Somfy Architectural Resource Binder

Applications for Commercial Buildings

Motors and Controls for Interior
and Exterior Shading Solutions

somfy®

Solutions for Buildings

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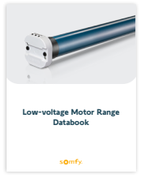
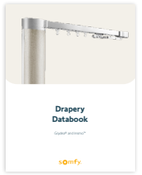
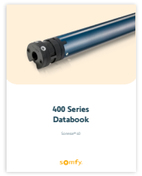


Low Voltage Databook



Drapery Databook



400 Series Databook

animeo® IP Databook

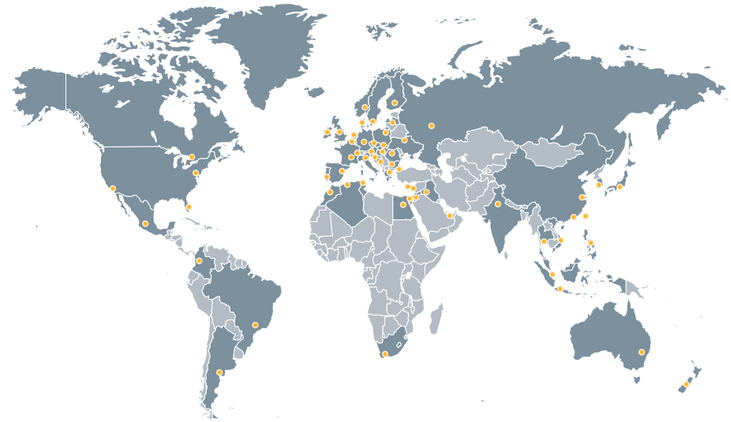
500 Series Databook

Who is **Somfy?**

Somfy Systems is the global leader in the manufacturing of strong, intelligent, quiet motors and control systems for both interior and exterior window coverings. Since 1969, Somfy engineers have designed products for both the commercial and residential markets and recently celebrated the production and sales, throughout the world, of more than 200 million motors.

Somfy's Commercial Building Solutions offer a wide range of intelligent motors and controls that optimize the utilization of natural light in your commercial workspace. Our systems are calibrated to maximize occupant comfort while enhancing visual environments, minimizing solar glare and heat gain, and providing UV protection.

Somfy's natural light automation systems are scalable in design, offered in low voltage, line voltage or wirefree options, and are perfect for projects of any size or budget.



Somfy operates worldwide via a network of **121 subsidiaries** and **60 offices & agencies** across **59 countries**. With **8 production sites**, Somfy has efficient and responsive industrial assembly facilities. Our high quality standards allow us to cater to **270+ million users'** and **30,000 commercial clients'** needs worldwide.

Our subsidiaries

bft-automation.com/en_US

simu.com/us

telecoautomation.com

Power of **Somfy**

Commitment to **QUALITY**

Continuous
PRODUCT INNOVATION

Dedicated to
SERVICE & SUPPORT

Somfy is the leading global manufacturer of strong, intelligent and quiet motors with electronic and app controls for interior and exterior window coverings.

200+ million motors produced and sold since 1969
Production capacity of **70,000** motors a day
270 million users worldwide
4 distribution centers across North America
100% LEED Accredited Architectural Specification Team
Motors backed by a **5 year** warranty
50+ years of experience
More than **600** standard approvals in the world
Ease of product **installation** and **adjustment**
400+ engineers developing innovation
Somfy has certified over **100 patents** since the year 2000
Life Cycle Testing for **endurance** and **reliability**
State-of-the-art **product testing** facility
100% products tested

Acoustic Tests for Sound Level and Quality • Mechanical & Electrical Safety Tests (UL, CE, TUV)
Radio Technology Somfy® (RTS) Receiver Power & Sensitivity • Embedded Software Validation Testing
Heat and Fire Resistance Testing • Water and Oxidation Resistance • Climate (Temperature & Humidity) • Packaging

Somfy **Support**

Working with you from specification to commissioning

Thousands of shade manufacturers around the world choose Somfy motors to bring their natural light control products to life. Somfy's nationwide Architectural Specification Team will work with you to find the right manufacturer and support your project every step of the way.

