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Product Manual

# CS-SHADE-ROLLER-BATT

## Crestron® Battery Powered Shades

**Original Instructions**

The U.S. English version of this document is the original instructions.  
All other languages are a translation of the original instructions.

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# Overview

Crestron® battery-powered shades (CS-SHADE-ROLLER-BATT) add beauty, convenience, and comfort to any interior space.<sup>1</sup> Install battery-powered shades in locations where power and control wires cannot be run. A battery pack powers the shade motor while the SG radio provides control and status of the shade.

This section provides the following information:

- [Features](#)
- [Physical Description](#)

# Features

Key features include:

- Easy installation in post-construction or retrofit applications
- 3 year (average) battery life
- Install shades where power and control cabling cannot be run
- Designed for use with Crestron® QMT®3 Series Architectural or QMT3 Series Décor shade hardware
- For roller shades 22 to 96 in. (559 to 2,439 mm) wide using Décor shade hardware
- For roller shades 24 to 96 in. (610 to 2,439 mm) wide using Architectural shade hardware
- Digital Quiet Motor Technology™ provides silent operation and precise positioning
- Dependable, brushless motor design provides reliable, long-life operation
- Patented automatic torque calibration technology detects obstructions to prevent damage
- Programmable stop points afford customizable scene presets
- Real-time remote activity monitoring and status feedback
- Local push button interface for setup and testing
- Onboard multicolor diagnostic LED
- Quick and easy installation
- Fully integrated antenna— no external antenna or dongle required
- Control system integration using SG wireless communications
- Powered using 8 D cell batteries in an external battery pack
- Limited Lifetime Warranty

## Long-life Battery Operation

Power is supplied to the QMT® shade motor via 8 D cell batteries<sup>2</sup> (not supplied). The batteries are stored in an external battery compartment that is mounted in the fascia of QMT3 Series Architectural shade hardware. When mounting with QMT3 Series Décor shade hardware, the battery compartment can be hidden behind the roller shade fabric, valence, or drapes, and can be color-matched to the bracket hardware.

## QMT®3 Series Architectural or Décor Mounting Hardware

Designed for use with Crestron® QMT®3 Series Architectural ([CSS-ARCH3](#)) or QMT3 Series Décor ([CSS-DECOR3](#)) mounting hardware.<sup>1</sup> QMT3 series mounting hardware is a compact mounting system that allows a Crestron shade to be mounted on a wall, ceiling, or window jamb.

The CSA-ARCH3 fascia for battery-operated shades includes an integrated battery holder that neatly stores the battery compartment. The battery holder swings open to provide easy access for battery

replacement.

## Natural and Artificial Daylight Control

Protect fine furnishings and floor coverings from harmful UV rays with intelligent shading solutions. For added energy efficiency, shades can also be configured to track the location of the sun to reduce solar-heat gain in the summer and utilize its warmth in the winter. Crestron shades can also be set to automatically close, preventing glare on a TV and ensuring the ideal viewing scenario.

## Security and Privacy

Shades provide privacy and security. Use semi-translucent shade fabrics to allow natural light into the space, or blackout shade fabric to completely block views. In the event of a forced entry into a home, shades integrated with a security system can be set to raise automatically, allowing an intruder to be easily spotted from the outside.

## Quiet Shade Motors

Crestron automated shades feature low-voltage Digital QMT® shade motors for quiet operation. Crestron shades help manage daylight without audible disruptions to the space.

## Brushless Motor Technology

The Crestron Digital QMT shade motor is a brushless design, which translates into exceptional reliability, smoother operation, and ultra-quiet performance.

## Easy Installation

Crestron shades are easy to install. Brackets are easily mounted, and the shade components are secured with no special tools required.

## Crestron Design Tool Shades (CDTS) Software

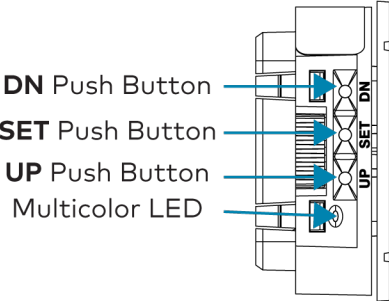
The [Crestron Design Tool Shades \(CDTS\)](#) is a web-based tool used for quoting and ordering Crestron roller shades and drapery tracks. The software may be used to easily create proposals for customers and place orders directly to Crestron.

Notes:

1. Battery-powered shade motors cannot be used with roman shades, horizontal sheers, dual-roll brackets, couplers, and pockets.
2. Estimated battery life is based on two open/close cycles per day. High environmental temperatures and shades taller than 60 in. (1524 mm) can reduce the battery life.



# Physical Description



## Controls and Indicators

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- UP, SET, DN** (3) Pushbuttons for setup and testing
- Status** (1) Multicolor LED for motor status indication and diagnostics

# Specifications

This section provides the following information:

- [CS-SHADE-ROLLER-BATT](#)
- [CSM\(I\)-QMTDC-163-1-SG](#)

# CS-SHADE-ROLLER-BATT

Specifications for the CS-SHADE-ROLLER-BATT are below.

## Shade Motor

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**CSM-QMTDC-163-1-SG** For details, refer to the [CSM-QMTDC-163-1-SG](#) product page.

**CSMI-QMTDC-163-1-SG** For details, refer to the [CSMI-QMTDC-163-1-SG](#) product page.

## Shade Brackets

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**CSS-ARCH3** For details, refer to the [CSS-ARCH3](#) product page.

**CSS-DECOR3** For details, refer to the [CSS-DECOR3](#) product page.

## Environmental

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**Temperature** 32° to 104° F (0° to 40° C)

**Humidity** 10% to 90% RH (noncondensing)

## Dimensions

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**System Width** **Décor shade hardware:** 22 to 96 in. (559 to 2,439 mm);  
**Architectural shade hardware:** 24 to 96 in. (610 to 2,439 mm);  
**Architectural shade hardware with blackout channels:** 29 to 96 in. (737 to 2,439 mm);  
Depending upon shade height and fabric selection

## Compliance

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**Regulatory Model: M202034001**

UL, cUL, FCC, IC, CE, RCM

# CSM(I)-QMTDC-163-1-SG

Specifications for the CSM-QMTDC-163-1-SG and CSMI-QMTDC-163-1-SG QMT® shade motors<sup>1</sup> are below.

## Motor

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<b>Torque</b>	3/4 Nm max; Torque values vary throughout the shade travel and are based on the shade configuration
<b>Speed</b>	10 - 18 RPM
<b>Duty Cycle</b>	8 minutes on / 40 minutes off at 3/4 Nm
<b>Shade Width</b>	<b>Décor shade hardware:</b> 22 to 96 in. (559 to 2,439 mm); <b>Architectural shade hardware:</b> 24 to 96 in. (610 to 2,439 mm); <b>Architectural shade hardware with blackout channels:</b> 29 to 96 in. (737 to 2,439 mm); Depending upon shade height and fabric selection

## Power Requirements

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<b>Battery Pack</b>	8 D cell batteries (not supplied) in an external battery compartment; 3 year (average) battery life <sup>2</sup> ; <b>Architectural shade hardware:</b> The battery pack secures to the fascia via the integrated battery pack holder on the battery-operated shade fascia; <b>Décor shade hardware:</b> The battery pack can be mounted to a flat surface that is hidden behind the roller shade fabric or color-matched to the mounting hardware
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## Wireless Communications (-EX models)

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<b>RF Transceiver</b>	SG 2-way RF; Domestic: 915 Mhz; International: 869.4-869.6 MHz; IEEE 802.15.4 compliant
<b>Range (Typical)</b>	230 ft (70 m) indoor, to SG wireless gateway; Subject to site-specific conditions and individual device capabilities
<b>Gateway</b>	Requires a Universal Wireless Gateway ( <a href="#">CEN-GW1</a> or <a href="#">CENI-GW1</a> , sold separately)

## Connector

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(1) 3-conductor attached lead with inline detachable terminal block;  
Connects to battery compartment

## Controls and Indicators

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**UP, SET, DN** (3) Pushbuttons for setup and testing  
**Status** (1) Multicolor LED for motor status indication and diagnostics

## Environmental

---

**Temperature** 32° to 104°F (0° to 40°C)  
**Humidity** 10% to 90% RH (noncondensing)

## Dimensions

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**Diameter** Ø 1.63 in. (42 mm)  
**Length** 13.25 in. (337 mm)

## Compliance

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### Regulatory Model: M202034001

UL, cUL, FCC, IC, CE, RCM

Notes:

1. Battery-powered shade motors cannot be used with roman shades, horizontal sheers, dual-roll brackets, couplers, and pockets.
2. Estimated battery life is based on two open/close cycles per day. High environmental temperatures and shades taller than 60 in. (1524 mm) can reduce the battery life.

