



CSA-DECOR3-BRKT-163-EC-MTL and  
CSA-DECOR3-BRKT-CLUTCH-EC-MTL  
Crestron Shades with Brushed Metal  
Brackets

Product Manual  
Crestron Electronics, Inc.

**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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# Contents

|   |           |
|---|-----------|
| <b>Overview</b>                                 | <b>6</b>  |
| Features  | 7         |
| CSA-DECOR3-BRKT-163-EC-MTL Features             | 8         |
| CSA-DECOR3-BRKT-CLUTCH-EC-MTL Features          | 10        |
| <b>Specifications</b>                           | <b>11</b> |
| CSA-DECOR3-BRKT-163-EC-MTL Specifications       | 12        |
| Product Specifications                          | 12        |
| Dimension Drawings                              | 14        |
| CSA-DECOR3-BRKT-CLUTCH-EC-MTL Specifications    | 18        |
| Product Specifications                          | 18        |
| Dimension Drawings                              | 19        |
| <b>Installation</b>                             | <b>23</b> |
| Motorized Shade Installation                    | 24        |
| Shade Brackets                                  | 25        |
| Shade Assembly                                  | 28        |
| Motor Wiring                                    | 31        |
| Replace a Motor                                 | 33        |
| Manual Shade Installation                       | 36        |
| Shade Brackets                                  | 37        |
| Shade Assembly                                  | 40        |
| Chain Safety Hold                               | 44        |
| <b>Configuration</b>                            | <b>48</b> |
| Test and Adjust Shade Limits (Motorized Shades) | 49        |
| Test the Shade Travel                           | 49        |
| Adjust the Shade Limits                         | 49        |
| Fabric Telescoping                              | 51        |
| Wireless Communications                         | 52        |
| Join a Wireless Network                         | 52        |
| Leave a Wireless Network                        | 52        |
| Verifying Communications Status                 | 53        |
| <b>Operation</b>                                | <b>54</b> |
| Controls and Indicators                         | 55        |
| LEDs  | 56        |
| <b>Troubleshooting</b>                          | <b>57</b> |
| System Diagnostics                              | 57        |
| Error State                                     | 58        |

**Resources ..... 59**

    Crestron Support and Training ..... 59

    Programmer and Developer Resources ..... 59

    Product Certificates ..... 59

    Related Documentation ..... 59



# Overview

The CSA-DECOR3-BRKT-163-EC-MTL and CSA-DECOR3-BRKT-CLUTCH-EC-MTL are small shade mounting systems that expose the entire shade, giving the space a contemporary look. The system is very compact, enabling installation in tight spaces. The brushed metal end caps conceal the mounting brackets to provide an exceptionally elegant finish. The easy-to-install and versatile mounting brackets allow the shade to be mounted inside the window opening or on a wall or ceiling.

The CSA-DECOR3-BRKT-CLUTCH-EC-MTL is a motorized roller shade and the CSA-DECOR3-BRKT-CLUTCH-EC-MTL is a manual, clutch-operated shade.

This section provides the following information:

- [Features](#)

# Features

This section provides the following information:

- [CSA-DECOR3-BRKT-163-EC-MTL Features](#)
- [CSA-DECOR3-BRKT-CLUTCH-EC-MTL Features](#)

# CSA-DECOR3-BRKT-163-EC-MTL Features

Key features include:

- Modern-looking hardware for exposed roller shade systems
- Compact design, takes up less space on mounting surface
- Metal end caps available in a variety of colors to match any decor
- Controlled using an CSM-QMTDC-163-1-EX-BLK-MTL or CSM-QMTDC-163-1-CN-BLK-MTL Digital QMT® motor
- Universal bracket for both manual and motorized shading solutions
- Digital Quiet Motor Technology™ provides silent operation and precise positioning
- 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 pushbutton interface for setup and testing
- Onboard multicolor diagnostic LED
- Quick and easy installation
- Control system integration using infiNET EX® wireless or Cresnet® wired communications
- Powered using 24VDC low-voltage, Class 2 wiring
- Limited Lifetime Warranty

## 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.

# CSA-DECOR3-BRKT-CLUTCH-EC-MTL Features

Key features include:

- Intuitive pull-chain control for precise positioning
- Universal mounting brackets allow for inside mount installation to the window jamb or header or outside mount to the window casing, wall, or ceiling
- Small light gaps
- Modern-looking hardware for exposed roller shade systems
- Compact design, takes up less space on mounting surface
- Metal end caps available in a variety of colors to match any decor
- Universal bracket for both manual and motorized shading solutions
- Smooth and quiet operation
- Field-configurable for left or right side pull chain operation
- Quick and easy installation
- Limited Lifetime Warranty

## 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 reduce solar-heat gain in the summer and utilize its warmth in the winter.

## Security and Privacy

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## Crestron Design Tool Shades (CDTS) Software

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# Specifications

This section provides the following information:

- [CSA-DECOR3-BRKT-163-EC-MTL Specifications](#)
- [CSA-DECOR3-BRKT-CLUTCH-EC-MTL Specifications](#)

# CSA-DECOR3-BRKT-163-EC-MTL

## Specifications

Product specifications for the CSA-DECOR3-BRKT-163-EC-MTL.

## Product Specifications

### Shade Control

---

|                  |   |
|------------------|---|
| <b>Motorized</b> | Operator: Motor;<br>Communications: infiNET EX wireless or Cresnet wired;<br>Torque: 3/4 Nm;<br>Speed: 10 - 30 RPM;<br>Duty Cycle: 8 minutes on / 40 minutes off at 3/4 Nm; |
|------------------|---|

### Communications

---

|   |  |
|---|--|
| <b>Cresnet Wired<br/>(-CN Motors)</b>       | Cresnet controlled device  |
| <b>infiNET EX Wireless<br/>(-EX Motors)</b> | RF Transceiver: infiNET EX® 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), default channel 15;<br>IEEE 802.15.4 compliant;<br>Range (typical): 150 ft (46 m) indoor (250 ft (76 m) outdoor) to nearest mesh network device(s);<br>Subject to site-specific conditions and individual device capabilities <sup>1</sup> ;<br>Gateway: Requires a wireless gateway ( <a href="#">CEN-GWEXER</a> or <a href="#">CEN-GW1</a> , sold separately) |

### Shade Configuration

---

|                         |  |
|-------------------------|--|
| <b>Shade Width</b>      | 17.5 to 96 in. (445 to 2,439 mm);<br>Bracket-to-Bracket (B2B) width including end caps;<br>Width is dependent upon shade height and fabric selection |
| <b>Fabric Width</b>     | 1.5 in. (38 mm) deduction;<br>Fabric Width = B2B - 1.5 in. (38 mm)   |
| <b>Light Gap</b>        | Drive Side: 0.74 in. (18 mm)<br>Idler Side: 0.76 in. (19 mm)   |
| <b>Tube Diameter</b>    | Ø 1.63 in. (42 mm)   |
| <b>Roll Up Diameter</b> | 2.5 in. (64 mm)  |

### End Caps

---

|                 |  |
|-----------------|--|
| <b>Material</b> | Metal  |
| <b>Colors</b>   | Chrome, stainless steel, natural aluminum, black nickel, and old brass |

### Power Requirements

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**24VDC** 42.5 W, 1.8A @ 24VDC;  
Requires a dedicated power supply ([CSA-PWS40](#) or [CSA-PWS10S-HUB-ENET](#), sold separately);  
Use a home home run connection between the motor and the power supply

## Connector

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**Wire lead and Connector** (1) wire lead with 4-pin, 3.8 mm terminal block;  
For power and wired communication;  
-EX Models: 2-wire lead for power (24, G);  
-CN Models: 4-wire lead for power (24, G) and communication (Y, Z)

## Controls and Indicators

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**UP, SET, DN** (3) Recessed pushbuttons;  
For setup and testing

**Status** (1) Multicolor LED;  
For motor status and diagnostics

## 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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**Bracket** Height: 2-7/16 in. (62 mm)  
Width: 1-1/16 in. (28 mm)  
Depth: 3-1/16 in. (78 mm)

