Specifications:

	SL-10L-12V	SL-10L-24V	SS-20L-12V	SS-20L-24V
System Voltage	12 V	24 V	12 V	24 V
Maximum Voltage	30 V	50 V	30 V	50 V
Rated Solar Input	10 A		20 A	
Rated Load	10 A		20 A	
25% Current Overload	5 minutes	N/A	5 minutes	N/A
Regulation Voltage: Sealed PWM	14.1	28.2	14.1	28.2
Regulation Voltage: Flooded PWM	14.4	28.8	14.4	28.8
Temperature Compensation	-27 mV/°C	-54 mV/°C	-27 mV/°C	-54 mV/°C
Low-Voltage Disconnect (LVD)	11.7 V	23.4 V	11.7 V	23.4 V
Low-Voltage Reconnect (LVR)	12.8 V	25.6 V	12.8 V	25.6 V
Self-consumption	8 mA	9 mA	8 mA	9 mA
Ambient Temperature Range	-40 to 60°C			

Battery Type Selection:
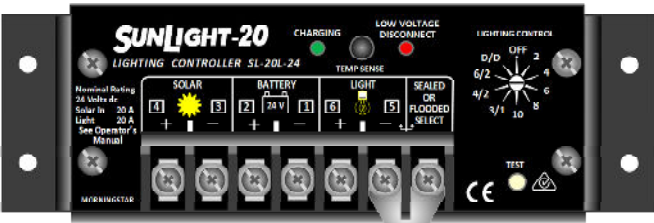
For Sealed Batteries:
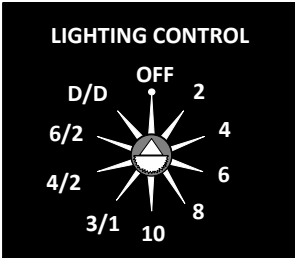
Battery Select Jumper **INSERTED**
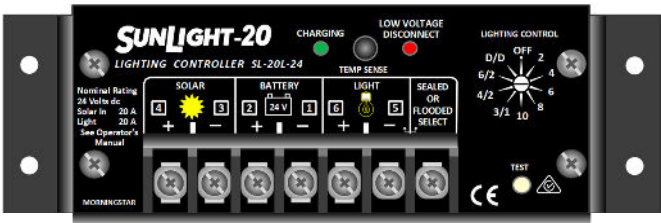
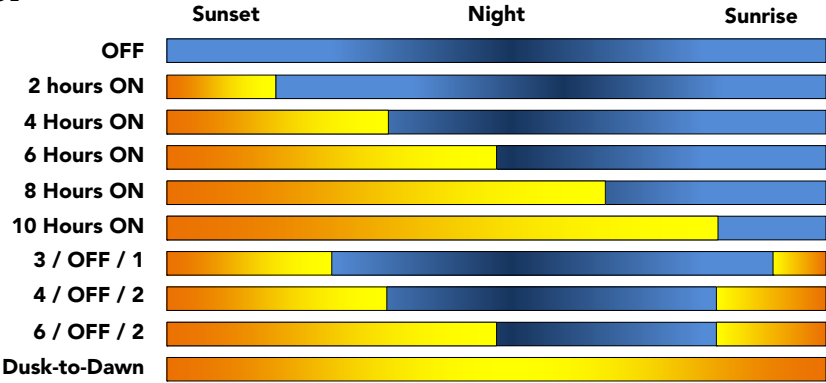**For Flooded Batteries:**

Battery Select Jumper **REMOVED**

⚠️ **IMPORTANT:**
The SunLight charging algorithm is compatible with lead-acid or NiCd batteries. *NiMH, Li-ion, and other battery chemistries are not compatible with the SunLight charging algorithm.*

Lighting Control Options:

LIGHTING CONTROL

OFF
D/D   2
6/2   4
4/2   6
3/1   8
     10

Turn the dial to the desired setting. This illustration shows the dial set to **OFF**.

Sunset	Night	Sunrise
OFF
2 hours ON
4 Hours ON
6 Hours ON
8 Hours ON
10 Hours ON
3 / OFF / 1
4 / OFF / 2
6 / OFF / 2
Dusk-to-Dawn

See the SunLight Operator's Manual for detailed information on lighting control settings.

