

## Slim Drapery Motor RTMLDSS50



**Slim Drapery Motor** - The Slim Drapery Motor is designed to install seamlessly behind the drapery panel with quiet start / stop operation, the ability to easily charge without having to remove the motor and up to 500 open and close cycles per charge, providing the ultimate integrated functionality without compromising the look of your window treatment.

The Slim Drapery Motor is compatible with our R-TEC Automation<sup>®</sup> Track System and AriA<sup>®</sup> R-TEC Automation<sup>®</sup> 1 3/8" H-Rail Traverse Systems for easy incorporation of draperies into the ARC<sup>™</sup> motorized platform. The Manual Override feature enables manual operation when needed. It offers the option to power the motor with a Li-ion Battery with optional Solar Panel recharging or continuous 110v AC Power Transformer with 10' or 30' Cord.

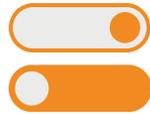
### FEATURES



2-Way RF  
Communication



Adjustable  
Speed



Preferred  
Open / Close  
Limit Settings



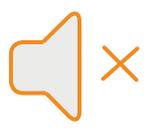
Favorite  
Position



Obstruction  
Detection



Manual  
Override



Quiet  
Operation

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# COMPLIANCE STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

## TECHNICAL DATA / PACK CONTENTS

### PRODUCT SPECIFICATIONS

Parameters	Slim Drapery Motor RTMLDSS50	Li-ion Battery RTMLDSSB	110v AC Power Transformer 10' (plug RTMP included) RTMLDSSPT	110v AC Power Transformer 30' (plug RTMP not included) RTMLDSSPTCS
Max. Run Time	12 min.		-	
Torque	1.2 Nm		-	
Speed	120 RPM * (Adj. to 80 or 100)		-	
Radio Frequency	433.92 MHz		-	
Sound Level	~44 DB		-	
Limit Switch Type	Electronic		-	
Voltage Output	-	14.4 V DC		18 V DC
Voltage Input	15 V DC	-		110 V AC 60 Hz
Current	1.3 A	-		2.0 A
Consumption	20 W	37.44 W		36 W
Battery Size / Type	-	2600 mAh		-
Charge Time	-	8 hours ** (at 2 A)		-
Charge Voltage	-	5 V DC (Micro USB)		-
Solar Panel Compatible	-	5 V USB Compatible		-
Power Cable Length	-	-	10' (3 m)	30' (9.1 m)
Weight	1.83 lbs. (0.83 Kg)	0.60 lbs. (0.27 Kg)	0.71 lbs. (0.32 Kg)	1.41 lbs. (0.64 Kg)
RF Protocol	ARC™		-	
RF Modulation	FSK		-	
RF Signal Range	49 ft. (15 m)		-	
Temperature Working Range		32° F - 140° F (0° C - 60° C)		
Limit Range	∞		-	
Insulation Class		Class A		
Life Cycle Testing		10,000 Cycles   50 Kg   Up to 11 m Track		
Protection Class		IP40 ***		

\*120 RPM is the default speed in operation | 80 RPM is the default speed during limit setting.

\*\*Charge time is based on typical 5V / 2A charge rate of fully discharged battery, actual time may vary between batteries.

\*\*\*Motor/Battery protection activates when battery voltage reaches 13.5 V DC (motor stops when battery is flat).

# TRACK & BELT DEDUCTIONS

System	Drive Pulley	Return Pulley	Track Length	Belt Length
R-TEC Track One Way Draw	RTMDSS50DP	RTMDSS50RP	System Overall Length - $3 \frac{5}{8}"$ Ex: $72" - 3 \frac{5}{8}" = 68 \frac{3}{8}"$ Track Length	(Track Length x 2) + $7 \frac{3}{8}"$ Ex: $(68 \frac{3}{8}" \times 2) + 7 \frac{3}{8}" = 144 \frac{1}{8}"$
R-TEC Track Center Draw	RTMDSS50DP (x 2)		System Overall Length - $4 \frac{5}{8}"$ Ex: $72" - 4 \frac{5}{8}" = 67 \frac{3}{8}"$ Track Length	(Track Length x 2) + $9 \frac{1}{2}"$ Ex: $(67 \frac{3}{8}" \times 2) + 9 \frac{1}{2}" = 144 \frac{1}{4}"$
AriA® $1 \frac{3}{8}"$ H-Rail Traverse One Way Draw	RTFMH138PK/		System Overall Length - $7 \frac{1}{2}"$ Ex: $72" - 7 \frac{1}{2}" = 64 \frac{1}{2}"$ Track Length	(Track Length x 2) + $10"$ Ex: $(64 \frac{1}{2}" \times 2) + 10" = 139"$
AriA® $1 \frac{3}{8}"$ H-Rail Traverse Center Draw	RTFMH138PK/		System Overall Length - $7 \frac{1}{2}"$ Ex: $72" - 7 \frac{1}{2}" = 64 \frac{1}{2}"$ Track Length	(Track Length x 2) + $10"$ Ex: $(64 \frac{1}{2}" \times 2) + 10" = 139"$

NOTE: Above figures are for straight tracks only.

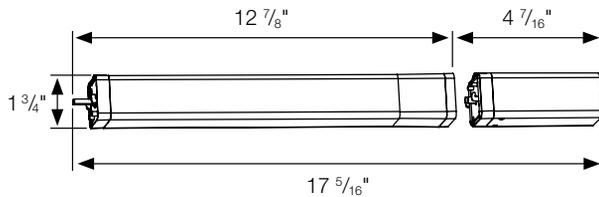
## PACK CONTENTS

1. Slim Drapery Motor (power options sold separately)
2. Instruction Manual

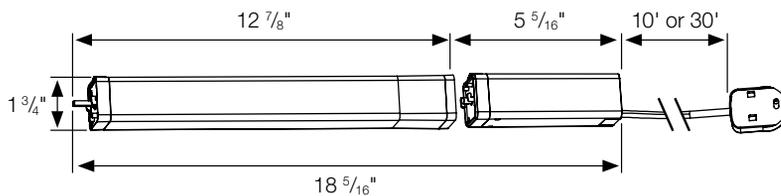
	Description
RTMLDSS50	Slim Drapery Motor
RTMLDSSB	Li-ion Battery*
RTMLDSSPT	110v AC Power Transformer 10' (plug RTMP included)
RTMLDSSPTCS	110v AC Power Transformer 30' (plug RTMP not included)

\*Li-ion Battery requires Wall Battery Charger RTMLDSSBC & USB Charger Cable RTMLDSSUSB or Solar Panel Battery Charger RTMSOLAR2.

Slim Drapery Motor with Li-ion Battery



Slim Drapery Motor with 110v AC Power Transformer



# INSTALLATION



Installation Instructions:

R-TEC Track System



H-Rail Traverse System

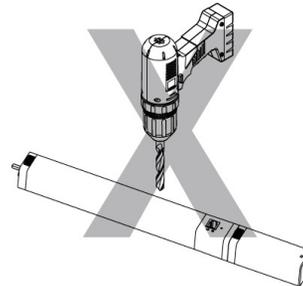
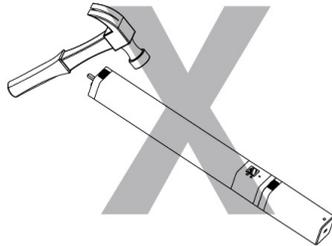
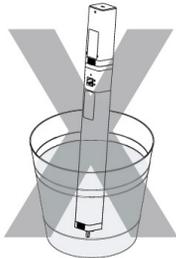


# SAFETY



## WARNING

Incorrect installation can lead to serious injury and will void manufacturer's liability and warranty.