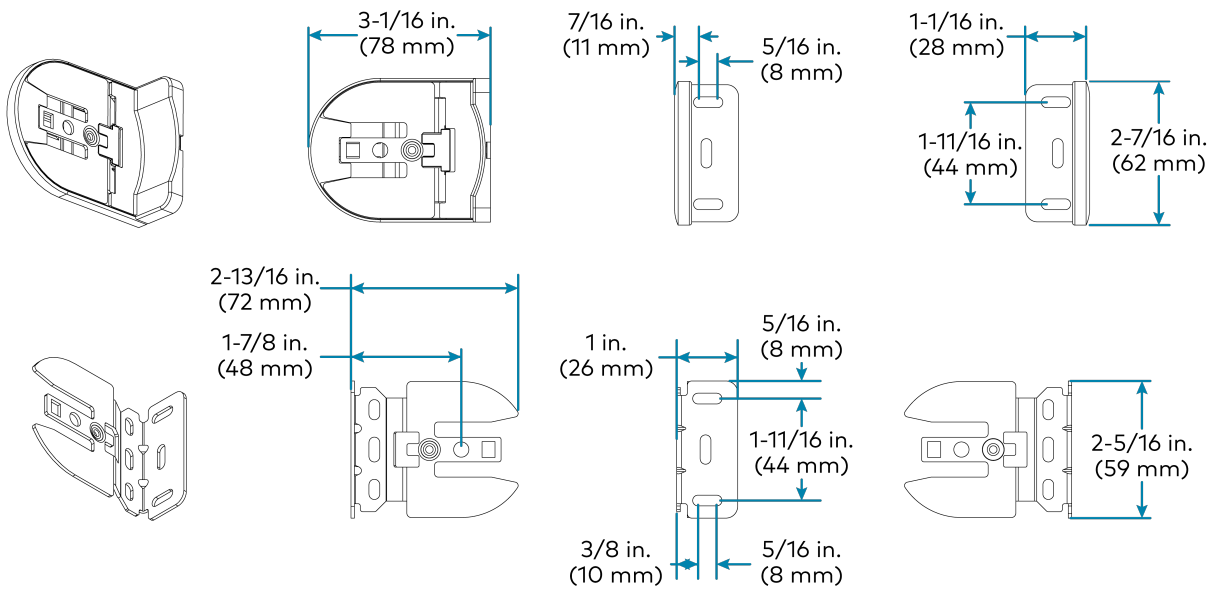
## Compliance

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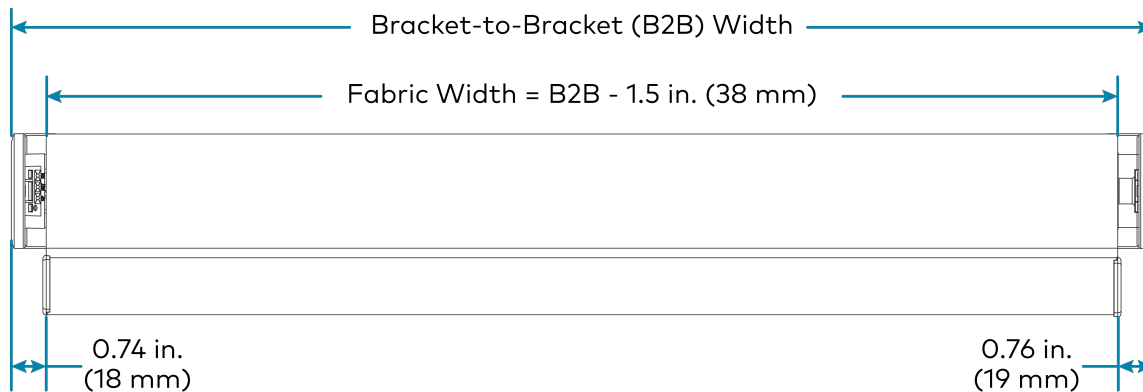
**Regulatory Model: M202034001**  
IC, FCC Part 15 Class B Digital Device

# Dimension Drawings

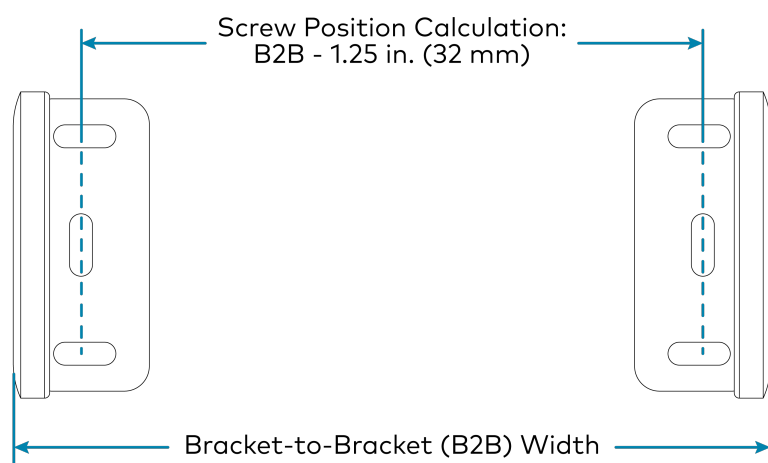
## Bracket Dimensions



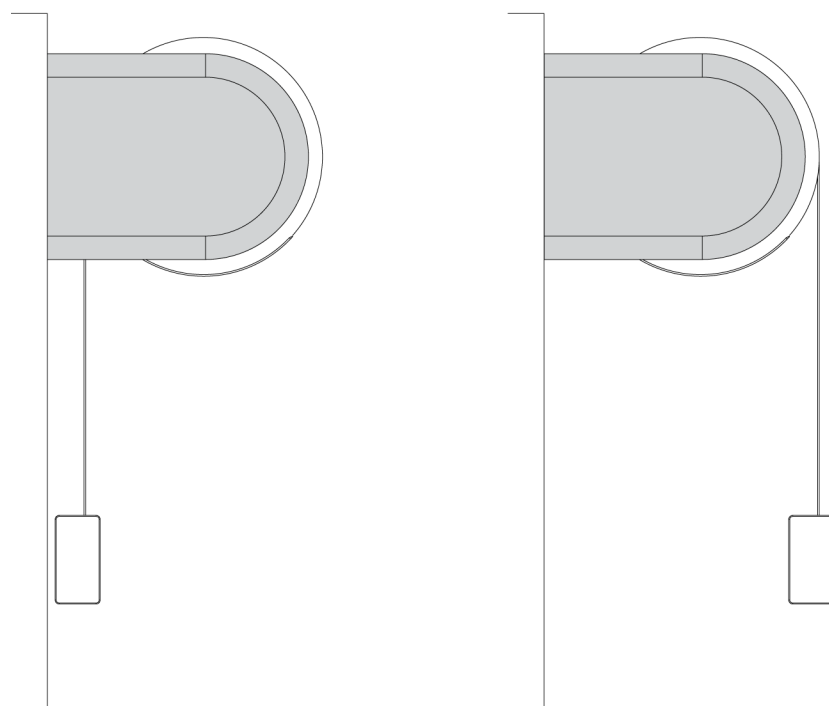
## System Size



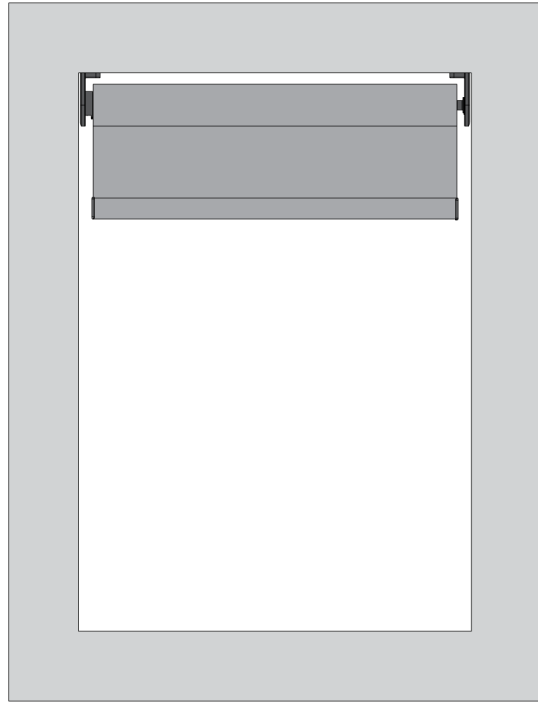
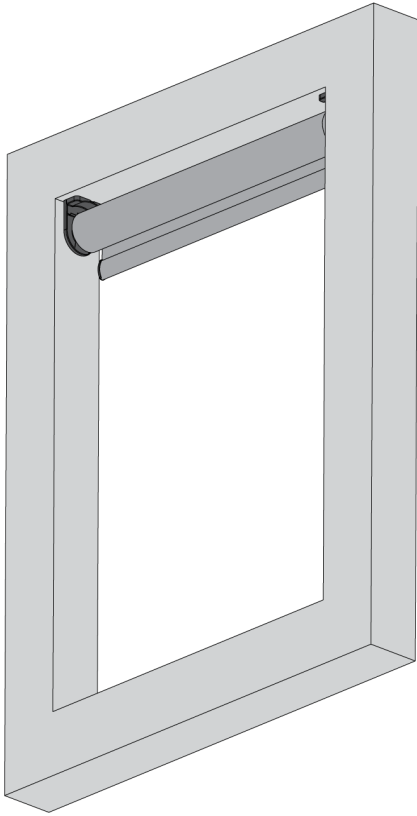
### Bracket Mounting Screw Position