Contact Information:
Technical Support: morningstarcorp.com/support
Phone: 1-215-321-4457

CE   ALL COMPONENTS REACH COMPLIANT
Registration, Evaluation and Authorization of Chemicals

MORNINGSTAR
World's Leading Solar **Controllers & Inverters**
25+ years — Since 1993

SunLight™
SOLAR LIGHTING CONTROLLER

Quick Start Guide

SunLight-10
Solar Lighting Controller

SunLight Models:

SL-10L-12V	SL-10L-24V
SL-20L-12V	SL-20L-24V

SunLight-20
Solar Lighting Controller

In the Box:

SunLight-10
Solar Lighting Controller

OR

SunLight-20
Solar Lighting Controller

Warranty Registration:
https://www.morningstarcorp.com/product-registration/

Scan QR Code to go directly to the SunLight Operator's Manual and warranty information online.

Tools Required:

⌀ — 3/16" (5 mm) Flathead Screwdriver
✚ — #2 Phillips Screwdriver
— Multimeter

## Important Safety Information:

⚡ **WARNING: Shock Hazard**
The SunLight solar lighting controller must be installed by a **qualified** technician in accordance with the electrical regulations of the country of installation.

📖 **IMPORTANT:** *READ the SunLight Operator's Manual for safety and regulatory information, instructions on configuration and operation, and warranty information.*

MS-004021 Rev 1

Recommended Minimum Clearance:

2" (51 mm)

2" (51 mm)
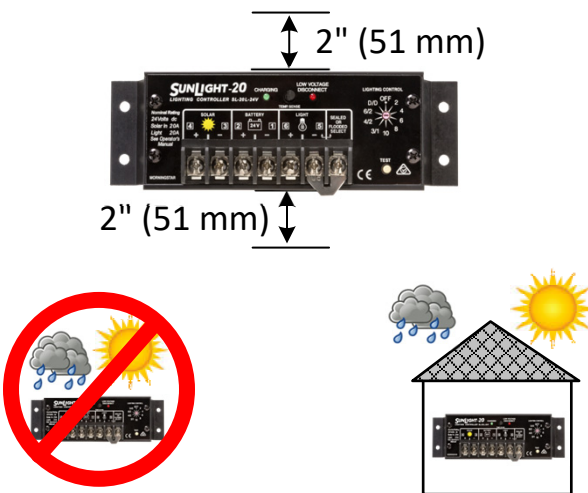
WARNING: Explosion Hazard

Never install the SunLight in an enclosure with vented/flooded batteries. Battery fumes are flammable and will corrode and destroy the SunLight circuits. Ensure sufficient ventilation.

CAUTION: Equipment Damage

Do not expose the SunLight CC to weather. Locate in a dry, protected area to prevent equipment damage. Ensure the minimum clearance requirements are followed to provide adequate ventilation and prevent the unit from overheating.

Mounting:

Step 1: Choose Mounting Location

Locate the SunLight on a **vertical** surface within 10 feet (3 m) of the battery bank that is protected from direct sun, high temperatures, and water.

Step 2: Check for Clearance and Ventilation

Place the SunLight in the location where it will be mounted. Verify that there is sufficient room to run wires and that there is ample room above and below the controller for air flow.

