CRESTRON

Description

The Crestron® digital QMT® CSM-QMTDC shade motors are programmed locally using the buttons on the motor. The information in this guide serves as a detailed overview of the programming of the Crestron CSM-QMTDC shade motors.

NOTE: The procedures described in this document can also be performed remotely via a Crestron control system. The timeout and LED indicators are the same as described in this document.

Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates.

Controls and Indicators

The Crestron CSM-QMTDC shade motors have labeled **UP**, **SET**, and **DN** push buttons that are used to program the shade. The 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** (down) button is the third button from the LED. Refer to the illustration below for details.

Crestron CSM-QMTDC Motor Multicolor LED and Push Button Orientation

DN Push Button

SET Push Button

UP Push Button

Multicolor LED
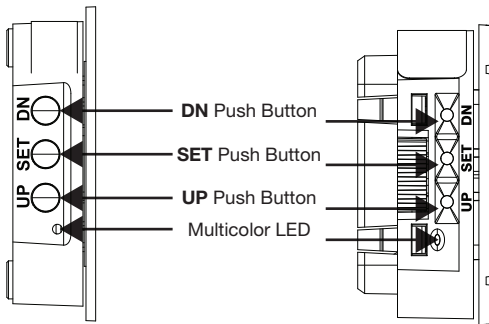
Test the Shade

Before the shade is operated, the motor must be tested to ensure that the motor direction is correct and that the shade travels correctly while raising and lowering.

WARNING: Care has been taken to ensure that your shade is properly balanced. Prior to initial operation, please confirm that your brackets have been adjusted so that the shade hangs level and plumb. Upon startup, run the shade all the way down and check for plumb. Observe the shade closely as it rolls up. If the shade begins to telescope, stop immediately and take the appropriate action to ensure the shade tracks properly. To prevent damage to the fabric from telescoping, you should not leave the shade unattended during the first few cycles of operation. Failure to follow these instructions may result in damage to the edge of the fabric, which is not covered by the warranty.

Test Motor Direction

Press the **DN** (down) button to lower the shade. If the shade begins to travel up, the motor direction must be reversed.

To reverse the shade direction, press and hold the **SET** button for 10 seconds. The red LED lights for 3 seconds.

NOTE: Reversing the direction of the motor resets any limits that have been previously set. After setting either the upper or lower limit, the motor automatically enters Limit Setup mode for the opposite limit. Follow the procedure in "Set Shade Limits" to reassign limits.

Test Shade Travel

Using the **DN** and **UP** buttons, ensure that the shade travels to the anticipated lower limit and then back to the expected upper limit. The shade should not come in contact with any building materials.

The shade should travel the full length of the window opening and stop before reaching the top or bottom of the window opening. If the shade does not travel as expected, refer to "Set Up the Shade" below.

Set Up the Shade

Test Shade Limits

Shade limits are set from the factory, but it may be necessary to reset them depending on the installation conditions. Test the lower limits by lowering the shade until it reaches its lower limit. Test the upper limits by raising the shade until it reaches its upper limit. Refer to "Set Shade Limits" if the limits need to change.

Set Shade Limits

When the shade limits are not set, the red LED blinks three times, pauses for 1 second, blinks once, pauses for 5 seconds, and then repeats this code until the limits are set.

NOTE: After 8 seconds of inactivity, Limit Setup mode is exited.

Set the lower limit for the shade.

1. Press and hold **SET** for 4 seconds to enter Limit Setup mode. The LED alternates between amber and green.
2. Press and release the **DN** button to begin lower limit setup. The green LED blinks.
3. Use the **UP** and **DN** buttons 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.

NOTE: If the upper limit is not set when the lower limit is saved, the motor automatically enters upper limit mode upon saving the lower limit. This typically occurs when the motor direction has been reversed and both limits are erased.

Set the upper limit for the shade.

1. Press and hold **SET** for 4 seconds to enter Limit Setup mode. The LED alternates between amber and green.
2. Press and release the **UP** button to begin upper limit setup. The amber LED blinks.
3. Use the **UP** and **DN** buttons 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.