# Installation

This section provides the following information:

- [Mount the Shade Brackets](#)
- [Mount the Shade Assembly](#)
- [Mount Battery Pack and Insert Batteries](#)
- [Level and Center the Shade Assembly](#)
- [Motor Wiring](#)
- [Replace a Motor](#)
- [Mount Fascia](#)

# Mount the Shade Brackets

Mount the roller shade with CSA-ARCH3 series or CSA-DECOR brackets.

## CSA-ARCH3 Brackets

**CAUTION:** There is risk of personal injury and equipment damage if the shade or associated parts fall during or after installation. Use care during installation. Use mounting hardware (for example, screws or bolts) that is appropriate for the mounting surface when securing the brackets.

To mount the shade brackets:

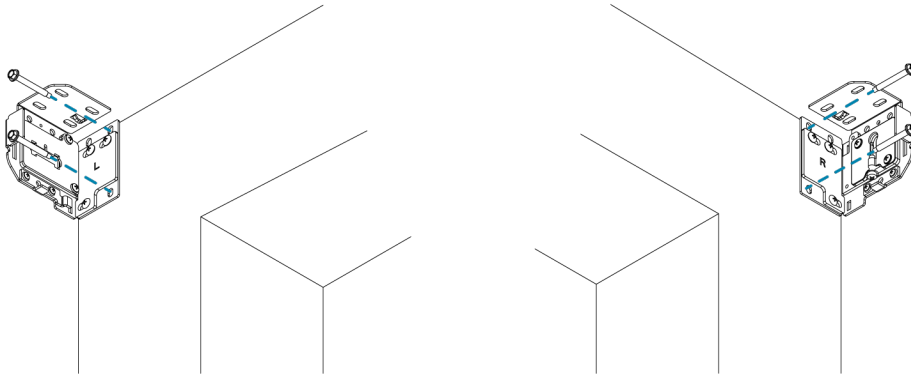
1. Check for a proper fit by holding the roller shade assembly in the approximate mounting location. Use the fascia to measure the proper distance between mounting brackets. The brackets should be mounted flush with the end of the fascia.
2. Mark the locations of the brackets.
  - The mounting points must be level, plumb, and on the same plane. Use a laser level to make sure that the brackets are level.
  - Space the brackets according to the specifications on the order form.
3. If applicable, attach the end caps to the mounting brackets. Attach the end cap marked **LEFT** to the motor bracket (stamped with an L) and the end cap marked **RIGHT** to the idler bracket (stamped with an R). The end caps snap into place.

4. Mount the brackets to the outside of the window frame (outside mount) or the inside of the window frame (inside mount). Use hardware that is appropriate for the mounting surface. Make sure the brackets are level and mounted to a flat surface.
- **Motor Bracket (L):** Mounts on the left-side of the window opening.
  - **Idler Bracket (R):** Mounts on the right-side of the window opening.

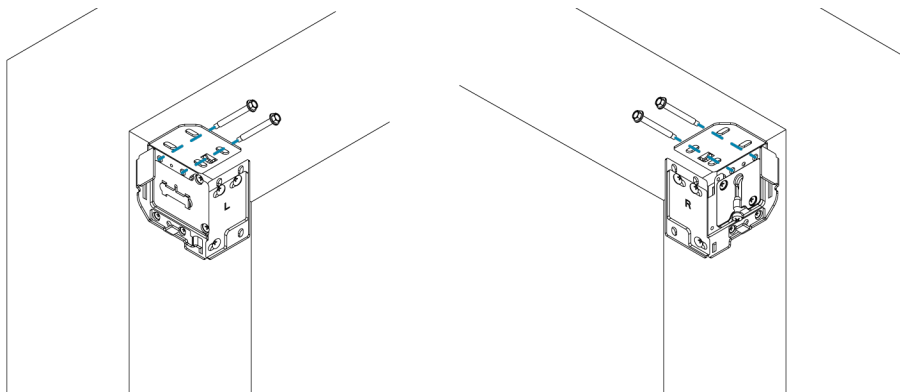
**NOTES:**

- The stamped **L** and **R** on the bracket should face the wall and window.
- For inside mounts, secure the mounting brackets to the window jamb or the window header.
- The screws provided with the mounting brackets are intended for use on walls (or jambs) with wood or metal blocking. These screws should not be used for hollow drywall or masonry installations. It is the responsibility of the installer to ensure that the mounting method used is secure.

**Outside Mount (CSA-ARCH3-BRKT)**



**Inside Mount (CSA-ARCH3-BRKT)**





## CSA-DECOR3 Brackets

**CAUTION:** There is risk of personal injury and equipment damage if the shade or associated parts fall during or after installation. Use care during installation. Use mounting hardware (for example, screws or bolts) that is appropriate for the mounting surface when securing the brackets.

To mount the shade brackets:

**NOTE:** The motor bracket must be installed on the left side of the window.

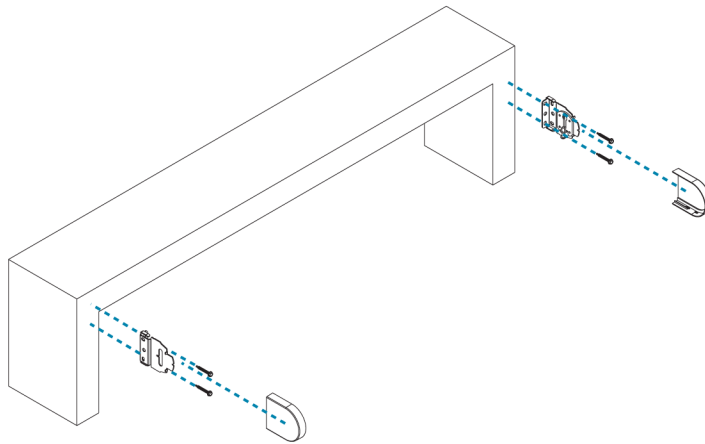
1. Check for a proper fit by holding the roller shade assembly in the approximate mounting location.
2. Mark the locations of the brackets.
  - The mounting points must be level, plumb, and on the same plane. Use a laser level to make sure that the brackets are level.
  - Space the brackets according to the specifications on the order form.
3. If applicable, attach the end caps to the mounting brackets. Attach the end cap marked **LEFT** to the motor bracket (stamped with an L) and the end cap marked **RIGHT** to the idler bracket (stamped with an R). The end caps snap into place.

4. Mount the brackets to the outside of the window frame (outside mount) or the inside of the window frame (inside mount). Use hardware that is appropriate for the mounting surface. Make sure the brackets are level and mounted to a flat surface.
- **Motor Bracket (L):** Mounts on the left-side of the window opening.
  - **Idler Bracket (R):** Mounts on the right-side of the window opening.

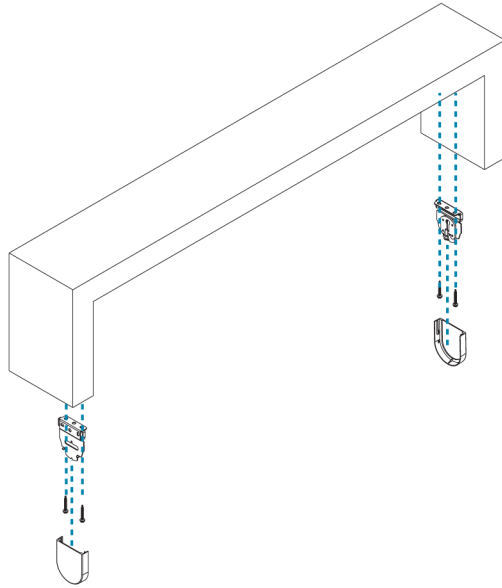
**NOTES:**

- The stamped **L** and **R** on the bracket should face the wall and window.
- For inside mounts, secure the mounting brackets to the window jamb or the window header.
- The screws provided with the mounting brackets are intended for use on walls (or jambs) with wood or metal blocking. These screws should not be used for hollow drywall or masonry installations. It is the responsibility of the installer to ensure that the mounting method used is secure.