## CAUTION

- Do not expose to moisture or extreme temperatures.
- Do not allow children to play with this device.
- Use or modification outside the scope of this instruction manual will void warranty.
- Installation and programming to be performed by a suitably qualified installer.
- For use within drapery treatments.
- Use only R-TEC Automation® hardware.
- Before installation, remove any unnecessary cords and disable any equipment not needed for powered operation.
- Ensure torque and operating time is compatible with end application.
- Do not expose the motor to water or install in humid or damp environments.
- Motor is to be installed in vertical application only.
- Do not drill into motor body.
- The routing of cable through walls shall be protected by isolating bushes or grommets.
- Ensure power cable and antenna are clear and protected from moving parts.
- If cable or power connector is damaged, do not use.
- Ensure all mechanical connections are secure.

## IMPORTANT SAFETY INSTRUCTIONS TO BE READ PRIOR TO OPERATION

- It is important for the safety of persons to follow the enclosed instructions. Save these instructions for future reference.
- Persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge should not be allowed to use this product.
- Keep remote controls away from children.
- Frequently inspect for improper operation. Do not use if repair or adjustment is necessary.
- Keep motor away from acid and alkali.
- Keep clear when in operation.



Li-ion



Do not dispose of in general waste.

Please recycle batteries and damaged electrical products appropriately.



# WIRING

## CHARGING OPTIONS

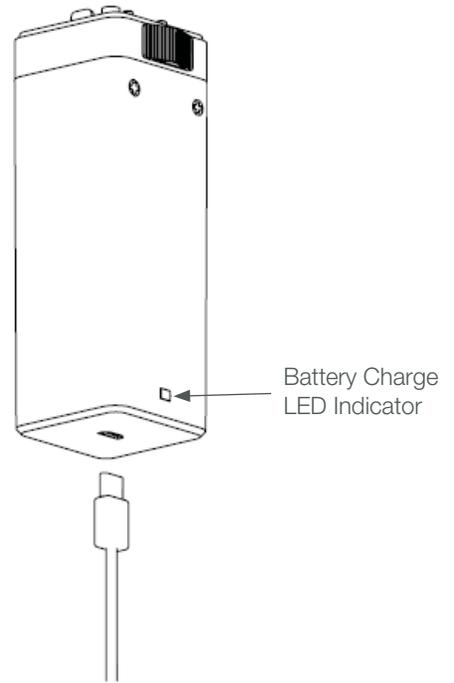


### IMPORTANT

Before first use, charge battery fully until LED indicator turns Green (Solid).

Charge Li-ion Battery RTMLDSSB using 5V Micro USB.

Solid Red = Charging  
Solid Green = Fully Charged



Use optional Solar Panel Battery Charger RTMSOLAR2 for continuous recharging!

## AC POWER TRANSFORMERS

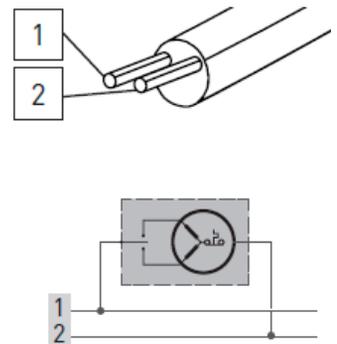
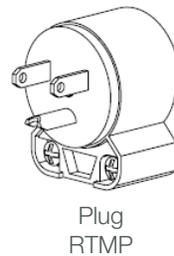
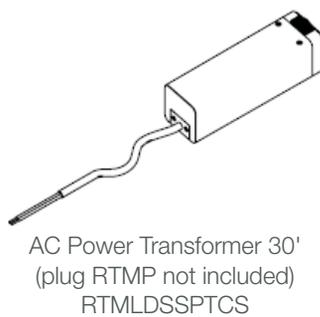
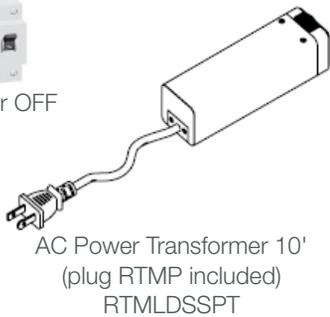
Disconnect the main power supply.

Connect the motor according to the information in the table below.



### IMPORTANT

Ensure cable is kept clear of fabric.

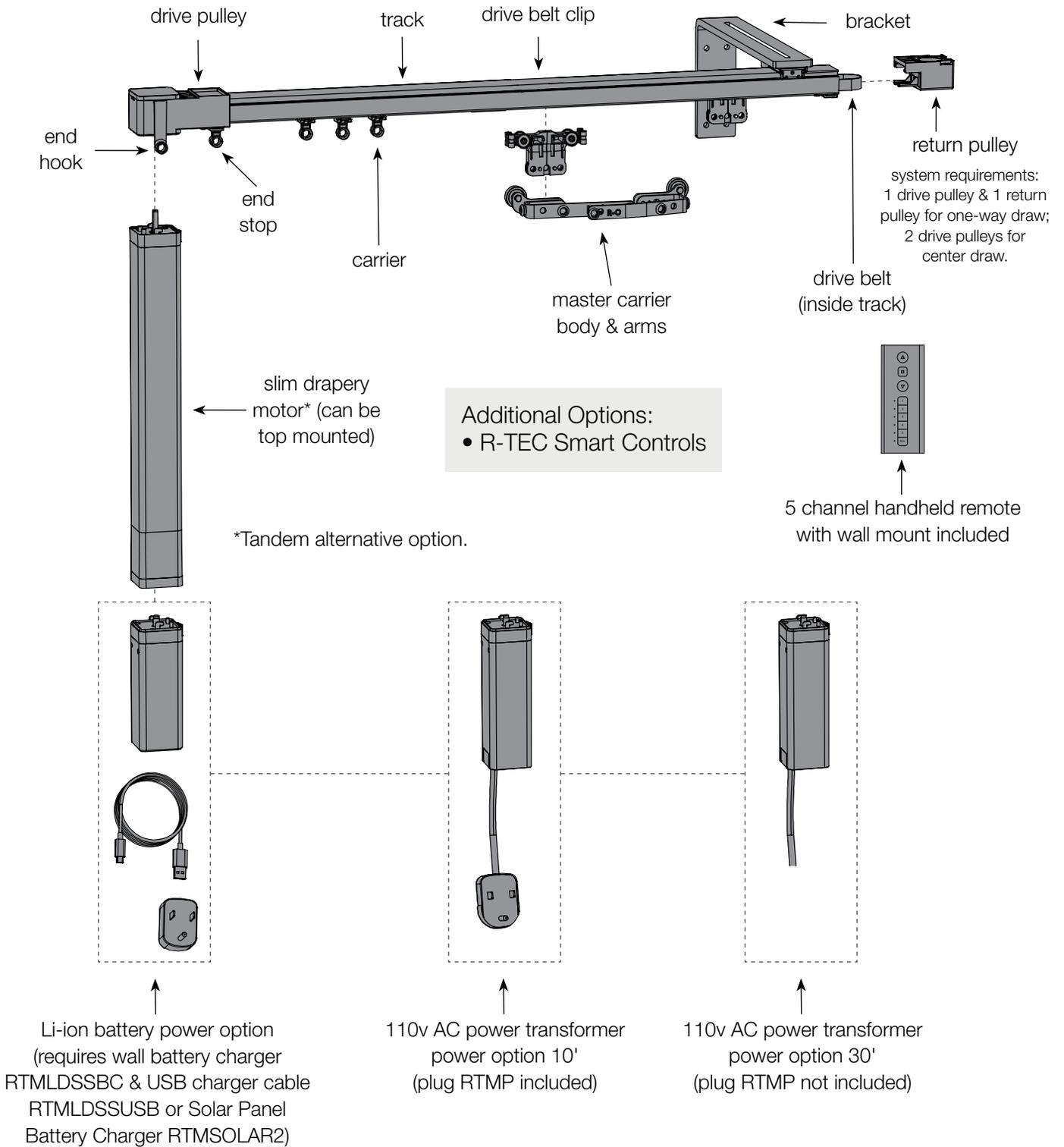


Item #	Power	Neutral	Live	Earth	Power Cord Length
RTMLDSSPT	120 V AC / 60 Hz	White	Black	N/A	10' (3 m)
RTMLDSSPTCS					30' (9.1 m)
RTMP				Green	N/A