Planning

Specification for projects of all sizes and price points

Somfy's Architectural Specification team will remain on hand throughout the planning and specification process ensuring a tailor-made solution for your project.

Experienced professional installation services

Somfy's nationwide network of trained professional installers will work hard to respect your project timeline and meet all local and federal building requirements.

Installation

Commissioning

Simplified and trouble-free system programming

- Intuitive animeo® IP software allows the facility manager total control over all system functions.
- Sample pattern projects can be established through Somfy support to simplify programming.
- Somfy on-site support is available.

Continuing Somfy Support

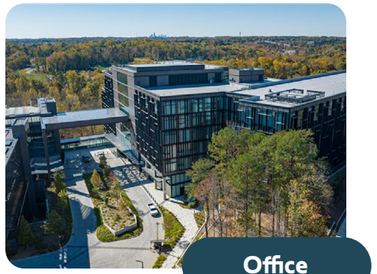
All Somfy system components are backed by a 5 year non-prorated warranty and a 10+ year life expectancy.

Operation

For additional information about Somfy products or services, visit **somfysystems.com/commercial** or email **architectural@somfy.com** for project support.

About Somfy

Project **References**



Vanguard Charlotte Campus
Charlotte, NC

Sector:	Office
Architect:	LS3P
Fabricator:	Hunter Douglas Architectural
Dealer:	Clayco Corp.

The Ritz Carlton
Half Moon Bay, CA

Sector:	Hospitality
Architect:	HBA Hirsch Bedner Associates
Fabricator:	5 Star Interior Services
Dealer:	5 Star Interior Services

Integrative Biosciences Center
Detroit, MI

Sector:	Education
Architect:	Harley Ellis Deveraux
Fabricator:	Hunter Douglas Architectural
Dealer:	Creative Windows

University of Texas SW Brain and Cancer Center
Dallas, TX

Sector:	Healthcare
Architect:	Page, EYP Architectural & Engineering
Fabricator:	Marek Brothers Dallas
Dealer:	Marek Brothers Dallas

Vertical **Market Segments**

There are many reasons for which commercial buildings are built or renovated. Buildings are needed for education, for work, for healing, and for relaxation. Somfy offers a wide array of solutions for any type of building, delivering benefits that are universally desirable for any functionality.

- Increased **thermal and visual comfort** aids the learning rate of students, creates a productive atmosphere for workers, provides comfort to customers, and fosters the well-being of patients. Everyone wants to benefit from as much natural light as possible, while at the same time avoiding heat gain and glare.
- Optimized energy performance provides substantial energy savings and meets new environmental regulations by consuming less energy and natural resources. Saving money and protecting the environment are positives for any building owner and occupant.
- Rapid **return on investment** as a result of energy savings and reduced maintenance and operational costs.

"Natural light, proper ventilation, appropriate temperature and humidity ranges, or even localized controls lead to healthier environments." *-Miller et al. 2009*

Somfy solutions for your projects

Somfy has developed intelligent solutions for the operation of building openings and sun protection devices. These systems improve comfort for occupants while also reducing energy costs.

Offices
- Increase energy savings by utilizing natural light management to reduce artificial lighting in the workplace.
- Integrate shading solutions with building management systems to control heat gain and reduce peak loads on cooling systems.

Hospitality
- Save energy by managing the amount of heat gain or loss in occupied or unoccupied spaces.
- With automated and remote-controlled solutions, everyone can take advantage of the benefits of motorized shading solutions.

Healthcare
- Consider controlling solar shading solutions in patient rooms using integrated bedside controls.
- Centralized shading control systems offered by Somfy allow adjustments of shade positions from the main nursing stations or control desk.

Education
- Integrate with building security systems to automatically open or close shading solutions during evacuation or lock out modes.
- Actively participate in Child Safety Month by excluding strings and chains from manual windows in spaces occupied by young children.

Vertical Market Segments - **Offices**

Office Solutions

- Managing light levels is an essential component for comfort. It is monitored in order to provide the best possible working conditions for occupants while also promoting their good health.
- Somfy's centralized automation solutions are easy to integrate, operate and help maximize energy savings. The ease of operating automated shades reduces the effort required to adjust manual shades which improves comfort and decreases building's operating costs.

