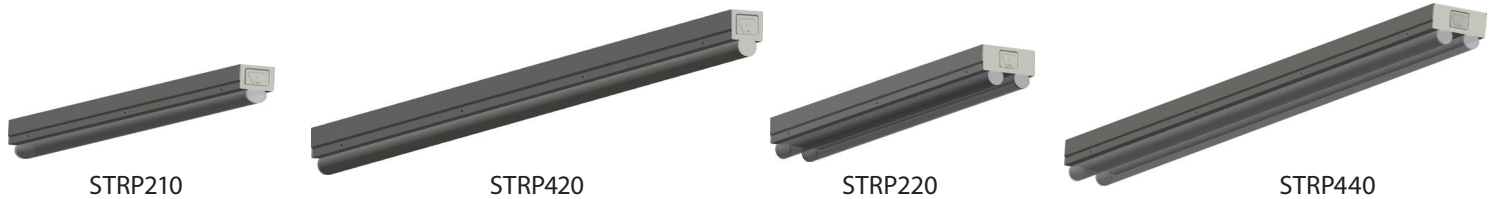


INSTRUCTIONS

STRP-LED INSTALLATION

RAB®

RAB Lighting is committed to creating high-quality, affordable, well-designed and energy-efficient LED lighting and controls that make it easy for electricians to install and end users to save energy. We'd love to hear your comments. Please call the Marketing Department at 888-RAB-1000 or email: marketing@rablighting.com



IMPORTANT

READ CAREFULLY BEFORE INSTALLING FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

RAB fixtures must be wired in accordance with the National Electrical Code and all applicable local codes. Proper grounding is required for safety. THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

WARNING: Disconnect or turn OFF power at the electrical panel before installing or maintaining fixture. No User serviceable parts inside fixture.

SURFACE MOUNTING

The fixture is suitable for indoor applications for ceiling mounting, as follows:

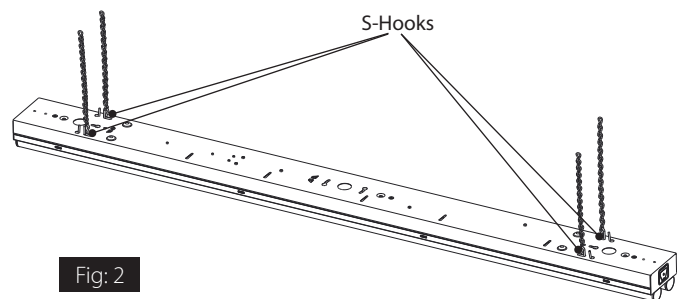
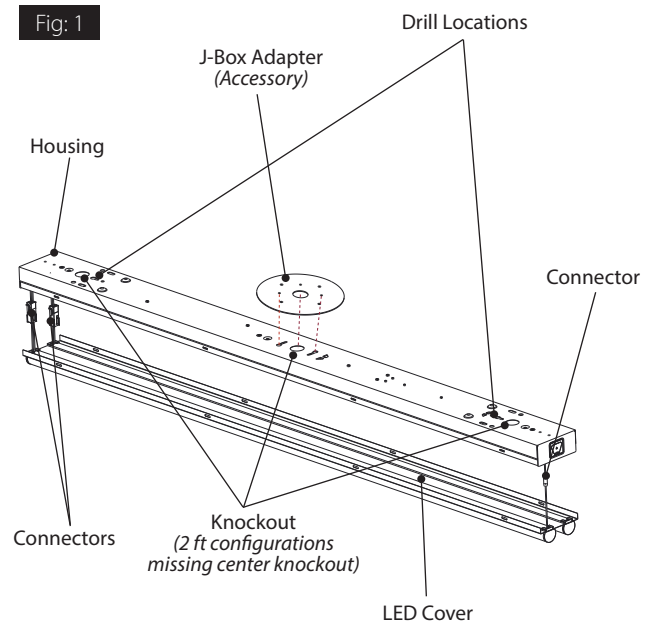
1. Remove **LED Cover** by pushing in/squeezing the fixture's sides and lifting the **LED Cover** to disengage.
2. Locate the line voltage input wires near one of the **Knockouts**. Remove the corresponding **Knockout** to access the fixture's leads. Pull supply wires through the **Knockout** and secure with proper hardware (*by others*).
3. Securely mount the **Housing** directly to a sturdy surface using the correct mounting hardware through the **Drill Locations**, (2 places minimum). See **Fig. 1**. The **J-Box Adapter** (*ordered separately as JBSTRP, on 4' units only*) is used to cover the Junction Box (*by others*).
4. Use correct UL-rated wire connectors as required by the National Electric Code to make electrical splices to fixture leads.
5. Connect the **Connectors**, tidy up the leads, and secure the **LED Cover** to the **Housing**.

