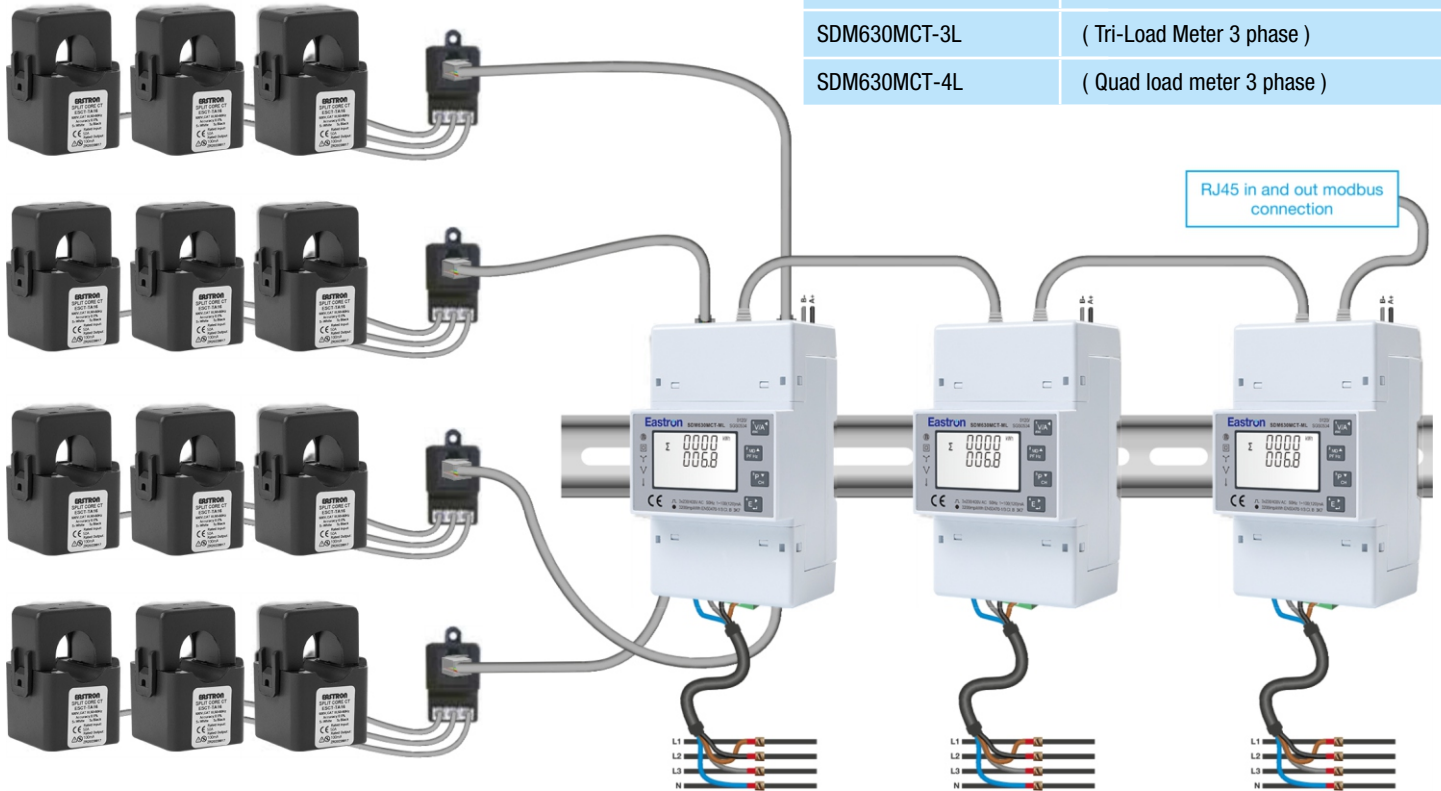
Enclosure	
Mounting	DIN rail(DIN3880)
Dimesion	71x122.5x66mm(WxHxD)
Protecting rating	IP51(indoor)
Material	UL94V-0
Weight	330g

For more information on these products, please contact our sales team on 86 0573 83698881 or email sales@eastrongroup.com

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Example of 1 phase installation

