

## BASIC SWITCHING CONTROL TERMINOLOGY AND INFORMATION GUIDE

### LOW VOLTAGE MODULAR SWITCH (RECESSED WALL INSTALLATION)

Available with drapery motors only. A specially designed three button switch, open-stop-close, which allows direction reversal at any point. Low voltage switching connections are made, using RJ-11 modular cable, from the switching port of the motor to a modular wall jack (phone type); then inside the wall to the junction box containing the switch. Power to the motor is supplied by a 9 foot power cord.

### HARD WIRED (HW)

All motors (except drapery motors and Model 9700) come with a 4 wire, 6 foot pigtail, consisting of a common, two directional wires and a ground. Used for wiring to a powered, SPDT (single-pole, double-throw) 110VAC switch. The motor's pigtail is connected either by hard wiring or by plug/receptacle to an individual junction box. If more than one motor is controlled by a single switch, isolation (parallel) relays are required.

### HARD WIRED WITH ISOLATION RELAYS (HW/ISO)

This variation of Hard Wiring is used when controlling two or more motors simultaneously from a single SPDT switch. Each motor pigtail (with relay incorporated) is connected either by hard wiring or by plug/receptacle to an individual junction box. The wiring from each junction box is connected from one to the next; with the wiring from the terminal junction box going to the switch.

### RADIO FREQUENCY WIRELESS REMOTE CONTROL (TI-RF)

A radio frequency controlled system for Models 140-S, 400, 9600, 9300, 5100 and 8000 systems. The receiver is built-in for Models 140-S, 9600 and 8000. The maximum range is 100'. The style of the Ti transmitters are sleek with an anti-scratch white piano lacquer finish. The Ti transmitters are available in 1, 2, 6 and 16 channels. Each transmitter includes a wall bracket. The TiWMT is a wireless wall switch with removable transmitter available in 1, 2 and 6 channels. Fully compatible with Bond Controls.

### RADIO FREQUENCY WIRELESS REMOTE CONTROL (RTS)

Radio Technology Somfy, provides a comprehensive method for radio frequency control of motorized systems, with cross platform control system integration. Available both as stand alone, single motor RF control, or as an integrated part of a whole house automated system.

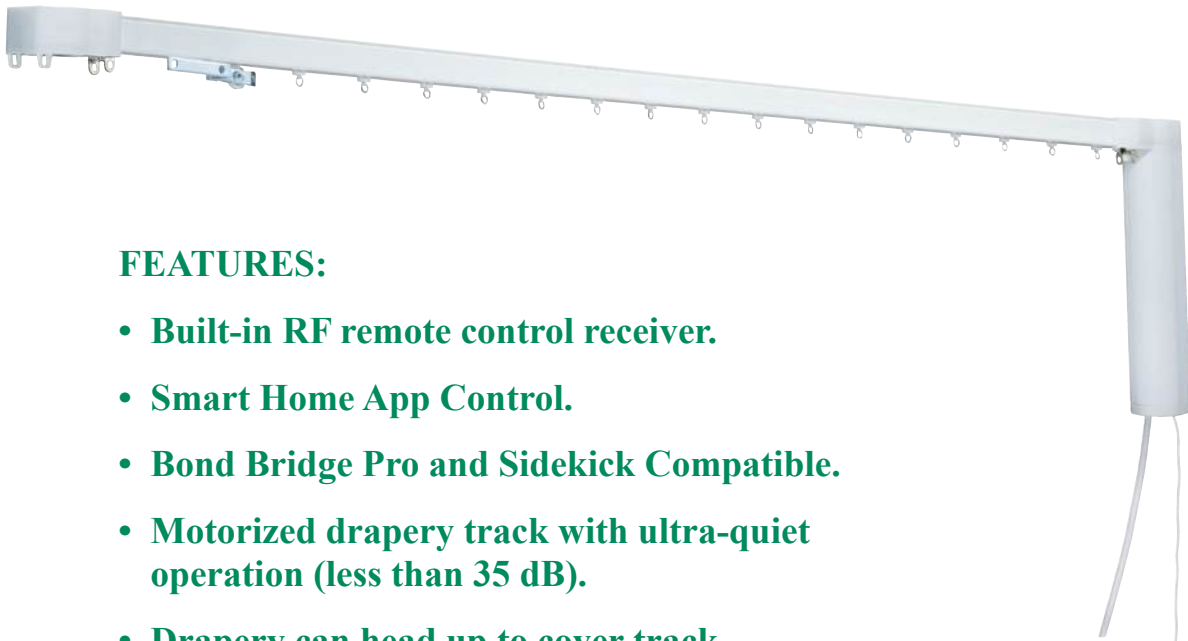
### RECHARGEABLE BATTERY SYSTEMS

No outlet required and eliminates any electrical work. This type of motor has a built-in battery that lasts up to a year before requiring a recharge. The plug-in charger includes a 14 ft. cord. Systems available up to 144" and 26 pounds. Compatible with all RTS controls.

### CONTROL SYSTEM

Provides an interface with a home theater, multi-room control system, or whole-house automation system. For drapery motors interfacing with a home theater, multi-room control system, or whole-house automation system; two (2) momentary dry contacts (switching contacts with no voltage inputted) are required for open-stop-close (two button) operation. Operation initiates with either the "Open" or "Close" contact, and a second action with either contact produces the "Stop" function. For Model 140-S, close the open/close contacts simultaneously for the stop function. All other motors (except model 9700) use two (2) momentary dry contacts. All motors are fully compatible with control systems by AMX, Control4, Crestron Electronics, Lutron Electronics, Savant, Vantage, and others.

## Model 140-S Drapery System

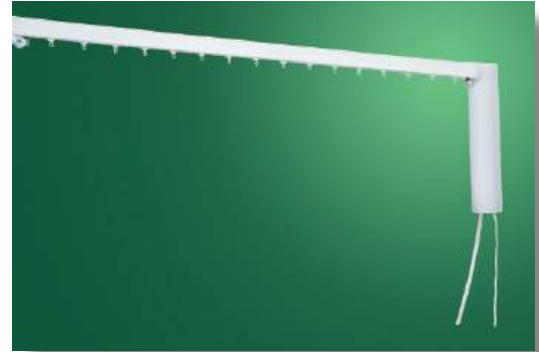


### FEATURES:

- **Built-in RF remote control receiver.**
- **Smart Home App Control.**
- **Bond Bridge Pro and Sidekick Compatible.**
- **Motorized drapery track with ultra-quiet operation (less than 35 dB).**
- **Drapery can head up to cover track.**
- **Manual operation override.**
- **Automatically identifies and sets Open and Stop operation limits.**
- **The Touch Motion function performs opening/closing of draperies without using any controls.**
- **Dry contact or line voltage controlled.**
- **Track available in 19 ft. lengths without a splice.**

### MODEL 140-S DIRECT DRIVE DRAPERY TRACK SYSTEM

The Model 140-S Direct Drive Drapery Track System is a high quality belt-driven track system. The motor has a built-in RF Receiver, and has a touch motion or tug feature that works by simply tugging the drapery to engage the motor. In case of a power outage, the built-in clutch allows the drapery to be pulled easily by hand. The motor is used in conjunction with our 80 Series Roller Track, which is aluminum with an EPD (electrophoretic deposition) paint coating to assure smooth operation. The profile of the track was designed to allow the drapery to head-up or hang below. The components are all high quality. The drive pulley contains a steel bearing (not plastic), the carriers are designed with special resin wheels for virtually silent traversing, and the belt is steel reinforced. All to assure smooth reliable operation.