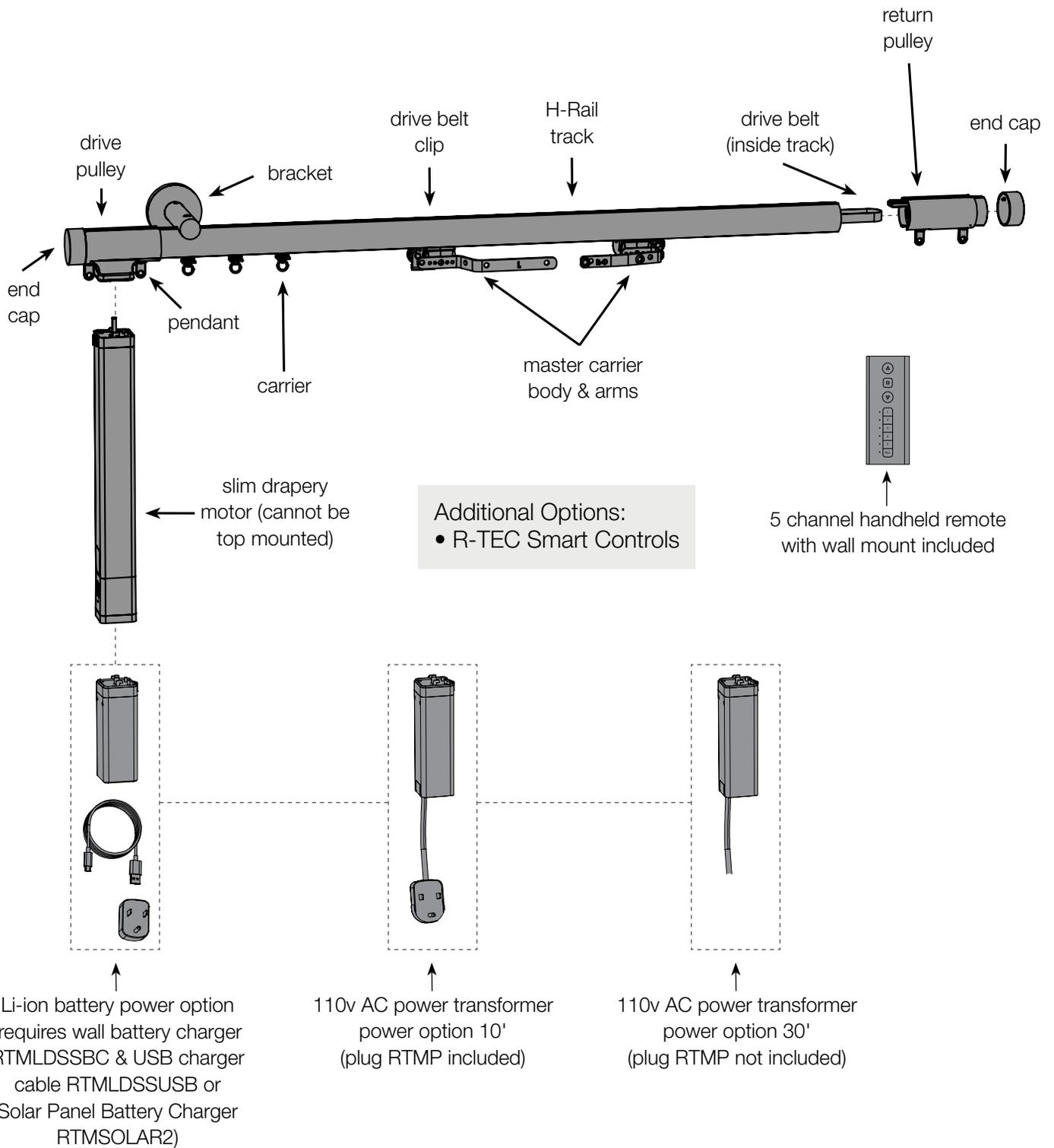
# ASSEMBLY

## GENERAL SCHEMATICS

### R-TEC Automation® Track



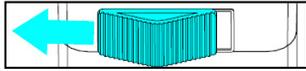
# AriA® 1 3/8" Automated H-Rail Traverse



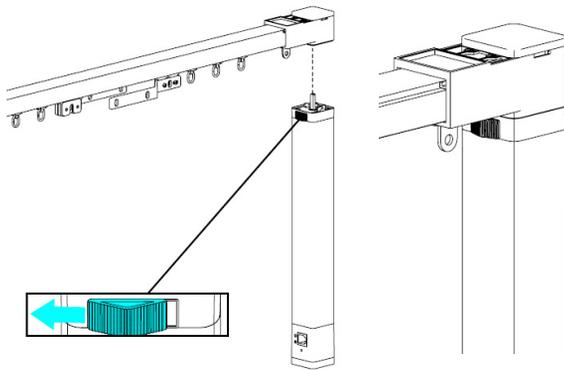
# ATTACHING & REMOVING THE MOTOR

## Attaching the Motor to the Drive Pulley

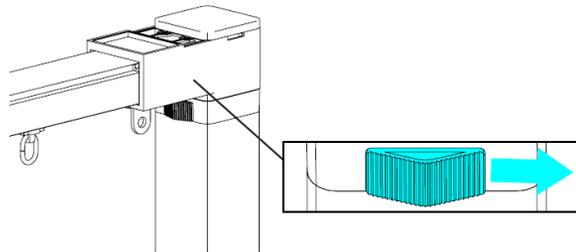
- 1 Slide the lock button fully left against the spring pressure force.



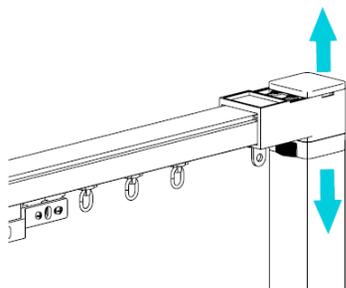
- 2 Align and engage the Motor with the Drive Pulley.



- 3 Push to lock button fully to the right to ensure the two are securely attached.

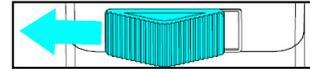


- 4 Check that the Motor and Drive Pulley are securely attached by trying to pull them apart.

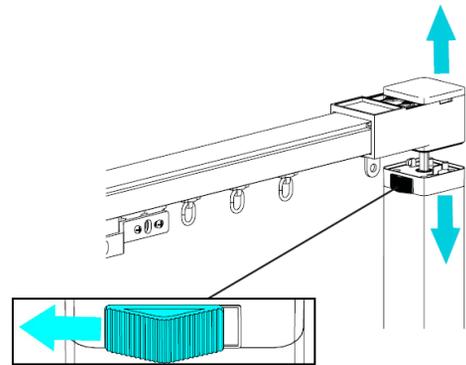


## Removing the Motor from the Drive Pulley

- 1 Slide the lock button fully left against the spring pressure force.