WARNING: To prevent wiring damage or abrasion, do not expose wiring to sharp objects.

SUSPENDED MOUNTING

The fixture can be mounted using **S-hooks** (*ordered separately as STRP SHOOK*).

1. Mount **S-hooks** (*two S-hooks for the single tube, four S-hooks for the double tube*) to the fixture as shown in **Fig. 2**.
2. For electrical wiring, follow steps 1, 2, and 4 above.



INSTRUCTIONS

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CONTINUOUS RUN MOUNTING

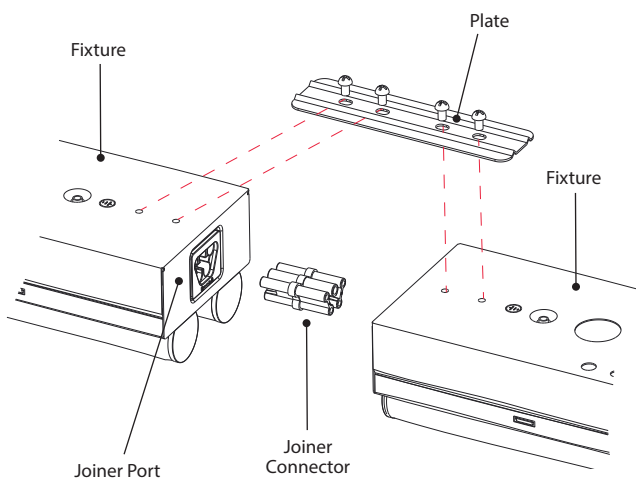
Multiple fixtures can be mounted together:

1. For continuous runs, remove **Joiner Port** cover. Plug together **Fixtures** using the **Joiner Connector** between fixtures for quick connect installation (Fig. 3). Only the first **Fixture** needs to be electrically hardwired from above. For suspended mount, join every two adjacent **Fixtures** by attaching a **Plate** using four screws as shown in Fig. 3. If surface mounted, all joined **Fixtures** must be mechanically secured to the mounting surface and are not required to be attached to a **Plate** with four screws.
2. **NOTE:** The **Joiner Port** at each end of the **Fixtures** is marked "A" or "B"; please note that the "A" connector must be inserted in to the "B" end of the following fixture and vice versa.
3. **CAUTION:** The maximum number of fixtures allowed to be linked together is indicated in the below table. xx represents color temperature 3500K and may be replaced by 40 (4000K) or 50 (5000K).

Catalog #	Maximum Number of Linked Fixtures
STRP210	Up to 30 fixtures
STRP220	Up to 25 fixtures
STRP420	Up to 25 fixtures
STRP440	Up to 15 fixtures

WARNING: To prevent wiring damage or abrasion, do not expose wiring to sharp objects.

Fig. 3

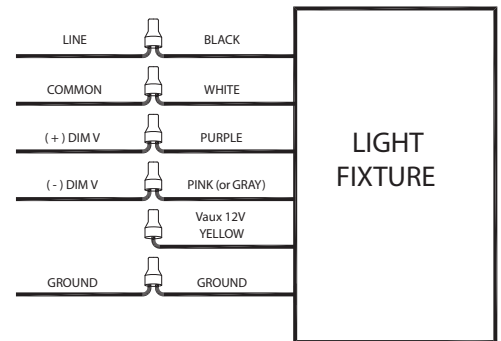


0-10V DIMMABLE WIRING

RISK OF FIRE. Universal voltage driver permits operation at 120V thru 277V, 50 or 60 Hz. For 0-10V dimming, follow the wiring directions as shown in Fig. 4.

1. Connect the black fixture lead to the **LINE** supply lead.
2. Connect the white fixture lead to the **COMMON** supply lead.
3. Connect the green **GROUND** wire from fixture to supply ground.
4. Connect the purple fixture lead to the (V+) DIM lead.
5. Connect the pink (or gray) fixture lead to the (V-) DIM lead.
6. Cap the yellow fixture lead, if present. Do NOT connect.