#### SPECIFICATIONS MODEL 140-S

Dimensions (H) x (W) x (D)	13" x 3.125" x 2.125"	Power consumption	During stand by: 2.5 W or lower Max. load operation: 90 W
Track Compatibility	80	Control board operating voltage	5 VDC
Maximum Drapery Weight (One Way Draw)	100 lbs	Control board operating current	5 mA
Maximum Drapery Weight (Center Open)	140 lbs	Amperage	1.4 A
Maximum Track Length	36 ft.	Operating speed	6 in/sec
Rated power voltage	100 VAC to 240 VAC	Rated current	0.8 N.m
Cycle	50/60 Hz	Ambient temperature	0 to 50°C (non-condensing)
		Time rating	4 min. (continuous operation)
		Noise level	35 dB (in default motor speed)

### BELT DRIVE DRAPERY MOTOR

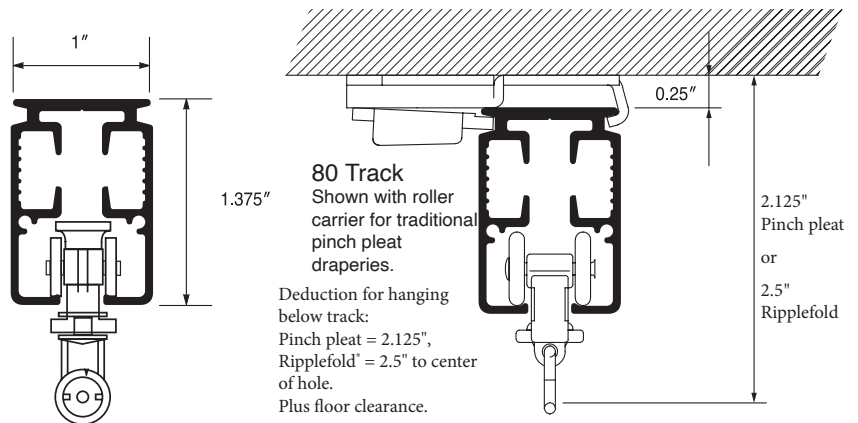
#### 80 SERIES DUAL CHANNEL TRACK

The 80 Series Dual Channel Roller Track is aluminum extruded with an EPD (electrophoretic deposition) paint coating to assure smooth operation. The profile of the dual channel track was designed to allow the carriers to be isolated in a separate channel away from the belt. Available for pinch pleat draperies, which may head-up or hang below the track.

Ripplefold® style roller carriers are available in 80%, 100% and 120% fullness. The maximum length track without a splice is 234.625" for straight tracks and 212" for custom curves.

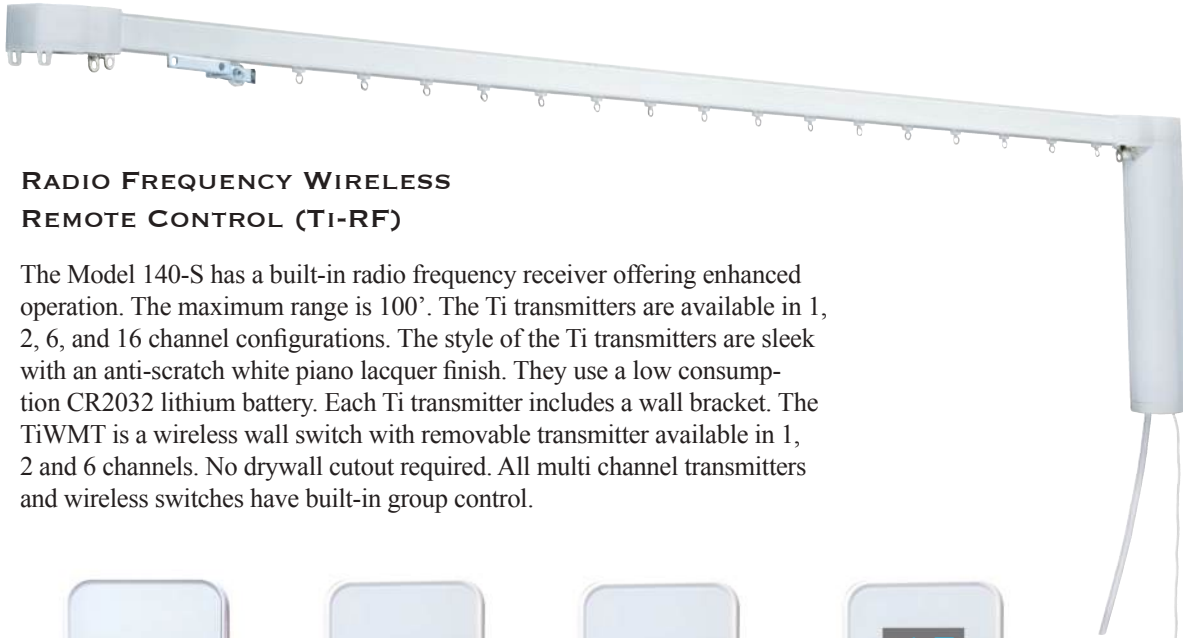
Available as either ceiling or wall mount.

#### 80 TRACK CROSS SECTION AND INSTALLATION DIMENSIONS



Recommend installation of brackets in intervals of 30".

### MODEL 140-S BELT DRIVE DRAPERY SYSTEM



#### RADIO FREQUENCY WIRELESS REMOTE CONTROL (TI-RF)

The Model 140-S has a built-in radio frequency receiver offering enhanced operation. The maximum range is 100'. The Ti transmitters are available in 1, 2, 6, and 16 channel configurations. The style of the Ti transmitters are sleek with an anti-scratch white piano lacquer finish. They use a low consumption CR2032 lithium battery. Each Ti transmitter includes a wall bracket. The TiWMT is a wireless wall switch with removable transmitter available in 1, 2 and 6 channels. No drywall cutout required. All multi channel transmitters and wireless switches have built-in group control.