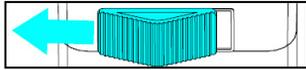
- 2 Pull the Motor away from the Drive Pulley.



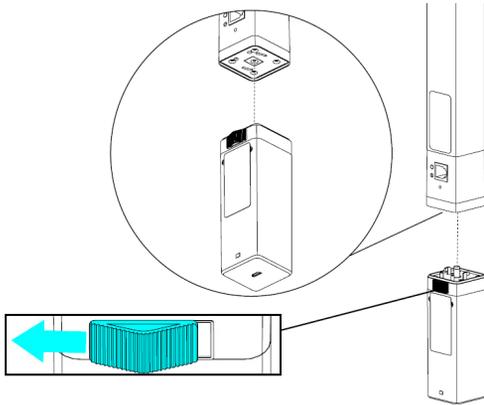
# ATTACHING & REMOVING THE LI-ION BATTERY OR 110v AC POWER TRANSFORMER

## Attaching the Li-ion Battery or 110v AC Power Transformer to the Motor

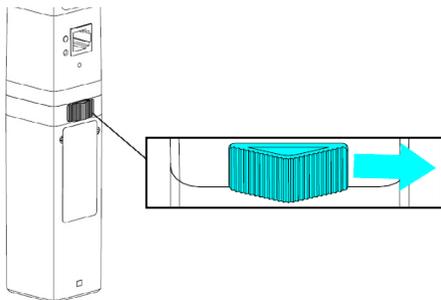
- 1 Slide the lock button fully left against the spring pressure force.



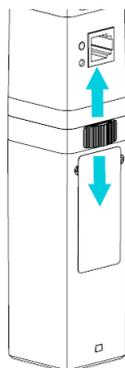
- 2 Align and engage the Li-ion Battery or 110v AC Power Transformer with the Motor.



- 3 Push to lock button fully to the right to ensure the two are securely attached.

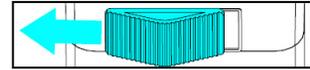


- 4 Check that the Motor and Li-ion Battery or 110v AC Power Transformer are securely attached by trying to pull them apart.

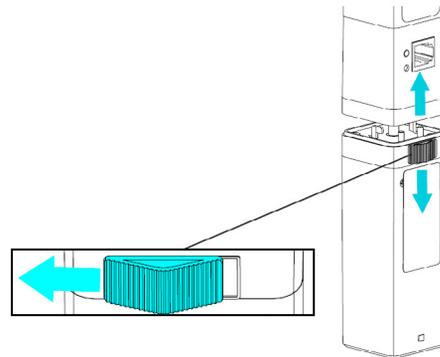


## Removing the Li-ion Battery or 110v AC Power Transformer from the Motor

- 1 Slide the lock button fully left against the spring pressure force.



- 2 Pull the Li-ion Battery or 110v AC Power Transformer away from the Motor.



# FUNCTIONAL OVERVIEW

## P1 BUTTON / MOTOR STATE TEST

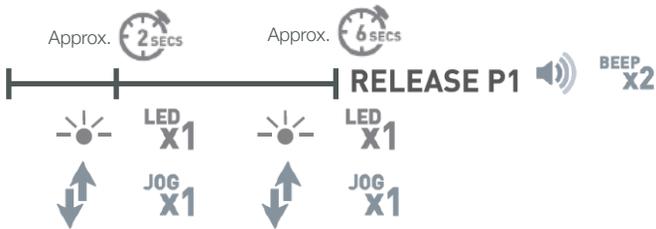
P1 Press	Condition	Function Achieved	Visual Feedback	Audible Feedback	Function Described
	If limit is NOT set	None	No Action	None	No Action
Short Press then Release (<2 seconds)	If limits are set	Operational control of motor, run to limit. Stop if running	Motor runs	None	Operational control of motor after pairing and limit setting is completed first time
	If motor is in "Sleep Mode" & limits are set	Wake and control	Motor wakes and runs in a direction	None	Motor is restored from Sleep Mode and RF control is active

Hold P1 Button on Motor Head

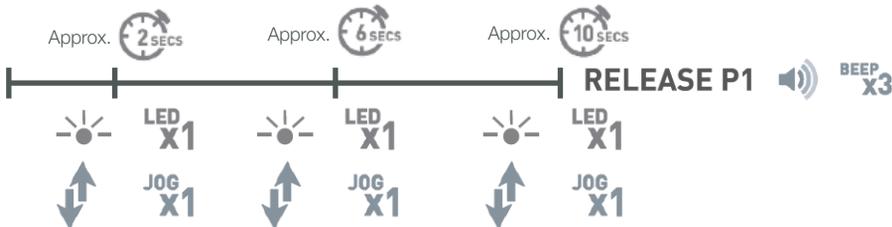
### Activate Pairing Mode



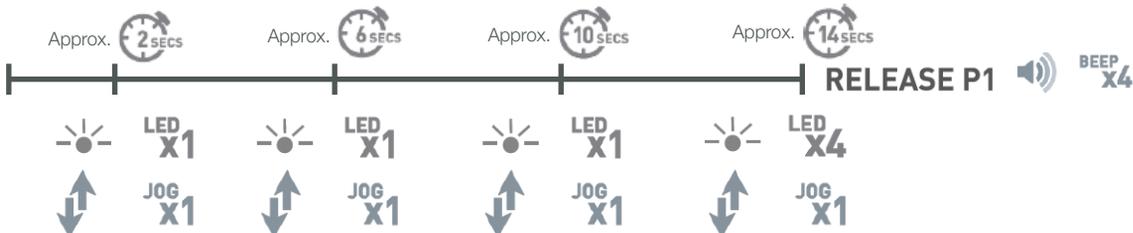
### Sleep Mode



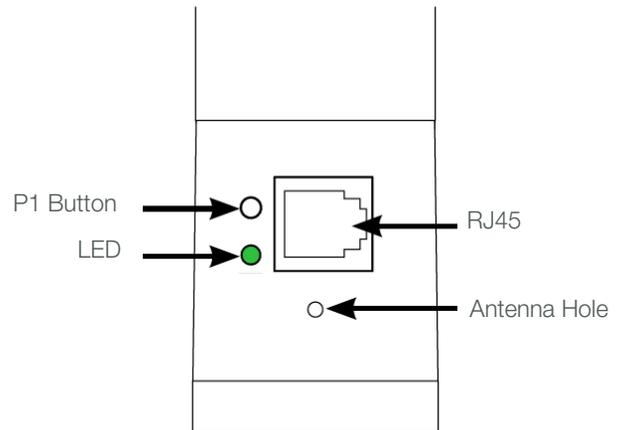
### Enter Setting Mode



### Reset to Factory Settings



### GREEN LED



# PROGRAMMING / INITIAL SET UP

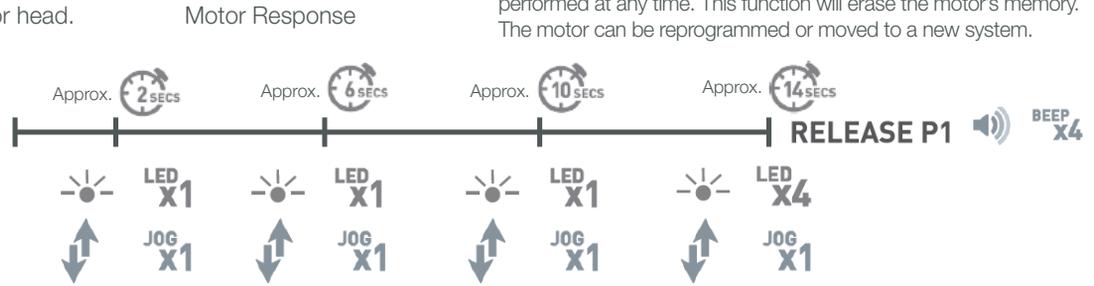
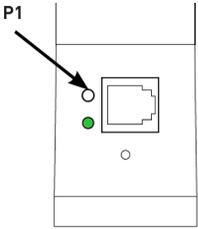
## FACTORY RESET MOTOR



### IMPORTANT

If programming or limit setting issue accrue, a factory reset can be performed at any time. This function will erase the motor's memory. The motor can be reprogrammed or moved to a new system.