NOTE: If the lower limit is not set when the upper limit is saved, the motor switches to allow setting the lower limit after saving the upper limit. This typically occurs when the motor direction has been reversed and both limits are erased.

Joining an infiNET EX Network (infiNET EX Interfaces Only)

The device connects to the Crestron network via the infiNET EX® communications protocol. Use the procedures outlined below to join or leave an infiNET EX network and to verify communications between the device and the control system.

Joining an infiNET EX Network

Before a device can be used in a shading system, it must first join an infiNET EX network by being acquired by an infiNET EX gateway.

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

1. Put the infiNET EX gateway into Acquire mode from the unit itself or from Crestron Toolbox™, as described in its manual at www.crestron.com/manuals.

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

2. Place the device into Acquire mode.
   a. Tap the **SET** button three times, then press and hold it down (tap-tap-tap-press+hold) until the white LED starts to blink (this can take up to 10 seconds).
   b. When the white LED blinks, release the button to start the acquire process.
      • The interface is acquired when the LED stops blinking.
      • If the acquire process fails, the LED blinks rapidly until a button is pressed.
3. Once all devices have been acquired, take the gateway out of Acquire mode. Refer to the gateways' operations guide for more information

To leave an infiNET EX network, put the device into Acquire mode, as described in "Joining an infiNET EX Network" above, when no gateway is in Acquire mode.

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 LED blinks to indicate the communications status. Refer to the following table for details.

LED	COMMUNICATIONS STATUS
Turns on for 5 seconds	Device is communicating with the control system.
Blinks three times	Device is communicating with the gateway but the gateway is not communicating with the control system.
Blinks twice	Device was previously joined to the network but is not communicating with the gateway.
Blinks once	Device is not joined to the network.

infiNET EX Motor Comunication

Refer to the Best Practices for Installation and Setup of Crestron RF Products Reference Guide (Doc. 6689) at www.crestron.com/manuals if communication issues exist with recessed or pocket mount installations.

LED Diagnostics

LED Patterns: Normal Operation

The following table provides a list of possible LED patterns encountered during normal operation of the shade. All LEDs extinguish after 1 minute of inactivity if there are no errors to report.

LED Patterns

LED PATTERN	LED COLOR	OPERATING MODE
Two fast blink then pause (1/8 second on, 1/8 second off, 1/8 second on, 5/8 second off)	Blue	Firmware upgrade over Cresnet® is in progress.
Slow blink (1/2 second on, 1/2 second off)	Blue	The motors internal firmware upgrade is in progress.
Solid	Blue	The motor is in bootloader.
Fast blink (1/4 second on, 1/4 second off)	White	The motor is in Identify mode.
Slow blink (1/2 second on, 1/2 second off)	Green	The motor is moving from local button press.
Solid	Green	The motor is communicating with the control system program.
Slow blink (1/2 second on, 1/2 second off)	Red	The motor is not communicating with the control system.

LED Patterns: Error Situation

Crestron CSM-QMTDC motors display error codes using the red LED on the interface. The LED blinks a specific pattern to indicate an error.

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

The blink patterns are listed in the following table. Refer to the "Troubleshooting" section for possible corrections.

LED Blinking Patterns

LED PATTERN	ERROR STATE
Error code 3-1	The motor limits are not set.
Error code 3-3	An obstruction is blocking the shade fabric from moving freely.
Error code 3-4	A motor over current error exists. Check for obstacles or any sources of excessive friction.
Error code 3-5	A motor duty cycle error exists. To correct, reduce operating duty cycle of motor.
Error code 3-6	There is a communications error between the motor and Cresnet or infiNET EX control board.
Error code 2-1	There is no traffic on the network. Check to ensure that proper Cresnet wiring is maintained, or, for infiNET EX devices, ensure that the motor is connected to a gateway.
Error code 2-2	The motor is not being polled by the control system. Ensure that the Net ID matches the control system program and that the program is running on the control system.

Troubleshooting

The following tables provide corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

Crestron CSM-QMTDC 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 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 does not exceed the rating for the motor.
The LED is blue.	The motor is stuck in the bootloader.	Reload firmware to the motor.