Ti-1



Ti-2



Ti-6



Ti-16



TiWMT-6



Ti-Hub  
App Control

The Ti-Hub offers smart home App control. Simple set up and integration with all Ti-RF controlled motors. Create scenes, timers, "Hey Siri" voice commands, Alexa and Google home compatible, and control your draperies, shades or blinds from anywhere in the world.

### BOND WIRELESS REMOTE CONTROL AND SMART HOME INTEGRATION (TI-RF AND RTS)



#### SIDEKICK FOR SHADES GEN 3 UNIVERSAL SHADE REMOTE CONTROL

- Works with multiple motor technologies
- 5- or 1-channel interchangeable control
- Pairs directly with the shade
- Wireless control via RF
- Estimated 10-year battery life
- Flush mount: Install with or without a workbox
- Provides state feedback to the Bond Bridge Pro
- Set up shade limits
- No manufacturer remote required
- Supports the new Keypad Mode

\* Battery life is estimated based on using a sidekick to cycle a shade once a day.

#### BOND BRIDGE

- Works with Alexa, Google Home, and SmartThings
- Remote Control via Bond Home app
- Works with iPhone or Android
- No installation needed
- Smart home functionality without breaking the bank
- Works with 2.4GHz Wi-Fi networks



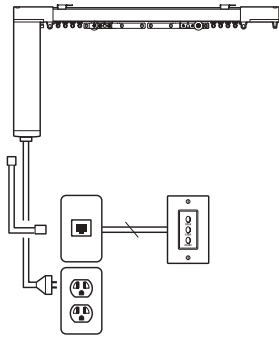
#### BOND BRIDGE PRO

- Ethernet port & PoE technology
- Smart home integrations
- Ceiling and wall mount
- Works with Alexa, Google Home, and SmartThings
- Remote Control with App
- Works with iPhone or Android
- No installation needed
- Smart home functionality without breaking the bank

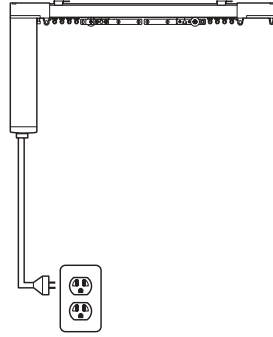
### MODEL 140-S BELT DRIVE DRAPERY MOTOR ELECTRICAL/ELECTRONIC CONTROL AND WIRING INFORMATION GUIDE

Recommend use of a Surge Protected 110 VAC duplex outlet.

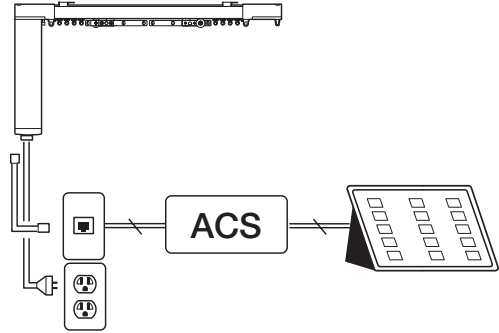
**A. S-300A Switch Individual Control**



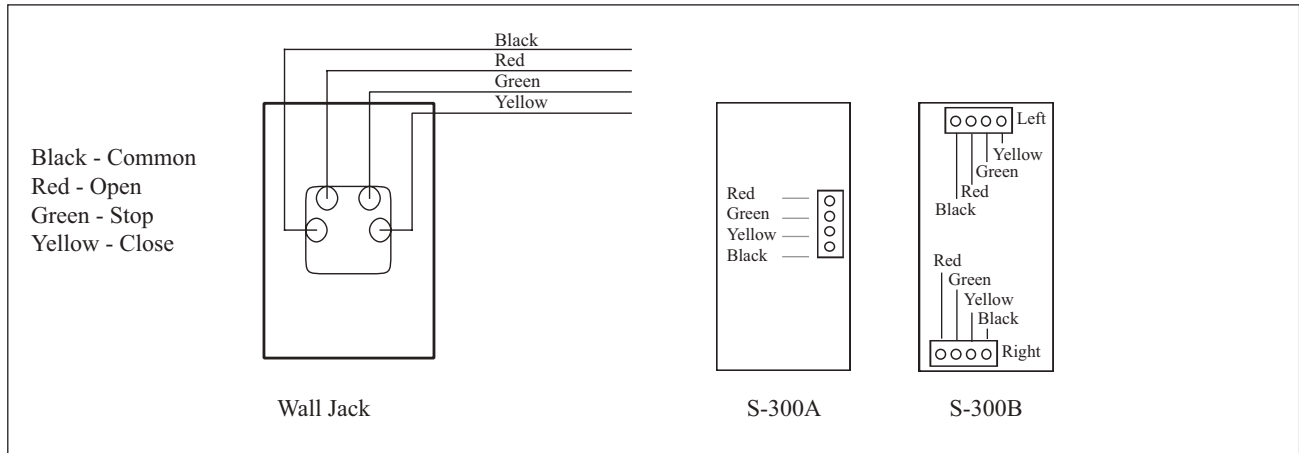
**B. Individual Radio Frequency Remote Control**



