

SB3024iL | SB3024DiL

40A/30A, @12V/@24V, MPPT



Marine | RV | Off-Grid | PV Street Lighting

Great for mid-sized systems, the SB3024 charge controller family, featuring our patented MPPT technology, handles up to 800 W of PV power when charging at 24V. This controller is ideal for RVs and Marine applications with its auxiliary output for charging a second battery, and can utilize a remote display with its IPN connectivity. The SB3024(D)iL will manage up to a 20A DC load output. When programmed with the IPN ProRemote, BT Connect, or UCM, it can be used for PV street lighting, utilizing its smart dusk-to-dawn load control feature. Its IPN Network interface can communicate with other Blue Sky Energy charge controllers as a single charging system, allowing increased flexibility and optimization in system design. **OPTIONAL:** The DUO Option upgrade allows a SB3024(D)iL-DUO to provide diversion type PWM charge control for hydroelectric, wind or similar DC generators.

Product Features

- Patented MPPT technology, hassle-free auto-detection for 12V / 24V systems
- Longer battery life with advanced multi-stage charging for Lead-Acid or LiFePO₄ batteries selectable by microswitches
- Charge a second battery or control a DC load output with Low Voltage Disconnect (LVD)
- Fully programmable charge profiles with IPN ProRemote or BT Connect
- Program for Dusk-to-Dawn Lighting Control with the IPN ProRemote or BT Connect
- Battery Temperature Compensation (with external battery temp. sensor)
- Networks with other Blue Sky Energy controllers for higher power (Master-Followers)

Display

- LEDs for charge and DC load output status
- LED display for battery voltage and output current (only SB3024DiL)
- Remote Display optional (IPN ProRemote, ProTouch, IPN Remote)

Electronic Protections

- PV array overload and reverse polarity
- Battery reverse polarity

Accessories

- IPN Remote - basic monitoring remote display
- IPN ProRemote - remote display w/ programming and battery monitoring
- ProTouch - touchscreen remote display for monitoring and basic programming
- UCM - gateway for monitoring and programming via the Internet
- BT Connect - Bluetooth adapter for programming and battery monitoring
- External battery temperature sensor

97% peak efficiency •

Fast MPP Tracking •

Excellent performance •

IPN Network compatible •

Great for lithium batteries •



Specifications:	SB3024(D)iL @12V	SB3024(D)iL @24V
Maximum PV Power:	540 W with 36-cell PV panel (*) 400 W with 60/72-cell PV panel (*)	800 W with 72-cell PV panel (*)
Rated Battery (Output) Current:	40 A with 36-cell PV panel (*) 30 A with 60/72-cell PV panel (*)	30 A with 72-cell PV panel (*)
Conversion Efficiency:	97% (typical @28V / 24 A output)	
Power Consumption:	0.35 W (typical standby)	
Recommended Max Panel Voc at STC:	45.6 V (Max Panel Input 57 V)	
Charge Profile:	Multi-Stage plus Manual or Automatic Equalization	
Absorption Voltage:	14.4 V ⁽¹⁾	28.8 V ⁽¹⁾
Float Voltage:	13.2 V ⁽¹⁾	26.4 V ⁽¹⁾
Equalization Voltage (if enabled):	15.2 V ⁽¹⁾	30.4 V ⁽¹⁾
Min. Battery Voltage for Operation:	9 V	
Auxiliary Output (option A, B, or C):	A) Auxiliary Battery Charge 2A (2nd battery) B) DC Load Control with LVD C) Dusk-to-Dawn (by IPN ProRemote or BT Connect)	
Load (LVD) Disconnect/Reconnect Voltage:	11.5 V / 12.6 V ⁽¹⁾	23.0 V / 25.2 V ⁽¹⁾
Maximum Auxiliary Output current (option B or C):	20 A	
Onboard Display:	Only version SB3024DiL	
Temperature Compensation (by optional Battery Temperature Sensor):	-5.00 mV/°C/cell correct factor (Range 0.00 to -8.00 mV/°C/cell) ⁽¹⁾	
Operating Temperature:	-40°C – 40°C	
Maximum Full Power Ambient:	40 °C	
Environmental Protection:	IP20	
Connection:	Battery and PV terminals #14-2 AWG (tightened 45 in-lb, 5 nm) Auxiliary Output terminals #24-12 AWG (tightened 6 in-lb, 0.67 nm) IPN Network terminals #24-14 AWG wire (tightened 2.1 in-lb, 0.24 nm)	
Weight:	3.95 lb. (1.8 Kg)	
Dimensions:	6.86 x 6.6 x 3.38" (17.4 x 16.8 x 8.6 cm)	
Warranty:	5 years	
Certifications:	ETL (UL 1741, CSA E335-1/2E), CE, RoHS, FCC	

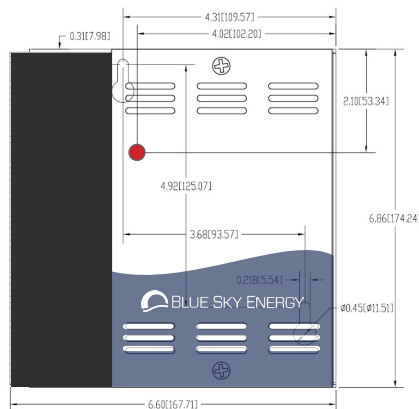
(*) 36-cell panels are typically referred to as "12 V panels" providing Vmp/Voc of ~18 V / 22 V at STC, 60-cell panels refers to "20 V panels" (Vmp/Voc ~30 V / 37 V), 72-cell panels refers to "24 V panels" (Vmp/Voc ~36 V / 44 V).

(1) Factory default voltages unless programmed via its onboard display or with an IPN ProRemote display, BT Connect, ProTouch, or UCM.

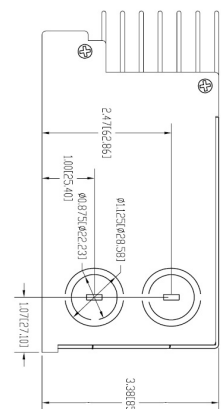
LED Indicators Charge Status



Metal Front Panel



Front View



Side View