



Preliminary



## SMA Energy Meter-US

Maximize energy savings by monitoring home energy use and flows

## Monitor home energy

- View energy savings by monitoring home energy use and flows.
- Realtime data via the SMA Energy app and ennexOS.SunnyPortal.com
- Track solar generation and home consumption over periods of time

## Easy, flexible installation

- UL2808 rated for mounting in electrical panelboards
- Space-saving design, pre-terminated wiring (included) and split-core, clamp-on current transformers (CTs)
- Flexible use in home and small commercial applications
- Fast commissioning via the SMA 360° app
- Flexible communication options, LAN or RS485

The new SMA Energy Meter empowers installers and homeowners to control energy savings by monitoring the home's energy use and flows.

Homeowners can understand their home's energy use and solar generation while learning how energy is consumed, generated, and stored. SMA's Home Energy Solutions grow with you, providing valuable information on a home's energy usage to aid in future design decisions like adding backup and battery capacity.

The SMA Energy Meter is compact, easy to install and quick to configure via the SMA 360° app. Via the SMA Energy app, homeowners can monitor energy consumption to easily track energy costs, quantify savings and view the net positive impact.

Via installer-provided Ethernet cable (#24AWG, min 300 V, shielded, 10/100 Mbit/s, R145 plugs) or R5485 cable (2 x 2 x 24AWG, shielded)   Part	Fechnical data	SMA Energy Meter-US
Dota protocol   SMA Speedwire, Modbus RTU	Communication	
Inputs (voltage)   Voltage inputs	Connection to the inverter (SBSE x.x-US-50) or local area network (LAN) router	
Nominal voltage   120 / 240 V or 120 / 208 V	Data protocol	SMA Speedwire, Modbus RTU
Nominal voltage   120 / 240 V or 120 / 208 V	Inputs (voltage)	
Frequency	Voltage inputs	4 (L1, L2, L3, N) pre-wired (3 ft/0.9 m)
Ambienf conditions         -13°F to +131°F (-25°C to +55°C)           Coparating temperature range         -13°F to +158°F (-25°C to +70°C)           Environmental protection rating         NEMA1           Max. permissible value for relative humidity (non-condensing)         5% to 90% ²           Elevation above sea level         0 to 6,562 ft (2000 m)           General data         Split-phase (120/240V), 3-phase (120/208V), paired with Sunny Boy Smart Energy (SBSE x.x-US-50) inverter(s)           Dimensions W/H/D in inches (mm)         1.5° x 3.5° x 2.5″ (70° x 8 x x-65)           Weight         0.2 lb (90 g)           Mounting location         Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)           Status display / internal power consumption         1.5° x 3.5° x 2.5″ (70° x 8 x x-65)           Measurement accuracy, measuring interval         3 LEDs / ≤ 2 W           Measurement accuracy, measuring interval         1%, 200 ms           Additional components         • (additional available in boxes of 10)           Power cable harmess         • (additional available in boxes of 10)           Power cable harmess         • (additional conditional condition resistor (1)         • (additional conditional conditional conditional conditional condition resistor (1)         • (additional conditional	Nominal voltage	120 /240 V or 120/208 V
Coperating temperature range	Frequency	50 or 60 Hz/±5%
Transport lemperature range Environmental protection rating Max. permissible value for relative humidity (non-condensing) Elevation above sea level Oto 6,562 ft (2000 m)  General data Applications Split-phase (120/240V), 3-phase (120/208V), paired with Sunny Boy Smart Energy (SBSE x.x.US-50) inverter(s) Dimensions W/H/D in inches (mm) Status display / internal power consumption Status display / internal power consu	Ambient conditions	
Environmental protection rating  Max. permissible value for relative humidity (non-condensing)  Elevation above sea level  O to 6,562 ft (2000 m)  General data  Applications  Applications  Applications  Split-phase (120/240V), 3-phase (120/208V), paired with Sunny Boy Smart Energy (SBSE x-x-Us-50) inverter(s)  Dimensions W/H/D in inches (mm)  Weight  O 2 lb (90 g)  Mounting location  Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)  Status display / internal power consumption  Additional components  Current transformers (2)  Power cable harness  Mounting bracket  RS 485 connectors (2)  Termination resistor (1)  Communication cable  Features  C1 assembly  C1 assembly  C1 assembly  C2 clamp CTs with 1 pre-configured connector  C1 ratings  C1 cable length in inches  C1 inside diameter in inches  C1 inside diameter in inches  C2 years  C4 util 250V, 200A rated, 300A max, UL2808  C1 cable length in inches  C2 years  C4 til 250V, 200A rated, 300A max, UL2808  C1 cable length in inches  C2 years  C4 util 250V, 200A rated, 300A max, UL2808  C1 cable length in inches  C2 years  C4 util 250V, 200A rated, 300A max, UL2808  C1 cable length in inches  C2 years  C4 util 250V, 200A rated, 300A max, UL2808  C3 years  C4 util 250V, 200A rated, 300A max, UL2808  C4 util 250V, 200A rated, 300A max, UL2808  C5 cable length in inches  C6 utilificates and permits  UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Operating temperature range	-13°F to +131°F (-25°C to +55°C)