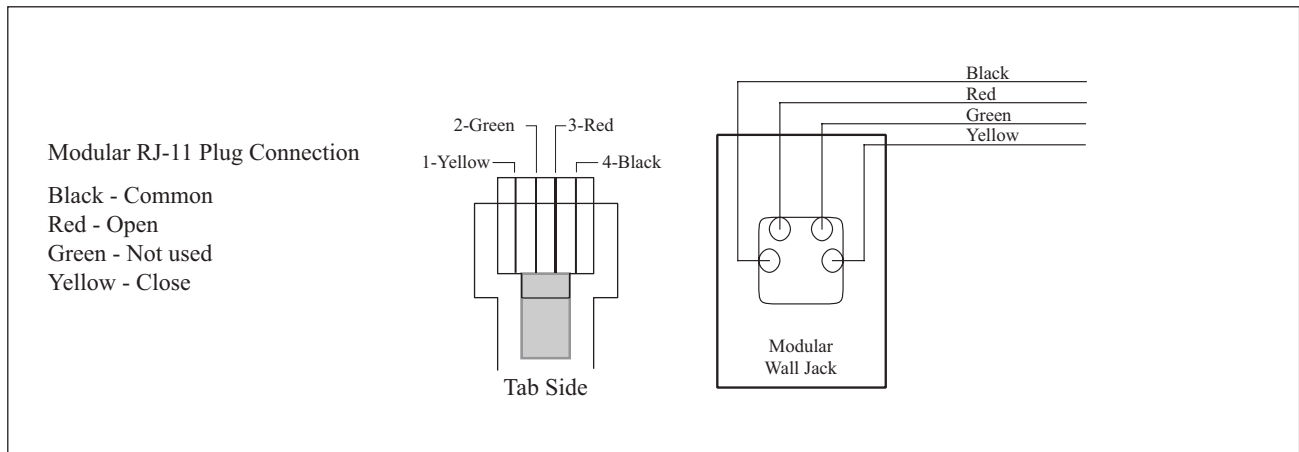
**C. Automation Control System**



**D. Modular Wiring for Model 140-S Connecting to S-300A or S-300B Switch**

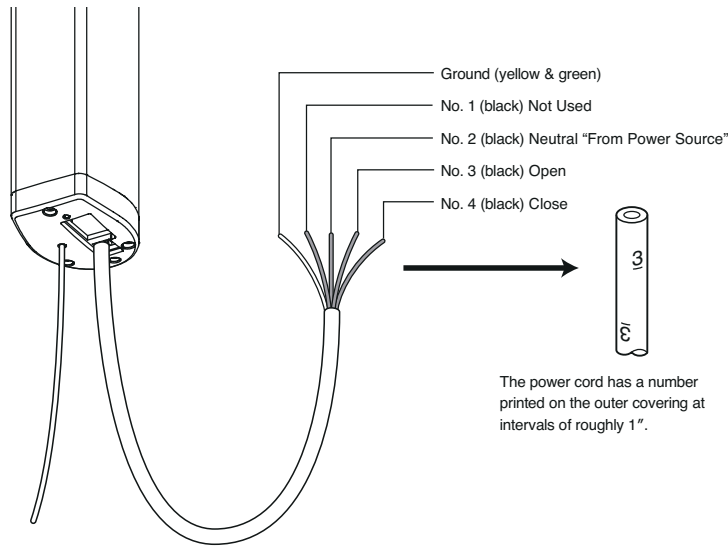


**E. Modular Wiring for Model 140-S Connecting to Automation Control System**



### MODEL 140-S BELT DRIVE DRAPERY MOTOR ELECTRICAL/ELECTRONIC CONTROL AND WIRING INFORMATION GUIDE

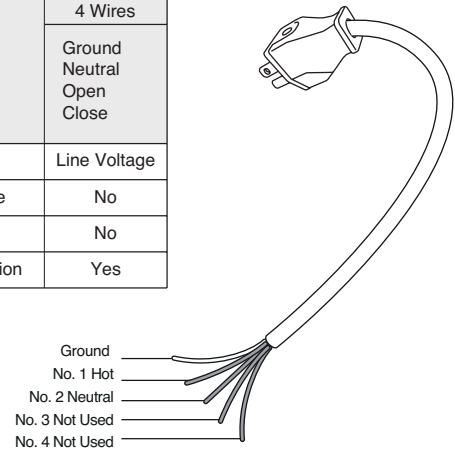
#### F. Line Voltage Switching Control Using 4 Wires



#### Operations and Connecting Diagrams

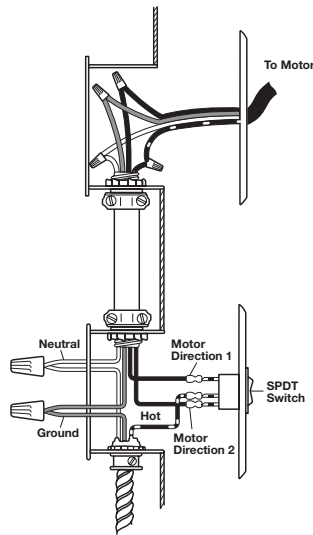
Wire	4 Wires	
		Ground
Contact	Line Voltage	Close
RF Remote	No	
Slow Stop	No	
Touch Motion	Yes	

#### G. 3 Prong Grounding Plug Connection

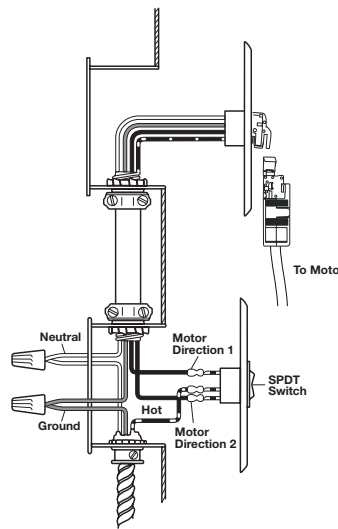


#### Hard Wiring (HW)

All motors come with a 4 wire 18 gauge grounded pigtail. This consists of a neutral, two directional wires, and a ground. This type of wiring is used when the motor is to be controlled by a recessed wall switch. The pigtail is connected by either hard wiring or a plug/ receptacle. A single motor is controlled by a SPDT (single pole, double throw) switch. Two motors can be controlled together by a DPDT (double pole, double throw) switch.



Standard Hard Wiring



Hard Wiring with optional plug/receptacle

## 400 SERIES DRAPERY MOTORS



Control options include  
Wall Switch - RF - RTS® - Timer

Fully Compatible with All Major Home  
Automation Systems, including those  
manufactured by AMX, Control 4, Crestron,  
Lutron Electronics, Savant, Vantage and others.

**Motors assembled in the USA from components  
manufactured in the USA and Japan.**

## POWERFUL FEATURES:

### QuietSTOP

In a significant enhancement of previous designs, the motor's intelligent electronics anticipate limit positions, providing gentle and quiet stopping.

### OSP

Optimum Stacking  
Positioning

No settings. No fuss.

Perfect appearance every  
time.

### REALSPEED

Moving swiftly and  
quietly at 10"/second,  
draperies get to where  
they need to be.

### TRU\_Load

Load capacities of our  
motors do not decrease  
as the track size  
increases.



### DIRECT DRIVE DRAPERY MOTORS

Direct drive motors are used in conjunction with roller tracks as part of a direct drive system. The motor attaches to the end of the track where a shaft on the motor fits into a pulley, which moves the cable and operates the track components. Available as a straight or curved system, with the operating cable strung on the inside of the track. The motor is flush with the front edge of all tracks. All motors are available with surface mount or recessed low voltage switches, infrared or radio frequency wireless remote control, or home automation systems. Drapery should be manufactured with a 3.5" return to cover motor projection and a 5" space between the last two pleats on return (motor) side. Drapery should not drag on the floor, or rub against pocket or valance. Do not use silicone to lubricate as it will adhere to cord and cause slippage around drive wheel.



