SolarEdge Home Network

Wireless Mesh Network

COMMUNICATION

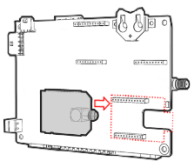
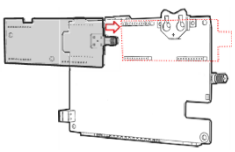


One communication platform for seamless device connection within the SolarEdge Smart Energy Management ecosystem

- Faster, easier, and cleaner installations*
  - Avoids the hassle of wired infrastructure with wireless connectivity between inverter and system devices
  - Simple plug and play connection
  - Automatic device detection and configuration using SetApp
- Field-proven wireless technology
  - Mesh network topology enabling long-range transmissions
  - Robust performance in challenging environments
- Connectivity you can count on
  - Reliable communications with no single point of failure (for multiple device systems)
  - Secured telemetry with advanced device authentication and data encryption
- External antenna to ensure maximum coverage

* When compared to SolarEdge installations using wired communications

/ SolarEdge Home Network Plugin

PART NUMBER		ENET-xBNP-01	ENET-xBCL-01	ENET-xBP-XXX(1)	UNIT
PERFORMANCE					
Transmission Power (max)		17(2)			dBm
Receiver Sensitivity		-100			dBm
Indoor Range (no line of sight)		50 / 160			m / ft
ENVIRONMENTAL					
Operating Temperature		-40 to 185 / -40 to +85			˚C / ˚F
Storage Temperature		-40 to 185 / -40 to +85			˚C / ˚F
MECHANICAL					
Size		0.98 x 1.37 / 25 x 35	1.29 x 2.99 / 33 x 76	0.98 x 1.37 / 25 x 35	in / mm
POWER SUPPLY					
DC Voltage (nominal)		3.3			Vdc
Max Input Current		200			mA
COMMUNICATION					
Supported Communication Protocol		SolarEdge Home Network			
Operating Frequency Range		916 – 924 (AUS) 915 – 928 (Brazil) 863 – 870 (EU) 920 – 925 (Taiwan) 902 – 928 (US)			MHz
Modulation		O-QPSK (Quadrature Phase Shift Keying)			
EIRP with Antenna		20 (AUS) 19 (Brazil) 14 (EU) 27 (Taiwan) 20 (US)			dBm
ANTENNA(3)					
Antenna Type		Outdoor			
Antenna Connector		RP-SMA			
VSWR		≤4.0			dBi
Polarization		Vertical			
Material		PC Lexan 503R-WH5151L or WH8G952 Sabic			
Dimensions (Length x Diameter)		7.87 x 0.78 / 200 x 20			mm / in
COMPLIANCE					
Australia	EMC / EMI	CISPR 32 AS/NZS CISPR 32, AS/NZS 4268			
	Radio	AS/NZS 4268			
Brazil	Radio	Resolução N° 680 e Ato Nº 14448/2017			
Canada	EMC / EMI	ICES-003			
	Radio	RSS-247 for SRD, RSS-102 MPE report			
Europe	EMC / EMI	CISPR 32, EN 55032, EN 55035, EN 301 489-1, EN 301 489-3			
	Radio	EN 62311 (EMF test), EN 300-220-1, EN 300-220-2			
Japan	EMC / EMI	VCCI-CISPR 32			
	Radio	ARIB STD-T93, JAPAN EXTREMELY LOW POWER			
Korea	EMC / EMI and Radio	Korea RF (KN 32/35)			
Taiwan	EMC / EMI and Radio	NCC LP0002			
US	EMC / EMI and Radio	FCC Part 15B, FCC Part 15C			
COMPATIBILITY(4)					
		SolarEdge Home Network-ready inverter with the following part number: SExxxxH-RWxxxBExx 	SetApp-enabled inverter with the following part numbers: SExxxxH-RW0xxBNxx, SExxxxH-RWSxxBNxx, SExxK-RW0xxBNxx. Note: Plug in to the cellular socket. If the cellular socket is occupied, use ENET-xBP-XXX instead. 	Inverters that do not have a socket for the SolarEdge Home Network Plug-in See footnotes 1 and 4.	

(1) ENET-xBP-XXX is designed for inverters that do not have a socket for the SolarEdge Home Network Plug-in. In addition to the plug-in and the antenna, this kit includes a communication board that must be installed instead of the existing communication board.
(2) Transmission power may be higher according to each country's standard requirements.
(3) External antenna is provided with the SolarEdge Home Network Plug-In kit.
(4) For details about selecting the appropriate SolarEdge Home Network Plug-in kit for your inverter, see the SolarEdge Home Network Plug-in Kit Selection technical note.

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/ Inline Energy Meter

Part Number		MTR-240-3PC1-D-A-MW	MTR-240-1PC1-DW-MW	UNITS
Model Number		**MTR EU3**	**MTR EU1**	
ELECTRICAL SERVICE				
Nominal Voltage		3 x 230/400	1 x 230	Vac
Voltage Range	Line to Line	320 - 460	-	Vac
	Line to Neutral	184 - 264.5		
Supported Grids		L1 / L2 / L3 / N (WYE)	L / N	
Power Consumption (max)	SolarEdge Energy Net Wireless Connection	< 2.0		W
	RS485 Wired Connection	< 1.8		
AC Frequency		45 - 65		Hz
Maximum Current (Imax)		65		A
Transitional Current (Itr)		0.5		A
Starting Current (Ist)		20		mA
Minimum Current (Imin)		0.25		A
Reference Current (Iref)		5		A
Active Energy Accuracy		EN54070 Class B[1] IEC 62053-21 Class 1		
Active Energy Accuracy Error	Itr ≤ I < Imax	1		%
	Imin ≤ I < Itr	1.5		
Reactive Energy Accuracy		IEC 62053-23 Class 2		
Reactive Energy Accuracy Error	Itr ≤ I < Imax	2		%
	Imin ≤ I < Itr	2.5		
Over-voltage		CAT III 600		Vac
RS485 COMMUNICATION				
RS485 Terminal Cross Section		0.2 - 2		mm^2
Interface		RS485 half duplex, 3 wires (A, B, GND)		
Protocol		MODBUS RTU		
Power Register Update Resolution		<200		ms
All Other Registers		< 4		sec
RS485 Line Termination		120 (selectable)		Ω
WIRELESS COMMUNICATION[2]				
Frequencies		863 - 876 (band 868) 902 - 930 (band 915)		MHz
Transmit Power EIRP		14 (with internal antenna) 16 (with external antenna)		dBm
Transmit Power (Max)		14		dBm
Modulation		OQPSK		
Internal Antenna Gain		0		dBi
External Antenna[3] Gain		2		dBi
Antenna Connector		SMA-RP		
External Antenna Mounting		Wall mount with bracket		
PULSE DISPLAY				
Pulse Frequency		1000		imp / kWh
Pulse Length		5 (min), 80 (max)		ms
INSTALLATION/MECHANICAL				
Display		8 digits		
Protection Rating (Indoor)		IP51		
Mounting Support		DIN rail		
Weight		320		g
Material		PC Lexan 503R		
Dimensions (W x H x D)		72 x 90 x 58		mm
AC Terminal Cross Section Area		1.5 - 25		mm^2

(1) EN54070 Class B, when AC inputs are connected to the upper terminal blocks. EN54070 Class A, when AC inputs are connected to the lower terminal blocks
(2) SolarEdge Energy Net wireless communication requires inverter support
(3) External antenna kit should be purchased separately (PN: SE-ANT-ENET-HB-01)