How automated shading contributes to LEED certifications:

① **Minimum Energy Performance**
Somfy can contribute toward prerequisite when factored into building design, automated window coverings controlling the amount of solar energy entering the building based on energy modeling run by consultant.

② **Optimize Energy Performance**
Somfy's automated shading technology can contribute to this credit by reducing solar heat gain in the built environment.

American Airlines Trinity HQ Campus

Fort Worth, TX

Sector:	Office
Architect:	Kendall Heaton Architects
Fabricator:	Hunter Douglas Architectural
Dealer:	Marek Brothers

LEED Gold

Vertical Market Segments - **Hospitality**

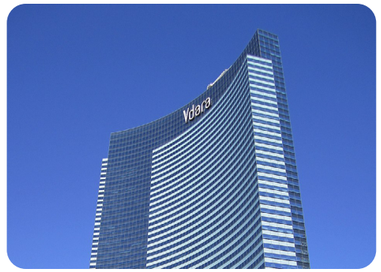
Hospitality Solutions

- Somfy motors and controls improve occupant conditions such as consistent operating temperatures in hotel rooms, reception areas, and meeting rooms. Maintaining constant temperatures by managing natural light and heating or cooling loads is a key factor in improved occupant comfort.
- The sensors and automatic devices used in Somfy solutions reduce energy consumption by prioritizing the use of natural light, reducing solar gains in the summer and adapting building openings to actual occupancy periods (tourist season, seminar times, etc.).
- With automated and remote controlled solutions, everyone can take advantage of the benefits of technology. Occupants have complete freedom over their space and simple control options are able to adapt the hotel's structure to their desires.

How automated shading contributes to LEED certifications:

① **Daylight & Quality Views**
Spaces with Somfy's automated shading technology to control glare are exempt from the ASE requirement of this credit. Achieving quality views to the outdoor natural or urban environment for 75% of all regularly occupied floor area is enhanced by proper fabric selection and daylight management strategies.

② **Acoustic Performance**
Somfy's ultra quiet motors operating at 38db can contribute towards this credit by reducing mechanical noise in spaces.



MGM City Center Vdara

Las Vegas, NV

Sector:	Hospitality
Architect:	Rafael Vinoly Architects
Fabricator:	Mechoshade

LEED Gold

Vertical Market Segments - **Healthcare**

Healthcare Solutions

- By using Somfy control systems, patients can manage their own window coverings without moving from their bed in order to control natural light, protect their privacy and stay in control of their comfort at all times.
- Somfy solutions communicate with weather sensors, timers and switches to centralize main controls for a building.

This is an example of the customized bedside controls used in healthcare applications which have shade control built into the remote.

How automated shading contributes to LEED certifications:

① **Environmental Product Declaration**
Somfy's commitment to healthy and environmentally sustainable products is reflected in our extensive database of Somfy motors and controls with type III EPD's listed in the Eco passport program.

② **Material Ingredients**
Somfy provided REACH compliant declarations on all our motors and controls.

NYU Langone Health, Helen L. and Martin S. Kimmel Pavilion

New York, NY

Sector:	Healthcare
Architect:	Ennead Architects, NBBJ
Fabricator:	DFB Sales
Dealer:	DFB Sales

LEED Platinum

Vertical Market Segments - **Education**

Education Solutions

- Somfy motorization and control systems enable integration with building security systems to automatically open or close shades during evacuation or lock out modes. The operation of automated shades during emergency modes increases the security and safety of the occupants.
- If a school is designed to meet local requirements by eliminating strings from window shading fixtures, the school will be able to actively participate in Child Safety Month by excluding strings and chains from manual windows in spaces occupied by young children.
- The sensors and automatic devices used in Somfy solutions reduce energy consumption by prioritizing the use of natural light, reducing solar gains in the summer and adapting building openings to actual occupancy periods.

How automated shading contributes to LEED certifications:

① **Innovation**
Somfy industry leading technologies such as window coverings being powered through PoE and agnostic integration opportunities encourages teams to achieve exceptional or innovative performance.