Hold **P1** button on motor head.  
Wait for 4 BEEPS.

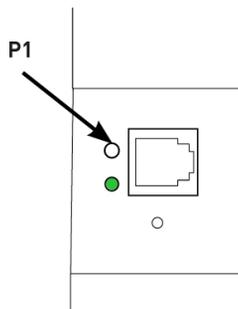


## PAIR MOTOR WITH CONTROLLER

Select a channel (15) on the controller.



Hold **P1** button on motor head.



Hold **STOP** on switch.



### IMPORTANT

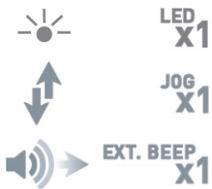
Consult your user manual for information on selecting channel.



### IMPORTANT

Motor is now in set up mode and ready for setting limits. When limits are not set only one remote channel can be paired with the motor. When limits are set, up to ten channels can be paired with the motor.

Motor Response  
**RELEASE P1**



Motor Response



## CHECK / CHANGE MOTOR DIRECTION

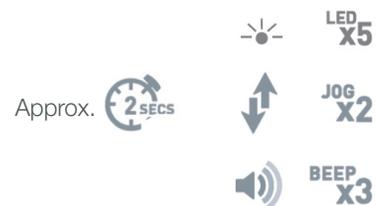
To check travel direction, press **UP** or **DOWN** on controller.



To reverse travel direction, hold both **UP** and **DOWN** on controller until the motor responds.



Motor Response



Quick Press = Step

Long Press = Continuous Travel



### IMPORTANT

Reversing motor direction using this method is only possible during initial set up.

# CHECK / CHANGE MOTOR DIRECTION CONT.

Press **P1** on Motor for 10 seconds to enter setting mode

To reverse travel direction, hold both **UP** and **DOWN** on controller until the motor responds.



NOTE: Changing motor direction after initial set up (with limits already set) will clear the limits. Open and close the drapery to re-set the limits automatically.

# AUTO SET LIMITS

The R-TEC Slim Drapery Motor features automatic limit detection. Once the motor is attached to a fabricated, installed track, limits can be set with a few simple actions.

Press the **UP** or **DOWN** buttons on the controller.  
Carrier will run to the end of the track.

When carrier has reached the end of the track, it will automatically set the limit there.  
Repeat for the opposite end.



## IMPORTANT

To verify limits were successfully set, press up or down to run to limit. Motor should now function with slow start / slow stop feature. After the limits are set, the motor will only move in the set limit range. If the motor encounters a new obstacle a maximum of 3x at the same position, the limit will automatically reset.

NOTE: If the motor encounters an obstacle, collision detection will stop the motor to prevent damage.

**Initial set up is now complete.**



# ADJUSTING LIMITS

## ADJUST OPEN LIMIT

Hold **UP** and **STOP** on the controller.

Move drapery to the desired open position by pressing the **UP** button.

To save open limit, hold **UP** and **STOP**.



Motor Response



Motor Response



## ADJUST CLOSE LIMIT

Hold **DOWN** and **STOP** on the controller.

Move drapery to the desired closed position by pressing the **DOWN** button.

To save close limit, hold **DOWN** and **STOP**.



Motor Response



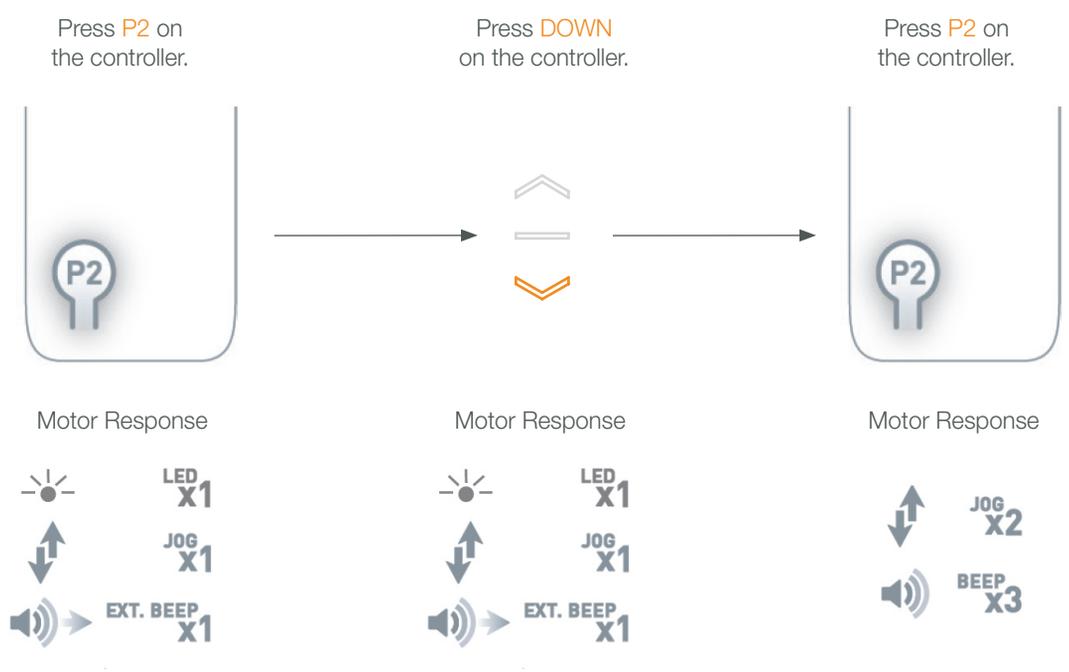
Motor Response



Once in limit adjustment mode, button selection on the remote must be made within 2 minutes. If not, motor will exit adjustment mode.

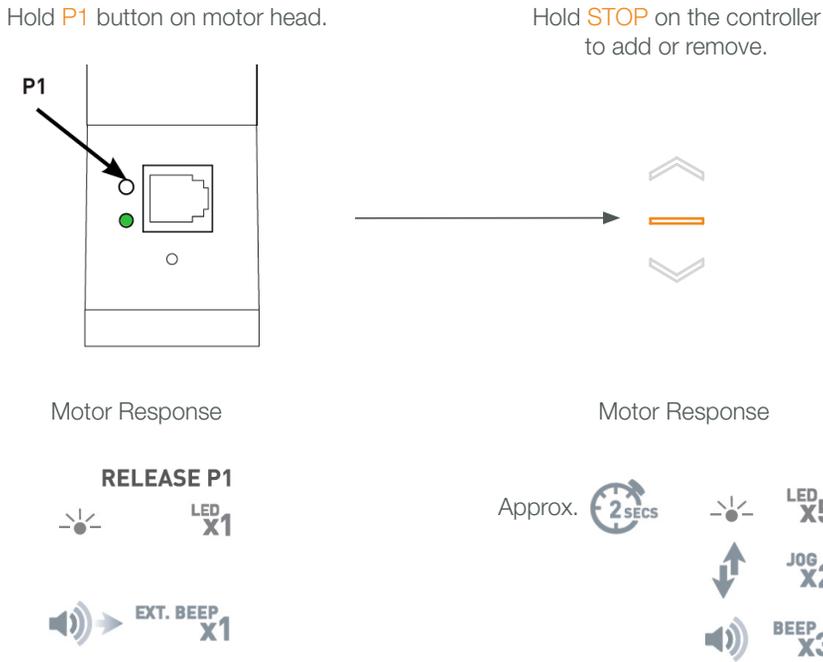
To exit limit adjustment mode without making changes, press P1 or P2 and limits will remain unchanged.