**Outside Mount**



## Inside Mount



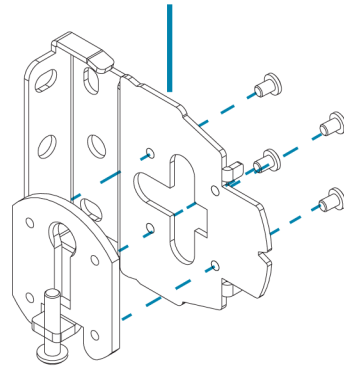
### Rotate the Keyhole

When the idler bracket is mounted, the keyhole in the idler bracket must be parallel with the wall; the head of the adjustment screw must face down. Rotate the keyhole so that it is in the correct orientation.

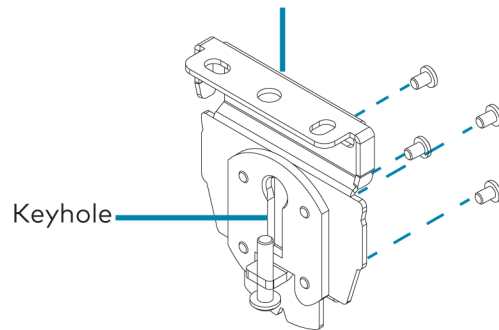
1. Using a Phillips screwdriver, remove the four screws holding the idler mount in the left-hand bracket and then remove the idler mount. Keep all hardware for reassembly.
2. Reassemble the idler mount and the bracket so that the keyhole is parallel to the wall when the bracket is mounted. The screw head on the vertical adjustment screw must face down.

3. Secure the idler mount with the screws removed in step 1.

Remove the screws and separate the keyhole from the idler bracket.



Reassemble the bracket. Ensure the keyhole is parallel with the wall when it is mounted.



# Mount the Shade Assembly

Mount the roller shade assembly to the mounting brackets.

## CAUTIONS:

- There is risk of personal injury and equipment damage if the shade or associated parts fall during or after installation. Use proper mounting hardware (for example, screws or bolts) for the mounting surface when securing the brackets to the surface.
- Two or more people are required to properly mount the shades.

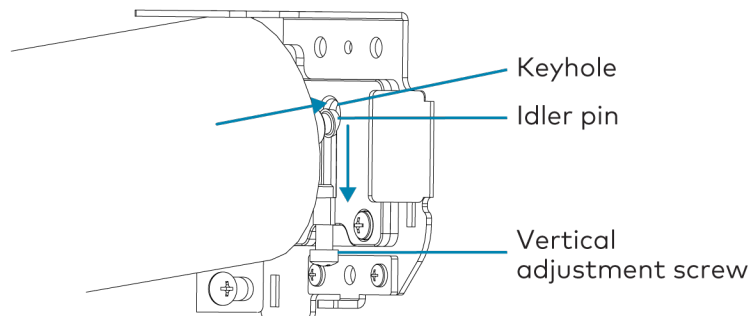
**NOTE:** The motor must be installed on the left side of the window.

## CSA-ARCH3 Brackets

To mount the roller shade assembly:

1. Insert the idler pin into the top of the keyhole on the right bracket, and slide it down into the keyhole. The idler pin sits on the vertical adjustment screw.

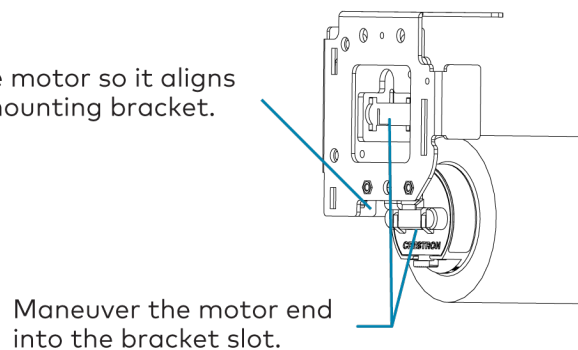
**Insert the Idler Pin into the Keyhole (CSA-ARCH3-BRKT)**



2. Raise the motor end of the roller shade assembly to the motor bracket.
3. Push the roller shade assembly toward the idler bracket to compress the spring on the idler pin.

**Align the Motor with the Motor Bracket (CSA-ARCH3-BRKT)**

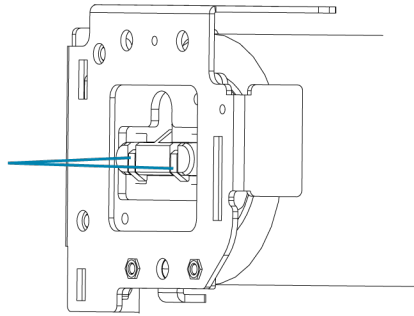
Rotate the motor so it aligns with the mounting bracket.



4. Push the tab on the motor assembly into the hole in the motor bracket. When the shade is properly seated, the two clips spring down to secure the motor to the bracket. Make sure that the shade is properly mounted before letting go.

**Secure the Motor to the Motor Bracket (CSA-ARCH3-BRKT)**

Plastic clips lock the motor into its bracket when the motor is fully inserted. Pull the motor gently to the right to ensure that the motor is securely locked into place.

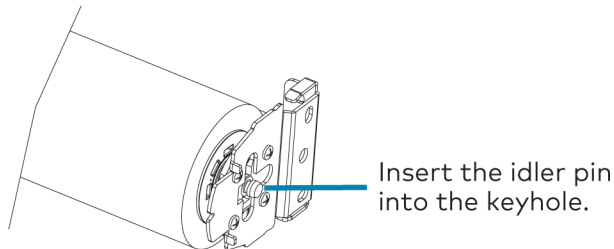


## CSA-DECOR3 Brackets

To mount the roller shade assembly:

1. Insert the idler pin into the top of the keyhole on the right bracket, and slide it down into the keyhole. The idler pin sits on the vertical adjustment screw.

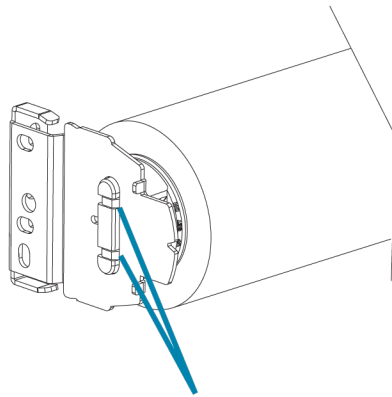
**Insert the Idler Pin into the Keyhole**



2. Raise the motor end of the roller shade assembly to the motor bracket.
3. Push the roller shade assembly toward the idler bracket to compress the spring on the idler pin.

4. Push the tab on the motor assembly into the hole in the motor bracket. When the shade is properly seated, the two clips spring down to secure the motor to the bracket. Make sure that the shade is properly mounted before letting go.

**Secure the Motor to the Motor Bracket**



Maneuver the motor end into the bracket slot.

Plastic clips lock the motor into its bracket when the motor is fully inserted. Pull the motor gently to the right to ensure that the motor is securely locked into place.

# Mount Battery Pack and Insert Batteries

The CS-SHADE-ROLLER-BATT is compatible with CSA-ARCH3 and CSA-DECOR3 mounting brackets.

**CAUTION:** Removing the batteries or disconnecting the battery-pack cable from the motor during motor operation may result in lost shade limits. To reset the shade limits, refer to [Test and Adjust Shade Limits on page 38](#).

**NOTE:** If the shade motor is not acquired by a gateway, the shade motor enters **Acquire** mode after it is powered on. To join a wireless network, place the gateway into **Acquire** mode before powering the shade motor. For details, refer to [Mount Battery Pack and Insert Batteries on page 24](#).