### Roll Type: Regular Roll (Left) and Reverse Roll (Right)

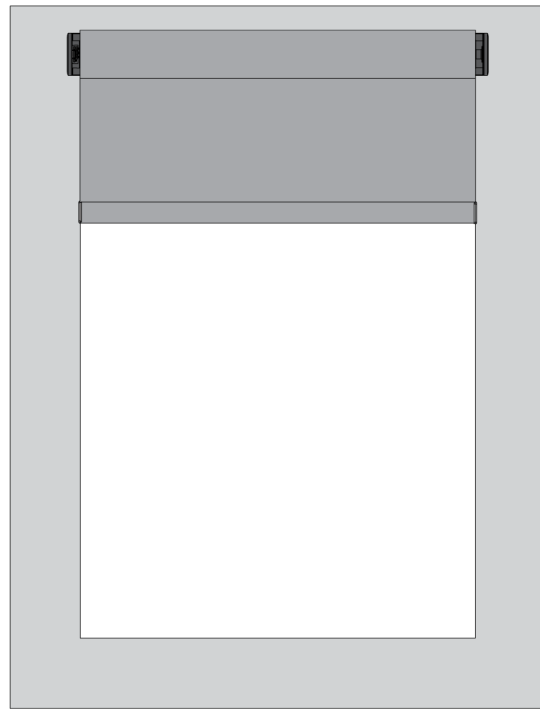
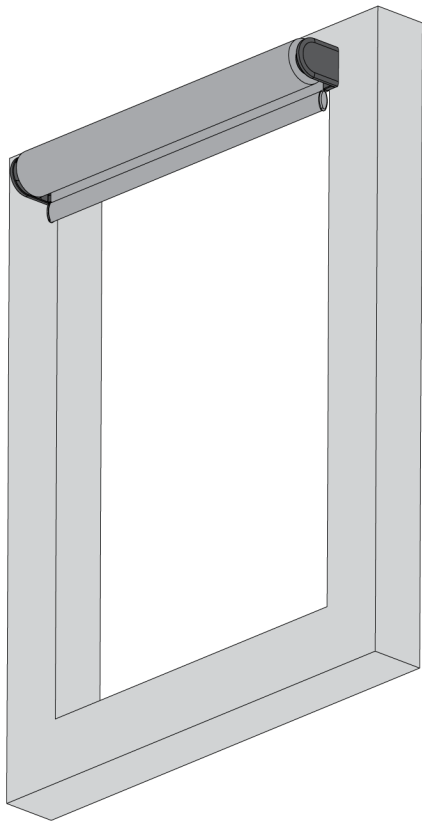


## Inside Mount





## Outside Mount



# CSA-DECOR3-BRKT-CLUTCH-EC-MTL

## Specifications

Product specifications for the CSA-DECOR3-BRKT-CLUTCH-EC-MTL.

## Product Specifications

### Shade Control

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|               |  |
|---------------|--|
| <b>Manual</b> | Operator: Metal bead chain with manual clutch;<br>Gear Ratio: 3:1;<br>Load : 15.6 lb (7.1 kg) max;<br>Pull Force: 5.2 lb. (2.4 kg) max |
|---------------|--|

### Shade Configuration

---

|                         |   |
|-------------------------|---|
| <b>Shade Width</b>      | 8 to 96 in. (204 to 2,439 mm);<br>Bracket-to-Bracket (B2B) width including end caps;<br>Width is dependent upon shade height and fabric selection |
| <b>Fabric Width</b>     | 1.56 in. (39 mm) deduction;<br>Fabric Width = B2B - 1.56 in. (40 mm)  |
| <b>Light Gap</b>        | Drive Side: 0.79 in. (20 mm)<br>Idler Side: 0.77 in. (19 mm)  |
| <b>Tube Diameter</b>    | Ø 1.63 in. (42 mm)  |
| <b>Roll Up Diameter</b> | 2.5 in. (64 mm)   |

### End Caps

---

|                 |  |
|-----------------|--|
| <b>Material</b> | Metal  |
| <b>Colors</b>   | Chrome, stainless steel, natural aluminum, black nickel, and old brass |

### Environmental

---

|                    |                               |
|--------------------|-------------------------------|
| <b>Temperature</b> | 32° to 104°F (0° to 40°C)     |
| <b>Humidity</b>    | 10% to 90% RH (noncondensing) |

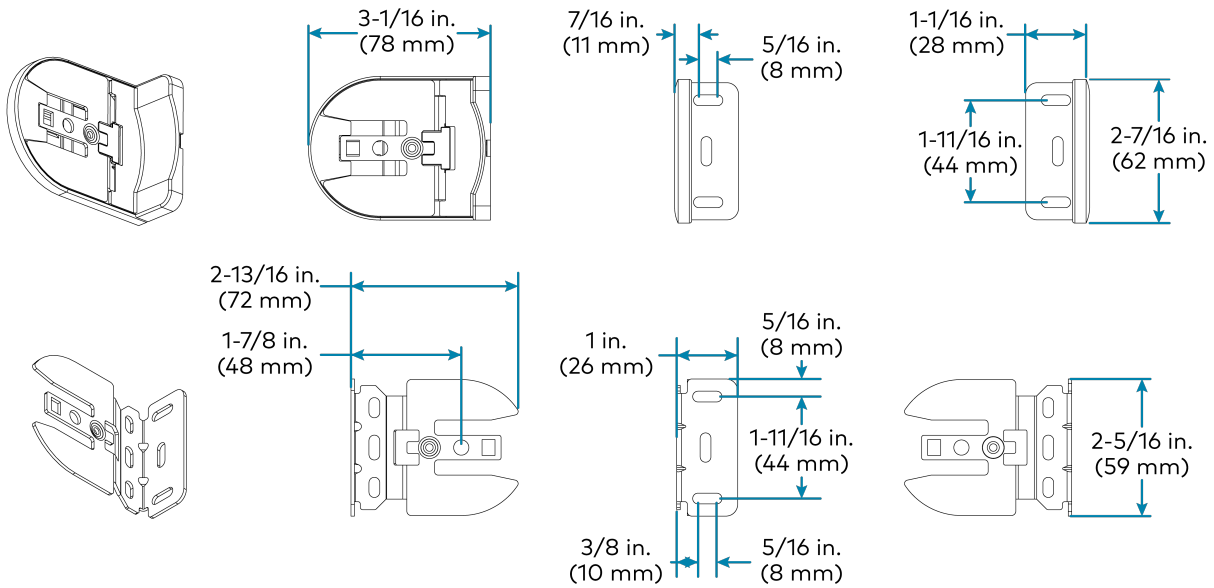
### Dimensions

---

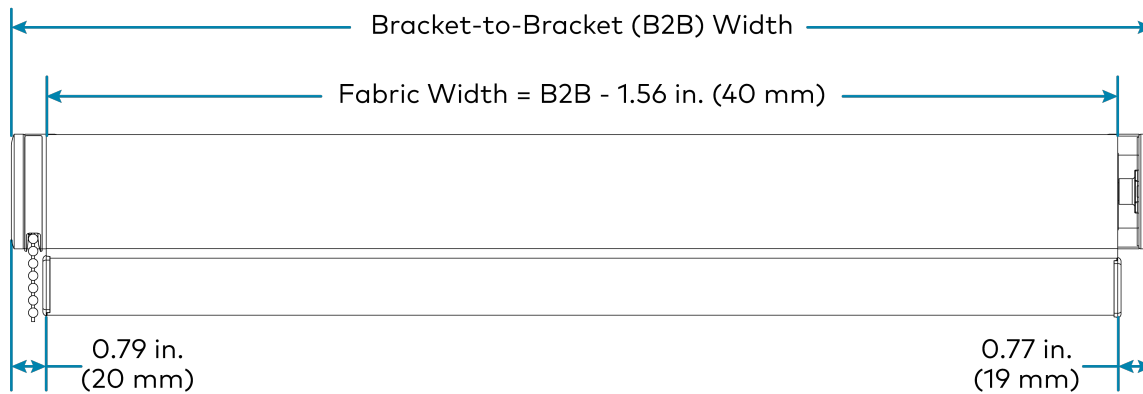
|                |  |
|----------------|--|
| <b>Bracket</b> | Height: 2-7/16 in. (62 mm)<br>Width: 1-1/16 in. (28 mm)<br>Depth: 3-1/16 in. (78 mm) |
|----------------|--|