# DELETE LIMITS



# CONTROLLERS & CHANNELS

## USING MOTOR P1 BUTTON



# USING AN EXISTING CONTROLLER TO ADD A NEW CONTROLLER OR CHANNEL

A = Existing controller or channel (to keep).

B = Controller or channel to add or remove.

Press **P2** on controller A.

Press **P2** a second time on controller A.

Press **STOP** on new switch or remote controller to add it.



Motor Response



Motor Response



Motor Response



# USING AN EXISTING CONTROLLER TO DELETE A CONTROLLER OR CHANNEL

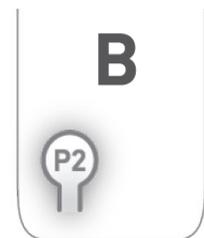
A = Existing controller or channel (to keep).

B = Controller or channel to add or remove.

Press **P2** on controller A.

Press **P2** a second time on controller A.

Press **P2** on new switch or remote controller to remove it.



Motor Response



Motor Response



Motor Response



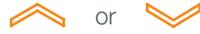
## IMPORTANT

Consult your user manual for your controller or sensor.

# FAVORITE POSITIONING

## SET A FAVORITE POSITION

Move drapery to the desired position by pressing the **UP** or **DOWN** button on the controller.



Press **P2** on controller.

Press **STOP** on controller.

Press **STOP** on controller.



Motor Response



Motor Response



Motor Response



## SEND DRAPERY TO FAVORITE POSITION

Press **STOP** on controller for 2 seconds.



## DELETE A FAVORITE POSITION

Press **P2** on controller.

Press **STOP** on controller.

Press **STOP** on controller.



Motor Response



Motor Response



Motor Response



# ADJUSTING MOTOR SPEED

There are three speed settings (80, 100 & 120 RPM).

With limits set, the default speed is maximum speed. If motor responds to the inputs below with two quick beeps, the speed setting is already at the maximum or minimum speed trying to be set. When motor limits are not set, default speed is minimum.

## INCREASE MOTOR SPEED

Press **P2** on controller.



Motor Response



Press **UP** on controller.



Motor Response



Press **UP** on controller.



Motor Response



## DECREASE MOTOR SPEED

Press **P2** on controller.



Motor Response



Press **DOWN** on controller.



Motor Response



Press **DOWN** on controller.



Motor Response

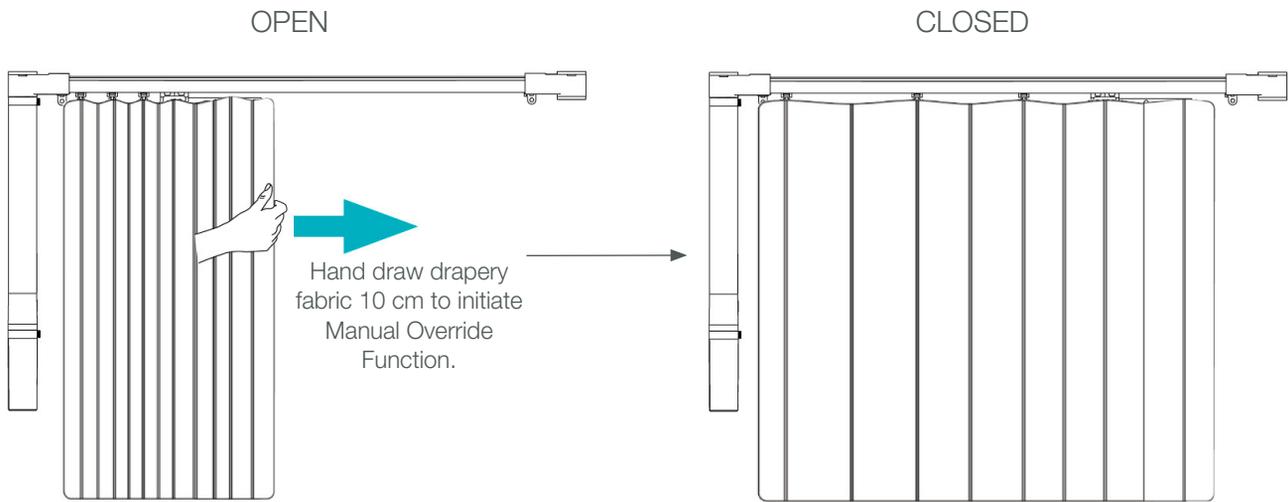


# MANUAL OVERRIDE FUNCTION

The R-TEC Slim Drapery Motor exhibits a function which enables the motor to be initiated by hand draw. When the fabric is displaced more than 10 cm by hand draw, the motor continues to move towards the drawn direction, until the limit is reached.

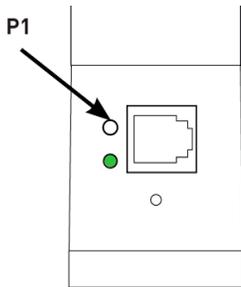
The Manual Override Function can be toggled on and off by pressing the P1 button for 10 seconds, followed by the STOP button.

## OPERATING WITH MANUAL OVERRIDE FUNCTION



## TURN MANUAL OVERRIDE FUNCTION ON / OFF

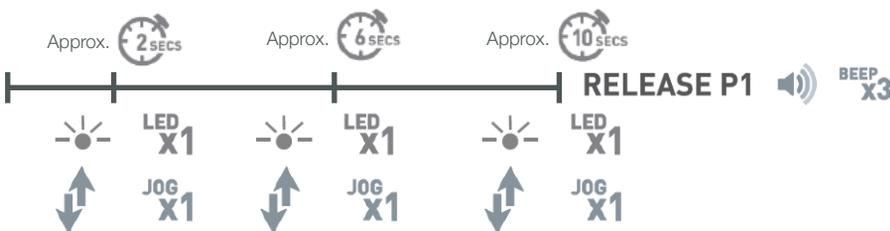
Hold **P1** button on motor head for 10 seconds.



Hold **STOP** on the controller to switch manual override function on or off.



Motor Response



Motor Response



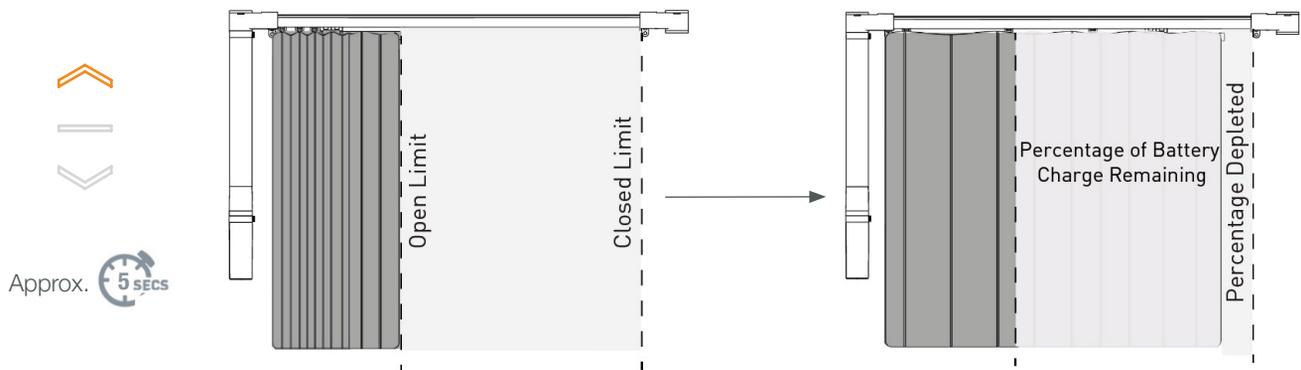
# BATTERY CHECK FUNCTION

## SEND DRAPERYS TO BATTERY CHARGE LEVEL

Hold **UP** on controller for approximately 5 seconds.

