

Selector guide – Solar Boost™ MPPT and Sun Charger™ PWM Solar Charge Controllers & Accessories

Charge Controllers (BSE p/n)	Battery Voltage	Maximum PV Voc @ STC ①	Maximum PV Power @ Vbat / Vpv ②	Maximum Output Current	Charge Algorithm	Digital Display	Remote Display Option	Load Control	Lighting Control	Agency Approval	Typical Applications
Solar Boost 2000E (SB2000E)	12V	24V	340W 12V/12V	25A	2-stage, plus Equalization	Yes	No	No	No	—	Small to medium 12V systems; RV's, boats, small off grid cabins & small industrial.
Solar Boost 3000i (SB3000i)	12V	40V	400W 12V/12V 290W 12V/20V	←30A ←22A	3-stage, plus Equalization	Yes	Yes	Yes 20A Voltage or AH based	Yes	—	Small to medium 12V systems; RV's, boats, cabins & industrial. Aux. output for load control or 2 nd battery charge. IPN™ network coordinates multiple units.
Sun Charger 30 (SC30, SC30-LVD)	12V	24V	450W 12V/12V	30A	3-stage, plus Equalization	Yes	No	-LVD option 50mA drive	-LVD option 50mA drive	CE	Entry level PWM (non-MPPT) controller, small to medium 12V systems; RV's, boats, small off grid cabins & small industrial.
Solar Boost 50L ** (SB50L & DL) **no longer in production Replacement in 2014	12/24V	45.6V	670W 12V/12V 12V/20V 12V/24V 1340W 24V/24V	50A	3-stage, plus Equalization	Optional	Yes	No	No	ETL/cETL CE, FCC	Medium to large 12/24V systems; larger RV's & Boats, on or off grid homes & larger industrial. Replacement scheduled for 2013 end of year release.
Solar Boost 3048L (SB3048L & DL)	24/48V	112V	800W 24V/24V 24V/48V 24V/60V 1340W 48V/48V 48V/60V	30A	3-stage, plus Equalization	Optional	Yes	No	No	ETL/cETL CE, FCC	Medium to large 24/48V systems; on or off grid homes, larger industrial & telecomm.
Solar Boost 3024iL (SB3024iL & DiL)	12/24V	45.6V	540W 12V/12V 400W 12V/20V 12V/24V 800W 24V/24V	←40A ←30A ←30A ←30A	3-stage, plus Equalization	Optional	Yes	20A Voltage or AH based	Post-dusk & Pre-dawn timers	ETL/cETL CE, FCC	Medium 12/24V systems; RV's, boats, cabins & industrial. Aux. output for load control or 2 nd battery charge. IPN™ network coordinates multiple units for larger systems.
Solar Boost 1524iX (SB1524iX)	12/24V	45.6V	270W 12V/12V 200W 12V/20V 12V/24V 400W 24V/24V	←20A ←15A ←15A ←15A	3-stage, plus Equalization	No	Yes	20A / 15A Voltage or AH based	Post-dusk & Pre-dawn timers	—	Smaller 12/24V systems; RV's, boats, cabins & industrial. Aux. output for load control or 2 nd battery charge. IPN™ network coordinates multiple units for larger systems.
Solar Boost 2512i-HV (SB2512i-HV) Replaces SB2512i	12V	40V	340W 12V/12V 270W 12V/20V	←25A ←20A	3-stage	No	Yes	No	No	—	Small to medium 12V systems; RV's, boats, cabins & industrial. Includes limited IPN network interface to support IPN displays.
Solar Boost 2512iX-HV (SB2512iX-HV) Replaces SB2512iX	12V	40V	340W 12V/12V 270W 12V/20V	←25A ←20A	3-stage, plus Equalization	No	Yes	25A Voltage or AH based	Post-dusk & Pre-dawn timers	—	Small to medium 12V systems; RV's, boats, cabins & industrial. Aux. output for load control or 2 nd battery charge. IPN™ network coordinates multiple units for larger systems.