SPECIFICATIONS	MODEL 475
Dimensions (H)x(W)x(D)	6.41" x 4.01" x 2.75"
Track Compatibility	30, 90
Weight	4.6 lbs.
Voltage	120 VAC
Amperage	0.76 A
Cycle	60 Hz
Wattage	80 W
Horsepower	0.11 hp
Maximum Drapery Weight	175 lbs.
Maximum Track Length	65 ft.
Traversing Speed	10 in/sec
Thermal Overload	120°C

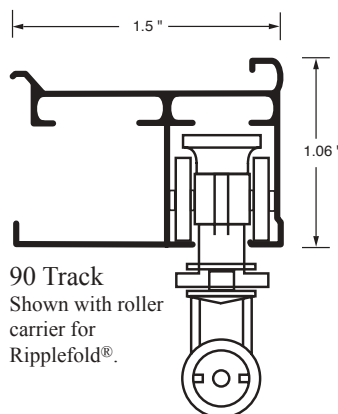
### DIRECT DRIVE ROLLER TRACKS

#### 90 DUAL CHANNEL TRACK

SM Automatic offers the Series 90 Dual Channel Track for pinch pleated draperies, as well as alternative Contemporary pleating styles, often referred to generically as S-fold or Z-fold.

Pinch pleated systems utilize 5/8" roller carriers for minimal stacking (which allows the option to hang the draperies below the track, or head up to conceal the track), while roller carriers (9/16") have also been designed for Contemporary pleating applications, which guarantees smooth operation.

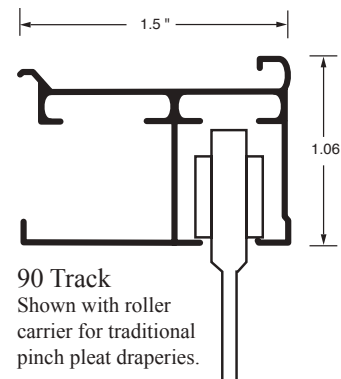
The aluminum track has a white finish. The maximum length of track without splice: 250". Available as either ceiling or wall mount.



Deduction for hanging below track: 1.5" plus floor clearance. Sew snap tape at top of fabric.

Ceiling or wall brackets add 0.25" to track height.

Add an extra snap at 3" from end for overlaps and returns.



Deduction for hanging below track: 1.5" plus floor clearance

Ceiling or wall brackets add 0.25" to track height.

### DIRECT DRIVE ROLLER TRACK

#### 30-VQ

The 30-VQ (Very Quiet) track is a breakthrough in combining noise reduction, durability and strength. Made from Hishimetal, the 30-VQ is formed by bonding high quality steel with layers of PVC, and coating with acrylic resin.

Assembled direct drive roller tracks include: cut-to-measure track, master carriers, roller carriers (3 per foot are standard, with extra carriers at additional cost), end pulleys, and plastic covered steel cable. Steel tracks are PVC coated inside and out. Roller tracks are also available as cord drawn and hand drawn. Since the draperies hang below the track, a recess or top treatment is strongly suggested. The maximum track width without splice is 237".

#### 30

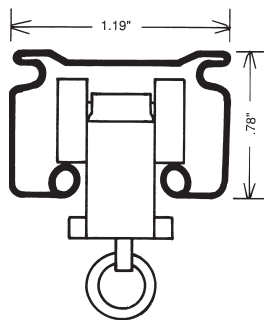
Steel with white finish

Dimensions: 1.19" x .78" (30mm x 20mm)

Deduction for hanging below track: 1.25"

Plus floor clearance

Capacity: 11 lbs. per carrier



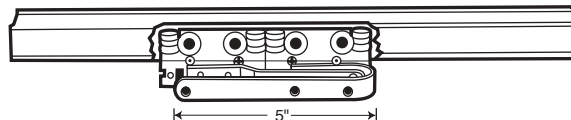
Cross sections of tracks shown actual size

### ROLLER TRACK MASTER CARRIERS

90 Track, which now includes as standard, long arm overlap master carriers

overlap: 5"

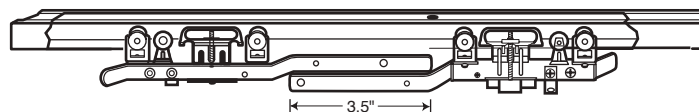
underlap: 3.5"



30 Track with standard overlap master carriers

overlap: 3.5"

underlap: 3.5"



*Custom extended arms may be available. If required, call Customer Service for details.*

### DIRECT DRIVE DRAPERY SYSTEMS

#### HOW TO SELECT THE CORRECT DIRECT DRIVE SYSTEM FOR YOUR SPECIFIC REQUIREMENTS

1. Decide on the direct drive motor which best suits your needs, based on the actual weight of the draperies.
2. Choose the roller track which correlates with your project requirements. Criteria to be considered are: overall track size, stacking requirement, drapery pleating style, drapery weight, pocket or recess dimensions, and whether or not the draperies can hang below the track.
3. Refer to pricing below to find the system cost according to size requirements.
4. Add control options as listed on pages 20-22, as described on page 23.
5. All systems include motor, track and brackets. Switching controls must be ordered in addition.
6. If track is curved, refer to page 16 for additional information and costs.



#### CONTEMPORARY PLEATING INFORMATION

##### S - fold

- 120% fullness - carriers spaced at 1.875" (4.25" snap tape)
- 100% fullness - carriers spaced at 2.125" (4.25" snap tape)
- 80% fullness - carriers spaced at 2.375" (4.25" snap tape)
- 60% fullness - carriers spaced at 2.625" (4.25" snap tape)

#### RIPPLEFOLD SNAPS SPACING

- 1<sup>st</sup> to 2<sup>nd</sup> snap on master carrier
- 2.625" on center
- 2<sup>nd</sup> snap on master to 1<sup>st</sup> roller carrier
- 4.25" on center

##### Z - fold

- 120% fullness - 3.75" pleat (7.5" snap tape)
- 100% fullness - 4.25" pleat (8.5" snap tape)
- 80% fullness - 5" pleat (10" snap tape)

Draperies using Contemporary pleating must hang below the track.

### DIRECT DRIVE ROLLER TRACKS



*Please consult the electrical/electronic options on pages 20-22, to order either the appropriate switch(es) or remote control options. Please refer to page 68 for ordering information and page 70 for installation guidance.*

### DRAPERY MOTORS ELECTRICAL/ELECTRONIC CONTROL INFORMATION

#### LOW VOLTAGE MODULAR SWITCH (RECESSED WALL INSTALLATION)

Available for drapery motors only. The switch conforms to a single gang junction box. Low voltage switching connections are made from the switching port of the motor to a modular wall RJ-11 jack (phone type) using a modular cable; then inside the wall to the junction box containing the switch. *The modular cable is nonstandard, and should be supplied by SM Automatic (see page 14).* Low voltage 4 conductor wire run within the wall is typically supplied by the electrician. Power to the motor is supplied by a 9 foot power cord. Electrical outlet and wall jack should be positioned behind drapery, typically 12" directly below motor.