Draperies will close first if not already closed.

Draperies then moves to percentage of battery charge remaining.

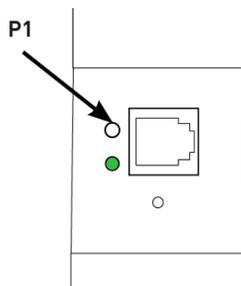


# RS485 COMMUNICATION

Default RS485 function is disabled. RS485 function is not available when motor is powered by the Li-ion Battery. RS485 function is only available when motor is powered by a 110v AC Power Transformer. Motors must be paired one at a time with control PC when multiple motors are to be connected on a network.

## ENABLE RS485 COMMUNICATION

Hold **P1** button on motor head for 2 seconds.



Motor Response



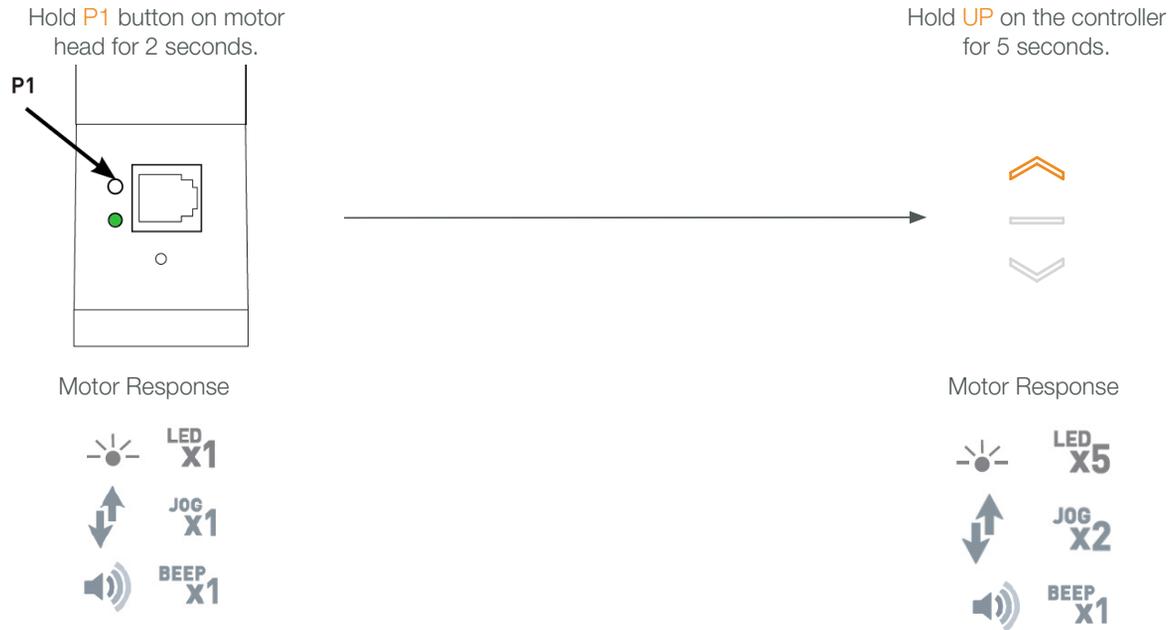
Hold **UP** on the controller for 5 seconds.



Motor Response



# DISABLE RS485 COMMUNICATION



# RS485 FAILURE

RS485 failure reminder when trying to turn on RS485 function of battery powered motor:



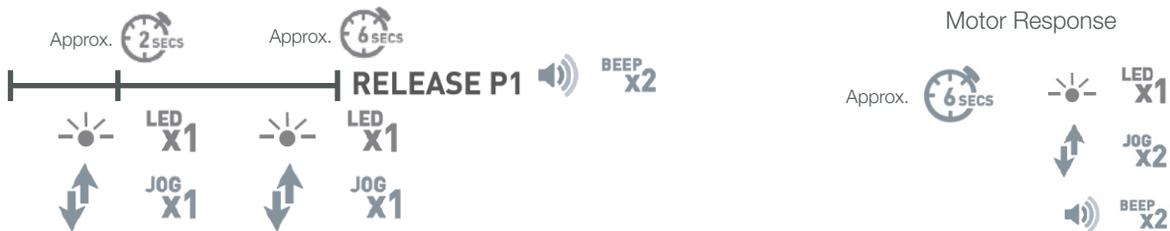
# SLEEP MODE

If multiple motors are grouped on a single channel, Sleep Mode may be used to put all but 1 motor to sleep, allowing programming of just the one motor that remains "Awake". See [page 12](#) for detailed P1 functions.

## ENTER SLEEP MODE

Sleep mode is utilized to prevent a motor from incorrect configuration during other motor setup.

Hold **P1** on the motor head for approximately 6 seconds.



### IMPORTANT

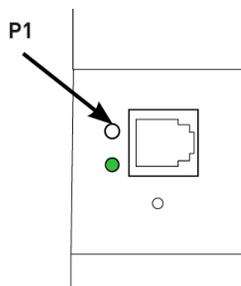
In Sleep Mode, the Manual Override Function is available and operating the drapery via this method will not cause the motor to exit sleep mode.

## EXIT SLEEP MODE

### Option 1

Exit sleep mode once the drapery is ready.

Press and release **P1** on the motor head



Motor Response

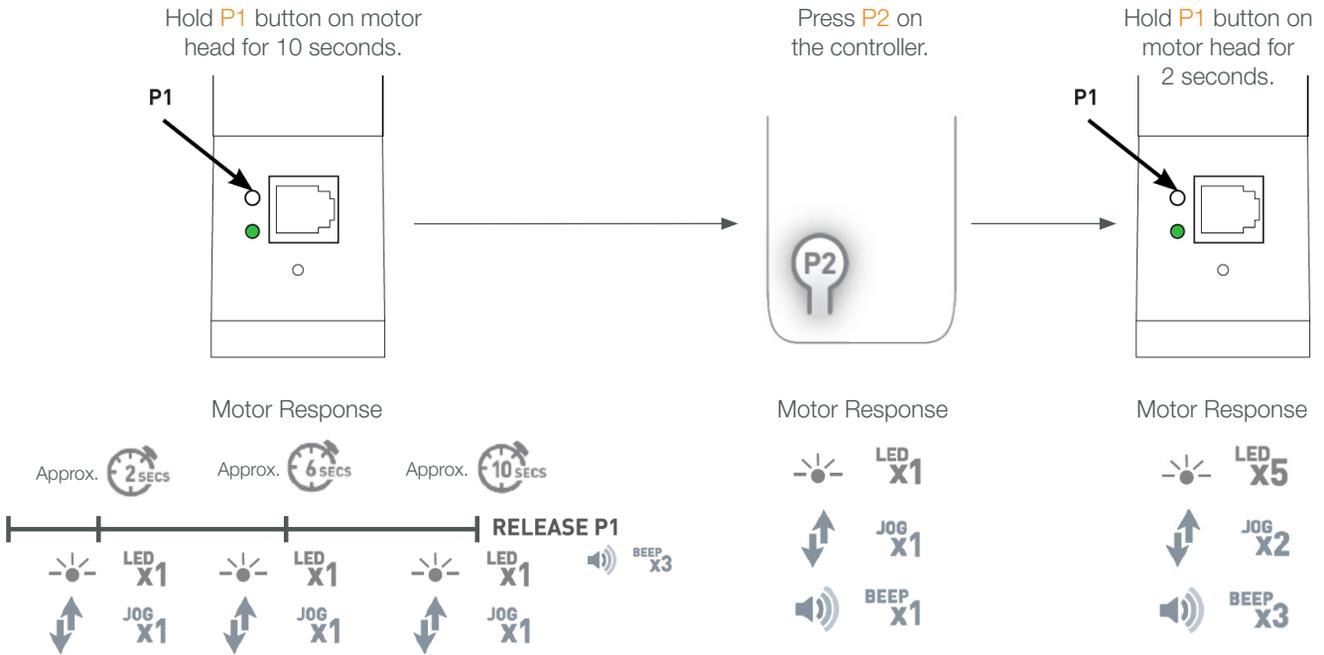
Motor will move in last default direction to limit position