Options / Accessories (BSE p/n)	Compatible Product	Approvals	Typical Applications and Features
SB50 Display (SB50RD25)	SB50L SB3048L, SB6024HL	ETL/cETL CE, FCC	Remote display shows Input/Output current, Battery Voltage and Charge System Status.
IPN-ProRemote (IPNPRO, IPNPRO-S)	SB3024i(L), SB2512i(X)(-HV) SB1524iX, SB3000i & future IPN based charge controllers	ETL/cETL CE, FCC	Full featured remote display combines both charge controller monitoring/setup and complete battery system monitoring. Includes highly accurate amp-hour counting "fuel gauge" type battery capacity display. The IPN-ProRemote can monitor up to 8 IPN based charge controllers.
IPN-Remote (IPNREM)	SB3024i(L), SB2512i(X)(-HV) SB1524iX, SB3000i & future IPN based charge controllers	ETL/cETL CE, FCC	Low cost remote display provides a simple Battery Voltage and Solar Charge Current display for IPN base charge controllers. The IPN-Remote can monitor up to 8 charge controllers on the IPN network.
DUO-Option (UPGRADE-3024DUO)	SB3024i(L)	ETL/cETL CE, FCC	Converts 3024's 20 amp auxiliary output into separate diversion type charge controller. Provides both diversion control for wind/hydroelectric, and PV MPPT in the same unit. User configurable to deliver minimum possible power to the dump load or maximum possible power to the dump load. Available as factory option or field upgrade.
Current Booster Module (CBM4070)	SB3024i(L), SB2512i(X)(-HV) SB1524iX, SB3000i	CE	External high current MOSFET Current Booster Module. Increases DC load current capability of charge controller to 70 amps for lighting or similar DC load applications. Increases SB3024i(L) DUO-Option diversion PWM current capability to 40 amps.
Battery Temp Sensor (930-0022-20)	All Solar Boost charge controllers with temp sense input	ETL/cETL CE, FCC	Allows charge controller to automatically adjust charge voltage setpoints based on measured battery temperature.
Universal Communication Module (UCM)	SB3024i(L), SB2512i(X)(-HV) SB1524iX, SB3000i & future IPN based charge controllers		Provides a gateway between the charge controller IPN network and standard communication interfaces including Modbus RTU via RS-485, Modbus I/P, and internet connectivity via embedded Ethernet HTTP web site and FTP data upload. Also provides 128 days of datalogging.
Adapter Plate, SC30 to SCI cutout (SC30-ADAPTER)	SC30(-LVD), SB2000E, SB3000i		Black powder coated aluminum adapter plate measuring 7.5" x 4.6" (19.1 x 11.7cm). Allows clean installation of SC30 size controller into a cutout previously occupied by an SCI or similar charge controller measuring 7.5" x 4.25" (19.1 x 10.8cm).
Adapter Plate, IPN-Remote to SCI cutout (REM-ADAPTER)	IPN-Remote		Black powder coated aluminum adapter plate measuring 7.5" x 4.6" (19.1 x 11.7cm). Allows clean installation of IPN-Remote into a cutout previously occupied by an SCI or similar charge controller measuring 7.5" x 4.25" (19.1 x 10.8cm).
Adapter Plate, IPN-Remote to SCI cutout (PRO-ADAPTER)	IPN-ProRemote		Black powder coated aluminum adapter plate measuring 7.5" x 4.6" (19.1 x 11.7cm). Allows clean installation of IPN-ProRemote into a cutout previously occupied by an SCI or similar charge controller measuring 7.5" x 4.25" (19.1 x 10.8cm).
SC30/SB2000E wall mount box (720-0011-01)	SC30(-LVD), SB2000E, SB3000i		Black powder coated steel mounting box to allow surface mount of charge controller. Same X,Y dimension as charge controller, 2.75" (7.0cm) deep.
SB2512iX ABS wall mount box (MTG BOX 2512)	SB2512i(X), SB2512i(X)-HV, SB1524iX		Corrosion proof black ABS plastic mounting box for SB2512i(X) size charge controllers, 5.0" x 5.0" x 2.5" (12.7 x 12.7 x 6.4cm). Included with SB2512i(X)-HV units, and SB1524iX units shipped after 11/30/2012.

- ① PV V_{oc} at STC should not exceed controller maximum PV input voltage rating ± 1.25 . Values shown here already include 1.25 derating. See Technical Bulletin 100214.
 ② 12V PV refers to typical 36 cell module providing V_{MP}/V_{oc} of $\approx 18V/22V$ at STC. 20V PV refers to 60 cell module ($\approx 30V/37V$), and 24V PV refers to 72 cell module ($\approx 35V/44V$).