CRESTRON®

infiNET EX))

Description

The Crestron® digital QMT® CSM-QMTDC-DRP-3 motors are programmed locally using the buttons on the motor or through a control system. The information in this guide serves as a detailed programming overview of the Crestron CSM-QMTDC-DRP-3 drapery 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.

NOTE: Before using the CSM-QMTDC-DRP-3, ensure the device is using the latest firmware. Check for the latest firmware for the CSM-QMTDC-DRP-3 at www.crestron.com/firmware. Firmware is loaded onto the device using Crestron Toolbox™.

Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.

Controls and Indicators

The Crestron CSM-QMTDC-DRP-3 motors have open, configure, and close push buttons that are used to program the drapery. The motors have a multicolor LED that provides confirmation, operating mode, and error state feedback.

Crestron CSM-QMTDC-DRP-3 Motor Multicolor LED and Push Button Orientation

Close Push Button
Configure Push Button
Open Push Button
Multicolor LED
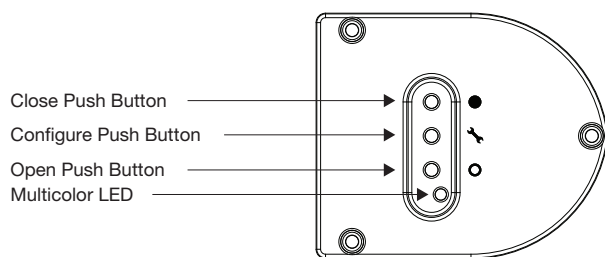
Test the Drapery

Before the drapery is operated, the motor must be tested to ensure that the motor direction is correct and that the drapery travels correctly while being opened and closed.

NOTE: Before using the CSM-QMTDC-DRP-3 motor, ensure the device is using the latest firmware. Check for the latest firmware for the CSM-QMTDC-DRP-3 motor at www.crestron.com/firmware. Firmware is loaded onto the device using Crestron Toolbox™.

Test the Motor Direction

Press the open or close button to move the drapery fabric. If the drapery fabric begins to move in the other direction, the motor direction must be reversed.

To reverse the motor direction, press and hold the configure button for 10 seconds. The red LED lights for 3 seconds. The drapery motor then immediately enters the Find Limit sequence.

NOTE: Reversing the direction of the motor erases all limits that have been previously set. Follow the procedure in "Set up the Drapery Limits" to reassign limits. After either the open or close limit is set, the motor automatically enters Limit Setup mode for the opposite limit.

Set Up the Drapery Limits

The drapery motor needs to establish its hard limits (beginning or end of track, or major obstruction) automatically after the motor is powered up for the first time. Press and hold the open and close buttons for 10 seconds. The purple LED blinks. The drapery motor will move the fabric until it finds its close limit and then its open limit.

NOTE: Find Limits mode should be entered only after the drapery fabric has been hung. If it has been entered without the drapery fabric hung it, it must be re-run.

When the drapery 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 Find Limits mode is completed, the drapery motor runs the drapery fabric one open and close cycle.

Set Custom Drapery Limits

If the drapery full-open and full-close positions need to be set at different locations from the default, custom open and closed limits can be set.

NOTE: After 8 seconds of inactivity, the motor exits Limit Setup mode.

Set the close limit for the drapery.

1. Press and hold the configure button for 4 seconds to enter Limit Setup mode. The LED alternates between amber and green.
2. Press and release the close button to enter close limit setup. The green LED blinks.
3. Use the open and close buttons to move the fabric to its desired position.
4. Press and hold the configure button for 4 seconds. The LED turns solid red to confirm that the lower limit has been successfully set.

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

Set the open limit for the drapery.

1. Press and hold the configure button for 4 seconds to enter Limit Setup mode. The LED alternates between amber and green.
2. Press and release the open button to enter open limit setup. The amber LED blinks.
3. Use the open and close buttons to set the drapery to its desired position.
4. Press and hold the configure button for 4 seconds. The LED turns solid red to confirm that the upper limit has been successfully set.