② **LEED AP**
Somfy Architectural Specification Representatives have LEED BD+C, LEED Green Associate and WELL AP credentials.

Ford Robotics Lab Building

Ann Arbor, MI

Sector:	Education
Architect:	University of Michigan, Ford, HED
Fabricator:	Creative Windows
Dealer:	Openlight

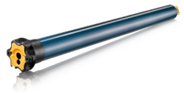
LEED Gold

System **Architecture**

Somfy products installed in a typical building equipped with motorized shading solutions.

The bus line
Allows bi-directional communication between the various products connected to the network.

Somfy now offers innovative SDN Connect Bus Distribution Devices to improve power and data distribution along any SDN bus line.

Motors


Compact sensor
Provides real time weather information to the building controller

Building controllers
Compatible with proprietary bus (Somfy Digital Network™) protocols to control buildings of any size.

Local controls


animeo® IP
Virtual Keypads

DecoFlex
Digital Keypad

Programming and configuration interfaces


Choose Your AC Motor - **Interior**

Interior Roller Shades

A wide range of quiet motors and intelligent controls are available and selection is determined based on project requirements and building functionality. Somfy solutions offer a large range of motor and control options for all types of end products.

- Somfy line voltage (AC) motors fit the most common interior and exterior window treatment applications.

Sonesse® ULTRA 50

Sonesse® 40

Somfy Designed for Silence - Quietness Scale

Somfy DESIGNED FOR SILENCE

For individual motor sound ratings, refer to databook appendix

The Sonesse® range of motors are rated according to their quietness. The volume scale below appears on all Sonesse range specification pages and designates the motors's level of sound output.

Wired Technology

The cost-effective standard solution. Typically used for applications requiring small to large torque ranges in new construction or retrofits where wiring can be run without difficulty.

Type of Power Cable

Wired
120V AC / 60Hz
4-conductor SJTW cable

Electrical connection	white = neutral red = direction 1 black = direction 2 green = ground
Torque	4-100 Nm
Diameter	40-60 mm
Voltage	120 V AC
Current consumption	0.5-3.8 A
Installation comments	Line voltage can not be powered in parallel. Follow local codes and regulations.
Applications	• Interior shades • Roller shutters • Screens • Awnings

SDN Connect

The precise solution where exact positioning is required. The motor's increment encoder measures the specific position and sends bi-directional communication to the controller.

Type of Power Cable

400 Series
120V AC / 60Hz
2-conductor cable

500 Series
120V AC / 60Hz
3-conductor cable

NOTE: *Data cable required: RJ9 or RJ45 (sold separately)*

Electrical connection	white = neutral black = hot green = ground
Torque	4-35 Nm
Diameter	40-50 mm
Voltage	120 V AC
Current consumption	0.5-2.1 A
Installation comments	Follow the guidelines to properly design and install a Somfy Digital Network system. Supports a maximum length of 200 feet of data wiring from the motor to SDN Connect Data Hub.
Applications	For interior shades only.

Radio Technology Somfy®

A good solution in existing construction where pulling wires is difficult, mainly used in residential and small buildings. Radio frequency transmitters and accessories control the RTS motors without the need for wired controls.

Type of Power Cable

RTS
120V AC / 60Hz
3-conductor cable

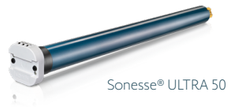
Electrical connection	white = neutral black = hot green = ground
Torque	4-100 Nm
Diameter	40-60 mm
Voltage	120 V AC
Current consumption	0.5-3.8 A
Installation comments	Max. recommended radio distance: 65 ft. with up to 2 cement walls.
Applications	• Interior shades • Roller shutters • Screens • Awnings

For more detailed information concerning line voltage motorized shades and blinds, see the 400 or 500 Series Databook appendix.

Choose Your DC Motor - **Interior**

Interior Roller Shades

- Low Voltage (DC) motors are designed for the most common interior window treatment applications.


Sonesse® ULTRA 50


Sonesse® 30

Somfy Designed for Silence - Quietness Scale

Somfy DESIGNED FOR SILENCE

For individual motor sound ratings, refer to databook appendix

The Sonesse® range of motors are rated according to their quietness. The volume scale below appears on all Sonesse range specification pages and designates the motors's level of sound output.