## CSA-ARCH3 Brackets

Battery-operated shades that use the CSA-ARCH3 brackets ship with a jumper cable and a battery pack that is integrated into the fascia.

### Jumper Cable

A 15 ft (3 m) jumper cable is included to provide temporary power to the shade motor so that the shade can be set up prior to installing the fascia. The local controls on the shade motor and the leveling screw are easier to access when the fascia is removed.

To use the jumper cable:

1. Place the fascia near the shade on a table or the floor. Use care to avoid scratching or damaging the fascia.
2. Insert batteries into the battery pack. For details, refer to [Insert or Replace Batteries on page 25](#).
3. Connect one end of the jumper cable to the power pack and the other to the battery-powered shade motor.



## Insert or Replace Batteries

Use 8 D-cell, 1.5V, alkaline batteries to power the shade motor. Only 10-year batteries should be used. The batteries must be new.

### CAUTIONS:

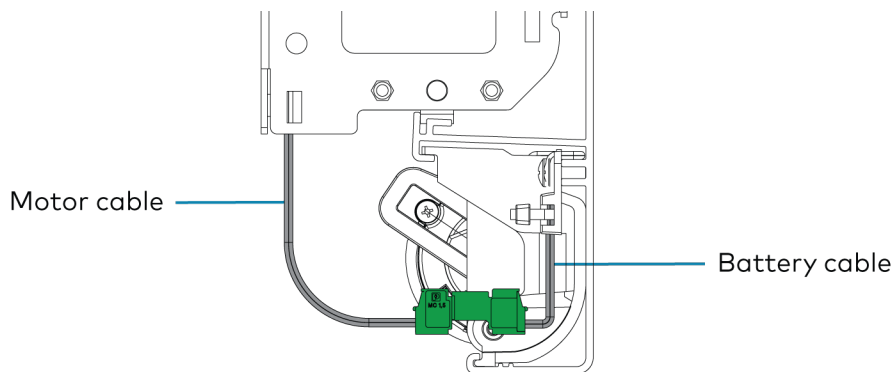
- Permanent damage to the shade motor may occur if the incorrect batteries are used. Use D-cell, 1.5V, alkaline batteries.
- Don't mix old and new batteries, batteries of different brands, or batteries of different types.

To insert or remove batteries:

**NOTE:** Always dispose of used batteries properly.

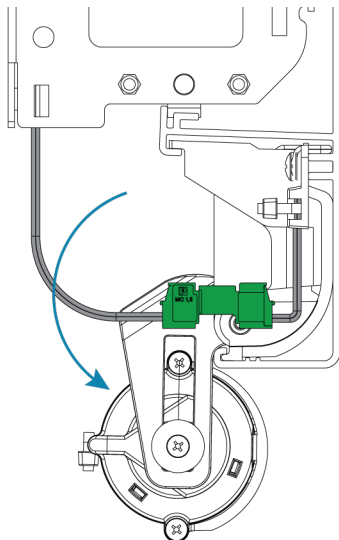
1. If the motor cable is connected to the battery-pack cable, rotate the connector bracket down and then disconnect the motor cable.

**CAUTION:** Removing the batteries or disconnecting the battery-pack cable from the motor during motor operation may result in lost shade limits. To reset the shade limits, refer to [Test and Adjust Shade Limits on page 38](#).

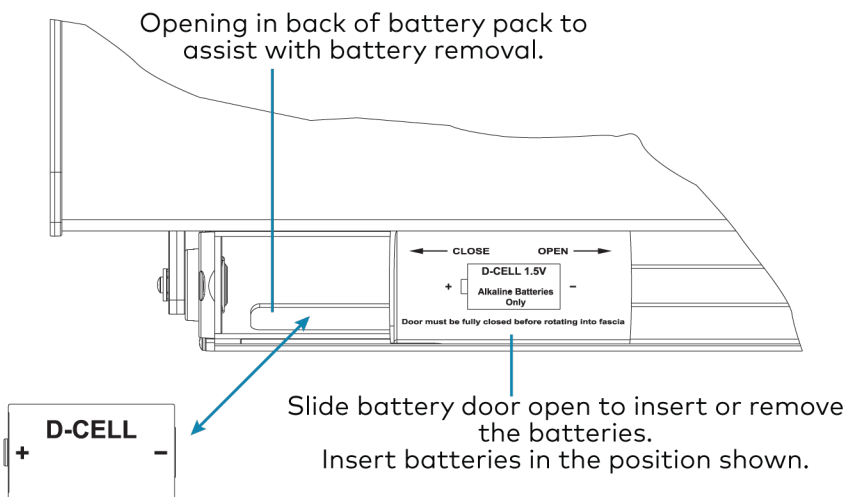


To disconnect battery assembly from motor, disconnect the connector on the motor cable from the connector on the battery cable.

2. Pull and rotate the battery pack until it is fully extended out of the fascia.



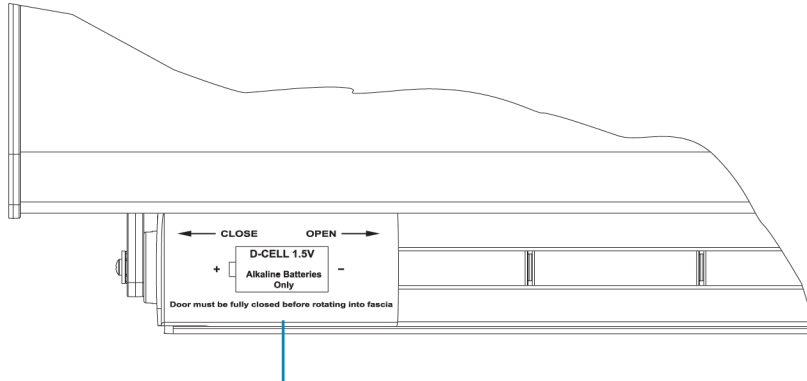
3. Slide the battery door into the **OPEN** position.



4. If necessary, remove the old batteries from the battery pack. Use the opening in the back to help remove the batteries.
5. Insert 8 D-cell batteries into the battery pack. Follow the markings on the battery pack to ensure proper orientation.

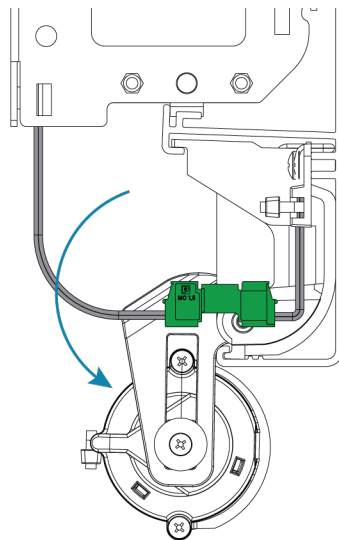
**NOTE:** Make sure that the batteries are inserted in the proper orientation.

6. Slide the battery door into the **CLOSE** position. The battery door will click into the closed position.



Slide battery door closed after the batteries are installed. The door clicks into place.

7. Rotate the battery pack into the fascia until the battery pack clicks into the fully closed position.



Rotate battery pack to original position.  
Battery pack clicks into position.

8. Connect the motor cable to the battery-pack cable on the connector bracket.

# CSA-DECOR3 Brackets

Battery-operated shades that use the CSA-DECOR3 brackets ship with a battery pack and a decorative cover.

## Insert Batteries

Use 8 D-cell, 1.5V, alkaline batteries to power the shade motor. Only 10-year batteries should be used. The batteries must be new.

### CAUTIONS:

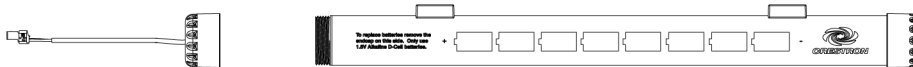
- Permanent damage to the shade motor may occur if the incorrect batteries are used. Use D-cell, 1.5V, alkaline batteries.
- Don't mix old and new batteries, batteries of different brands, or batteries of different types.