### Option 2

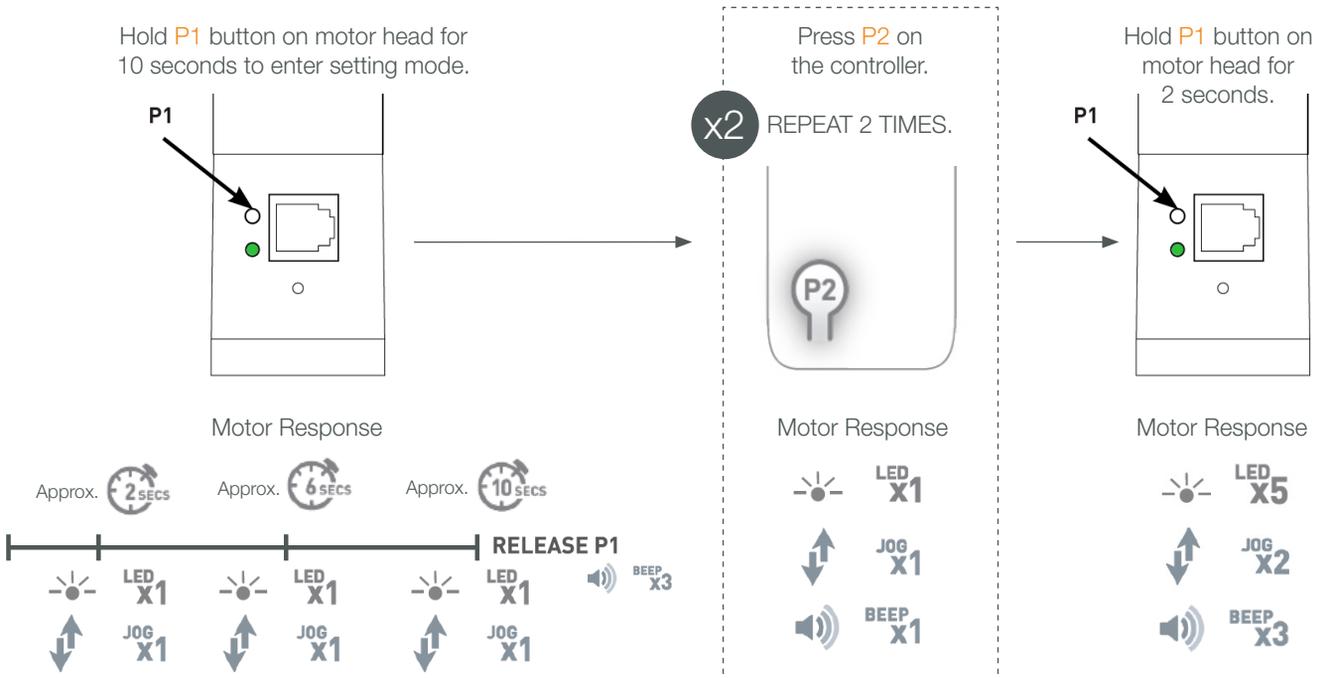
Remove power and then re-power the motor.

# EXTERNAL LOW VOLTAGE SWITCH MODE

## TWO BUTTON SPRING RETURN SWITCH (DEFAULT MODE)

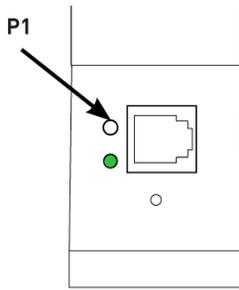


## THREE BUTTON SPRING RETURN SWITCH

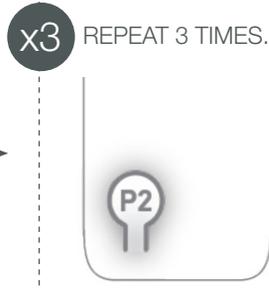


# SINGLE BUTTON SPRING RETURN SWITCH

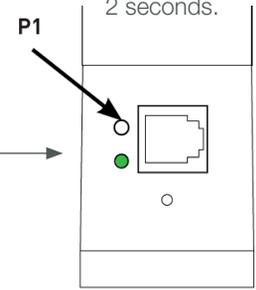
Hold **P1** button on motor head for 10 seconds to enter setting mode.



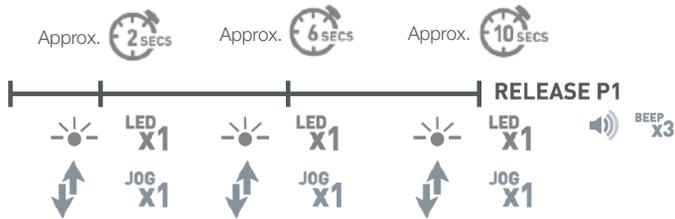
Press **P2** on the controller.



Hold **P1** button on motor head for 2 seconds.



Motor Response



Motor Response



Motor Response



# TROUBLESHOOTING

Problem	Cause	Remedy
Motor is not responding	Battery in motor is depleted	Recharge with compatible AC adapter and check connection and positioning of PV panel.
	Transmitter battery is discharged	Replace battery.
	Insufficient charging from Solar (PV) Panel	Check connection and orientation of PV panel.
	AC power supply not plugged in (AC Power Transformer power option)	Check motor to power cable connection and AC plug.
	Incorrect wiring (AC Power Transformer power option)	Check wiring of Field Plug if not factory fitted.
	Radio interference / Shielding	Ensure transmitter is positioned away from metal objects and that antenna on motor or receiver is kept straight and away from metal.
	Receiver distance is too far from transmitter	Move transmitter to a closer position.
	Charging failure	Connect battery to charger and check if LED indicates charging.
Motor Beeps + Flashes x4	Battery voltage is low / PV (solar) panel issue	Recharge with AC adapter or check connection and positioning of PV panel.
Cannot program a single Motor (multiple motors respond)	Multiple motors are paired to the same channel	Always reserve an individual channel for programming functions.
		SYSTEM BEST PRACTICE - Provide an extra 15 channel remote in your multi motor projects, that provides individual control for each motor for programming purposes.
		Place all other motors into sleep mode (see <a href="#">page 23</a> )

## Any Questions?

Contact our R-TEC Automation® in-house experts at 866.985.3423. Email us at [RTECAutomation@RowleyCompany.com](mailto:RTECAutomation@RowleyCompany.com). Please use the [Custom Solutions Forms](#) when ordering a Custom Solution.