≤ 35 dBA — ≤ 44 dBA

Radio Technology Somfy® (RTS)

A good solution in existing construction where pulling wires is difficult, mainly used in residential and small buildings. Radio frequency transmitters and accessories control the RTS motors without the need for wired controls.

Type of Power Cable

Weidmüller non-removable pigtail
7.5 in. (190mm)

Electrical connection	Weidmüller: V, V-
Torque	2-4 Nm
Diameter	30-50 mm
Voltage	24V DC
Current consumption	0.625 - 1.5 A
Installation comments	Maximum power lengths will vary when using different gauge wiring (18 gauge wire over 100 ft., 16 gauge wire over 150 ft. from the power source). Maximum recommended distance between the motor and controller is 65 feet.
Applications	Interior shades.

SDN Connect

The precise solution where exact positioning is required. The motor's increment encoder measures the specific position and sends bi-directional communication to the controller.

Type of Power Cable

SDN Low-Voltage Motor Cable
5-conductor
7.5" length

Electrical connection	Weidmüller: V+, V-, +, -, G
Torque	2-4 Nm
Diameter	30 or 50 mm
Voltage	24V DC
Current consumption	0.9—2.0 A
Installation comments	Follow the guidelines to properly design and install a Somfy Digital Network™ system. Support up to 240 feet of power and data wiring to individual low-voltage intelligent motors from Power Connect.
Applications	Interior shades.

For more detailed information concerning low voltage motorized shades and blinds, see the Sonesse® 30 Databook appendix.

Choose Your PoE Motor - **Interior**

Interior Roller Shades

- Power over Ethernet (PoE) motors are designed for the most common interior window treatment applications.


Sonesse® 40 PoE


Sonesse® 30 PoE

Somfy Designed for Silence - Quietness Scale

Somfy DESIGNED FOR SILENCE

For individual motor sound ratings, refer to databook appendix

The Sonesse® range of motors are rated according to their quietness. The volume scale below appears on all Sonesse range specification pages and designates the motors's level of sound output.

≤ 39 dBA — ≤ 47 dBA

Power over Ethernet (PoE)

A low-voltage power distribution and network-connected solution that utilizes PoE (Power over Ethernet) technology to power and control shades and draperies.

Type of Power Cable

CAT-5e SF/UTP — RJ45

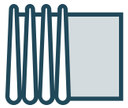
	Sonesse® 30	Sonesse® 40 2/25 Type 2	Sonesse® 40 4/25 Type 3	Sonesse® 40 6/25 Type 4
Electrical connection	CAT-5e SF/UTP — RJ45			
Torque	1.5 Nm	2 Nm	4 Nm	6 Nm
Diameter	30 mm	40 mm	40 mm	40 mm
Voltage	48V DC (42.5V DC —57V DC)			
Power Supply	Type 2 (30W)	Type 2 (30W)	Type 3 (60W)	Type 4 (75W)
Installation comments	Somfy recommends CAT-5e or higher SF/UTP (Shielded and Foiled with Unshielded Twisted Pair) for installations with high electromagnetic emissions and applications that can produce high electrostatic charging due to excessive friction. Maximum distance from power source is 328ft.			
Applications	Interior shades.			

For more detailed information concerning low voltage motorized shades and blinds, see the Low Voltage Databook appendix.

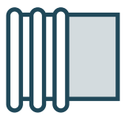
Choose Your Drapery Motor - **Interior**

Draperies — Glydea® ULTRA

Glydea® ULTRA is designed to easily adapt to various control technologies including dry contact, Radio Technology Somfy® (RTS), RS485 and Zigbee®. Glydea® is available for all drapery types including pinch pleat and Ripplefold®.