To insert or replace batteries:

1. If the battery pack is connected to the motor, disconnect the battery pack cable from the motor.

**CAUTION:** Removing the batteries or disconnecting the battery-pack cable from the motor during motor operation may result in lost shade limits. To reset the shade limits, refer to [Test and Adjust Shade Limits on page 38](#).

2. Remove the positive end of the battery pack. To remove, twist the cap counterclockwise.



Twist the cap counterclockwise to remove the cap and replace the batteries.

3. If necessary, remove the old batteries from the battery pack.
4. Insert 8 D-cell batteries into the battery pack. Follow the markings on the battery pack to ensure proper orientation.

**NOTE:** Make sure that the batteries are inserted in the proper orientation.

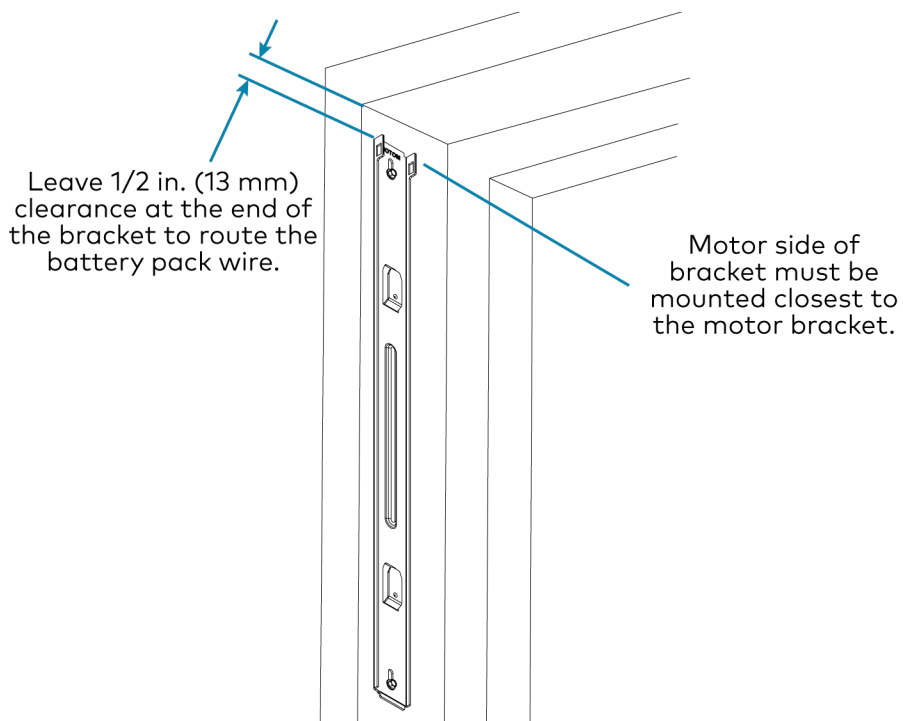
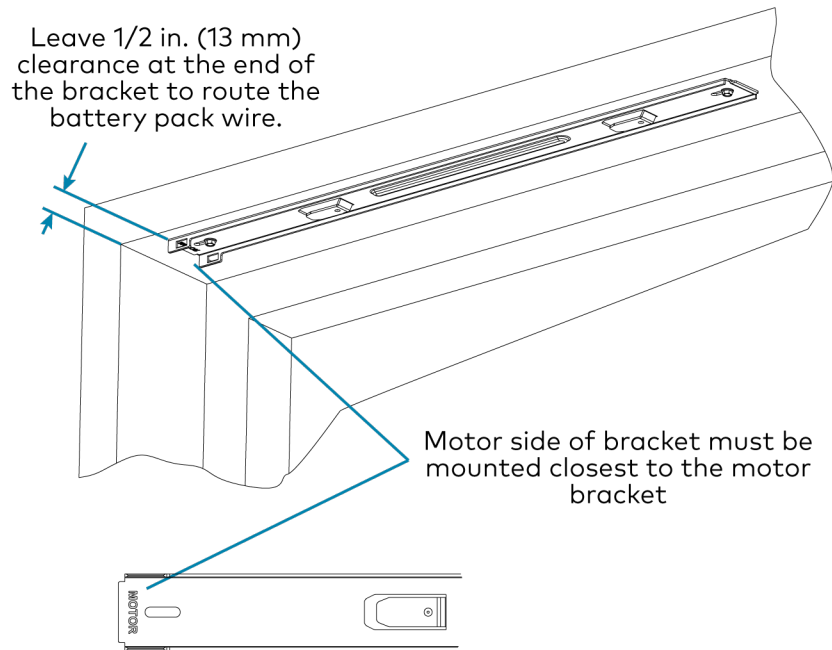
5. Replace the positive end of the battery pack. To replace, twist the cap clockwise.
6. Connect the battery-pack cable to the motor.

## Mount the Battery Pack

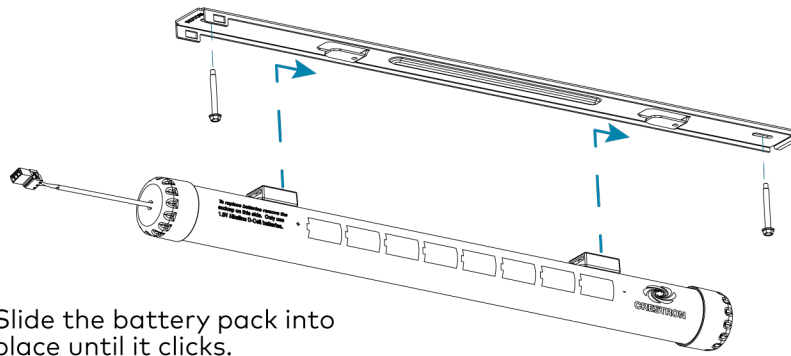
Mount the battery pack to a flat surface. The battery pack should be mounted on the same side of the shade as the motor and should be hidden from view by the shade fabric.

To mount the battery pack:

1. Secure the mounting bracket to the wall or window jamb using appropriate mounting hardware (not supplied). The motor side of the bracket must be mounted closest to the motor.



2. The mounting bracket has two clips that hold the battery pack in place. Slide the battery pack onto the clips until it clicks into place.



Slide the battery pack into place until it clicks.

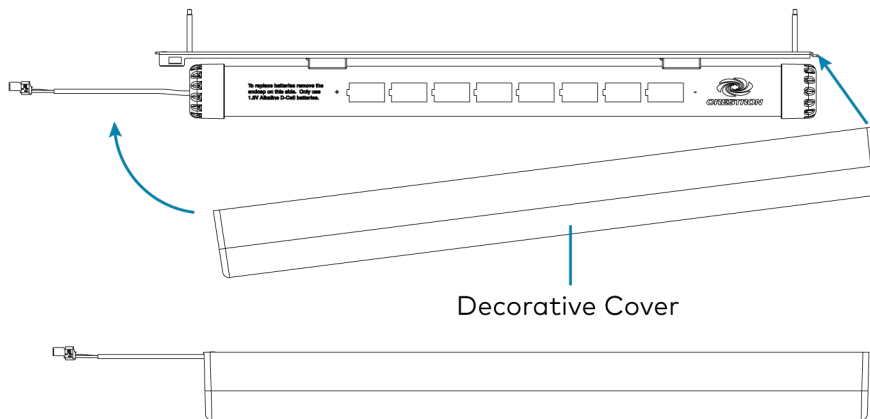
3. Connect the battery-pack cable to the motor.

## Attach the Decorative Cover

Use the decorative cover to conceal the battery pack.

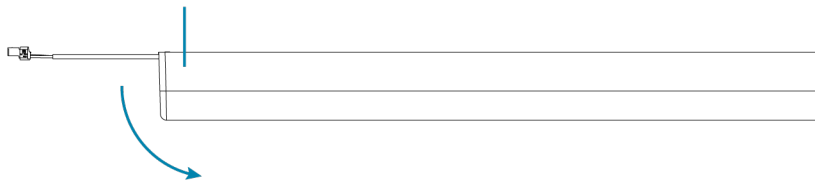
To attach the decorative cover, insert the tab on the end of the mounting bracket into the cover and then rotate the cover until it snaps into place.