Max. permissible value for relative humidity (non-condensing)  Elevation above sea level  General data Applications  Split-phase (120/240V), 3-phase (120/208V), paired with Sunny Boy Smart Energy (SBSE x.x.Us-50) inverter(s)  Dimensions W/H/D in inches (mm)  Weight  Supplications  Mounting location  Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)  Status display / internal power consumption  Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)  Status display / internal power consumption  Additional components  Current transformers (2)  Power cable harness  Mounting bracket  RS-485 connectors (2)  Fermination resistor (1)  Communication cable  Features  CI assembly  CI ratings  CAT IV 250V, 200A rated, 300A max, U12808  CI cable length in inches  CI inside diameter in inches  CI riside diameter in inches  U12808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Transport temperature range	-13°F to +158°F (-25°C to +70°C)
Elevation above sea level	Environmental protection rating	NEMA1
General data         Split-phase (120/240V), 3-phase (120/208V), paired with Sunny Boy Smart Energy (BSE x.x.U.S-50) inverter(s)           Dimensions W/H/D in inches (mm)         1.5" x 2.5" (70 x 88 x 65)           Weight         0.2 lb (90 g)           Mounting location         Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)           Status display / internal power consumption         3 LEDs / ≤ 2 W           Measurement accuracy, measuring interval         1%, 200 ms           Additional components         ■           Current transformers (2)         ● (additional available in boxes of 10)           Power cable harness         ■           Mounting bracket         ●           RS485 connectors (2)         ●           Termination resistor (1)         ●           Communication cable         -           Features         Features           CT assembly         2 clamp CTs with 1 pre-configured connector           CT ratings         CAT IV 250V, 200A rated, 300A max, UL2808           CT cable length in inches         48"           CT cable length in inches         0.875"           Warranty         2 years           Certificates and permits         UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Max. permissible value for relative humidity (non-condensing)	5% to 90% <sup>2)</sup>
Applications         Split-phase (120/240V), 3-phase (120/240V), paired with Sunny Boy Smart Energy (SBSE x.x-US-50) inverter(s)           Dimensions W/H/D in inches (mm)         1.5" x 3.5" x 2.5" (70 x 8x x 65)           Weight         0.2 lb (90 g)           Mounting location         Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)           Status display / internal power consumption         3 LEDs / ≤ 2 W           Measurement accuracy, measuring interval         1%, 200 ms           Additional components         Current transformers (2)           Power cable harness         ●           Mounting bracket         ●           RS485 connectors (2)         ●           Termination resistor (1)         ●           Communication cable         -           Features         Features           CT assembly         2 clamp CTs with 1 pre-configured connector           CT ratings         CAT IV 250V, 200A rated, 300A max, UL2808           CT cable length in inches         48"           CT cable length in inches         0.875"           Warranty         UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Elevation above sea level	0 to 6,562 ft (2000 m)
paired with Sunny Boy Smart Energy (SBSE x.x-US-50) inverter(s)  Dimensions W/H/D in inches (mm)  1.5" x 3.5" x 2.5" (70 x 88 x 65)  Weight  0.2 lb (90 g)  Mounting location  Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)  Status display / internal power consumption  3 LEDs / ≤ 2 W  Measurement accuracy, measuring interval  Additional components  Current transformers (2)  © (additional available in boxes of 10)  Power cable harness  Mounting bracket  Ex485 connectors (2)  Termination resistor (1)  Communication cable  Features  CT assembly  CT assembly  CT assembly  CT assembly  CT cable length in inches  CT cable length in inches  0.875"  Warranty  Certificates and permits  UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	General data	
