

Datasheet

- Three phase 1/5A Current transformer operated
- MID B+D certified
- UL listed
- Accuracy Class B or C EN50470-3:2022
Accuracy Class 1 or 0.5S IEC62053-22
- Bi-directional measurement for kW and kWh
- Configurable pulsed output
- Modbus or Mbus communication
- Multi-parameter measurement
- Multi-tariffs optional
- 2 tariffs(dual power source) optional
- Free configuration software
- 2 digital inputs optional



The SDM630MCT series is an advanced multi-function three phase energy monitoring solution with optional outputs such as pulses, RS485 Modbus and Mbus. Equipped with configuration and display buttons for ease of navigation through the various parameters and settings. Housed for DIN rail mounting, IP51 protection and 1/5A current transformer operated. The required current inputs are obtained via current transformers. This meter can be configurable to work with a wide range of CTs, giving the unit a wide range of operation. Certified in the UK according to EU directive 2014/32/EU.

MID certificate number 0120 / SGS0703.

UL certificate number UL-US-2555352-1.

Specification Table

Specification	
Nominal voltage(Un)	3x230/400 V ac
Voltage range	100-277V AC L-N, Max. 277V
Voltage between phase	100-480V AC L-L, Max. 480V
Current input	0.05-5(6)A, Max. 6A
- AC voltage withstand	4KV for 1 minute
- Impulse voltage withstand	6KV-1.2/50μS waveform
Rated current (Ib)	1A/5A CT input
Operational current range	0.4% Ib-I _{max}
Over current withstand	20 I _{max} for 0.5S
Operational frequency range	50 or 60Hz
Power consumption per phase	≤ 2W/10VA
Display	LCD
Max reading	9999999.9 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
M-bus	
Bus type	M-bus
Protocol	EN13757-3
Baud rate	600/1200/2400/4800/9600bps
Parity	NONE/EVEN/ODD
Stop bits	1 or 2
Primary Address	1 to 250
Secondary Address	00 00 00 01 to 99 99 99 99

Performance criteria	
Operating humidity	≤ 90%, no condensing
Storage humidity	≤ 95%, no condensing
Operating temperature	-40°C - +70°C
Storage temperature	-40°C - +80°C
Reference temperature	23°C± 2°C
International standard	EN IEC 62052-11:2021/A11:2022 / EN50470-3:2022
Accuracy class	Class 0.5S / Class C
Installation category	CAT III
Mechanical environment	M1
Electromagnetic environment	E2
Degree of pollution	2
Protection against penetration of dust and water	IP51 front panel, IP20 whole meter
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%
Power factor	±0.01
Active power, Apparent power	±1%
Reactive power	±1%
Reactive energy(Varh)	Class 2 IEC 62053-23
Active energy (Wh)	Class 0.5S IEC62053-22 / Class C EN50470-3:2022

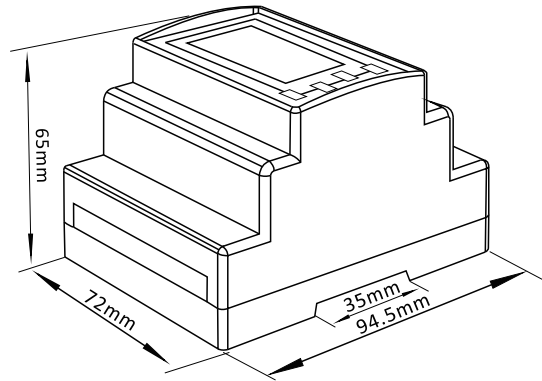
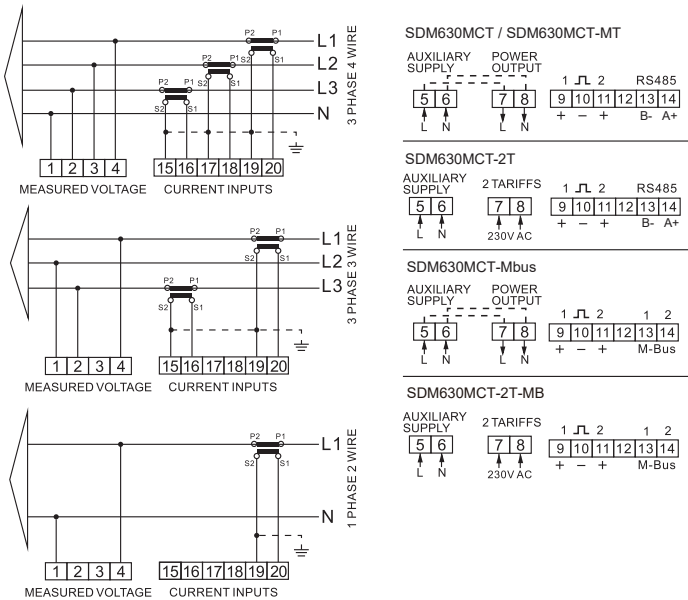
Pulse output	
Pulse outputs	2, passive type
Pulse output 1	Configurable
Pulse width 1	200 / 100 / 60mS (default 200mS)
Pulse output 2	3200imp/kWh
Pulse width 2	100mS