Fig. 4



CLEANING & MAINTENANCE

CAUTION: Be sure fixture temperature is cool enough to touch. Do not clean or maintain while fixture is energized.

1. Clean polycarbonate lens with non-abrasive cleaning solution.
2. Do not open the fixture to clean the LEDs. Do not touch the LEDs.

TROUBLESHOOTING

1. Check that the line voltage at the fixture is correct. Refer to wiring directions in Fig. 4.
2. Be sure the fixture is grounded properly.

Note: These instructions do not cover all details or variations in equipment nor do they provide for every possible situation during installation, operation or maintenance.

INSTRUCTIONS

STRP-LED INSTALLATION

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BATTERY BACKUP MODELS

WIRING

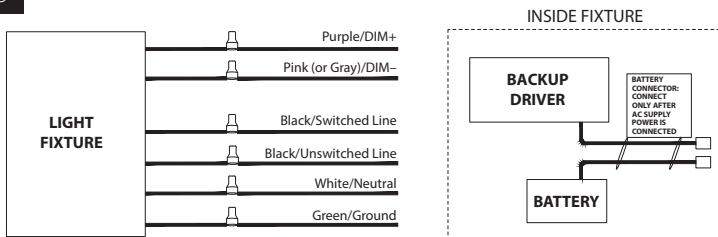
CAUTION: FOR BATTERY BACKUP FIXTURE (STRP440 only). Voltage can be present in **BATTERY**. To prevent high voltage from being present on output leads, Inverter connector must be open. Do not join **BATTERY** connector until installation is complete and AC power is supplied to the emergency driver (Fig. 5).

NOTE: Make sure that the necessary branch circuit wiring is available. An **UNSWITCHED** AC source of power is required. The emergency driver must be fed from the same branch circuit as the LED driver.

CAUTION: Do not use any supply voltage other than 120-277V 50/60 HZ.

1. Connect **UNSWITCHED HOT** fixture lead to **HOT AC** supply line.
2. If using an **UNSWITCHED** circuit, connect **UNSWITCHED** and **SWITCHED** lines together.
3. If using a **SWITCHED** circuit, connect **SWITCHED HOT** AC fixture lead to the external.
4. Connect the pink (or gray) fixture lead to the (V-) DIM lead.
5. For 0-10V Dimming, connect **DIM (+)** and **DIM (-)** to the supply **DIM (+)** and **DIM (-)**.
6. Connect **Ground** lead from the fixture to the supply ground. Do not connect **Ground** to the output leads.
7. All unused leads must be capped and insulated.
8. After installation is complete, supply AC power to the fixture and connect the **BATTERY**.
9. When power is on, the fixture should be on and the Charging Indicator Light should illuminate to indicate the battery is charging.
10. Once the **BATTERY** has charged for at least one hour, a short duration test may be performed by pressing the **Test Button** (Fig. 6).
11. After the battery has charged for 24 hours, a long duration test can be performed by shutting power to the fixture.

FIG. 5



OPERATION

1. When AC power is applied, the charging indicator light is illuminated, indicating that the **BATTERY** is being charged.
2. When power fails, the standby power automatically switches to emergency power (*internal battery*), operating at reduced illumination. The emergency driver supplies 5W of power in standby power for a minimum of 90 minutes.
3. When AC power is restored, the emergency driver automatically returns to charging mode.

MAINTENANCE

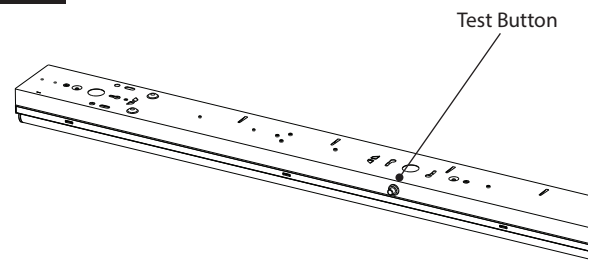
Although no routine maintenance is required to keep the emergency driver functional, it should be checked periodically to ensure that it is working. The following schedule is recommended:

1. Visually inspect the charging indicator light monthly. It should be illuminated.
2. Test the emergency operation of the fixture at 30-day intervals for a minimum of 30 seconds.
3. Conduct a 90-minute discharge test once a year. Fixture will operate at reduced illumination for a minimum of 90 minutes.

TROUBLESHOOTING

1. Is the fixture grounded properly?
2. If the charging indicator light does not illuminate after pressing the **Test Button** (Fig. 6), check if battery is connected properly.

