

GUARDIAN WIRING REFERENCE

ALERT: BATTERY MUST BE CONNECTED BEFORE SOLAR for the system to work and so the solar regulator does not see the battery in a fault condition.

TERMINAL BLOCK 1

DOOR SWITCH WIRING

DOOR	RED
COM	BLACK

AP22 HARNESS WIRING

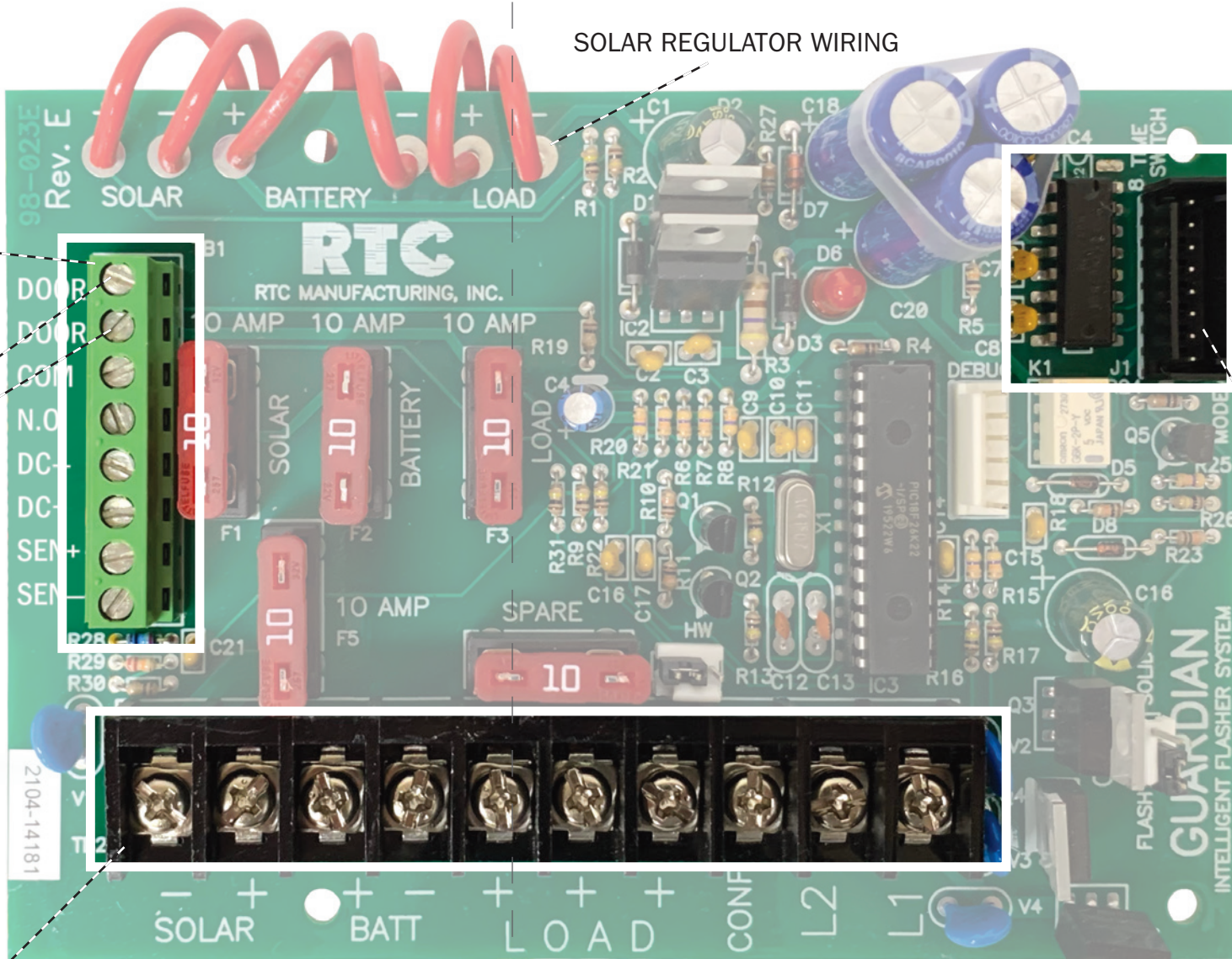
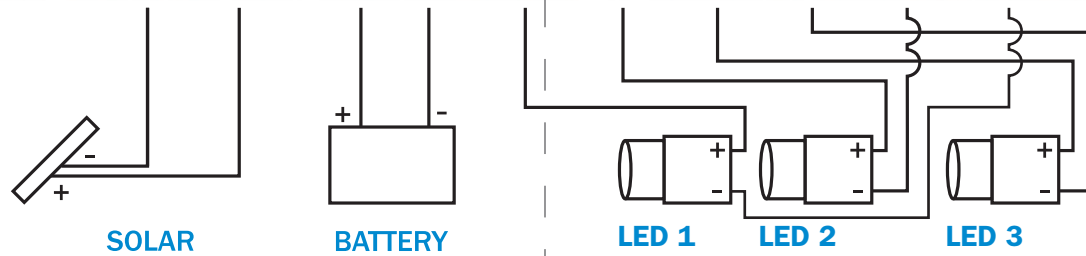
COM	YELLOW/BLACK
N.O.	YELLOW/WHITE
DC-	BLACK
DC+	RED