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Wiring Configuration

Dimension Drawing



Height 94.5mm
Width 72mm
Depth 65mm

Ordering Options

Meter Type	Description of Meter
SDM630MCT	3PH-4W, 3PH-3W, 1PH-2W, 3x230(400)V, 1A or 5A CT input, Class C/B, 50/60Hz, backlighted LCD display, 2 pulse outputs, RS485 Modbus RTU. Measures kWh, kVarh, W, Var, VA, V, A, PF, THD, Hz, Max.DMD, Imp_kWh, Exp_kWh etc.
SDM630MCT-MB	3PH-4W, 3PH-3W, 1PH-2W,, 3x230(400)V, 1A or 5A CT input, Class C/B, 50/60Hz, backlighted LCD display, 2 pulse outputs, M-Bus EN13757-3. Measures kWh, kVarh, W, Var, VA, V, A, PF, THD, Hz, Max.DMD, Imp_kWh, Exp_kWh etc
SDM630MCT-2T	3PH-4W, 3PH-3W, 1PH-2W,, 3x230(400)V, 1A or 5A CT input, Class C/B, 50/60Hz, backlighted LCD display, 2 pulse outputs, RS485 Modbus RTU, 2 Tariffs. Measures kWh, kVarh, W, Var, VA, V, A, PF, THD, Hz, Max.DMD, Imp kWh, Exp_kWh etc.
SDM630MCT-MT	3PH-4W, 3PH-3W, 1PH-2W, 3x230(400)V, 1A or 5A CT input, Class C/B, 50/60Hz, backlighted LCD display, 2 pulse outputs, multi-tariffs. RS485 Modbus RTU. Measures kWh, kVarh, W, Var, VA, V, A, PF, THD, Hz, Max.DMD, Imp_kWh, Exp_kWh etc.
SDM630MCT-2T-MB	3PH-4W, 3PH-3W, 1PH-2W,, 3x230(400)V, 1A or 5A CT input, Class C/B, 50/60Hz, backlighted LCD display, 2 pulse outputs, M-Bus EN13757-3, 2 Tariffs. Measures kWh, kVarh, W, Var, VA, V, A, PF, THD, Hz, Max.DMD, Imp_kWh, Exp_kWh etc

Conformity References

Measurement category: IEC 61010-1 CAT III

Over-voltage category: CAT III

Dielectric withstand: IEC 61010-1 double insulated, IEC 62052-31:2015

Protective class: II

EMC: EN 61326-1:2021 & EN 61326-2-3:2021, EN IEC 62052-11:2021/A11:2022

Low Voltage Directive: EN 61010-1:2010+A1:2019 & EN IEC 61010-2-030:2021+A11:2021, IEC 62052-31:2015

MID Std: EN 50470-3:2022 and IEC / EN IEC 62052-11:2021/A11:2022, IEC 62052-31:2015

UL Std: UL 61010-1, UL 61010-2-030

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