FIG. 6



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Easy Answers

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Tech Help Line
Call our experts: 888 722-1000

e-mail
Answered promptly - sales@rablighting.com

Free Lighting Layouts
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RAB WARRANTY: RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty

19724 MICROWAVE SENSOR FOR D10

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OPERATION

Multi-level Dimming:

- 100% light
- Dimmed to: 10, 20, 30, 50*%

**50% not on remote*

- Off

Cut Off Time Adjustment:

- Once room is vacated, light dims to selected % after chosen hold time elapses

Daylight Sensing:

- Surrounding natural light keeps fixture light off until room is occupied and natural light levels drop to selected level

8 Hour* Manual Mode:

- Turn fixture off-on 3 times within 3 seconds
- Green LED on antenna will flash and fixture will flash 3 times if done correctly
- Fixture will remain 100% for 8 hours, then sensor will come on automatically
- To cancel, turn the fixture off-on within 1 second

**Times out after one 8-hour cycle*

Ambient Daylight Threshold*:

- Turn fixture off-on 2 times within 2 seconds
- Green LED on antenna will flash slowly for 5 seconds and fixture will blink twice if done correctly
- Surrounding fc will be measured and recorded for 1 second
- Green LED on antenna and fixture will light for 10 seconds to indicate successful fc recording
- Most recent fc measurement overwrites any prior

**DIP settings (pg 1) and ambient lux overwrite each other depending on latest action*

Scene Mode:

- 100% detection range and 10% cut off dimming
- Scene 1 (SC1):** 1 min hold-time, 10 min cut off period, .2 fc daylight sensor
- Scene 2 (SC2):** 5 min hold-time, 10 min cut off period, .2 fc daylight sensor
- Scene 3 (SC3):** 10 min hold-time, 30 min cut off period, 1 fc daylight sensor
- Scene 4 (SC4):** 10 min hold-time, always on bi-level cut off period, 5 fc daylight sensor

SENSOR COVERAGE DIAGRAM

Below diagrams represent best average coverage from lab testing. Actual coverage may vary as metal on the fixtures can interfere with microwaves from the sensor

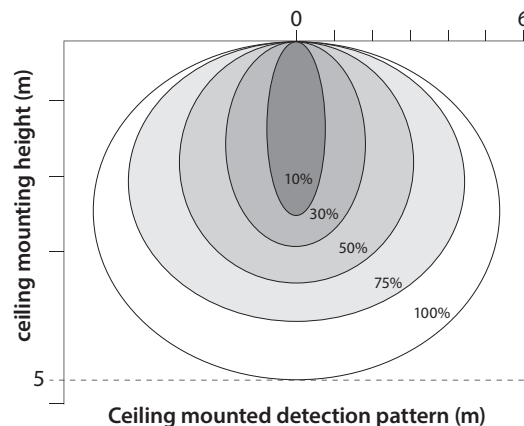


Fig. 3

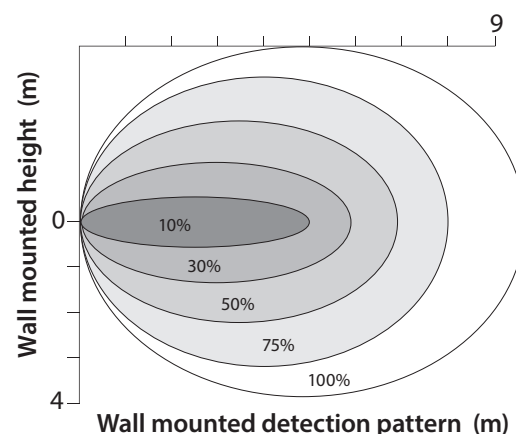


Fig. 4

SENSOR TECHNICAL DATA

Capacitance Load: 400W at 120V, 800W at 230V, 1000W at 277V

Operating Temperature: -20°C to +60°C (-4°F to +140°F)

