

Electrical Considerations for Executive Screens

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*ⓘ All electrical work being done **must** be in accordance with all Local and National Electrical Codes.*

Section 1: Power Isolation

ⓘ When planning for an Executive motorized unit, keep in mind you must always be able to cut power to each unit independently. This is not only during installation, but also in the event that the unit should ever need servicing, new remote needs to be added, or a re-screen is necessary

The simplest way to wire and Executive is to attach the supplied plug to the end of the cable coming from the motor. The customer can then either plug the unit into a receptacle. Another way wiring can be set up during construction for isolation of each individual unit is to have the builder install a switch (standard light switch (outdoor rated if on exterior) in the ceiling or wall next to where the unit will be installed. From the switch, the electrician can run a pigtail wire (18" into the opening) to where the Executive will be installed. This can be an added cost, so it is important to budget for it accordingly. Be sure that all wire connections are accessible for servicing the unit.

Section 2: Motors

The Somfy Maestria 50 RTS motors run off of 120V AC/60Hz power with an Integrated Radio Receiver, and have the following characteristics

- 10ft Motor Cable
- FCC Approved
- UL Recognized
- IP 44 Rated
- CSA Approved

Somfy RTS motors are low amperage; therefore, it would be acceptable to operate more than one Motorized unit wired in series to a 15-amp circuit as long as it complies with electrical codes. (See table below):

Performances	510S2	525S2	535S2
Torque	10 Nm	25 Nm	35 Nm
Nominal Voltage	120V / 60Hz		
Rated Current	1.3 A	1.6 A	2.1 A
Speed	20 rpm	20 rpm	20 rpm
Thermal Protection	5 minutes		
Radio Frequency	433.42 MHz		

ⓘ Motor selection is based on load and some restrictions may apply

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Technical Features			
Voltage Supply	AC	Temperature Working Range	14°F to 104°F (-10°C to 40°C)
Index Protection Rating	IP 44	Insulation Class	Class 1 for 120V
Limit Switch Type	Electronic RTS	Antenna: Integrated into power chord. Must be at least 12 inches and must not come in contact with metal	
Limit Switch Capacity	250 turns (Limited to 3 minutes of rotation without stop)		
Type of Cable	3 Conductor	Available Cable	10' (18' and 24' sold separately)

The RTS motors however cannot be wired to a direction switch (rocker: maintained or momentary), as they are not "directional" motors. Wiring a RTS motor to such a switch for control purposes will damage the motor and render it inoperable. A switch can only be wired to a RTS motor for the purposed of power isolation.

Section 3: Wiring

ⓘ The antenna is integrated into the power cord, therefore you must leave at least 12 inches of cable from the motor head and it must not come into contact with metal.

Standard "house" wire (12/2 or 14/2 gauge cable) is acceptable for wiring Motorized units. Electrical code suggests that the electrician match the size of cable, if possible, to the existing house wiring. The electrician can wire in parallel from one unit to the next providing that the rated capacity of the circuit is **not exceeded** (refer to power isolation). Ensure that all exposed cable is secured in such a way that it does not interfere with the operation of the roller

ⓘ Ensure that all electrical wiring meets or exceeds the local electrical codes in your area.

When a power source is located near the bottom of a Motorized unit equipped with standard track, a simple technique to wiring the unit is to run the motor cable through the housing, behind the roller, and down inside of the sidetrack before the track covers are snapped into place.

When attaching the motor cable, make sure there is a drip loop in the wire (especially if the motor is exposed to **any** form of moisture). The purpose of the drip loop is to prevent any moisture from running down the cable and into the head of the motor, as this can cause irreparable damage. Instead, the moisture will drip off at the lowest point of the loop.



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Section 4: Home Automation (HA) Systems

If you are working on “smart homes” with a centralized computer or home automation system, it is important to note that each brand of HA systems have different specifications for connections to an Motorized unit. Generally speaking, the following rules apply:

- All home automation systems except Lutron:
 - These systems can use either the “SINGLE CHANNEL” dry contact interface, which will allow you to directly connect via “low voltage cable” from the interface. This will give you the capability to connect a group of RTS motors directly to the interface wirelessly, but only “up/down/stop” as a group, no individual control.
 - The second option is to use a “UNIVERSAL RTS INTERFACE (URTSI)”. This will give you the capability to connect to a home automation system via RS232 or RS485 cable. This interface is wireless to the motors but gives you the capability to control the motors individually or in groups.

- Lutron home automation systems: Lutron is different in that it requires a “custom” made translator for communication between the motors and the home automation. The 16 Channel RTS Interface (URTSI) is still required between the motors and the translator. There are four variations of Lutron that needs to be considered, however effective Jul 2014, all shown Lutron options use one translator (SOMFY Cat # 1870210), they are:
 - Homeworks
 - RA2 to URTSI
 - GRAFIK EYE QS to URTSI
 - LUTRON QUANTUM to URTSI

If you have any questions, please call for further assistance and a Phantom Screen Technical Support Representative will be happy to supply you with the information you require.

Section 5: Remotes

All of the remote controls transmit with radio waves and are not infrared. They also pose an extremely low risk of cross transmittance, as they are equipped with a rolling code signal. The wireless remotes are exclusive to the motors. They are offered in the following variations: handheld, surface mount and “in-wall” mount. They are also available as a: single channel, 5 channel and 16 channel (based on style).

The expected battery life in one of these remotes with normal operation is approximately 3 years for the handheld and surface mount versions. The battery for these remotes is a CR 2430. The “in-wall” remote sold prior to September 2004 also uses that same batter, however, after that date the battery was replaced with a CR 2450, which under normal use has a normal battery life of 25 years.

Section 6: Environmental Controls

Somfy has various sun and wind control options available, to assist in the operation of the Motorized Screens. For a complete list of controls and their specifications contact a Phantom Screen Technical Support Representative