Weight     0.2 lb (90 g)       Mounting location     Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)       Status display / internal power consumption     3 LEDs / ≤ 2 W       Measurement accuracy, measuring interval     1%, 200 ms       Additional components       Current transformers (2)       Power cable harness     ●       Mounting bracket     ●       RS485 connectors (2)     ●       Termination resistor (1)     ●       Communication cable     -       Features     CT assembly       CT assembly     2 clamp CTs with 1 pre-configured connector       CT ratings     CAT IV 250V, 200A rated, 300A max, UL2808       CT cable length in inches     48"       CT inside diameter in inches     0.875"       Warranty     2 years       Certificates and permits     UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Applications	
Mounting location       Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)         Status display / internal power consumption       3 LEDs / ≤ 2 W         Measurement accuracy, measuring interval       1%, 200 ms         Additional components         Current transformers (2)       • (additional available in boxes of 10)         Power cable harness       •         Mounting bracket       •         RS485 connectors (2)       •         Termination resistor (1)       •         Communication cable       -         Features       2 clamp CTs with 1 pre-configured connector         CT assembly       2 clamp CTs with 1 pre-configured connector         CT ratings       CAT IV 250V, 200A rated, 300A max, UL2808         CT cable length in inches       48"         CT inside diameter in inches       0.875"         Warranty       2 years         Certificates and permits       UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Dimensions W/H/D in inches (mm)	1.5" x 3.5" x 2.5" (70 x 88 x 65)
Status display / internal power consumption       3 LEDs / ≤ 2 W         Measurement accuracy, measuring interval       1%, 200 ms         Additional components         Current transformers (2)       ● (additional available in boxes of 10)         Power cable harness       ●         Mounting bracket       ●         RS485 connectors (2)       ●         Termination resistor (1)       ●         Communication cable       -         Features       CT assembly         CT assembly       2 clamp CTs with 1 pre-configured connector         CT ratings       CAT IV 250V, 200A rated, 300A max, UL2808         CT cable length in inches       48"         CT inside diameter in inches       0.875"         Warranty       2 years         Certificates and permits       UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Weight	0.2 lb (90 g)
Measurement accuracy, measuring interval 1%, 200 ms   Additional components ● (additional available in boxes of 10)   Current transformers (2) ● (additional available in boxes of 10)   Power cable harness ●   Mounting bracket ●   RS485 connectors (2) ●   Termination resistor (1) ●   Communication cable -   Features Features   CT assembly 2 clamp CTs with 1 pre-configured connector   CT ratings CAT IV 250V, 200A rated, 300A max, UL2808   CT cable length in inches 48"   CT inside diameter in inches 0.875"   Warranty 2 years   Certificates and permits UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Mounting location	Indoors or inside 3R-rated enclosure (e.g. load center, meter/main, panelboard)
Additional components  Current transformers (2)  Power cable harness  Mounting bracket  RS485 connectors (2)  Termination resistor (1)  Communication cable  Features  CT assembly  CT ratings  CT ratings  CT cable length in inches  CT cable length in inches  Warranty  Certificates and permits  (2)  (additional available in boxes of 10)  (boxes of 10)  (communication cable  (communication	Status display / internal power consumption	3 LEDs / ≤ 2 W
Current transformers (2) ● (additional available in boxes of 10)   Power cable harness ●   Mounting bracket ●   RS485 connectors (2) ●   Termination resistor (1) ●   Communication cable -   Features Features   CT assembly 2 clamp CTs with 1 pre-configured connector   CT ratings CAT IV 250V, 200A rated, 300A max, UL2808   CT cable length in inches 48"   CT inside diameter in inches 0.875"   Warranty 2 years   Certificates and permits UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Measurement accuracy, measuring interval	1%, 200 ms