Clip the decorative cover onto the tab of the mounting bracket and then rotate until it snaps into place.



To remove the decorative cover, squeeze the decorative cover near the end where the motor exits and then pull the cover away from the mounting bracket.

Squeeze here to remove the decorative cover.



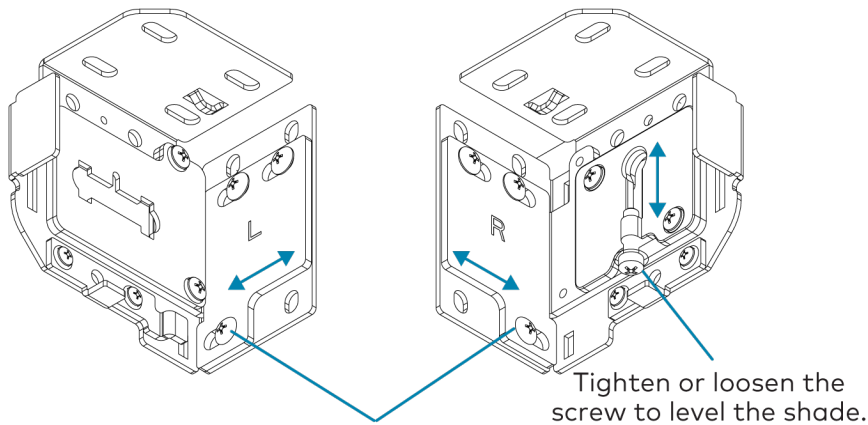
# Level and Center the Shade Assembly

Once the roller shade assembly is mounted, make adjustments to level the shade and center it in the opening.

**WARNING:** If the roll-up diameter is close to the maximum allowance, do not use the vertical adjustment screw to level the shade. The fabric can be damaged from contact with the bracket, fascia, or other hardware. Remount the bracket to level the shade.

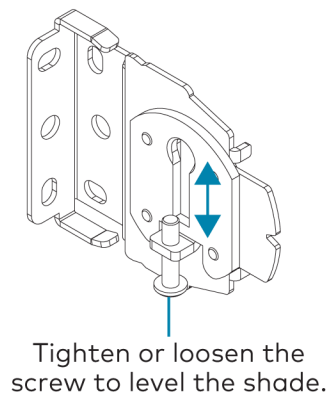
To level and center the shade assembly, use the adjustment features built into the shade bracket.

## Adjust the CSA-ARCH3 Bracket



Loosen the screws, adjust the shade so that it is centered in the opening, and then tighten the screws to lock the shade into place.

## Adjust the CSA-DECOR3 Bracket



Fabric telescoping is when the shade fabric shifts to the left or right during operation. Telescoping typically occurs when the shade assembly is not level. Situations that may cause telescoping:

- The shade is not perfectly level.
- The shade bumps into objects while traveling up or down.

- The HVAC ductwork is blowing on the shade, or air is coming in through a window.
- A foreign object is stuck to the shade fabric (for example tape, bugs, dust, etc.).

To prevent telescoping:

- Use the leveling features built into the shade brackets to make sure the shade is level. If the bracket adjustment is not enough to compensate, use a shim to level the system.
- Make sure there are no obstructions near the window area that the shade could bump into while traveling (for example, latches and cranks).
- Direct HVAC airflow away from the shade, and make sure that windows are closed while operating the shade.
- Lower the shade down to the bare tube (the shade will need to be placed into **Limit Setup** mode to allow the shade to travel below its lower limit). Inspect the front and back of the shade to make sure that no foreign objects are stuck to the shade fabric.

If the shade is still telescoping, shim using a small (1 in. x 1 in.) piece of tape on the bare tube. The shade must be rolled down past its lower limit to expose the tube.

- **Fabric is telescoping to the left:** Place the tape on the right side of the tube.
- **Fabric is telescoping to the right:** Place the tape on the left side of the tube.



# Motor Wiring

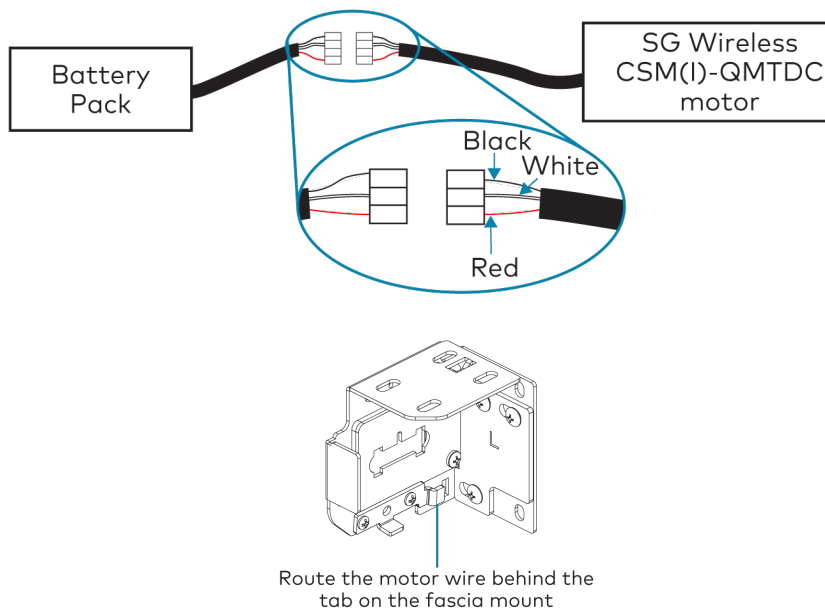
## Routing the Cables

To ensure proper functionality and a clean look, consider the following when routing cables and making connections:

- Route the cables so that they remain out of sight.
- Use cable ties to secure the cables to the loop on the bracket.
- Ensure that the cables and connectors do not make contact with the shade fabric.

## Making the Connections

Wire the SG Wireless QMT® Shade Motor



# Replace a Motor

The Crestron® CSM(I)-QMTDC-163-SG series QMT® shade motors can be removed and replaced.

These replacement motors are available:

- CSM-QMTDC-163-1-SG-RPR/RPL
- CSMI-QMTDC-163-1-SG-RPR/RPL

**CAUTION:** Roll up the shade fabric to prevent damage during this procedure.

## NOTES:

- A soft and clean work surface is required to perform this procedure.
- Remove the fascia and disconnect the motor cable before performing this procedure.

# Remove the Roller Shade Assembly

If necessary, the roller shade assembly can be removed from the mounting brackets.

**CAUTION:** Roll up the shade fabric to prevent damage during this procedure.

To remove the roller shade assembly:

**NOTE:** Place the roller shade on a soft and clean surface where it will not be damaged.

1. If the fascia is installed, remove the fascia.
2. To disconnect the old QMT shade motor from the motor mounting bracket, press the release button on the bottom of the shade motor.
3. Push the roller shade assembly toward the idler bracket; the idler pin compresses to allow the shade assembly to swing out of the bracket.
4. Lift the idler end of the roller shade assembly and remove the idler pin from the keyhole in the idler bracket. Place the roller shade assembly on a clean and soft surface.

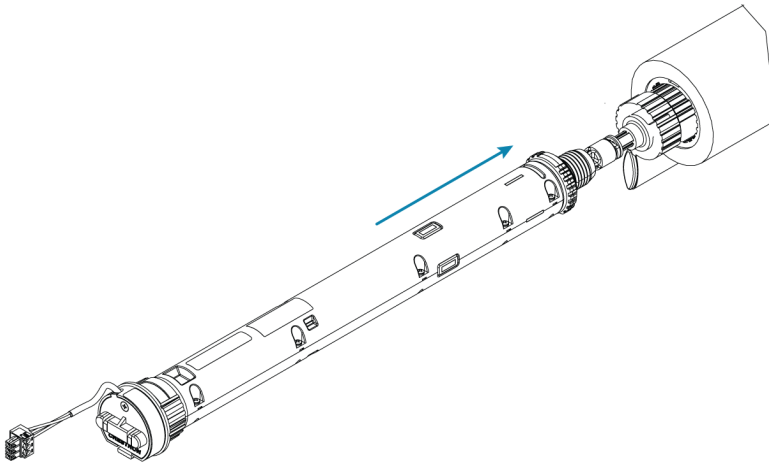
# Replace the Motor

To remove the old motor and then install a new motor:

**CAUTION:** Do not remove the motor by pulling on the control wire.

1. To remove the old motor, pull the motor head to remove it from the tube.
2. To install the new motor, fully insert the new motor into the tube. The tube is designed so that the motor can be easily inserted in only one orientation.