AP22 HARNESS WIRING (TXDOT)

COM	WHITE/YELLOW
N.O.	RED
DC-	WHITE/BLACK
DC+	WHITE/RED

TERMINAL BLOCK 2 WIRING SCHEMATIC

ALERT: BATTERY MUST BE CONNECTED BEFORE SOLAR



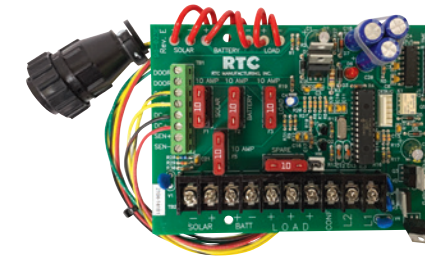
SOLAR REGULATOR WIRING

J1 WIRING

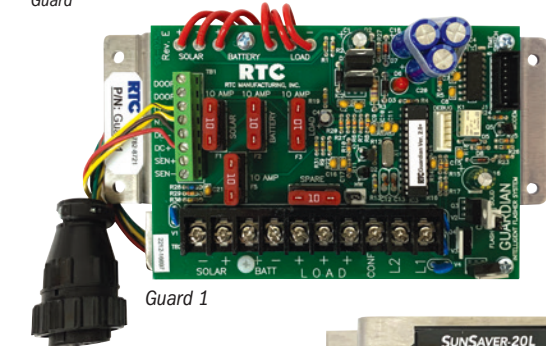


GUARDIAN SERIES

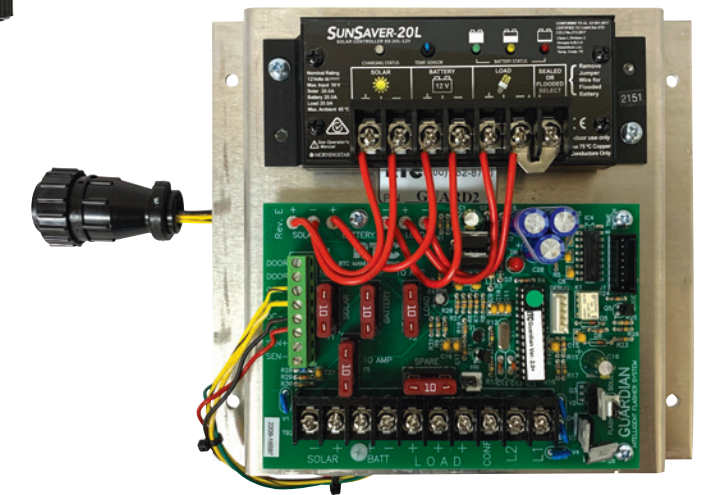
Intelligent Flasher System Installation Guide for the GUARD, GUARD1 and GUARD2



Guard



Guard 1



Guard2



GUARDIAN SERIES

Intelligent Flasher System Installation Guide for the GUARD, GUARD1 and GUARD2

Introduction

To install any Guardian Series product, you will need:

- All items shipped with your Guardian Series product including circuit board, bracket (Guard1 and Guard2), two connection harnesses, and door switch
- Phillips-head screw driver and drill
- Thin flathead screwdriver for Terminal Block 1
- Two 8/32" x ½" screws (only if you purchased new AP22)
- Appropriately-sized cabinet that will fit the Guardian Series board and bracket

Please Note: The following Installation Guide is for all three Guardian Series Products (Guard, Guard1, and Guard2). These specific product names will be mentioned in a few circumstances where steps apply exclusively to a certain model. Please take the time to locate which Guardian Series Product you are installing (printed on the circuit board). Unless mentioned specifically by name, the following steps apply to all Guardian Series Products.

Step 1 – Disconnect Power and Remove Components

To prevent harm to product and self, safely disconnect batteries and power to the system. Remove other existing components and disconnect all wiring from components to existing flasher control boards.

- Guard:** disconnect and remove existing flasher control board
- Guard1:** disconnect and remove all components except your existing solar regulator
- Guard2:** disconnect and remove all components

We recommend taping and labeling all component wiring as you disconnect it to make reconnecting (Step 7) easier.

Step 2 – Remove and/or Rearrange existing AP22/M2M Installations

Please Note: All Guardian Series products are designed to work alongside RTC AP22 time clocks and M2M modems. You should either have an existing AP22/M2M installation or have purchased these along with your Guardian Series product. The AP22 and M2M will need to fit inside your cabinet with your Guardian Series installation.