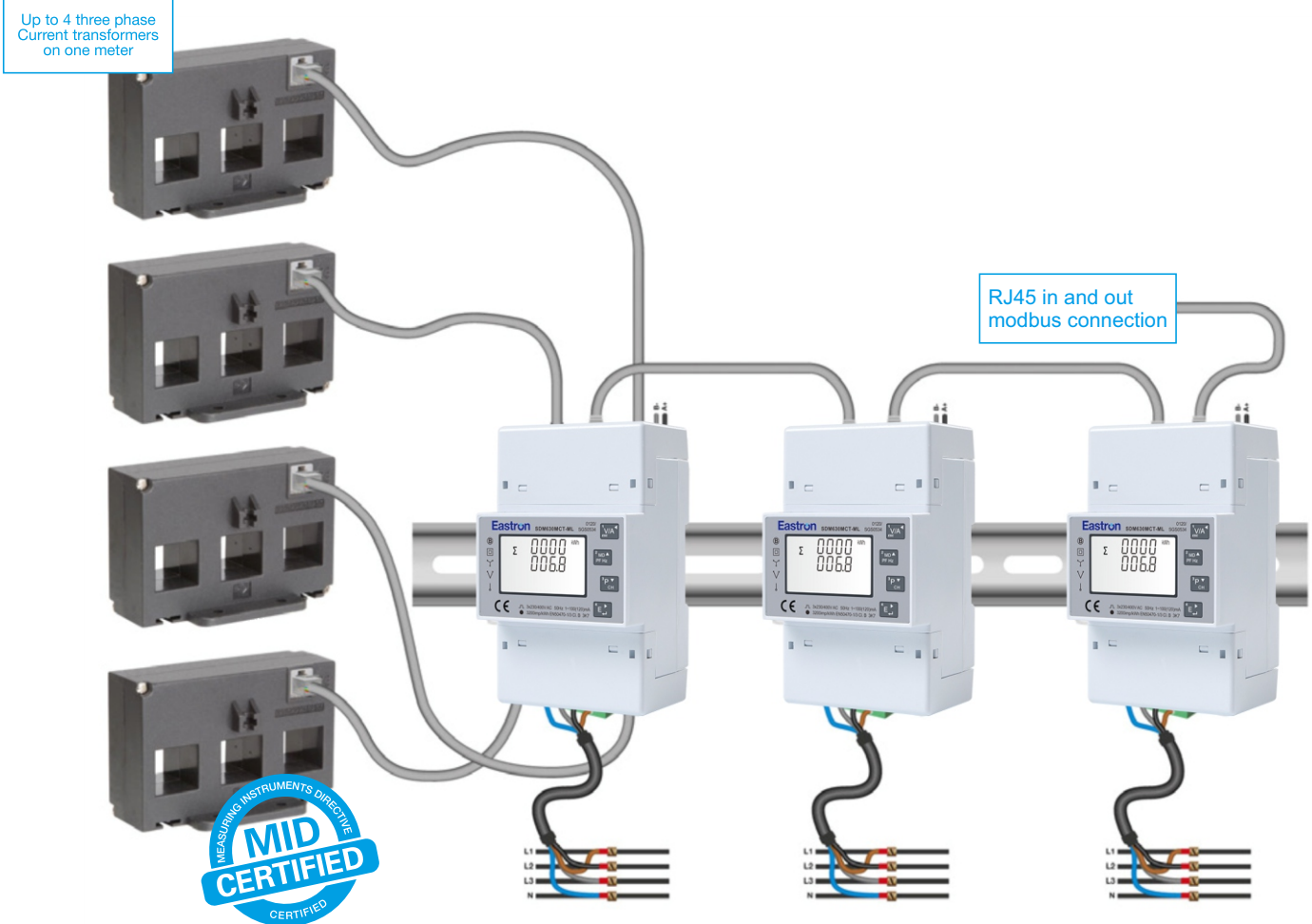
Up to 12 one phase current transforms on one meter (SDM630MCT-4L)



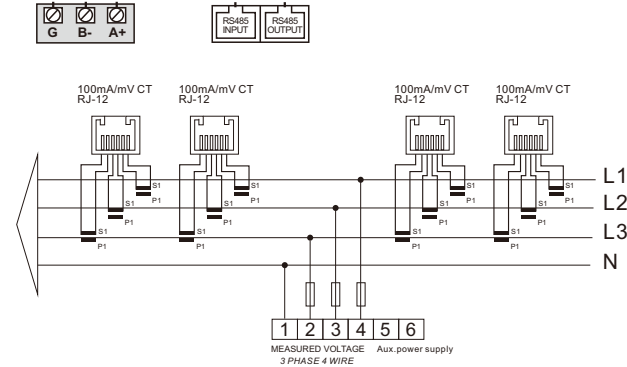
Meter Type	Description of Meter
SDM630MCT-1L	(Single Load Meter 3 phase)
SDM630MCT-2L	(Dual Load Meter 3 phase)
SDM630MCT-3L	(Tri-Load Meter 3 phase)
SDM630MCT-4L	(Quad load meter 3 phase)

RJ45 in and out modbus connection

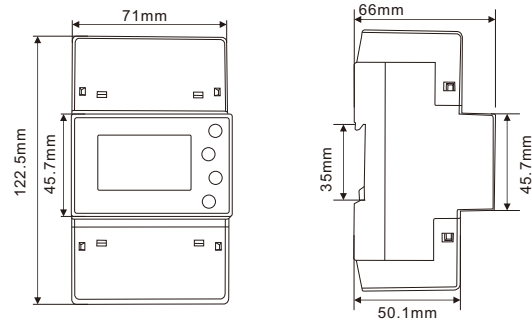
Example of 3 phase installation



Wiring Configuration



Dimension Drawing



Height 122.5mm
Width 71mm
Depth 66mm

Features



1 V/A
ESC

Ph to Ph Volts / Ph to N Volts / Voltage THD % / Current THD %

2 MD
PF Hz

Frequency and Power Factor total / Power Factor per Phase / Maximum Power Demand / Maximum Current Demand

3 P
CH

Active Power per Phase / Reactive Power per Phase / Apparent Power per Phase / Total Active Power / Total Reactive Power / Total Active Power / Channel Selection

4 E

Total kWh / Total kVAh / Imported kWh / Imported kVAh/ Exported kWh / Exported kVAh

Conformity References

Electromagnetic Compatibility: IEC/EN61326-1, IEC/EN55011 Class A, IEC/EN61000-4-2, -3-4-5-6-8-11 IEC/EN50470-1/3

Accuracy: IEC/EN50470-1/3, IEC/EN62053-21, IEC/EN62053-23

Safety: IEC/EN61010, IEC/EN50470-1

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

MID Directive: 2014/32/EU