**NOTE:** If the motor does not easily slide into the tube, rotate the motor 180-degrees and then insert the motor into the tube.



# Reinstall the Roller Shade Assembly

To reassemble the shade assembly:

1. If necessary, roll the shade fabric onto the tube.
2. Install the roller shade assembly and connect the motor wire. For details, refer to [Installation on page 14](#).
3. Test the motor direction, set the shade limits, and, if applicable, connect to the wireless network. For details, refer to [Configuration on page 37](#).

# Mount Fascia

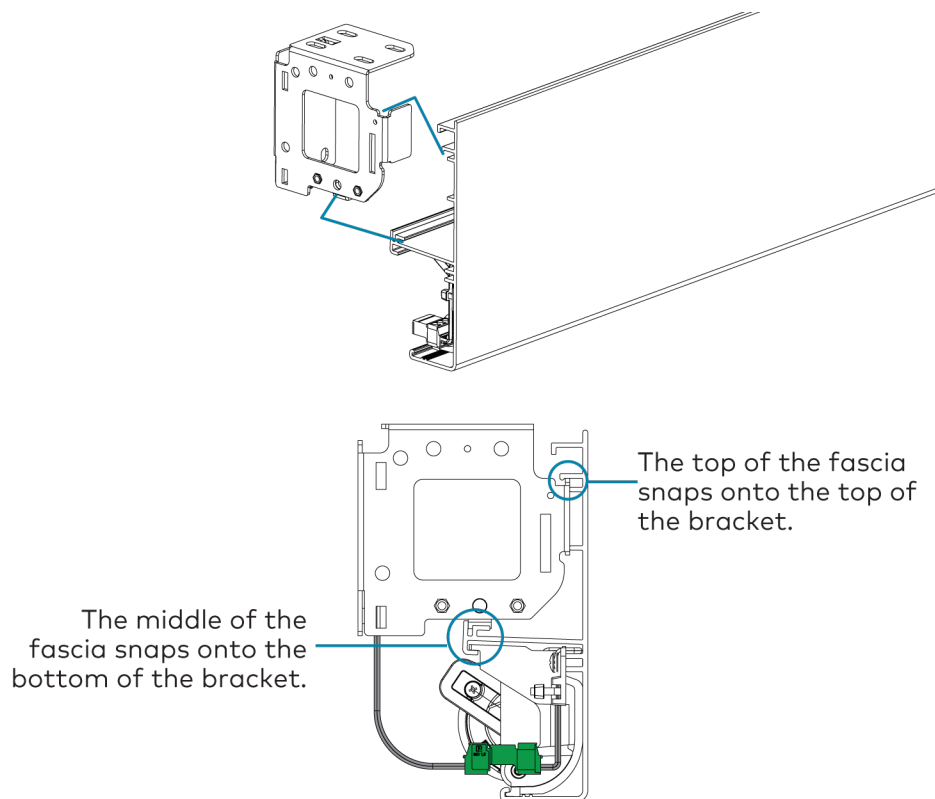
Once the assembly is installed, mount the fascia.

## Mount the Fascia

To mount the fascia:

1. Place the top of the fascia on the top of the bracket.
2. Press the fascia into place on the bottom of the bracket. The fascia snaps into place.

### Mount the Fascia (CSA-ARCH3-BRKT)



## Remove the Fascia

To remove the fascia, pull the bottom of the fascia down to clear the bottom tab on the bracket. Then, pull the fascia away from the window and upward to release the top of the fascia.

**NOTE:** The fascia for battery-operated shades contains an extra battery pack mounting bracket on the end of the fascia opposite the motor. This bracket is used to help facilitate the removal of the fascia.

# Configuration

Prior to configuration, ensure the device is running the latest firmware. To update the firmware, use the Crestron Toolbox™ application.

Program the QMT® shade motor using the buttons on the motor.

**NOTE:** The procedures described in this document can also be performed remotely using a control system.

This section provides the following information:

- [Test and Adjust Shade Limits](#)
- [Wireless Communications](#)

# Test and Adjust Shade Limits

## Test the Shade Travel

Test the travel of the shade fabric to ensure that it does not come in contact with building materials and that the upper and lower shade limits are properly set.

**WARNING:** Care has been taken to ensure that the shade is properly balanced. Prior to initial operation, confirm that the shade assembly is level and centered and that the brackets are level and plumb. To prevent damage to the fabric, do not leave the shade unattended during the first few open and close cycles. Failure to follow these instructions may result in damage to the shade fabric, which is not covered by the warranty.

To test the shade travel:

1. Press **DN** to lower the shade until it reaches its lower limit. **Stop immediately if the following occurs:**
  - The shade fabric contacts the mounting brackets or building materials.
  - The shade fabric telescopes.
2. Verify that the shade stops at the desired lower limit. If the shade does not travel to the desired lower limit, adjust the shade limits. For details, refer to [Adjust the Shade Limits on page 38](#).
3. Press **UP** to raise the shade until it reaches its upper limit. **Stop immediately if the following occurs:**
  - The shade fabric contacts the mounting brackets or building materials.
  - The shade fabric telescopes.
4. Verify that the shade stops at the desired upper limit. If the shade does not travel to the desired upper limit, adjust the shade limits. For details, refer to [Adjust the Shade Limits on page 38](#).
5. After adjusting the shade travel, perform several complete open and close cycles to verify that the shade is functioning properly.

## Adjust the Shade Limits

Shades are shipped from the factory with upper and lower limits set. If the shade limits are not set, the LED flashes red three times, pauses for 1 second, flashes once, pauses for 5 seconds, and then repeats this pattern until the limits are set. If necessary, adjust the upper and lower shade limits.

**NOTE: Limit Setup** mode exits after 120 seconds of inactivity.

To adjust the lower limit:

1. Press and hold **SET** for 4 seconds to enter **Limit Setup** mode. The LED alternates between amber and green.
2. To begin lower limit setup, press **DN**. The green LED flashes.

3. Press **UP** and **DN** to set the shade to its desired position.
4. Press and hold **SET** for 4 seconds. The LED turns solid red to confirm that the lower limit was successfully set.
5. If the upper limit is not set, the motor automatically enters **Limit Setup** mode for the upper limit. To set the upper limit, refer to step 3 in the procedure below.

To adjust the upper limit:

1. Press and hold **SET** for 4 seconds to enter **Limit Setup** mode. The LED alternates between amber and green.
2. To begin upper limit setup, press **UP**. The amber LED flashes.
3. Press **UP** and **DN** to set the shade to its desired position.
4. Press and hold **SET** for 4 seconds. The LED turns solid red to confirm that the upper limit was successfully set.
5. If the lower limit is not set, the motor automatically enters **Limit Setup** mode for the lower limit. To set the lower limit, refer to step 3 in the procedure above.

# Wireless Communications

The device connects to the Crestron network using the infiNET EX® wireless communications protocol. A [CEN-GW1](#) or [CENI-GW1](#) universal wireless gateway (both sold separately) is required for SG wireless communication. Use the procedures outlined below to join or leave the wireless network and to verify communications between the device and the control system.

To simplify the setup process, the battery shade enters Acquire mode after it is received from the factory and powered on for the first time. This allows shades to easily be acquired and tested with fascia installed.

## Join a Wireless Network

To join a wireless network:

**NOTE:** A device can be acquired by only one gateway.

1. Put the gateway into **Acquire** mode from the unit itself, the Web UI, Crestron Home® Setup app, or from Crestron Toolbox.

**NOTE:** In an environment where multiple gateways are installed, only one gateway should be in **Acquire** mode at any time.