The S-1DD, a hand held or surface mount version is also available. Switch is supplied with a 12 foot, low voltage cable, that plugs into a switching port of the motor.

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*Recommend use of a Surge Protected 110 VAC duplex outlet.*

#### RADIO FREQUENCY WIRELESS REMOTE CONTROL (RTS)

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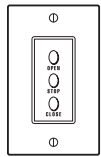
#### CONTROL SYSTEM

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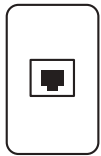
All drapery motors are "Smart Motors", designed with built-in logic boards. They are all fully compatible with all major control systems, including those manufactured by AMX, Control4, Crestron Electronics, Lutron Electronics, Savant, and Vantage Controls.



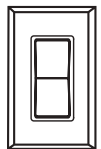
### ELECTRICAL/ELECTRONIC CONTROL AND WIRING INFORMATION LEGEND



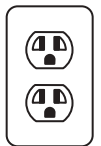
S-300A Switch



Modular Wall Jack (RJ-11)



S-DEC2 Decora Paddle Switch



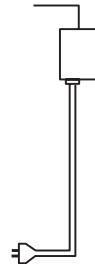
Standard 110 volt Duplex Outlet  
*(Recommend surge protection)*



Modular Cable (four conductor: 4/26)



In-wall Modular Cable (four conductor: 4/26)  
(supplied by others)



Radio Frequency Receiver



Control System Interface  
Low Voltage SPDT Interface



Automation Control System  
(supplied by others)



Automation Control System  
User Interface  
(supplied by others)

### DRAPERY MOTORS ELECTRICAL/ELECTRONIC CONTROL AND WIRING INFORMATION GUIDE

#### SWITCHES

S-300A White



S-300A Ivory



S-300B White



S-300B Ivory



S-1DD



#### RADIO FREQUENCY REMOTE CONTROL (TI-RF)

TiWMT - 1, 2, 6



#### RADIO FREQUENCY REMOTE CONTROL (SMA-RTS)

Situo 1 RTS



Situo 5 RTS



DecoFlex 5 RTS



#### RADIO FREQUENCY REMOTE CONTROL (TI-RF)

Ti-1



Ti-2



Ti-Hub  
App Control



Ti-6



Ti-16

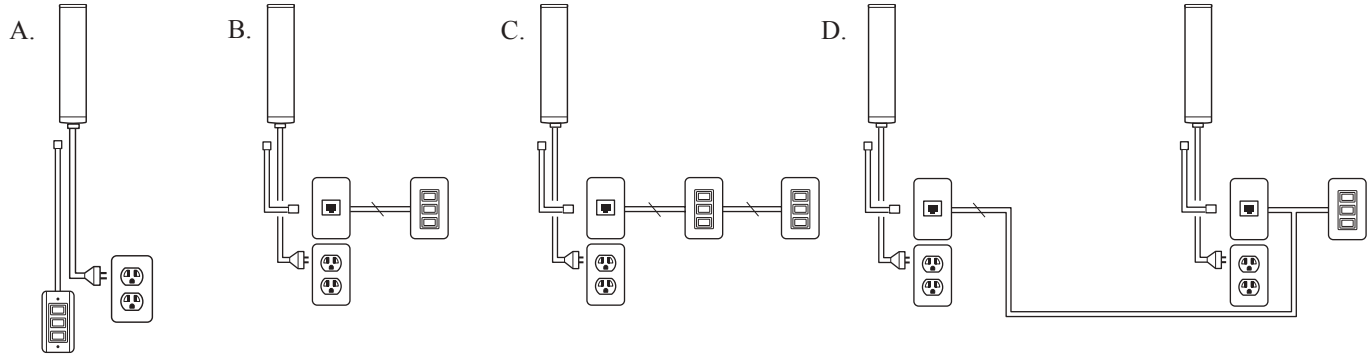


### DRAPERY MOTORS ELECTRICAL/ELECTRONIC CONTROL AND WIRING INFORMATION GUIDE

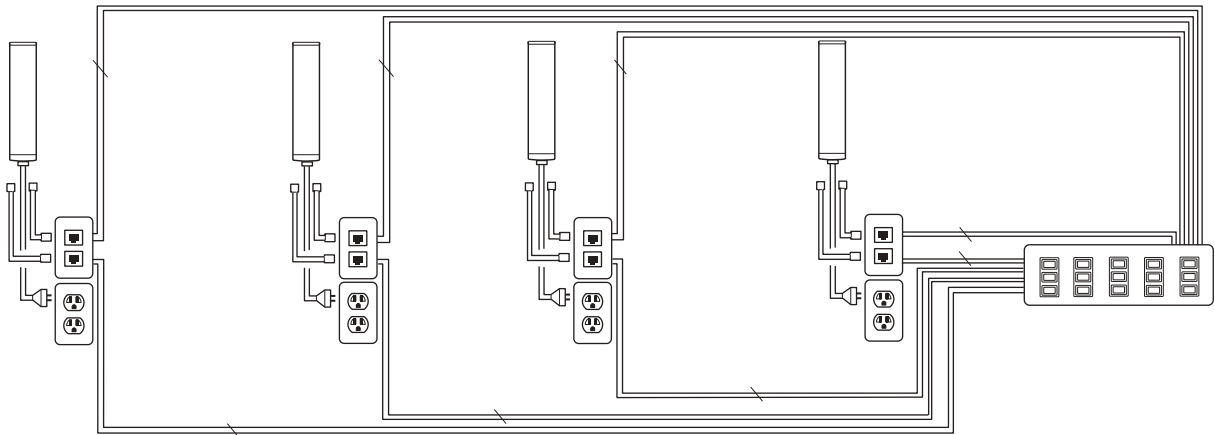
*Recommend use of a Surge Protected 110 VAC duplex outlet.*

- A. S-1DD Switch Individual Control
- C. Two S-300A Switch Individual Control

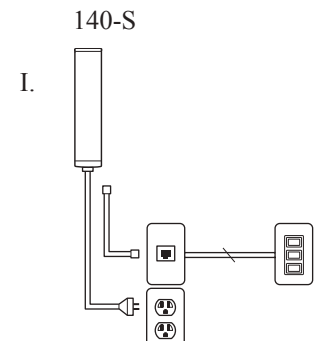
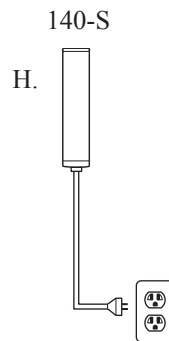
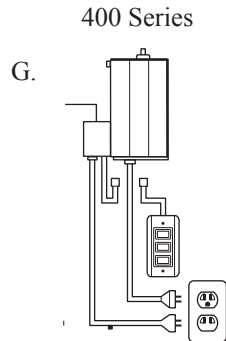
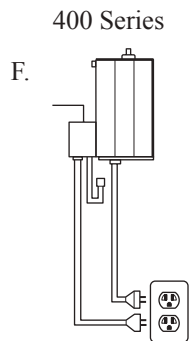
- B. S-300A Switch Individual Control
- D. S-300A Switch Group Control