# Dimension Drawings

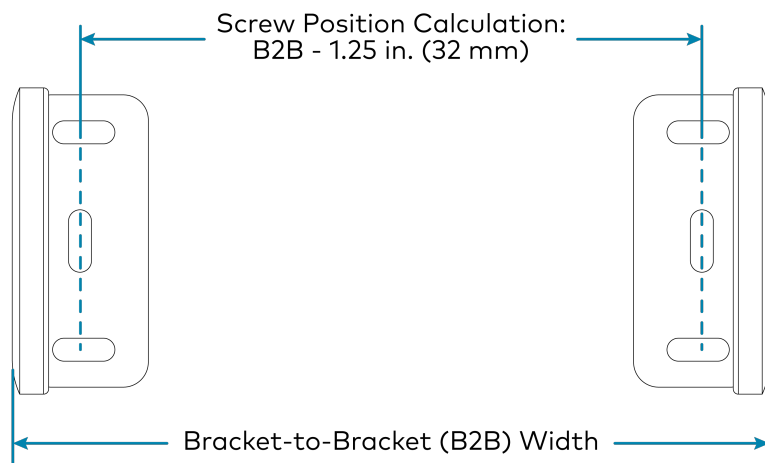
## Bracket Dimensions



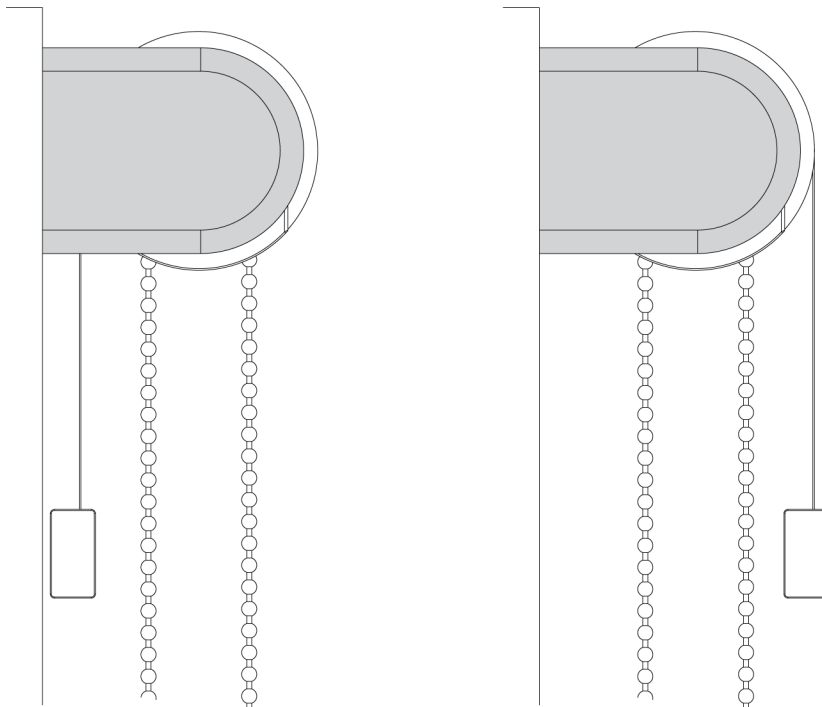
## System Size



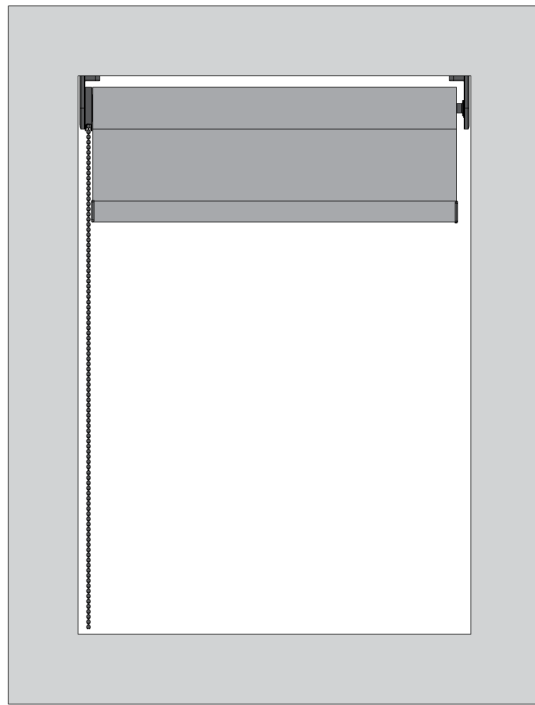
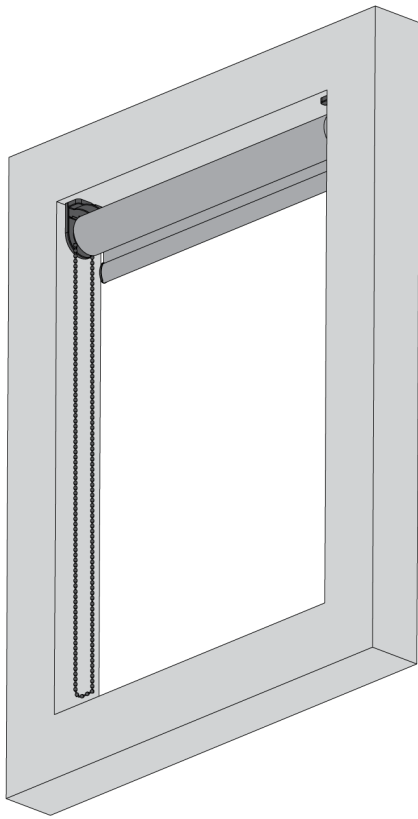
### Bracket Mounting Screw Position



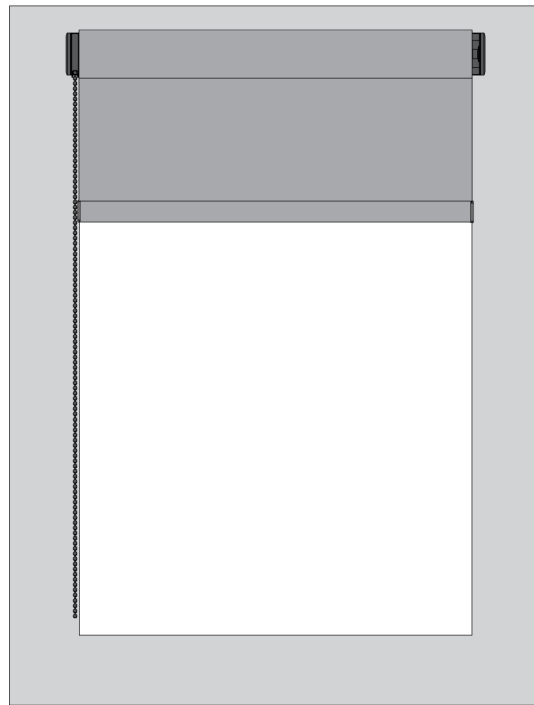
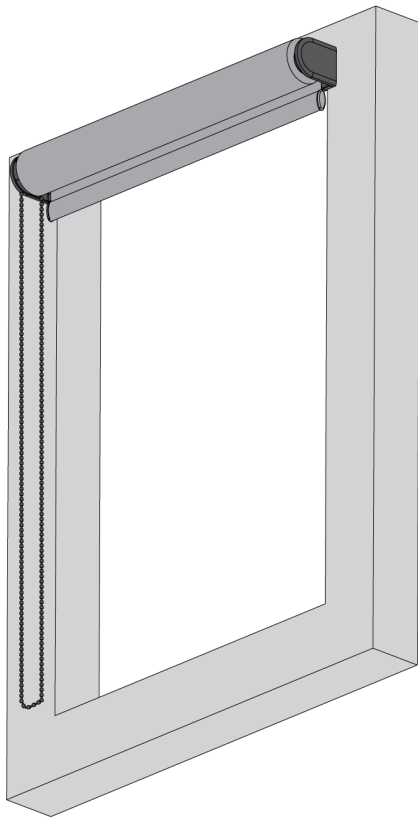
### Roll Type: Regular Roll (Left) and Reverse Roll (Right)



## Inside Mount



## Outside Mount



# Installation

This section provides the following information:

- [Motorized Shade Installation](#)
- [Manual Shade Installation](#)

# Motorized Shade Installation

This section provides the following information:

- [Shade Brackets](#)
- [Shade Assembly](#)
- [Motor Wiring](#)
- [Replace a Motor](#)

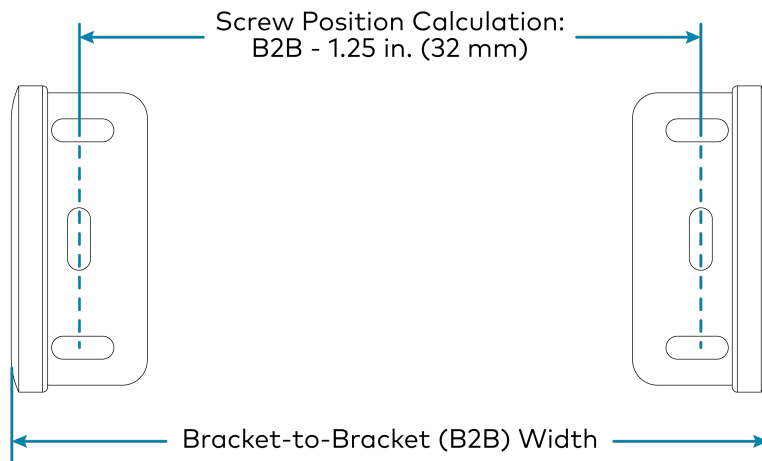


# Shade Brackets

**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:

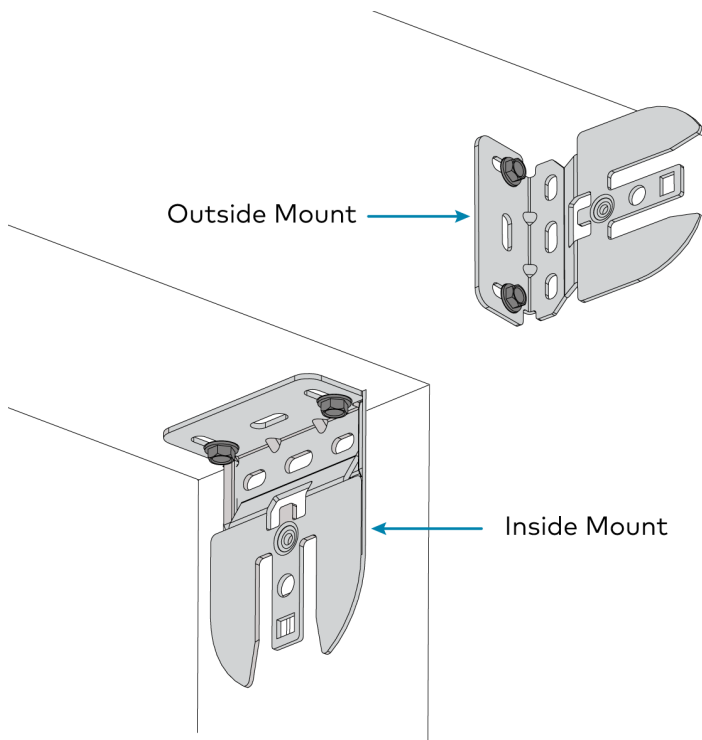
1. Check for a proper fit by holding the roller shade assembly in the approximate mounting location.
2. Mark the locations of the brackets and make sure that the mounting points are level and on the same plane. Use a laser level or snap a chalk line to mark the locations of the brackets. Space the brackets according to the specifications on the order form.