Pinch Pleat



RippleFold®

	Glydea® ULTRA 35	Glydea® ULTRA 60
Power supply	120V AC 50/60 Hz	
Amperage	0.8A	
Average linear speed	Silent Mode: 2.95 in./s (7.5 cm/s) Standard Mode: 4.95 in./s -7.86 in./s (12.5 cm/s-20 cm/s)	
Power consumption	96W (standby <1W)	
Power cable type	3-wire cable with molded NEMA plug 4-wire cable (wired version only)	
Control connector type	RJ12	
DCT control circuit voltage	3.3V DC	
Motor sound level	<38 dBA at silent mode	
Certifications	c TUV us, CE	
Track maximum length	32 ft. (9.7 m)	36 ft. (10.9 m)
Maximum number of junctions	2	
Minimum bending radius	11.8 in. (30 cm)	
Minimum curving radius	118 in. (300 cm)	
Side opening max weight	77 lbs / 30 ft 35 kg / 9.7 m	132 lbs / 36 ft 60 kg / 10.9 m
Center opening max weight	77 lbs / 30 ft 35 kg / 9.7 m	132 lbs / 36 ft 60 kg / 10.9 m
Tandem alternative	154 lbs / 70 kg 64 ft / 19.4m	264 lbs / 120 kg 72 ft / 21.8 m

Adaptable control modules available:

RTS Radio Technology Somfy®

Somfy Digital Network RS485

zigbee

WIRED TECHNOLOGY

DRY CONTACT

For more detailed information concerning Glydea® motorized draperies, see the Drapery Databook appendix.

Choose Your Motor - **Exterior**

Exterior Roller Shades

There are three types of exterior roller shades:

1 Exterior shades

Installed on the exterior of building facades to manage natural light entrance and minimize solar heat gain by blocking radiant heat outside the window.

2 Enclosed exterior shades

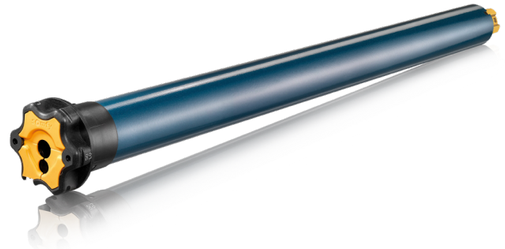
Provide optimum protection for the shade by retracting into a concealed, weather-tight enclosure.

3 Wind-resistant shades

Shades designed to remain tight during windy weather conditions. A mechanical protection against wind is often integrated using a lock at the bottom of each lateral guide rail guarantees a perfect alignment of the load bars.

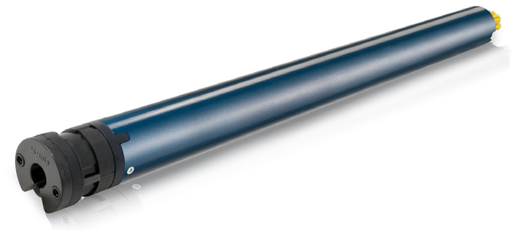
The choice of fabric is important since it influences the way in which heat is transmitted, reflected and absorbed. It is usually a perforated fabric made from woven - fiberglass or polyester coated and held by 2 lateral rails or cables. Somfy motors adapt to any type of blind and fit the requirements for speed to guarantee the occupants' visual comfort. They are designed to fit exterior shades up to 194 sq.ft.

500 Series — LT50 RS485



The RS485 motor controls and monitors networked shades and blinds to ensure users comfort and energy savings. Other control technologies available: wired (line voltage), Radio Technology Somfy or Digital bus for compatibility with third party control systems and more advanced features.

400 Series — Altus 40 RTS



Versatile radio motor allowing users to control any type of roller shade or blind. Several levels of power and sizes are available according to each application: Altus 40, 50, 60. Available in various speeds and a special fast-paced motors line for exterior roller shades.

Radio Technology Somfy® (RTS) offers a high-performance, convenient and reliable solution, eliminating the need for wiring between the motor and controls. With the radio receiver integrated within the motor, RTS is the ideal choice because installation is quick and easy.

For more detailed information concerning line voltage motorized exterior shades, see the 400 or 500 Series Databook appendixes.