- E. Individual and Group Switch Control



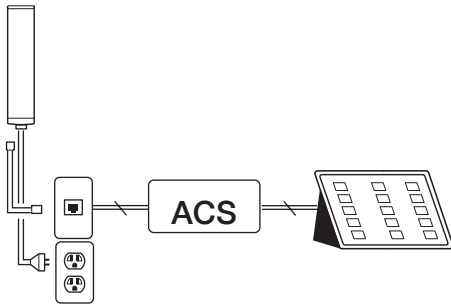
- F. Individual Radio Frequency Remote Control - 400 Series
- H. Individual Radio Frequency Remote Control - 140-S
- G. Individual Remote Control with S-1DD - 400 Series.
- I. Individual Remote Control with S-300A - 140-S



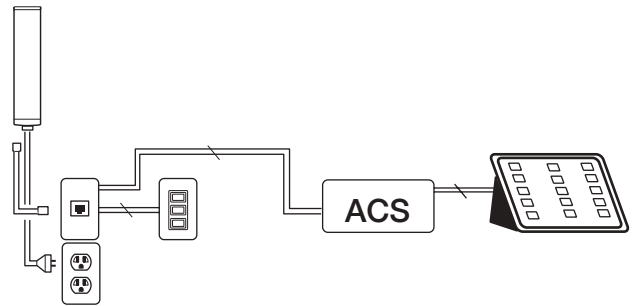
### DRAPERY MOTORS ELECTRICAL/ELECTRONIC CONTROL AND WIRING INFORMATION GUIDE

*Recommend use of a Surge Protected 110 VAC duplex outlet.*

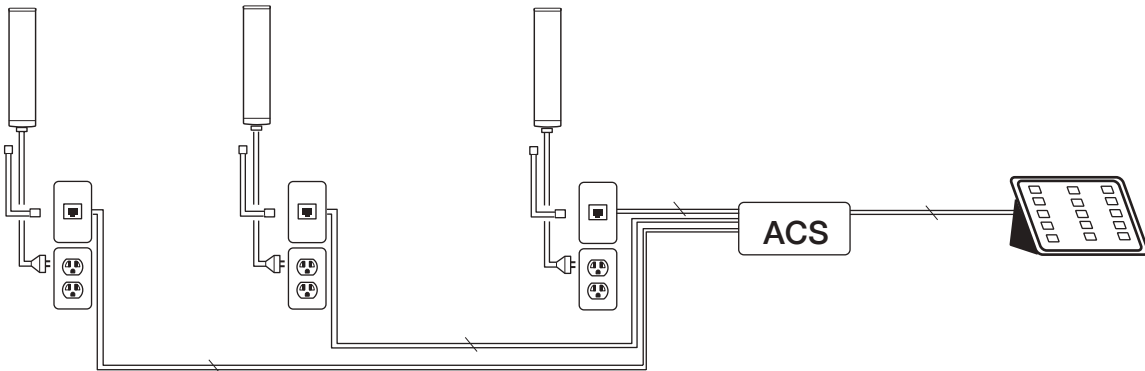
J. Automation Control System



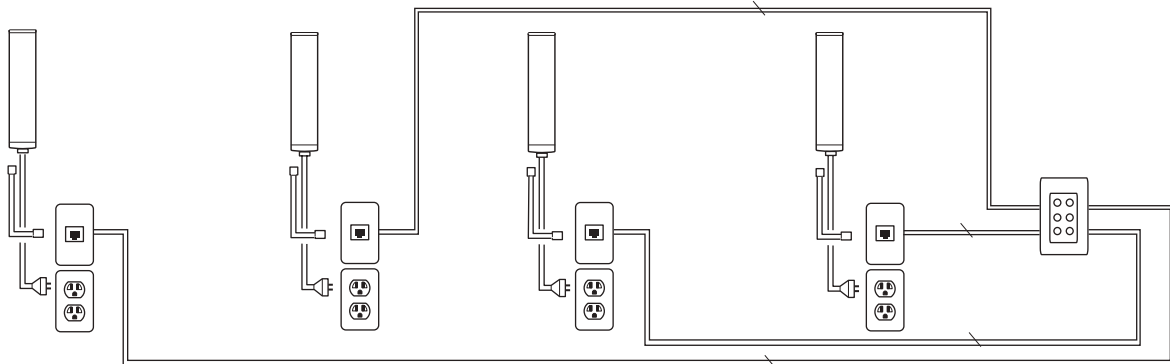
K. Automation Control System with Individual Remote Control and S-300A Switch



L. Individual and Group Automation Control System



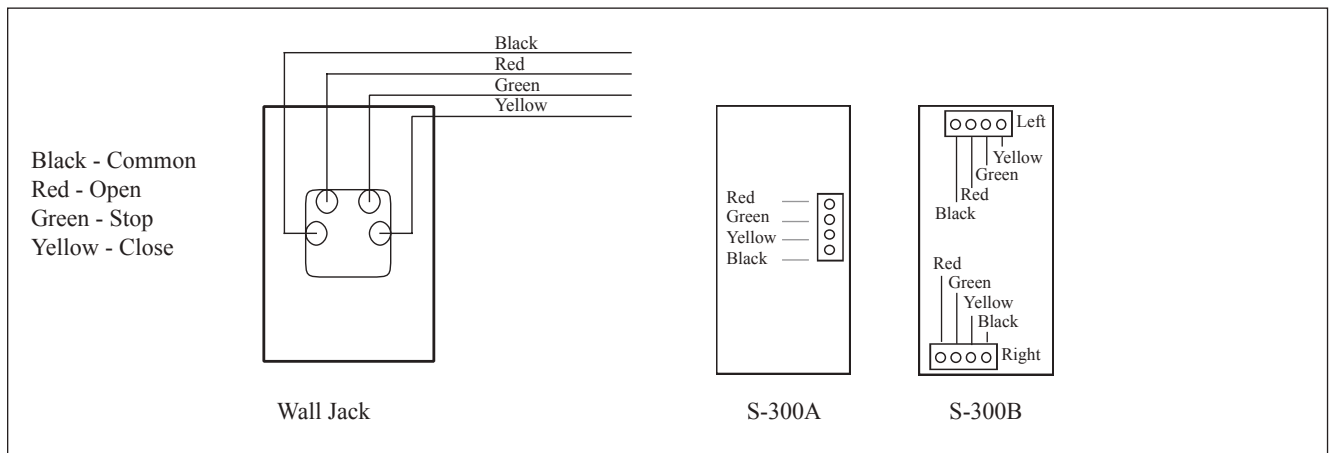
M. Double Group Switch Control with S-300B Switch