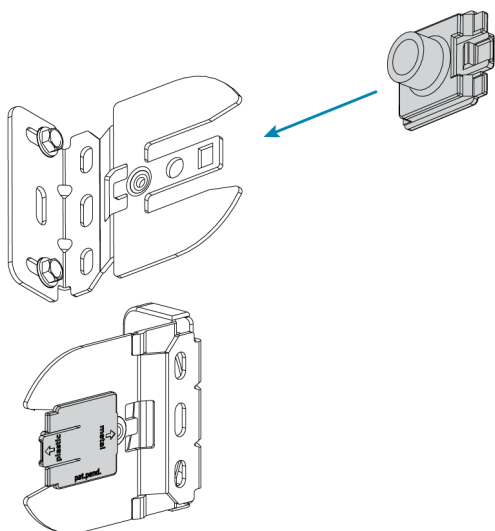
3. Mount the brackets to the outside of the window frame (outside mount) or the inside of the window frame (inside mount). Use hardware that is appropriate for the mounting surface. Make sure the brackets are level and mounted to a flat surface.

**NOTES:**

- The idler pin is attached to a bracket prior to shipment (not shown in image below). If the idler pin interferes with mounting, remove the idler pin by lifting the release tab on the back the pin and slide it off of the mounting bracket.
- The mounting screw head must be less than 3.5 mm tall. Taller screw heads will interfere with the installation of the screw cover.
- 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.

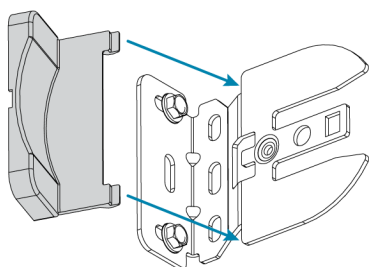


4. If the idler pin was removed, slide it onto the bracket. The idler pin snaps into place.



5. Attach a screw cover to each bracket. The screw covers snap in place.

**NOTE:** Install end caps after mounting the shade assembly.



# Shade Assembly

The roller shade assembly attaches to the mounting brackets.

## Mount the Shade Assembly

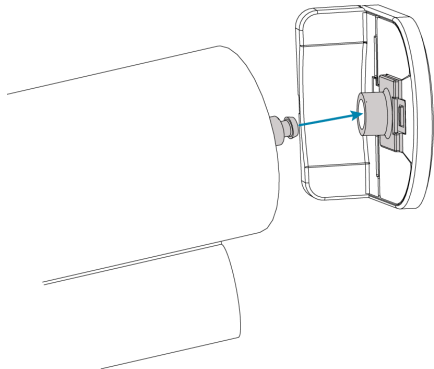
Mount the roller shade assembly to the mounting brackets.

### CAUTIONS:

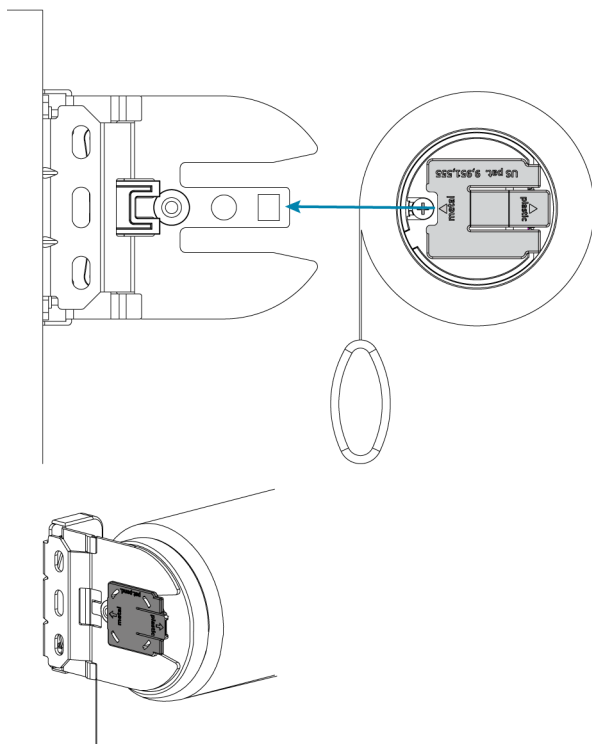
- There is risk of personal injury and equipment damage if the shade or associated parts fall during or after installation. Use proper mounting hardware (for example, screws or bolts) for the mounting surface when securing the brackets to the surface.
- Two or more people are required to properly mount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

To mount the roller shade assembly:

1. Place pin on the idler end of the shade on the idler pin.

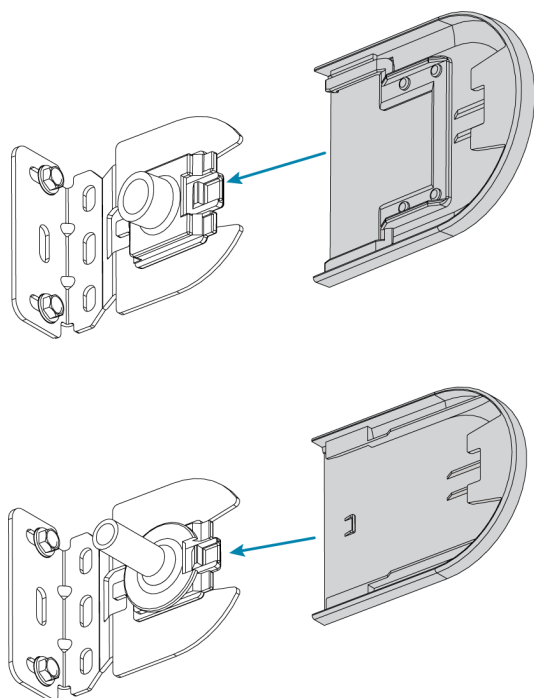


2. Slide the operator end onto the bracket. The operator snaps into place.



## Install the End Caps

Attach the end caps to the mounting brackets. The end caps snap into place.



## Remove the Shade Assembly

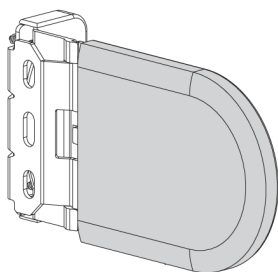
If necessary, the roller shade assembly can be removed from the mounting brackets.

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

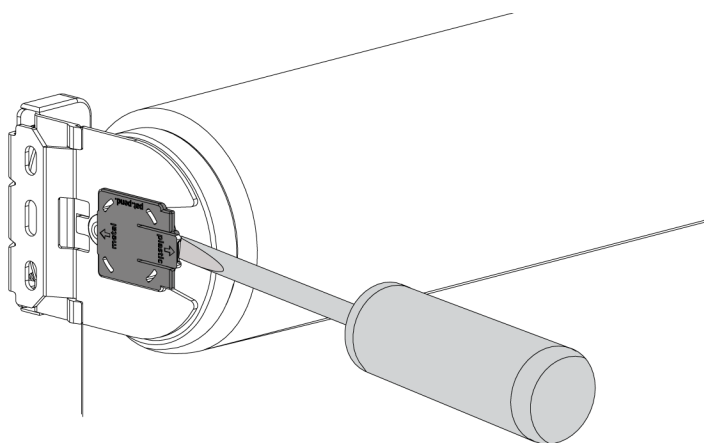
To remove the roller shade assembly:

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

1. Remove the end cap on the operator end of the shade assembly. Pull the end cap away from the mounting surface to slide the end cap off of the mounting bracket.



2. Use a screwdriver to lift the release tab on the operator end and then slide the operator end off of the mounting bracket.



3. Separate the idler end of the roller shade assembly from the idler pin.

# Motor Wiring

Make data and power connections for the QMT® shade motor. The "-CN" shade motors require both data and power connections while the "-EX" shade motors require only power.