Take time to plan how and where you will be fitting the Guardian Series board/panel, AP22, and M2M inside of your cabinet. The AP22 is designed to fit on the right-hand side of the Guardian product. If necessary, rearrange or remove existing AP22/M2M products to simplify installation.

Step 3 – Mount Guardian Series Product

Follow the instructions based on the specific Guardian Series product you are installing:

Guard: Remove existing RTC flasher control board by unscrewing it from the panel. The Guard circuit board can be installed using the existing mounting holes. Use the provided plastic screw in the mounting hole beneath BATT+ to reduce the possibility of an accidental short. You can use existing screws for the remaining mounting holes.

Guard1: The Guard1 needs to be installed directly beneath the existing solar regulator and close to where the AP22 and M2M products are/will be installed. Drill the provided self-tapping screws through the mounting holes in the silver bracket to secure the Guard1 to the cabinet in the proper location.

Guard2: The Guard2 needs to be installed close to where the AP22 and M2M products are/will be installed. Drill the provided self-tapping screws through the mounting holes in the silver bracket to secure the Guard2 to the cabinet in the desired location.

Step 4 – Mount AP22 and M2M

If AP22 was removed from the cabinet during Step 2, remount the AP22 to the cabinet on the right-hand side of the Guardian product using existing hardware. If you are installing AP22 for the first time, drill three 8/32" x ½" screws through the mounting holes and into the cabinet to the right side of the Guardian product. The M2M installs directly onto the AP22 using the provided M2M mount.

Step 5 - Connect Solar Regulator (see Guardian wiring reference on back)

Please Note: Connecting the solar regulator is only necessary if you are installing a Guard or Guard1 product. **If you are installing a Guard2, skip to Step 6.**

The Guardian is equipped with six red embedded wires which correlate to the terminal positions on the solar regulator. When connecting these wires, **it is important to make the connections in the following order:**

1. Disconnect all wiring currently connected to the solar regulator
2. Connect the Battery + and Battery - wires to the solar regulator
3. Connect the Solar + and Solar - wires to the solar regulator
4. Connect the Load + and Load - wires to the solar regulator

Step 6 - Connect AP22 Time Clock and M2M (see Guardian wiring reference on back)

Connect the new AP22 wiring harness (attached to Guardian board) to the time clock. If any problem arises, see back of guide for terminal block 1 wiring diagram.)

Connect the Guardian to the cell modem using the provided connection harness labeled “modem/radio”.

Step 7 – Install Door Switch (optional)

Please Note: In order for the Guardian door-monitoring feature to work, a door switch must be ordered and correctly installed. Door switches do not come standard with Guardian Series Products, but can be purchased separately from RTC and shipped along with your order.

The door switch operates as the “lever” of the switch is pressed in towards the black base of the switch. The door switch needs to be installed in a position & location that allows the cabinet door to press in the switch “lever” when the cabinet door is closed and let off “lever” when the cabinet is open. This will vary from cabinet to cabinet, but typically the side of the inside lip of the cabinet works well.

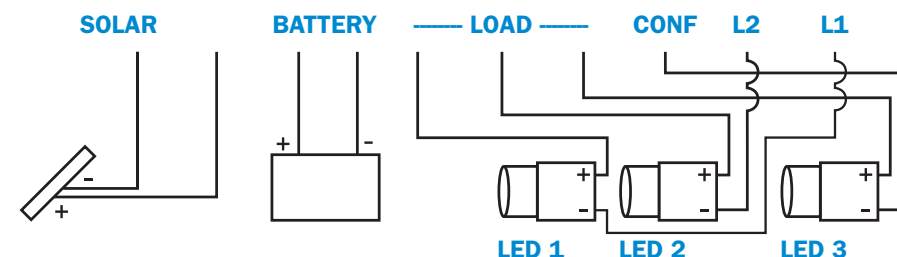
Choose a location that follows the above guidelines and mount the door switch using a drill and the provided mounting screws. **Using the flathead screwdriver, connect the red wire to the top DOOR terminal and the black wire to the bottom DOOR terminal on TB1.** Incorrect wiring can result in damage of product. See back of guide for wiring diagram.

Step 8 - Connect Cabinet Components to Terminal Block 2 (TB2)

Take the Battery +, Battery -, Solar + and Solar - conductors (previously disconnected in Step 1) and connect them to terminal block 2 on the Guardian Flasher Circuit Board.

ALERT: BATTERY must be connected before SOLAR for the system to work. We recommend the connection sequence as: 1) BATTERY, 2) SOLAR and then 3) LEDs.

Use the following TB2 schematic diagram as a reference:



Step 9 - Setup Guardian Series Product in RTC Connect™

After the hardware installation is complete, the Guardian system must be set up in RTC Connect. Detailed steps can be found in the Quick Start Guide in RTC Connect. To access the guide, follow these steps:

1. Download & Open RTC Connect Software
2. Log In
3. Click on “Utilities” on the Left Tool Bar
4. Select “Quick Start Guide”
5. Click on the “Adding A Guardian” title and follow directions