Power cable harness  Mounting bracket  RS485 connectors (2)  Termination resistor (1)  Communication cable  Features  CT assembly  CT ratings  CT ratings  CT cable length in inches  48"  CT inside diameter in inches  Warranty  Certificates and permits  •  •  •  Consume the configured connector  CT ratings  CAT IV 250V, 200A rated, 300A max, UL2808  AB"  CT inside diameter in inches  UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Additional components	
Mounting bracket         ●           RS485 connectors (2)         ●           Termination resistor (1)         ●           Communication cable         -           Features           CT assembly         2 clamp CTs with 1 pre-configured connector           CT ratings         CAT IV 250V, 200A rated, 300A max, UL2808           CT cable length in inches         48"           CT inside diameter in inches         0.875"           Warranty         2 years           Certificates and permits         UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Current transformers (2)	<ul> <li>(additional available in boxes of 10)</li> </ul>
RS485 connectors (2)       ●         Termination resistor (1)       ●         Communication cable       −         Features         CT assembly       2 clamp CTs with 1 pre-configured connector         CT ratings       CAT IV 250V, 200A rated, 300A max, UL2808         CT cable length in inches       48"         CT inside diameter in inches       0.875"         Warranty       2 years         Certificates and permits       UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Power cable harness	•
Termination resistor (1)  Communication cable  Features  CT assembly  CT ratings  CT cable length in inches  CT cable diameter in inches  Warranty  Certificates and permits  •  Communication cable  -  Cable length in pre-configured connector  CAT IV 250V, 200A rated, 300A max, UL2808  A8"  CT inside diameter in inches  0.875"  2 years  UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Mounting bracket	•
Communication cable         –           Features         2 clamp CTs with 1 pre-configured connector           CT assembly         2 clamp CTs with 1 pre-configured connector           CT ratings         CAT IV 250V, 200A rated, 300A max, UL2808           CT cable length in inches         48"           CT inside diameter in inches         0.875"           Warranty         2 years           Certificates and permits         UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	RS485 connectors (2)	•
Features         2 clamp CTs with 1 pre-configured connector           CT assembly         2 clamp CTs with 1 pre-configured connector           CT ratings         CAT IV 250V, 200A rated, 300A max, UL2808           CT cable length in inches         48"           CT inside diameter in inches         0.875"           Warranty         2 years           Certificates and permits         UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Termination resistor (1)	•
CT assembly         2 clamp CTs with 1 pre-configured connector           CT ratings         CAT IV 250V, 200A rated, 300A max, UL2808           CT cable length in inches         48"           CT inside diameter in inches         0.875"           Warranty         2 years           Certificates and permits         UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Communication cable	-
CT ratings       CAT IV 250V, 200A rated, 300A max, UL2808         CT cable length in inches       48"         CT inside diameter in inches       0.875"         Warranty       2 years         Certificates and permits       UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	Features	
CT cable length in inches  48"  CT inside diameter in inches  0.875"  Warranty  2 years  Certificates and permits  UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	CT assembly	2 clamp CTs with 1 pre-configured connector
CT inside diameter in inches         0.875"           Warranty         2 years           Certificates and permits         UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	•	
Warranty         2 years           Certificates and permits         UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	CT cable length in inches	
Certificates and permits UL2808, CAN/CSA C22.2 No. 61010-1 and 61010-2-030,	CT inside diameter in inches	0.875"
	Warranty	- '
	Certificates and permits	
Included - Not included	● Included - Not included  Last updated: August 2023 1) Mechanical 1.5 mm² to 25 mm² 2) 95% only on up to 30 days of the year	

Type designation

EMETER-US-50