## Routing the Cables

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

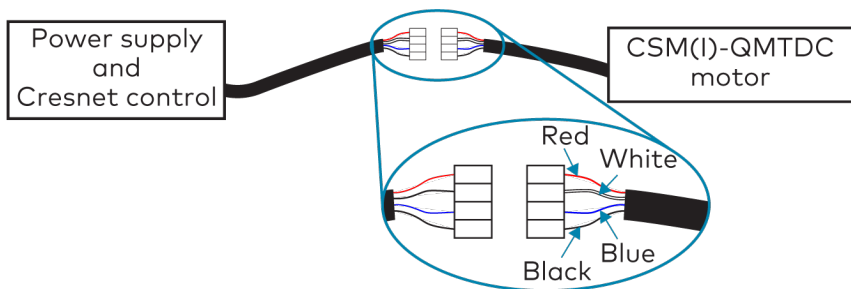
- The cables should exit the wall near the motor end of the shade assembly.
- Route the cables so that they remain out of sight.
- The brackets provide a cutout in the upper corner, which allows wiring to be easily run to the motor.
- A 2-pin connector may be required for shades with a large roll-up diameter.
- 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

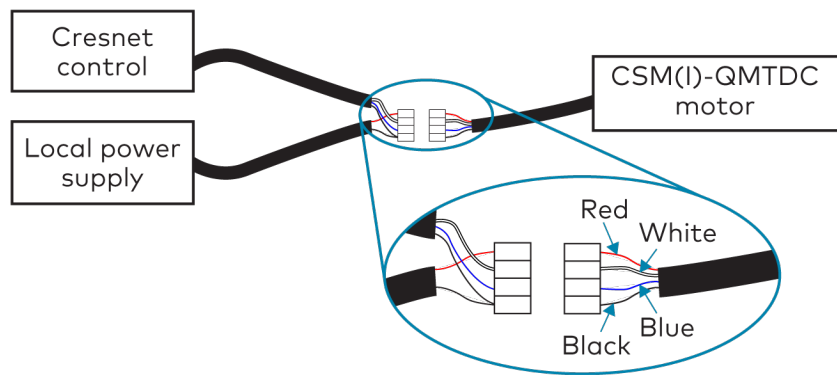
### NOTES:

- When making the connections, do not use CRESNET-HP cable with the small connector. When using CRESNET-HP cable, replace the connector on the motor pigtail with the larger connector that is supplied with the shade.
- All shades should be home run from the power supply ([CSA-PWS40](#) and [CSA-PWS10S-HUB-ENET](#), both sold separately).

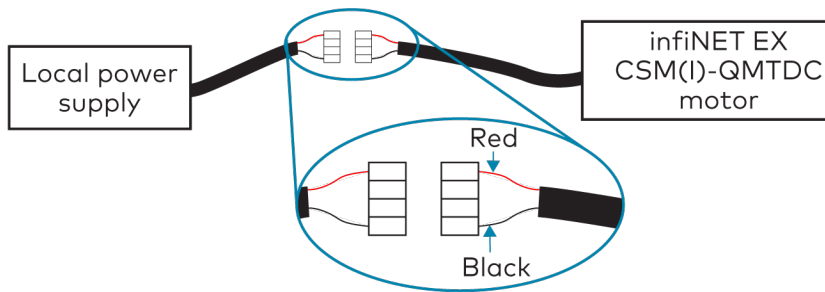
### Cresnet QMT® Shade Motor with the Power and Control Coming from the Same Source



### Cresnet QMT® Shade Motor with the Power and Control Coming from Separate Sources



### Wire the inNET EX® Wireless QMT® Shade Motor





## Replace a Motor

The QMT® shade motors can be removed and replaced.

**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

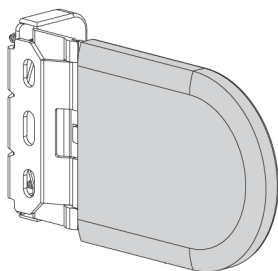
If necessary, the roller shade assembly can be removed from the mounting brackets.

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

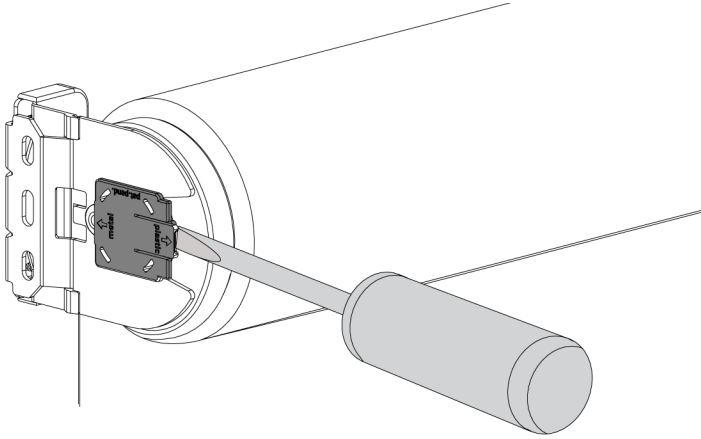
To remove the roller shade assembly:

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

1. Remove the end cap on the operator end of the shade assembly. Pull the end cap away from the mounting surface to slide the end cap off of the mounting bracket.



2. Use a screwdriver to lift the release tab on the operator end and then slide the operator end off of the mounting bracket.



3. Separate the idler end of the roller shade assembly from the idler pin.

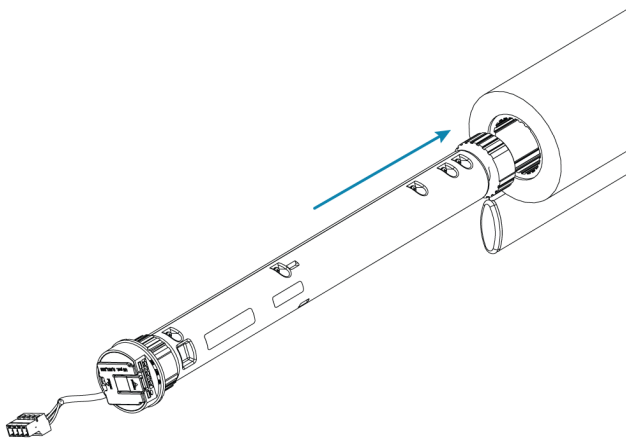
## Replace the Motor

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 \(on page 23\)](#).
3. Test the motor direction, set the shade limits, and, if applicable, connect to the wireless network. For details, refer to [Configuration \(on page 48\)](#).

# Manual Shade Installation

## WARNING/ADVERTENCIA:



Window blind cord can STRANGLE your child.

La cuerda de la persiana puede ESTRANGULAR a su niño.

To prevent strangulation, purchase cordless products or products with inaccessible cords.



Para evitar el estrangulamiento, compre alternativas cuerda o productos con cuerdas inaccesibles.

Young children can be strangled by loops in pull cords, chains, tapes and inner cords that operate the product. To avoid strangulation and entanglement, keep cords out of the reach of young children. Cords may become wrapped around a child's neck. Move beds, cots and furniture away from window covering cords. Do not tie cords together.

This section provides the following information:

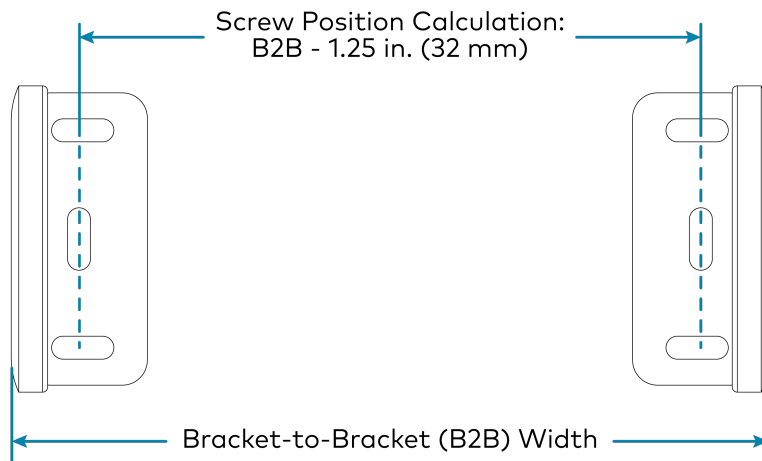
- [Shade Brackets](#)
- [Shade Assembly](#)
- [Chain Safety Hold](#)

## Shade 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:

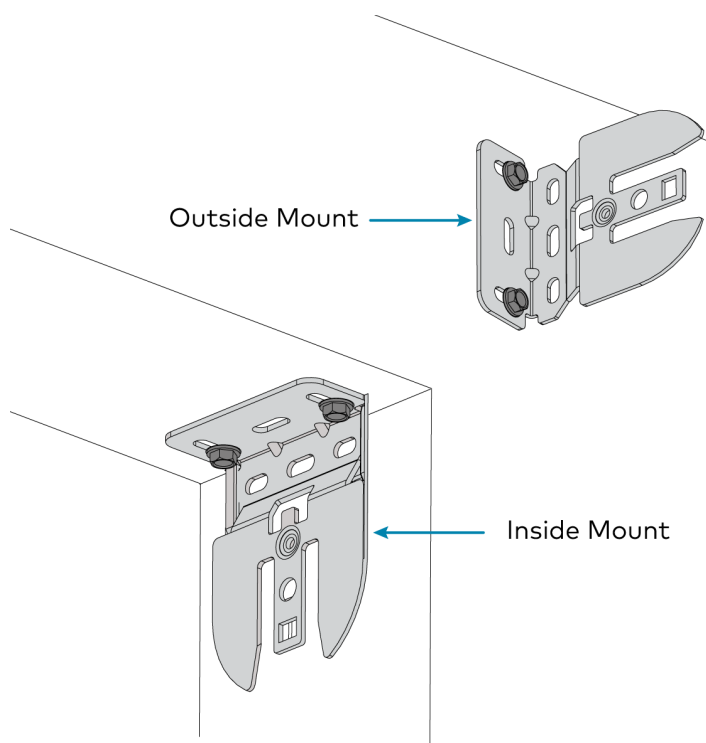
1. Check for a proper fit by holding the roller shade assembly in the approximate mounting location.
2. Mark the locations of the brackets and make sure that the mounting points are level and on the same plane. Use a laser level or snap a chalk line to mark the locations of the brackets. Space the brackets according to the specifications on the order form.