2. Place the device into **Acquire** mode:

- If the battery shade motor is powered on for the first time after it is received from the factory, it enters **Acquire** mode automatically and attempts to join a gateway. The LED flashes white slowly to show that the device is actively scanning the network.
  - If pairing was successful, the LED turns on for 5 seconds.
  - If pairing was unsuccessful, the LED flashes quickly. Press the **SET** button to acknowledge the failure. Ensure the gateway is in **Acquire** mode and within range before attempting the acquire process again.
- If the device did not enter **Acquire** mode automatically, use the **SET** button or a power-cycle sequence to enter **Acquire** mode. Use the power-cycle sequence if fascia is installed or the buttons are inaccessible.

**Enter Acquire mode using the SET button:**

- a. Press **SET** three times, and then press and hold it down (tap-tap-tap-press+hold) until the LED flashes white. It may take up to 10 seconds for the LED to flash.
- b. When the LED flashes, release the button. The LED slowly flashes white while the device searches for a gateway that is in Acquire mode, and then lights to indicate the pairing status.
  - If pairing was successful, the LED turns on for 5 seconds.
  - If pairing was unsuccessful, the LED flashes quickly. Press the **SET** button to acknowledge the failure. Ensure the gateway is in **Acquire** mode and within range before attempting the acquire process again.

**Enter Acquire mode using a power-cycle sequence:**

- a. Disconnect the battery pack.
  - b. Power cycle the motor two times:
    - i. Connect the battery pack to the motor.
    - ii. Wait 5 seconds.
    - iii. Disconnect the battery holder.
  - c. Connect the battery pack to the motor for a third time. The motor enters **Acquire** mode and the LED flashes slowly to show that the device is actively scanning the network.
    - If pairing was successful, the LED turns on for 5 seconds.
    - If pairing was unsuccessful, the LED flashes quickly. Press the **SET** button to acknowledge the failure. Ensure the gateway is in **Acquire** mode and within range before attempting the acquire process again.
3. Once all devices have been acquired, take the gateway out of **Acquire** mode. Refer to the gateway's manual for details.

# Leave a Wireless Network

To leave a wireless network:

1. Make sure that there are no gateways in **Acquire** mode.
2. Place the device in **Acquire** mode. To place the device in **Acquire** mode, refer to [Join a Wireless Network on page 40](#).
3. The device leaves the wireless network when it is searching for a new network. The LED flashes quickly to show that the device left the wireless network and that it did not join a new wireless network. Press the **SET** button to turn off the LED.

# Verifying Communications Status

To check the communications status of the device, tap the **SET** button three times and then press and hold it down (tap-tap-tap-press+hold) for up to 2 seconds. The white LED indicates the communications status.

White LED	Communications Status
Turns on for 5 seconds	The device is communicating with the control system.
Flashes three times	The device is communicating with the gateway but the gateway is not communicating with the control system.
Flashes twice	The device was previously joined to the network but is not communicating with the gateway.
Flashes once	The device is not joined to the network.

# Operation

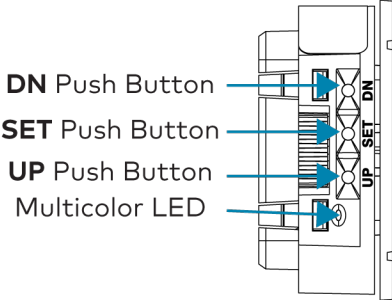
This section provides the following information:

- [Controls and Indicators](#)
- [LEDs](#)

# Controls and Indicators

The Crestron QMT® shade motors have **UP**, **SET**, and **DN** (down) push buttons that are used to program the shade. The shade motors have a multicolor LED that lights red, amber, green, blue, or white to provide confirmation, operating mode, and error state feedback. The **UP** button is located closest to the LED, the **SET** button is the second button from the LED, and the **DN** button is the third button from the LED.

LED and Pushbutton Orientation - CSM-QMTDC-163-1-SG



# LEDs

The LED flashes to provide a visual reference that the motor is operating normally or if it is in an error state.

The following table provides a list of possible LED patterns encountered during normal operation. All LEDs extinguish after 1 minute of inactivity.

## LED Patterns

LED Pattern	LED Color	Operating Mode
Solid	Blue	The motor is in <b>Bootloader</b> mode.
Fast flash (1/4-second on, 1/4-second off)	White	The motor is in <b>Identify</b> mode.
Slow flash (1/2-second on, 1/2-second off)	Green	The motor is moving from a local button press.
Solid	Green	The motor is communicating with the control system program.

# Troubleshooting

Use the following sections to view corrective actions for possible issues and error states.

## System Diagnostics

The following table provides corrective action for possible issues. If further assistance is required, please contact [Crestron Support](#).

### Crestron QMT Shade Motor Troubleshooting

Trouble	Possible Cause(s)	Action
The motor cannot be controlled and all of the LEDs are off.	There is no power provided to the motor.	Check the power connections between the battery pack and motor.
	The power connection is reversed between the motor and the battery pack.	Ensure batteries are installed in the battery holder in the proper orientation and that the batteries have not exceeded their useful life.
The motor moves in the opposite direction.	The motor was installed on the wrong side of the window opening.	Reinstall the shade with the motor on the left side of the window opening.
The motor intermittently stops working.	The motor is exceeding its maximum duty cycle.	Reduce the duty cycle of the motor operation.
	The motor is encountering an obstacle or excessive friction, which is causing it to stop.	Verify that all components are aligned and running smoothly.
	The load on the motor is exceeding its maximum rating.	Verify that the fabric weight and tube size do not exceed the rating for the motor.
The LED is blue.	The motor is stuck in the bootloader.	Reload firmware to the motor.
Motor speed reduced unexpectedly.	Batteries are nearing the end of their useful life.	Replace existing batteries with new batteries.

# Error State

Crestron QMT shade motors display error codes using the red LED on the interface. The LED flashes a pattern to indicate the error.

**NOTE:** The error code does not flash while the motor is in a sleep state. If the error state is still active when the motor wakes up, the LED will continue to flash the code.

For example, when a 3-3 LED flash pattern occurs, the LED flashes three times, pauses for 1 second, flashes three times, pauses for 5 seconds, and then repeats until the error is corrected. When a 2-1 LED flash pattern occurs, the LED flashes two times, pauses for 1 second, flashes once, pauses for 5 seconds, and then repeats this code until the error is corrected.

The flash patterns are listed in the following table. Refer to [Troubleshooting on page 46](#) for possible corrections.

## LED Blinking Patterns

LED Error Code	Error State
2-1	The motor is unable to communicate with the gateway. Check that the motor is connected to a wireless gateway.
2-2	The motor is not being polled by the control system. Ensure that the RF ID matches the control system program and that the program is running on the control system.
3-1	The motor limits are not set.
3-3	An obstruction is blocking the shade fabric from moving freely.
3-4	A motor overcurrent error exists. Check for obstacles or any sources of excessive friction.
3-5	A motor duty-cycle error exists. Reduce the operating duty cycle of the motor to correct the error.

# Resources

The following resources are provided for the CS-SHADE-ROLLER-BATT.

**NOTE:** You may need to provide your Crestron.com web account credentials when prompted to access some of the following resources.

## Crestron Support and Training

- [Crestron True Blue Support](#)
- [Crestron Resource Library](#)
- [Crestron Online Help \(OLH\)](#)
- [Crestron Training Institute \(CTI\) Portal](#)

## Programmer and Developer Resources

- [help.crestron.com](http://help.crestron.com): Provides help files for Crestron programming tools such as SIMPL, SIMPL#, and Crestron Toolbox™ software
- [developer.crestron.com](http://developer.crestron.com): Provides developer documentation for Crestron APIs, SDKs, and other development tools

## Product Certificates

To search for product certificates, refer to [support.crestron.com/app/certificates](http://support.crestron.com/app/certificates).

## Related Documentation

- [Crestron Design Tool Shades \(CDTS\)](#)
- [Crestron Shading Solutions Design Guide](#)
- [Crestron Shading Solutions Feature Page](#)
- [crestron.com/shadesafety](http://crestron.com/shadesafety) (PDF)



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