Step 3: Mount the Controller

Mark and drill holes as needed, or use self-tapping screws, and secure the controller in place.
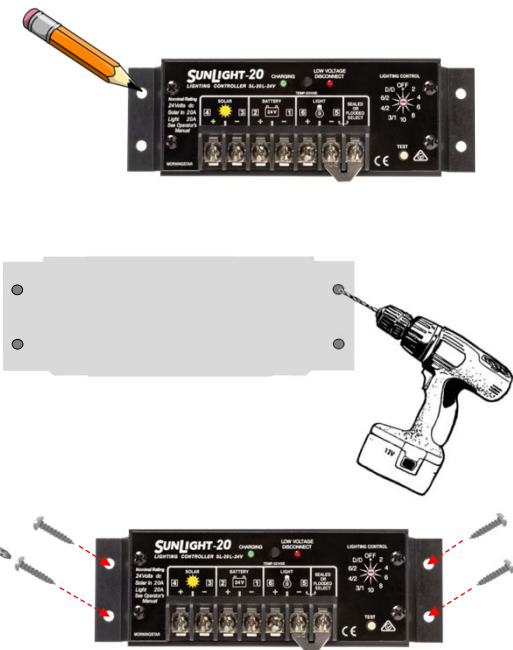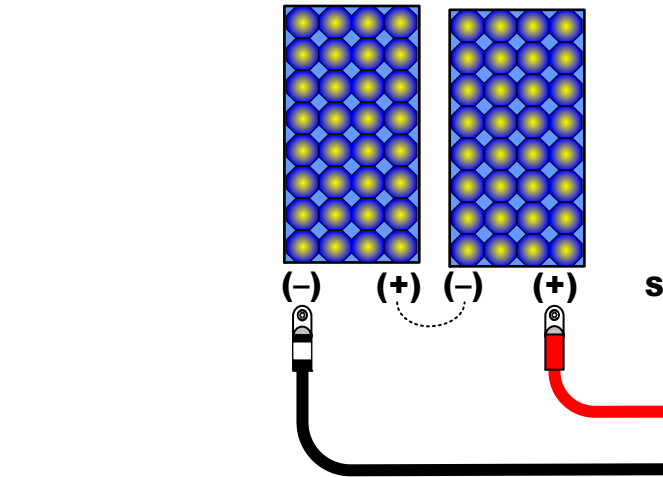

Photovoltaic (PV) Array

See the Morningstar PV String Calculator at:
http://string-calculator.morningstarcorp.com/

30 Voc Max @ 12 V battery / 50 Voc @ 24 V battery

12 Vdc Module   12 Vdc Module

(−)   (+)   (−)   (+)

Solar Disconnect*

PV (+)
PV (−)

Charging LED

Low-Voltage Disconnect (LVD) LED

Lighting Control Switch

Test Button

Load (−)
Load (+)

Lighting:

Fuse*

*See "Fuses, Breakers or Disconnects" in the Wiring and Torque Table below.

Battery (+)   Battery (−)

Battery Disconnect*

(+)   (−) Securing hardware not shown.

Battery / Battery Bank
(12-volt or 24-volt**)
**SunLight Model Dependent

Primary System Ground

IMPORTANT:
Array voltage should **NEVER** exceed the maximum input voltage.