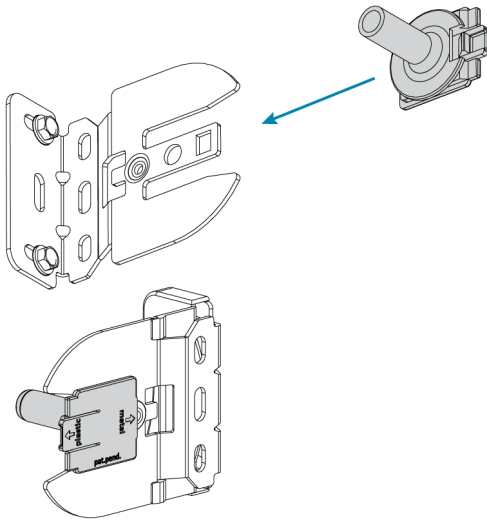
3. Mount the brackets to the outside of the window frame (outside mount) or the inside of the window frame (inside mount). Use hardware that is appropriate for the mounting surface. Make sure the brackets are level and mounted to a flat surface.

**NOTES:**

- The mounting screw head must be less than 3.5 mm tall. Taller screw heads will interfere with the installation of the screw cover.
- 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.

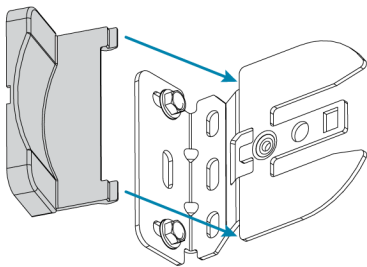


4. Slide the idler pin onto the bracket. The idler pin snaps into place.



5. Attach a screw cover to each bracket. The screw covers snap in place.

**NOTE:** Install end caps after mounting the shade assembly.



# Shade Assembly

The roller shade assembly attaches to the mounting brackets.

## Mount the Shade Assembly

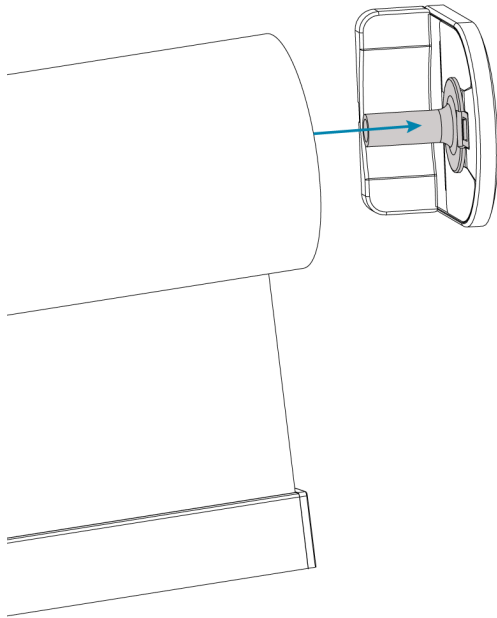
Mount the roller shade assembly to the mounting brackets.

### CAUTIONS:

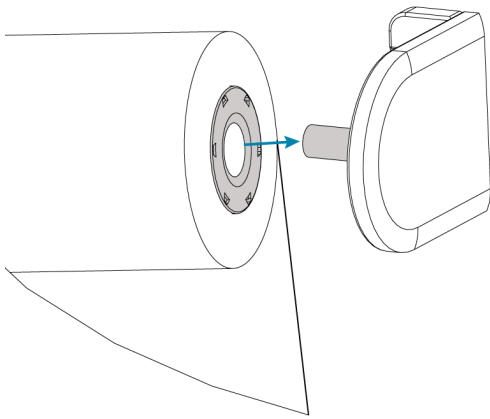
- There is risk of personal injury and equipment damage if the shade or associated parts fall during or after installation. Use proper mounting hardware (for example, screws or bolts) for the mounting surface when securing the brackets to the surface.
- Two or more people are required to properly mount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

To mount the roller shade assembly:

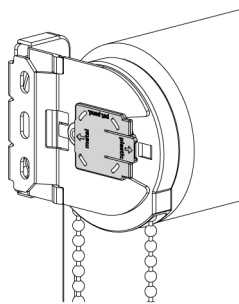
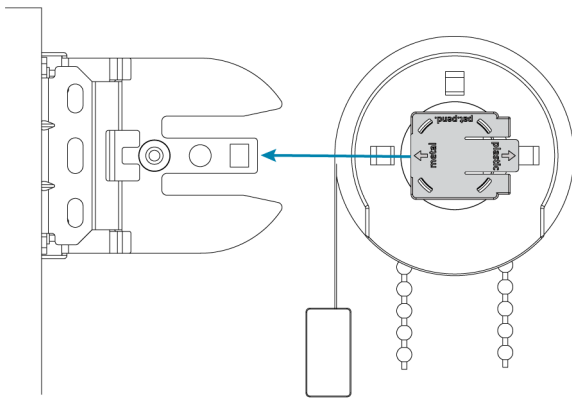
1. Place the idler end of the shade on the idler pin.





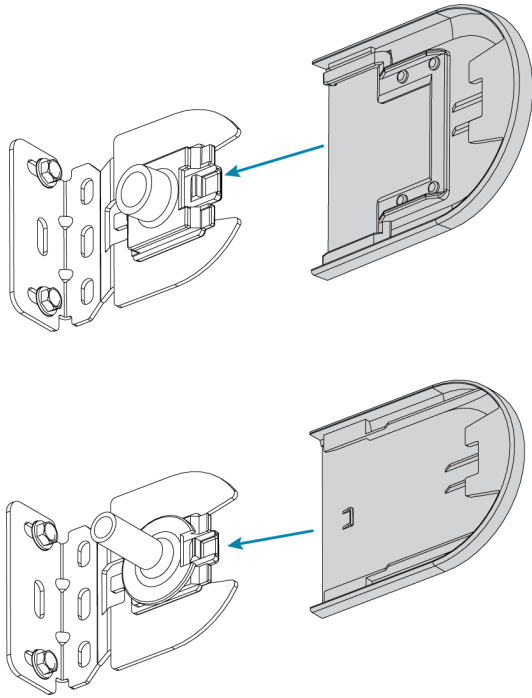


2. Slide the operator end onto the bracket. The operator snaps into place.



## Install the End Caps

Attach the end caps to the mounting brackets. The end caps snap into place.



## Remove the Shade Assembly

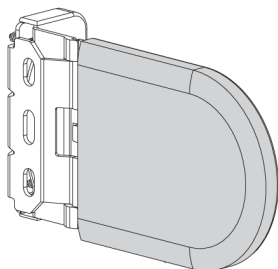
If necessary, the roller shade assembly can be removed from the mounting brackets.

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

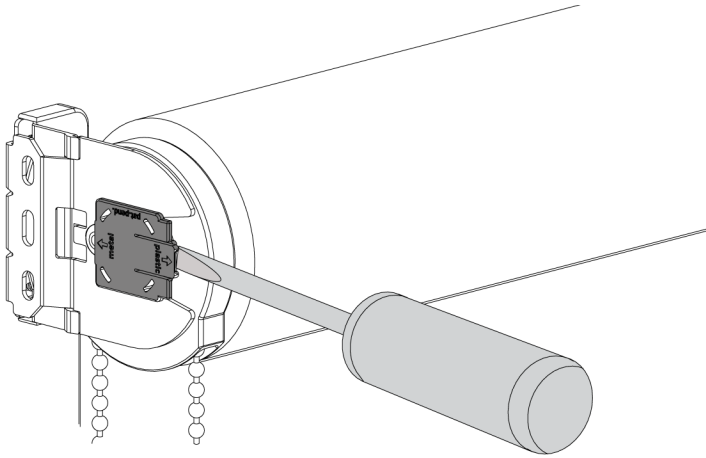
To remove the roller shade assembly:

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

1. Remove the screws that secure the chain safety hold and then remove the chain safety hold.
2. Remove the end cap on the operator end of the shade assembly. Pull the end cap away from the mounting surface to slide the end cap off of the mounting bracket.



3. Use a screwdriver to lift the release tab on the operator end and then slide the operator end off of the mounting bracket.



4. Separate the idler end of the roller shade assembly from the idler pin.

## Chain Safety Hold

### WARNING/ADVERTENCIA:



Window blind cord can STRANGLE your child.

La cuerda de la persiana puede ESTRANGULAR a su niño.

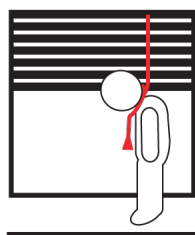
To prevent strangulation, purchase cordless products or products with inaccessible cords.



Para evitar el estrangulamiento, compre alternativas cuerda o productos con cuerdas inaccesibles.

Young children can be strangled by loops in pull cords, chains, tapes and inner cords that operate the product. To avoid strangulation and entanglement, keep cords out of the reach of young children. Cords may become wrapped around a child's neck. Move beds, cots and furniture away from window covering cords. Do not tie cords together.

