






Zhejiang Eastron Electronic Co.,Ltd.
Models for Solar PV Application



Model	SDM120CTM 40mA	SDM630MCT 1A/5A	SDM630MCT 40mA
			
Technical Spec.			
Nominal Voltage(Un)	120V or 230V AC	3x230/400V	3x230/400V
Operation Voltage	80%-120% of Un	80%-120% of Un	80%-120% of Un
Insulation capabilities			
-AC voltage withstand	4kV for 1 minute	4kV for 1 minute	4kV for 1 minute
-Impulse voltage withstand	6KV-1.2μS	6KV-1.2μS	6KV-1.2μS
Primary current	5-9999A	5-9999A	5-9999A
Secondary current	40mA CT	1A/5A CT	40mA CT
Basic current (Ib)	40mA	5A	40mA
Operational current range	0.2%Ib-I _{max} .	0.2%Ib-I _{max} .	0.2%Ib-I _{max} .
Over current withstand	20I _{max} for 0.5s	20I _{max} for 0.5s	20I _{max} for 0.5s
Operation frequency range	50/60Hz	50/60Hz	50/60Hz
Internal power consumption	≤2W/10VA	≤2W/10VA	≤2W/10VA
Display	LCD with backlight	LCD with backlight	LCD with backlight
Max. reading	999999kWh/kVarh	999999.9kWh/kVarh	999999.9kWh/kVarh

Performance criteria			
Operating humidity	≤90%	≤90%	≤90%
Storage humidity	≤95% ,no condensing	≤95% ,no condensing	≤95% ,no condensing
Operation temperature	-25℃-+55℃ or -40℃ - + 70℃	-25℃-+55℃	-25℃-+55℃
Storage temperature	-40℃ - + 70℃	-40℃ - + 70℃	-40℃ - + 70℃
Reference temperature	23℃ ± 2℃	23℃ ± 2℃	23℃ ± 2℃
International standard	IEC 62053-21/EN50470-1/3	IEC 62053-21/EN50470-1/3	IEC 62053-21
Accuracy class	Class 1/Class B	Class 1/Class B, Class 0.5s/Class C	Class 1,Class 0.5
Installation category	CATIII	CATIII	CATIII
Mechanical environment	M1	M1	M1
Electromagnetic environment	E2	E2	E2
Degree of pollution	2	2	2
Protection against penetration of dust and water	IP51 (indoor)	IP51 (indoor)	IP51 (indoor)
Insulating encased meter of protective class	II	II	II
Altitude	Up to 2000m	Up to 2000m	Up to 2000m
Electrostatic discharges	8kV contact/15kV air gap	8kV contact/15kV air gap	8kV contact/15kV air gap
Electromagnetic HF fields	IEC 61000-4-3	IEC 61000-4-3	IEC 61000-4-3
Electrical fast transients	4kV	4kV	4kV
Surge	4kV	4kV	4kV
Radiated&conducted emissions	EN 55022	EN 55022	EN 55022

Accuracy			
Voltage	0.5%	0.5%	0.5%
Frequency	0.2%	0.2%	0.2%
Power factor	0.01	0.01	0.01
Active power, Apparent power	±1%	±1%	±1%
Reactive power	±1%	±1%	±1%
Reactive energy(Varh)	Class 2	Class 2	Class 2
Active energy(Wh)	Class 1	Class 0.5/Class 1	Class 0.5/Class 1

RS485 Modbus			
Bus type	RS485 (semi-duplex)	RS485 (semi-duplex)	RS485 (semi-duplex)
Protocol	Modbus RTU	Modbus RTU	Modbus RTU
Baudrate	1200/2400/4800/9600	2400/4800/9600/19200/38400	2400/4800/9600/19200/38400
Address range	1-247	1-247	1-247
Max.Bus loading	64pcs	64pcs	64pcs
Communication distance	1000m	1000m	1000m
Parity	EVEN/ODD/NONE	EVEN/ODD/NONE	EVEN/ODD/NONE
Data bit	8	8	8
Stop bit	1 or 2	1 or 2	1 or 2

Pulse Output			
Pulse outputs	2	2	2
Pulse output type	passive	passive	passive
Pulse Output 1	Configurable	Configurable	Configurable
Pulse width	200/100(default)/60ms	200/100(default)/60ms	200/100(default)/60ms
Pulse output 2	1000imp/kWh	3200imp/kWh	3200imp/kWh
Pulse width	60ms	90ms	90ms

Model	SDM230Modbus V1	SDM630Modbus V2
		
Technical Spec.		
Nominal Voltage(Un)	120V or 230V AC	3x230/400V
Operation Voltage	80%-120% of Un	80%-120% of Un
Insulation capabilities		
-AC voltage withstand	4kV for 1 minute	4kV for 1 minute
-Impulse voltage withstand	6KV-1.2μS	6KV-1.2μS
Basic current (Ib)	10A	10A
Max. rated current(Imax.)	100A	100A
Maximum Current (I _{max} .)	0.4%I _b -I _{max} .	0.4%I _b -I _{max} .
Over current withstand	30I _{max} for 0.01s	30I _{max} for 0.01s
Operation frequency range	50/60Hz	50/60Hz
Internal power consumption	≤2W/10VA	≤2W/10VA
Display	LCD with backlight	LCD with backlight
Max. reading	999999.9kWh	999999.99kWh

Performance criteria		
Operating humidity	≤90%	≤90%
Storage humidity	≤95% ,no condensing	≤95% ,no condensing
Operation temperature	-25℃-+55℃	-25℃-+55℃ or -40℃ - + 70℃
Storage temperature	-40℃ - + 70℃	-40℃ - + 70℃
Reference temperature	23℃ ± 2℃	23℃ ± 2℃
International standard	IEC 62053-21/EN50470-1/3	IEC 62053-21/EN50470-1/3
Accuracy class	Class 1/Class B	Class 1/Class B, Class 0.5s/Class C
Installation category	CATIII	CATIII
Mechnaical environment	M1	M1
Electromagnetic environment	E2	E2
Degree of pollution	2	2
Pretection against penetration of dust and water	IP51 (indoor)	IP51 (indoor)
Insulating encased meter of protective class	II	II
Altitude	Up to 2000m	Up to 2000m
Electrostatic discharges	8kV contact/15kV air gap	8kV contact/15kV air gap
Electromagnetic HF fields	IEC 61000-4-3	IEC 61000-4-3
Electrical fast transients	4kV	4kV
Surge	4kV	4kV
Radiated&conducted emissions	EN 55022	EN 55022

Accuracy		
Voltage	0.5%	0.5%
Frequency	0.2%	0.2%
Power factor	0.01	0.01
Active power, Apparent power	±1%	±1%
Reactive power	±1%	±1%
Reactive energy(Varh)	Class 2	Class 2
Active energy(Wh)	Class 1	Class 0.5/Class 1

RS485 Modbus		
Bus type	RS485 (semi-duplex)	RS485 (semi-duplex)
Protocol	Modbus RTU	Modbus RTU
Baudrate	1200/2400/4800/9600	2400/4800/9600/19200/38400
Address range	1-247	1-247
Max.Bus loading	64pcs	64pcs
Communication distance	1000m	1000m
Parity	EVEN/ODD/NONE	EVEN/ODD/NONE
Data bit	8	8
Stop bit	1 or 2	1 or 2

Pulse Output		
Pulse outputs	2	2
Pulse output type	passive	passive
Pulse Output 1	Configurable	Configurable
Pulse width	200/100(default)/60ms	200/100(default)/60ms
Pulse output 2	1000imp/kWh	400imp/kWh
Pulse width	100ms	100ms