SB3024iL | SB3024DiL

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

Marine | RV | Industrial | Off-Grid | PV Street Lighting

Great for mid-sized systems, the SB3024 charge controller family, featuring our patented MPPT technology, handles up to 800W 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 SB3024iL or -DiL will manage up to a 20A load output for off-grid electrification or telecommunication systems. When programmed with the IPN Pro Remote 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 charges batteries faster
- Hassle-free auto-detection for 12V or 24V systems
- Networks with other Blue Sky controllers for higher power
- Longer battery life with advanced multi-stage charging (FLA,AGM,GEL)
- Equalize batteries automatically or manually
- Charge a second battery or control a DC load output
- Program for Dusk-to-Dawn Lighting Control with the IPN Pro Remote
- Battery Temperature Compensation (with external battery temp. sensor)
- Protects battery from deep discharge (via load output)
- Automatically reconnects load when power is available

Display

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

97% peak efficiency

Fast MPP Tracking

Excellent performance

IPN Network compatible

Great for lithium batteries

Protection

- PV array overload
- PV array reverse polarity
- Battery reverse polarity

Accessories

- IPN Remote - remote display for monitoring one or more controllers
- IPN ProRemote - remote display w/ programming and battery monitoring
- UCM - monitor and program controllers online
- External battery temperature sensor

Specifications:

	SB3024(D)iL @12V	SB3024(D)iL @24V
Maximum PV Power:	540W with 36-cell PV panel[*] 400W with 60/72-cell PV panel[*]	800W with 72-cell PV panel[*]
Rated Battery (Output) Current:	40A with 36-cell PV panel[*] 30A with 60/72-cell PV panel[*]	30A with 72-cell PV panel[*]
Conversion Efficiency:	97% (typical @28V / 24A output)	
Power Consumption:	0.35W (typical standby)	
Recommended Max Panel Voc at STC:	45.6V (Max Panel Input 57V)	
Charge Profile:	Multi-Stage plus Manual or Automatic Equalization	
Absorption Voltage:	14.4V[1]	28.8V[1]
Float Voltage:	13.2V[1]	26.4V[1]
Equalization Voltage (if enabled):	15.2V[1]	30.4V[1]
Auxliary Output (option A, B, or C):	A) Auxiliary Battery Charge 2A (2nd battery) B) Load Control C) Dusk-to-Dawn (by IPN ProRemote)	
Load (LVD) Disconnect/Reconnect Voltage:	11.5V/12.6V[1]	23.0V/25.2V[1]
Maximum Auxiliary Output current (option B or C):	20A	
Display:	Only version SB3024DiL	
Temperature Compensation (by optional Battery Temperature Sensor):	-5.00mV/°C/cell correct factor (Range 0.00 to -8.00mV/°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 (Tech. Bulletin #100218)	
Certifications:	cETLus CE FC RoHS COMPLIANT	

[*] 36-cell panels are typically referred to as "12V panels" providing Vmp/Voc of ~18V/22V at STC, 60-cell panels refers to "20V panels" (Vmp/Voc ~30V/37V), 72-cell panels refers to "24V panels" (Vmp/Voc ~36V/44V). (1) Factory default voltages unless programmed via DIP switches or with an IPN ProRemote display or UCM.