### WARNING/ADVERTENCIA:



- Children can climb furniture to reach cords.
- Move crib and furniture away.
- Keep all cords out of children's reach.
- Attach tension device to wall or floor.
- Fasteners provided with the tension device may not be appropriate for all mounting surfaces.
- Use appropriate anchors for the mounting surface conditions.
- Los niños pueden subir los muebles para alcanzar las cuerdas.
- Mueva la cuna y los muebles.
- Mantenga todas las cuerdas fuera del alcance de los niños.
- Conecte el dispositivo de tensión a la pared o al suelo.
- Los sujetadores provistos con el dispositivo de tensión pueden no ser apropiados para todas las superficies de montaje.
- Utilice anclajes apropiados para las condiciones de la superficie de montaje.

## Install the Chain Safety Hold

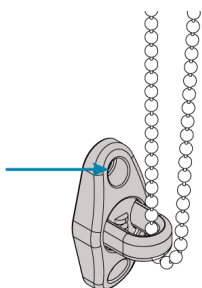
**WARNING:** The chain safety hold is designed so that children cannot pull the bead chain away from the wall or fit their head into the loop. Not installing this device can create a danger to small children, resulting in injuries or even death!

### NOTES:

- The screws provided with the chain safety hold 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 chain safety hold is secured in a manner that has a minimum release force of 20 lb (89 N).
- The chain safety hold can be installed on the window sill if the chain has the same tightness as a jamb mounted chain (as described below).

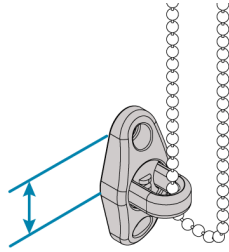
To install the chain safety hold:

1. Pull the chain safety hold down until the chain is taut on both sides. Ensure that the chain is plumb and that there is no interference. Make sure that the chain safety hold is installed at the maximum distance from the roller shade assembly to prevent the chain loop from becoming slack.
2. Mark the center of the upper screw hole.



Pull the chain safety hold down until the chain is taut and then mark the location of the upper screw hole.

3. Install the chain safety hold with the upper screw hole 1/2 in. (13 mm) above the mark created in step 2. Secure the chain safety hold with the supplied screws.



Install with the upper screw hole 1/2 in.  
(13 mm) above the mark

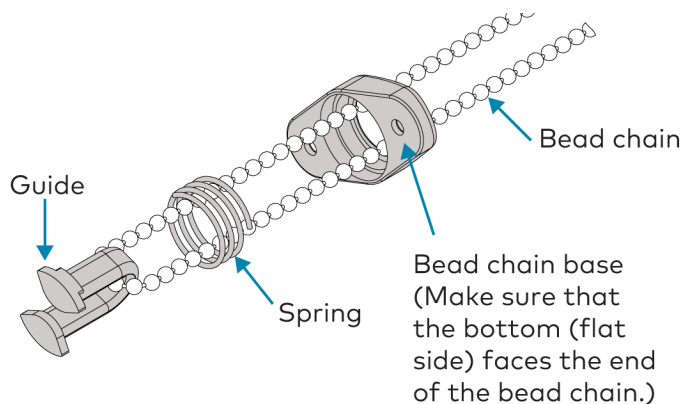
## Assemble the Chain Safety Hold

The chain safety hold is assembled. If necessary, the chain safety hold can be reassembled.

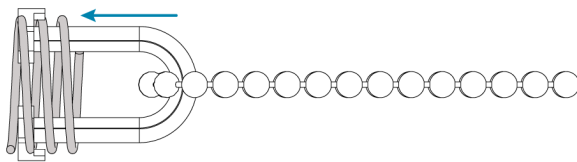
**NOTE:** Ensure that the two ends of the bead chain are attached with the connector.

To assemble the chain safety hold:

1. Slide the bead chain through the base of the Chain Safety Hold. Ensure that the flat bottom of the base faces towards the bottom of the bead chain.
2. Slide the bead chain through the spring.
3. Insert the guide through the loop at the end of the bead chain. The guide should be placed below the spring.

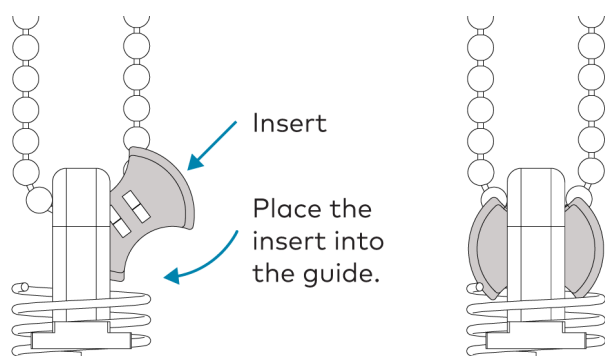


4. Slide the spring over the guide.

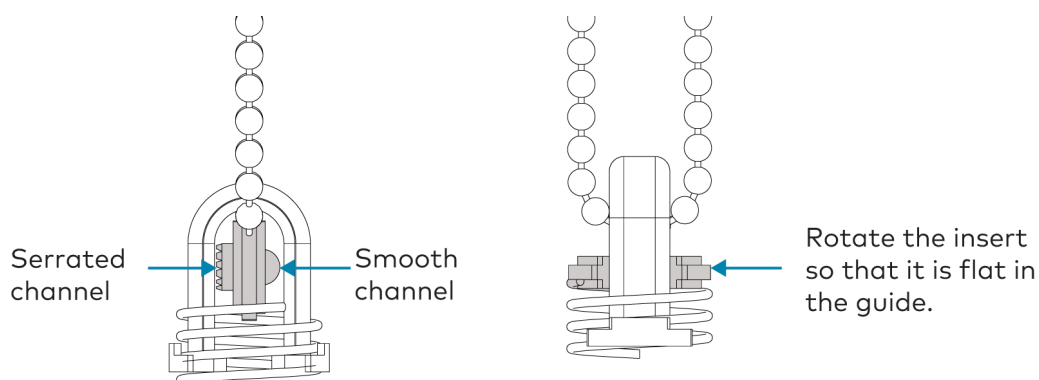


5. Compress the spring using needle-nose pliers and place the insert into the center of the guide.

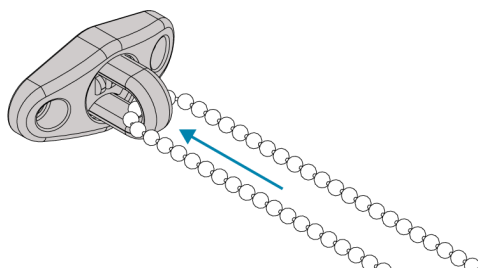
**NOTE:** Keep the pliers on either side of the guide to allow room when placing the insert into the guide.



6. Rotate the insert so that it is flat in the guide. The insert has two channels on it; use the smooth channel for the bead chain and the serrated channel for the cord.



7. Slide the base down the bead chain and over the guide.



# 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 \(Motorized Shades\)](#)
- [Fabric Telescoping](#)
- [Wireless Communications](#)
- [Join a Wireless Network](#)



# Test and Adjust Shade Limits (Motorized Shades)

## 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 \(below\)](#).
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 \(below\)](#).
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

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.

# Fabric Telescoping

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:

- If the shade assembly is not level, remount the shade brackets. If necessary, use a shim.
- 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. 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.

# Wireless Communications

The device connects to the Crestron network using the infiNET EX® wireless communications protocol. A [CEN-GWEXER](#) or [CENI-GWEXER](#), [CEN-GW1](#), or [CENI-GW1](#) wireless gateway (all sold separately) is required for infiNET EX® 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.

## 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, 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. To join the wireless network:
  - 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.
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 \(above\)](#).

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

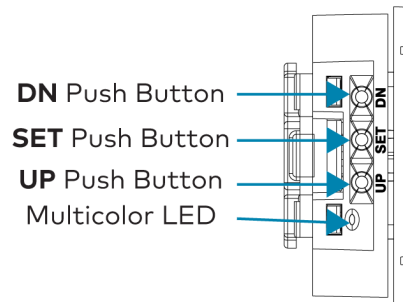
This section provides the following information:

- [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



# 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  |
|---|-----------|---|
| Two fast flashes, then pause (1/8-second on, 1/8-second off, 1/8-second on, 5/8-second off) | Blue      | A firmware upgrade over the network is in progress.         |
| Slow flash (1/2-second on, 1/2-second off)  | Blue      | The motor's internal firmware upgrade is in progress.       |
| 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. |
| Slow flash (1/2-second on, 1/2-second off)  | Red       | The motor is not communicating with the control system.     |



# 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 power supply and motor.                     |
|   | The power connection is reversed between the motor and the power supply.                  | Ensure that the power connection to the motor is not reversed.                      |
| The motor moves in the opposite direction.                  | The motor direction is reversed.  | Reverse the direction of the motor.   |
| 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.   |

# 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 \(on the previous page\)](#) for possible corrections.

## LED Blinking Patterns

| LED Error Code | Error State   |
|----------------|---|
| 2-1            | The motor is unable to communicate with the gateway. Check to ensure that proper Cresnet wiring is maintained. 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 NetRF 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.   |
| 3-6            | There is a communications error between the motor and Cresnetwireless control board.  |

# Resources

The following resources are provided for the CSA-DECOR3-BRKT-163-EC-MTL and CSA-DECOR3-BRKT-CLUTCH-EC-MTL.

**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)
- [Shade Measuring Worksheet Single roller and In-line Coupled](#) (PDF)

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