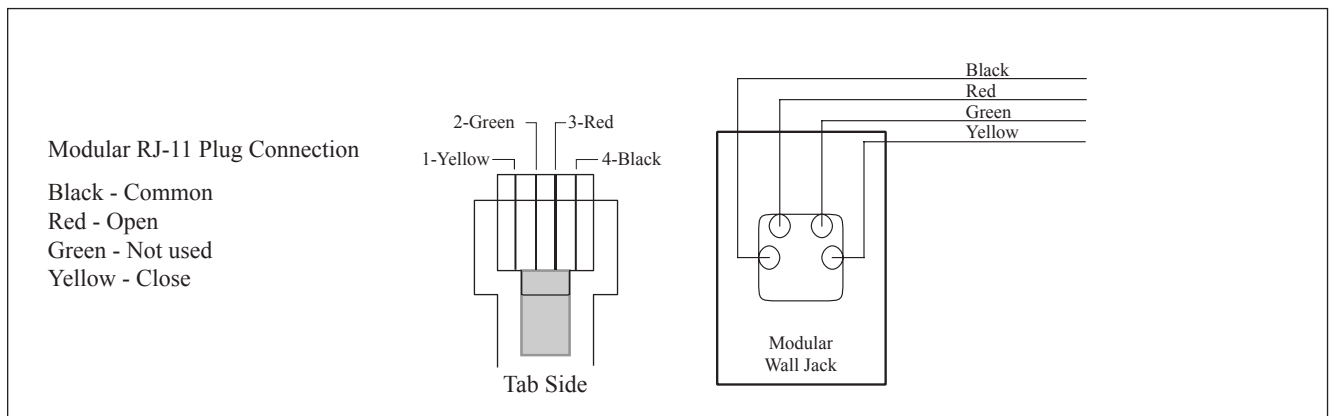


### DRAPERY MOTORS ELECTRICAL/ELECTRONIC CONTROL AND WIRING INFORMATION GUIDE

N. Modular Wiring for Direct Drive Motors Connecting to S-300A or S-300B Switch



O. Modular Wiring for Direct Drive Motors Connecting to Automation Control System



### RTS® - RADIO TECHNOLOGY SOMFY

Radio Technology Somfy (RTS) is a secure radio control system for the residential, commercial and hospitality markets. It offers a high performance, reliable and convenient wireless solution for motorization and automation, significantly reducing the wiring requirements. Wireless controls mean fast, easy installation with minimal impact on the building structure.

With the exclusive SMA-RTS receiver, the RTS control platform now extends across the entire spectrum of our product line, and is available for every drapery, blind and shade application.



Situ 1 RTS



Situ 5 RTS



Telis 16 Channel Transmitter



Telis 1 Chronis Timer Pure



DecoFlex 1- 5 Channels Wireless Wall Switch (shown: 5 channel)



Universal Interface



Repeater



SMA-RTS Drapery Motor Receiver



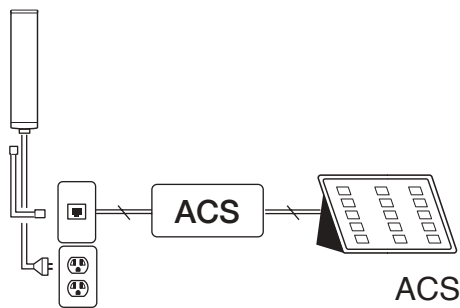
Dry Contact Interface (RTS)



TaHoma

### ELECTRICAL WIRING INFORMATION AND DIAGRAMS - A COMPARATIVE GUIDE FOR CONTROL SYSTEMS

#### DRAPERIES



#### MODEL 475, 140-S OR PROGRESS 25/50/80

When interfacing with a home theater, multi-room control system, or whole-house automation system; two (2) momentary dry contacts (switching contacts with no voltage inputted) are required for open-stop-close (two button) operation.

#### Stop Function:

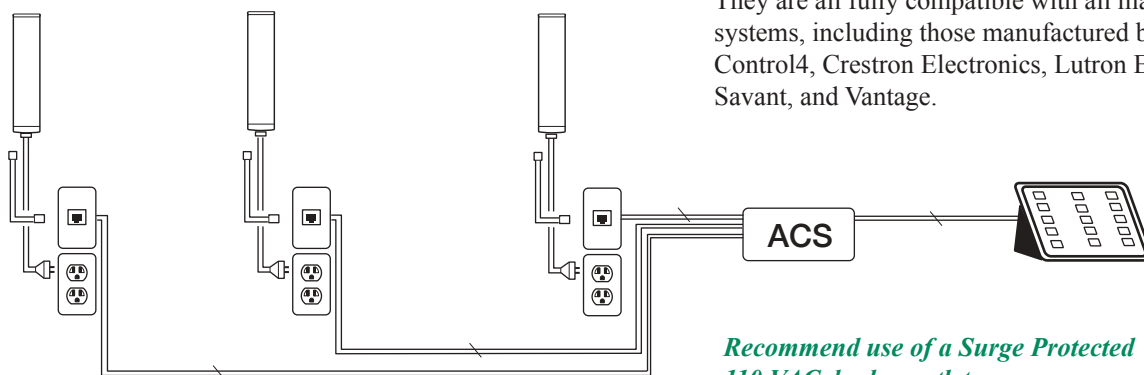
**For Model 140-S**, close the open/close contacts simultaneously or trigger the opposite direction contact for the “Stop” function.

**For Model 475**, operation initiates with either the “Open” or “Close” contact, and a second action with either contact produces the “Stop” function.

**For Progress 25/50/80 Ti-RF**, close the open/close contacts simultaneously for the “stop” function.

All drapery motors are “Smart Motors,” designed with built-in logic boards.

They are all fully compatible with all major control systems, including those manufactured by AMX, Control4, Crestron Electronics, Lutron Electronics, Savant, and Vantage.



*Recommend use of a Surge Protected  
110 VAC duplex outlet.*

#### Modular Wiring for Direct Drive Motors Connecting to an Automation Control System

##### Modular RJ-11 Plug Connection

- Black - Common
- Red - Open
- Green - Stop (only used with 3 contact configuration)
- Yellow - Close