Relay: Zero-cross relay

Maximum Mounting Height: 5m

Customizable Detection Area: 10, 50, 75 or 100%

Time Delay: 5s, 30s, 1min, 5min, 10min, 20min, 30min

Cut Off Period: 0s, 10s, 1min, 5min, 10min, 30min, 1hr, Bi-Level

Cut Off Dimming Level: 10, 20, 30, 50%

Cut Off Power: Less Than 1W

Daylight Threshold: About .2-5 fc or Disabled

Sensor Principle: High Frequency

Microwave Frequency: 5.8GHz +/- 75MHz

Microwave Power: <0.2mW

Detection Range Max: 16m across, 10m high

Detection Angle: About 30 to 150 degrees

19724 MICROWAVE SENSOR FOR D10

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REMOTE

Sensor will beep one time to indicate remote received successfully

Remote settings will override DIP Switch settings

ON/OFF: disables sensor; light is permanently* on or off

*un-do permanent on/off by selecting either Auto-Mode, RESET, or any Scene mode button

Auto Mode: sensor activates and all previously selected settings remain programmed

RESET: overrides selected settings; reverts to DIP settings

Dim buttons: + dims up and - dims down, adjusting lamp brightness

Black Button: no function

Test 2s: automatic* test mode with 2 second time delay; disables cut off period and daylight sensor

*un-do automatic test mode by selecting either RESET, any Scene mode button, or hold time

Power 100% & Power 80%: adjusts power output; to save energy select Power 80%. Must return to full output after initial 10,000 hours of LEDs by pressing Power 100%.

Group B:

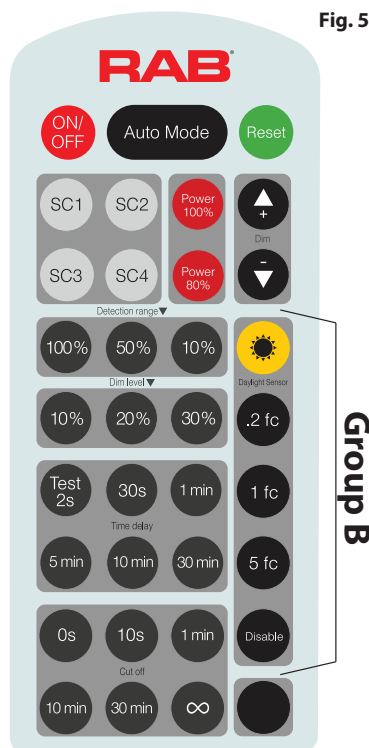
Yellow Sun Button: Ambient Daylight Threshold; records surrounding lux level and overwrites previously recorded value

.2, 1 and 5 fc: sets daylight sensor at respective ambient light values

Disable: disables daylight sensor; any motion registered by sensor activates fixture light

SC1, SC2, SC3, SC4: assigns one of 4 pre-set scenes; see "Operation" on pg 2 for scene descriptions

Fig. 5



REMOTE CONTINUED

Detection Range Button Group: assigns detection range of 10, 50 or 100%; use coverage diagrams on pg 2 for guidance. To limit area in which motion will set off sensor, use a smaller percent. The sensor will not detect motion outside of 100% and the fixture will not light.

Time Delay Button Group: assigns hold time of 30 seconds, 1 minute, 5 minutes, 10 minutes, or 30 minutes

Cut Off Button Group: assigns cut off period of 0 seconds, 10 seconds, 1 minute, 10 minutes, 30 minutes, or 1 hour. 0 seconds gives fixture on/off control rather than dimming. + ∞ keeps the light on always (if daylight sensor is disabled) with Bi-Level dimming control.

Dim Level: assigns level of 10, 20, or 30% for dimmed light output after time delay passes

TROUBLESHOOTING

If the sensor does not detect motion as expected:

- Check fixture mounting to compare fixture location and sensor coverage with the coverage diagrams on pg 2
- Adjust fixture location as necessary

Fixture will not light/sensor does not detect motion:

- Make sure ON/OFF button was not selected as this results in disabling the sensor
- Check all settings to be sure there is no conflicting selection with the ambient light level

Fixture and sensor are too active:

- Check detection area setting and reduce coverage as needed
- Increase time delay and/or adjust cut off period.

Basic Function Overview:

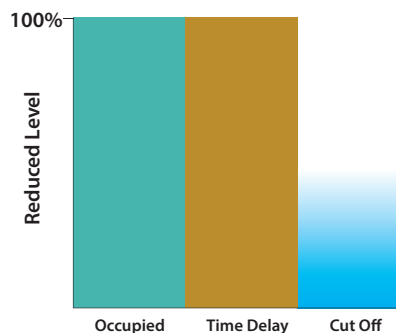


Fig. 6

Note: These instructions do not cover all details or variations in equipment nor do they provide for every possible situation during installation operation or maintenance.