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

Find Location

Find Location mode is an automatic reference detection procedure that the drapery executes after power outage or power cycle.

During power outages the drapery can be manually opened or closed by the user, which leaves the drapery motor unaware of the fabric location. Also, during initial power-up the drapery motor does not know the location of the fabric. To solve this problem, the drapery motor automatically enters Find Location mode after power is restored and a command is given to go to a specific location such as full open or full close, or any set position. When in Find Location mode, the drapery motor will run the drapery fabric to its full close hard limit, and then it will go to the location that has been requested. The LED blinks purple while in Find Location mode.

Speed Setup

The speed that the drapery fabric travels can be learned in Speed Setup mode.

1. Press and hold the open and configure push buttons for 4 seconds. The LED will turn blue.
2. Pull the fabric at the desired approximate speed for 2 seconds.
3. The blue LED turns off to indicate that the speed has been stored.
4. Operate the shade to ensure the desired speed setting has been achieved. This procedure may be repeated until the drapery runs at the desired speed.

NOTE: The drapery motor exits Speed Setup mode if it does not receive any input for 30 seconds.

Touch Sensitivity Setup

The drapery motor will open or close with a pull of the drapery fabric. To set up the sensitivity for how much force it takes to activate the drapery, use the following procedure:

1. Press and hold the close and configure push buttons for 4 seconds. The LED will turn purple.
2. Pull the fabric at the approximate force that the motor should react to.
3. The purple LED turns off to indicate that the touch sensitivity has been stored.
4. Pull the fabric with the same force applied in step 2 to open and close the drapery, and it should begin to open and close accordingly. This procedure may be repeated until the drapery reacts to the desired sensitivity.

NOTE: The drapery motor exits Touch Sensitivity Setup mode if it does not receive any input for 30 seconds.

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 an infiNET EX device can be used in a shading system, it must first join an infiNET EX network. To join an infiNET EX network, the device must be 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. Refer to the gateway's manual at www.crestron.com/manuals for details.

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

2. Put the device into Acquire mode by doing the following:
   a. Tap the configure button three times, and then press and hold it down (tap-tap-tap-press+hold) until the white LED on the device blinks once (this can take up to 10 seconds).
   b. Release the button to start the acquire process. The LED blinks slowly to show that the device is actively scanning the infiNET EX network.
      • The white LED turns on for 5 seconds to show that the device has been successfully acquired by the infiNET EX network.
      • The white LED blinks fast to indicate that the device was not successfully acquired by the infiNET EX network. Tap a button to acknowledge the failure. The LEDs time out automatically. Ensure the gateway is in Acquire mode and within range before attempting the acquire process again.

Leaving an infiNET EX Network

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 infiNET EX Communications Status

To check the communications status of the device, tap the configure 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.

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.

NOTE: Wireless networks composed predominantly of battery-powered devices may need additional infiNET EX expanders, such as the CLW-EXPEX or GLA-EXPEX (sold separately) or other non-battery powered infiNET EX devices, to ensure proper functionality of the network and battery life for the devices. Refer to the Best Practices for Installation and Setup of Crestron RF Products (Doc. 6689) for complete system design guidelines, or contact Crestron True Blue Support for further assistance.

LED Diagnostics

LED Patterns: Normal Operation

The following table provides a list of possible LED patterns encountered during normal operation of the drapery. 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 blinks, then pause (1/8 second on, 1/8 second off, 1/8 second on, 5/8 second off)	Blue	A firmware upgrade over Cresnet® is in progress.
Slow blink (1/2 second on, 1/2 second off)	Blue	The motor's 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 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. Reduce the operating duty cycle of the motor to correct the error.
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 table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

Crestron CSM-QMTDC-DRP-3 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 does not exceed the rating for the motor.
The LED is blue.	The motor is stuck in the bootloader.	Reload firmware to the motor.