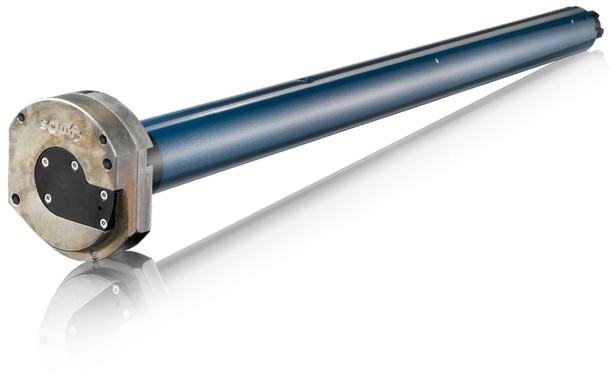
Choose Your Motor - **Exterior**

Awnings

Sunea® RTS CMO (Compact Manual Override)

Somfy offers the most advanced and innovative motor for cassette, semi-cassette and standard awnings. Achieve instant sun protection and extended control of outdoor spaces using this solution, while also incorporating all of the benefits of motorization with one motor.

Manual Override: Maintain control of the awning even with the loss of power. This dependable function enables the user to have peace of mind and operate the awning with a crank handle should power be lost. Additionally, Somfy's advanced technology ensures that all settings and programmed controls remain in the motor's memory.



Specifications

Model	525A2 CMO	535A2 CMO	550A2 CMO
Torque	25 Nm	35 Nm	50 Nm
Nominal Voltage	120V AC	120V AC	120V AC
Rated Current	1.6 A	2.1 A	2.1 A
Speed	20 rpm	20 rpm	14 rpm
Thermal Protection	4 minutes	4 minutes	4 minutes
Radio Frequency	433.42 MHz	433.42 MHz	433.42 MHz

Technology options available

Radio Technology Somfy® (RTS) offers a high-performance, convenient and reliable solution, eliminating the need for wiring between the motor and controls. With the radio receiver integrated within the motor, RTS is the ideal choice because installation is quick and easy.

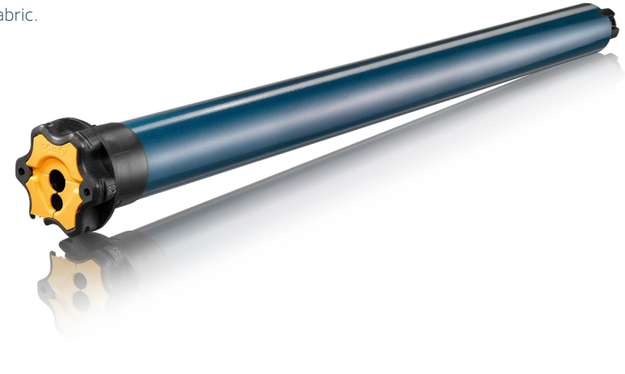
RTS
Radio Technology Somfy®

NOTE: For more detailed information concerning the Sunea® motor see the 500 Series Databook.

Exterior Screens

Maestria RTS 550R2

Somfy offers the most advanced and innovative motor designed to motorize all types of exterior vertical screens while offering the specific functionalities needed for zip applications. This includes smart functions such as obstacle detections and automatic adjustments to stretch fabric.



Specifications

Model	510A2 RTS	525A2 RTS	535A2 RTS	550A2 RTS
Torque	10 Nm	25 Nm	35 Nm	50 Nm
Nominal Voltage	120V AC	120V AC	120V AC	120V AC
Rated Current	1.3 A	1.6 A	2.1 A	2.1 A
Speed	20 rpm	20 rpm	20 rpm	14 rpm
Thermal Protection	5 minutes	5 minutes	5 minutes	5 minutes
Radio Frequency	433.42 MHz	433.42 MHz	433.42 MHz	433.42 MHz

Technology options available

Radio Technology Somfy® (RTS) offers a high-performance, convenient and reliable solution, eliminating the need for wiring between the motor and controls. With the radio receiver integrated within the motor, RTS is the ideal choice because installation is quick and easy.

RTS
Radio Technology Somfy®

NOTE: For more detailed information concerning the Sunea® motor see the 500 Series Databook.

Choose Your **Control**

Control Solutions for Buildings

The motor technology that you choose depends largely on the features you are specifying.

Wired Technology (WT)

Wired motors

Standard wired technology controls offer a time-tested and cost-effective solution for many building applications. In new construction or renovations, WT solutions provide simple and reliable control for installations that require less sophisticated management solutions. A variety of individual control options utilizing dry contact or wired switches are available. The common motor options available for wired technology are durable, dependable, and feature a wide variety of torques and speeds for interior or exterior motorized shading applications.