WARNING: Shock Hazard
The solar PV array can produce open-circuit voltages in excess of 40 Vdc when in sunlight. Verify that the solar input breaker or disconnect has been opened (disconnected) before installing the system wires.
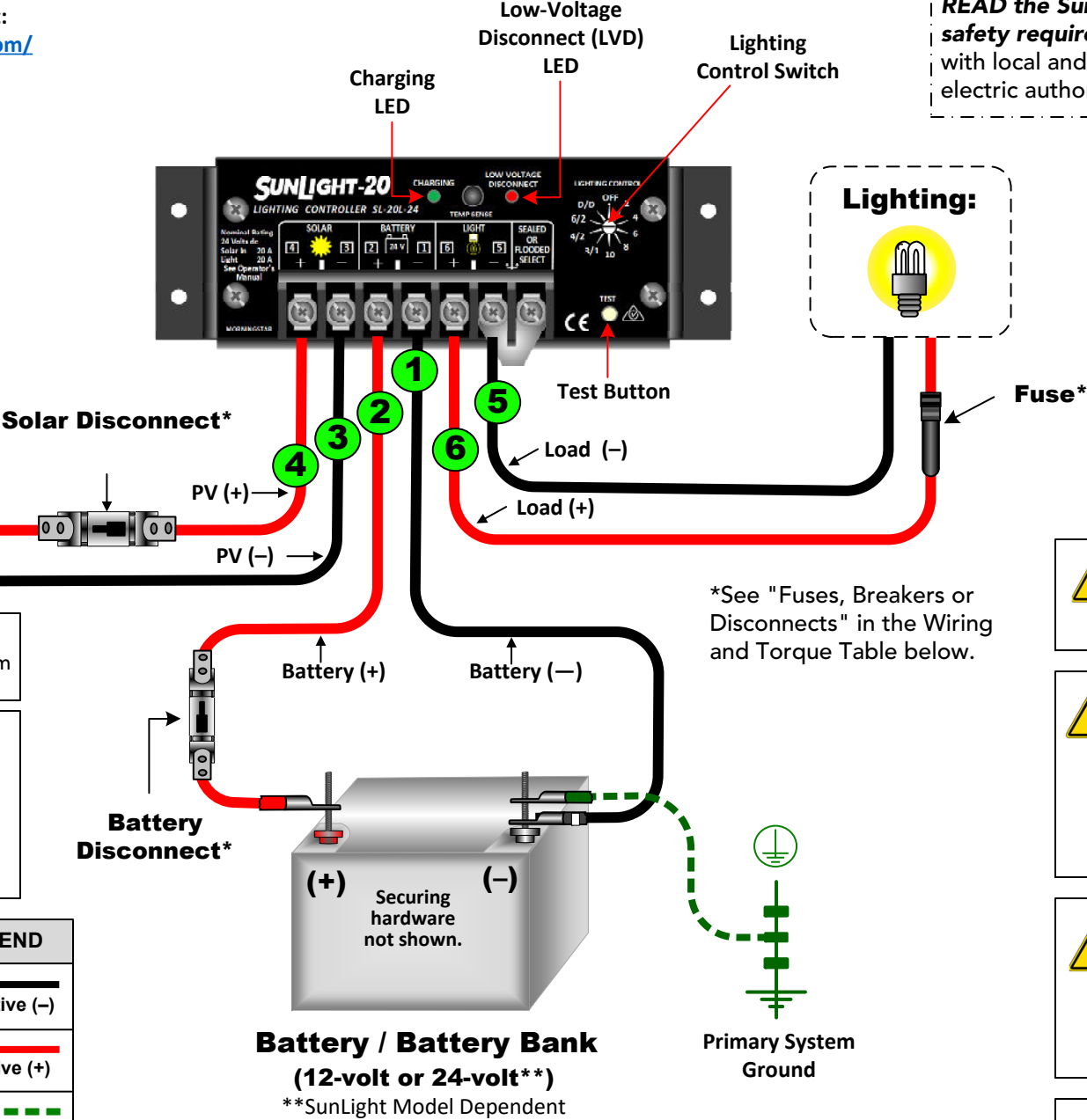
LEGEND

— Negative (−)
— Positive (+)
– – – Ground ⏚

NOTE: Fork-terminal connectors are not required. Use only copper wire with minimum 75°C insulation rating and between 10 AWG (5.2 mm²) and 14 AWG (2.1 mm²) gage.

WIRING AND TORQUE REQUIREMENTS

Recommended Order of Installation		Component	Wire Size (Solid)	Wire Size (multistrand)	Wire Size (fine strand)	Torque (Maximum)	Tool Required
1	2	Battery Terminals	#10 AWG 5.2 mm² (Maximum)	#10 AWG 5.2 mm² (Maximum)	#10 AWG 5.2 mm² (Maximum)	10.6 in-lbs. (1.2 Nm)	3/16" (5 mm) Flathead or #2 Phillips Screwdriver
3	4	Solar Terminals					
5	6	Load Terminals					
Fuses, Breakers, or Disconnects			*The sizing of fuses, breakers, or disconnects must be based on required wire ampacity. **Do NOT close breakers or disconnects, or insert fuses in the fuse-holder, until after all wiring has been completed.**				

IMPORTANT: Example only. Actual wiring may vary. *READ the SunLight Operator's Manual for mandatory safety requirements.* All configurations must comply with local and national electric codes. Consult your local electric authority to ensure compliance.

For additional information about the LED indications or the TEST Button functions, see the SunLight Operator's Manual.

WARNING: Risk of Fire
All over-current protection devices and wiring must be sized properly.

WARNING: Shock Hazard
Test between all terminals and ground before touching.
Power or accessory terminals are **NOT** electrically isolated from DC input and may be energized with hazardous solar voltage.

WARNING: Shock Hazard
Fuses, circuit breakers, and disconnect switches should never open grounded system conductors. Only GFDI devices are permitted to disconnect grounded conductors.

IMPORTANT:
Ensure there is **only 1** DC Negative-to-Ground Bond in the entire system.

Power UP Sequence:
1. Connect Battery/Battery Bank.
2. Connect Solar.

Power DOWN Sequence:
1. Disconnect Solar.
2. Disconnect Battery/Battery Bank.