



Patented Maximum Power Point Tracking (MPPT) technology allows Solar Boost 3024i to increase charge current up to 30 % or more compared to conventional charge controllers. Don't waste your money by throwing PV power away! Get the power you paid for with a SolarBoost 3024i charge controller.

Solar Boost 3024i provides an advanced fully automatic three stage charge control system to ensure the battery is properly and fully charged, resulting in enhanced battery performance with less maintenance. An automatic or manual equalize function is also provided to periodically condition flooded lead-acid batteries. To further enhance versatility, a user configurable auxiliary output and Blue Sky Energy's advanced IPN™ network interface are also included.

The user configurable auxiliary output can serve as either a 20 amp load controller, or as a 2 amp auxiliary battery charger. The load control feature can be used to limit excessive battery discharge in unattended remote systems, whereas the auxiliary battery charge feature is ideal for charging a separate battery such as the engine battery in an RV.

Blue Sky Energy's advanced Integrated PowerNet™, or IPN network, allows up to 8 IPN capable charge controllers to communicate with each other and operate as a single machine rather than separate charge controllers. The IPN network also allows networked controllers to share an optional battery temperature sensor and remote display. The IPN network does not require a display or other special communication hardware to operate.

#### Product Features

- | Patented MPPT technology increases charge current up to 30 % or more!
- | 30 A 12/24 V rating supports a wide range of applications
- | Auxiliary output serves as 20 A load controller or 2 A battery charger
- | IPN network interface coordinates multiple controllers and shares optional battery temperature sensor and display



- | Optional IPN-ProRemote display provides complete charge control and battery system monitoring, eliminating the need for a separate battery monitor device
- | Three stage charge control with filtered PWM output & auto/manual equalization improves battery performance and life
- | MPPT power converter can charge 12 V batteries from 24 V PV modules
- | Durable powder coat finish and conformal coated electronics resist corrosion
- | Full 24 month limited warranty, optional extended coverage available

**Technical data Blue Sky Energy Solar Boost™ 3024i:**

<b>Output Current Rating</b>	30 A maximum
<b>Nominal Battery Voltage</b>	12/24 V DC
<b>PV Input Voltage</b>	57 V DC maximum
<b>Power Consumption</b>	0.35 W typical stand-by, 1.0 W typical charge on
<b>Charge Algorithm</b>	3 stage bulk/acceptance/float (Full charge can be based on net charge current matched to battery amp-hours <sup>2</sup> .)
<b>Acceptance Voltage</b>	14.4 V DC (range 14.0-14.8 V DC <sup>1</sup> , 10.0-40.0 V DC <sup>2</sup> )
<b>Float Voltage</b>	13.4 V DC (range 13.2-13.8 V DC <sup>1</sup> , 10.0-40.0 V DC <sup>2</sup> )
<b>Equalization Voltage</b>	15.2 V DC (range 10.0-40.0 V DC <sup>2</sup> ), automatic or manual operation
<b>Auxiliary Output Function</b>	Single output field configurable as either: 20 A load controller, or 2 A auxiliary battery charger
<b>Aux. Battery Charge</b>	2 A typical, same charge voltage as primary battery
<b>Load Control</b>	20 A maximum; ON @ ±12.6 V DC/OFF @ ±11.5 V DC (Range 10.0-40.0 V DC <sup>2</sup> , or net battery amp-hours <sup>2</sup> )
<b>Temperature Compensation</b>	Optional temperature sensor adjusts charge voltage setpoints based on measured battery temperature. -5.00 mV/°C/cell correction factor (Range -0.00 to -8.00 mV/°C/cell <sup>2</sup> ) • sensor range -60 to +80°C
<b>Power Conversion Efficiency</b>	97 % typical @ 28 V 24 A output
<b>Cabinet Dimension</b>	6 <sup>7</sup> / <sub>8</sub> " H x 6 <sup>5</sup> / <sub>8</sub> " W x 3 <sup>3</sup> / <sub>8</sub> " D (17.4 x 16.8 x 8.59 cm)
<b>Analog Input</b>	Battery and aux. battery voltmeters, 40.0 V DC ± 0.50 % F.S., PV voltmeter, 60.0 V DC ± 0.50 % F.S.
<b>Accuracy/Range</b>	input/output ammeters, 35.0 A ± 0.50 % F.S.
<b>Communication</b>	Blue Sky Energy's proprietary IPN Network interface. Allows up to 8 IPN capable controllers to set up and operate as a single machine, share a common battery temperature sensor, and share an IPN-Remote or IPN-ProRemote display. Simple twisted pair cable interface with no special communication hardware required.
<b>Environmental</b>	-40 to 104 °F (-40 to +40 °C), 10-90 % RH non-condensing

<sup>1</sup> SB3024i alone, voltages double for 24 V battery<sup>2</sup> With IPN-ProRemote

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