

Datasheet

- Three phase 1/5A Current transformer operated
- MID B+D certified
- ETL registered
- Accuracy class 1.0 (Active Energy) or accuracy class 0.5 (SDM630MCT-MOD-MID-0.5)
- Bi-directional measurement for kW and kWh
- Configurable pulsed output
- Modbus (SDM630MCT) or Mbus (SDM630MCT-Mbus)
- Multi-parameter measurement
- Multi-tariffs
- 333mV/100mV/40mA current transformer input option (NON MID)
- Free configuration software
- 2 digital inputs



The SDM630MCT series is an advanced multi-function three phase energy monitoring solution with optional outputs such as pulses, RS485 RTU 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 / SGS0142.

Specification Table

Specification	
Nominal voltage(Un)	3x230/400 V ac
Operational voltage	80% - 120% of Un
Insulation capabilities	
- AC voltage withstand	4KV for 1 minute
- Impulse voltage withstand	6KV-1.2μS
Rated current (Ib)	1A/5A CT or 40mA/100mV/333mV 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
Pulse output 1	Configurable
Pulse output 2	3200 imp/kWh
Display	LCD
Max reading	9999999.9 kWh/kVarh

Performance criteria	
Operating humidity	≤ 90%, no condensing
Storage humidity	≤ 95%, no condensing
Operating temperature	-25°C - +55°C/-40 - + 70(optional)
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	1.0 % or 0.5% option available
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

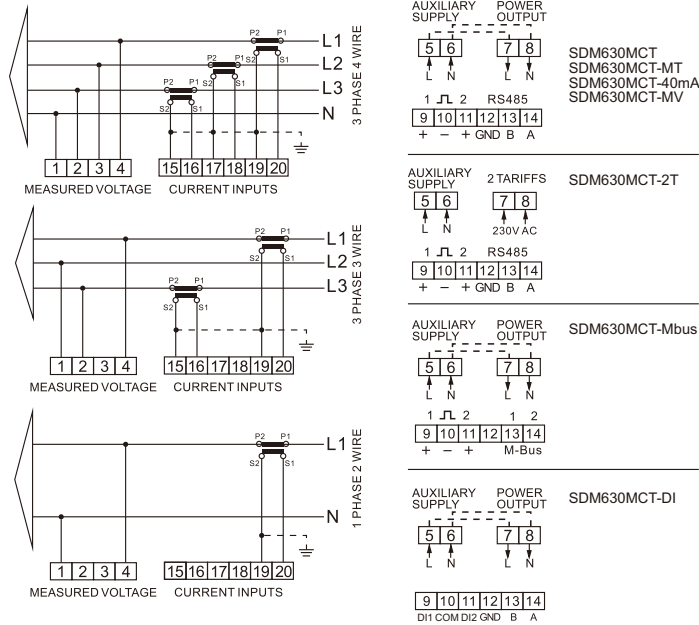
Modbus	
Bus type	RS485(semi-duplex)
Protocol	Modbus RTU
Baud rate	2400/4800/9600/19200/38400bps
Address range	1-247
Max. Bus loading	64pcs
Communication distance	1000M
Parity	EVEN/ODD/NONE
Data bit	8
Stop bit	1

M-bus	
Bus type	M-bus
Protocol	EN13757-3
Baud rate	300/600/1200/2400/4800/9600bps
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

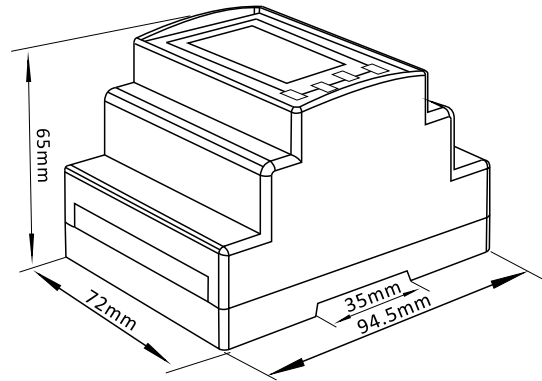
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Wiring Configuration



Dimension Drawing



Height 94.5mm
 Width 72mm
 Depth 65mm

Ordering Options

Meter Type	Description of Meter
SDM630MCT-Modbus	3PH-4W, 3PH-3W, 1PH-2W, 3x230(400)V, 1A or 5A CT input, Class 1.0 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-MODBUS-0.5	3PH-4W, 3PH-3W, 1PH-2W, 3x230(400)V, 1A or 5A CT input, Class 0.5 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-Mbus	3PH-4W, 3PH-3W, 1PH-2W,, 3x230(400)V, 1A or 5A CT input, 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, 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 1.0, 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-MV	3PH-4W, 3PH-3W, 1PH-2W, 3x230(400)V, 333mV CT input, 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-40mA	3PH-4W, 3PH-3W, 1PH-2W, 3x230(400)V, 40mA CT input, 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-DI	3PH-4W, 3PH-3W, 1PH-2W, 3x230(400)V, 1A or 5A CT input, Class 1.0 50/60Hz, backlighted LCD display, RS485 Modbus RTU, 2 digital inputs. Measures kWh, kVarh, W, Var, VA, V, A, PF, THD, Hz, Max.DMD, Imp_kWh, Exp_kWh etc.

Conformity References

Electromagnetic Compatibility: EN61326-1:2013 & EN61326-2-3:2013

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

MID DIRECTIVE: 2014/32/EU

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