Benefits

- Wired technology is a simple system technology to understand due to the basic nature and functionality.
- The control interfaces used with wired motors are limited to basic types with the same functionality of switching polarity to send commands.

Radio Technology Somfy® (RTS)

Radio motors

Radio Technology Somfy® (RTS) is Somfy's radio control platform which enables users to adjust motorized interior window coverings and motorized exterior products from virtually anywhere inside or outside.

Benefits

- Security: alternating, tamper resistant code with 16 million combinations.
- Reliability: its narrow bandwidth means that RTS usually is not affected by other systems (Depending on other system strength).
- Upgradeability: you can add/change user controls and automatic systems over time.
- Controllability: could be controlled using remotes, switches, sensors, timers and an app based TaHoma® interface.

Somfy Digital Network™ (SDN Connect)

Digital motors

The Somfy Digital Network™ operates as either a stand-alone option or included in animeo IP systems. SDN components are integrated into a system designed to operate a broad range of products, including roller shades, over a standard RS485 network. Bi-directional communication allows status feedback from each motor on the network in real time. SDN utilizes a bus network architecture so you can establish a remote connection to the system from most locations throughout the building.

A stand-alone SDN scalable shading system, without a system-wide master controller, provides powerful yet economical building solutions:

- Manage unique addresses for each intelligent motor.
- Operate AC line voltage motors and DC low voltage motors on a single intelligent network with no gateway devices required.
- Manufacturers can pre-set upper and lower motor limits, adjustable on-site via handheld device.
- Configure and manage local controls and motor groupings from any point in the system's wiring network.
- Each motor automatically aligns itself to a referenced shade position upon receiving a command from the network.

animeo® IP and SDN Connect

animeo® IP: control for all automated window coverings

Improve digital network performance using the new line of SDN Connect Bus Distribution Devices!

**Contact a Somfy Representative to understand system design abilities.*

animeo® IP

Automated Total Solar Management

Somfy's animeo IP portfolio consists of intelligent building controls, motor controls, local controls, and a full array of sensors and accessories. This complete range of proven solutions ensures maximum functionality and flexibility, as well as a simple installation process. Moreover, our products are naturally compatible with each other to ensure interoperability. Our intelligent solutions to automatically control solar shading will enhance occupants' comfort and well-being while improving the building's energy efficiency.

An intuitive user interface allows for simplified commissioning, building management and technical support, featuring drag-and-drop programming, motor auto discovery, and at-a-glance real-time system status updates.

What animeo® IP can do for your project

animeo® IP is a hardware and software solution that combines configuration and control software in one comprehensive package. By managing a full range of intelligent motors from a single source, animeo IP presents a stronger, more customizable solution that meets today's requirements for LEED certification while increasing occupant comfort.

animeo® IP performs in installations across all vertical market segments including Offices, Hospitality, Education and Healthcare.

animeo® IP Benefits	Building Owner	Architect	Facility Manager	Occupant/Tenant	Engineer
Energy Efficiency	• Reduce heat gain • Save on HVAC capital costs	• Reduce heat gain and cooling loss • Wider selection of glazing options	• Reduce lighting and HVAC demand during occupied and unoccupied times	• Reduce the power consumption from artificial light	• Increase the ability to achieve successful building perfomance
Visual & Thermal Comfort	• Improve building façade appearance • Reduce glare in work environment	• Solar Depth Entrance Management offers options for positioning workspaces	• Enter the distance between windows and work areas in animeo IP to manage solar depth entrance management	• Manage natural daylight • Minimize glare	• Assist during the design process to create a productive and comfortable working environment
Scalability & Flexibility	• Easily add to existing SDN installations	• One system fits buildings of all sizes	• System functionality and operation remains simple for a single office or an entire building	• System easily adapts to the specific needs and requirements of the workspace	• The system could support the functionality of multiple building types
Simplicity	• Reduces the complexity of automated solar shading solutions	• Simple to design, install and commission	• Easy to adjust functionality of motors or controls from Graphical User Interface • Control entire building from one computer	• Override automatic control via in-wall keypads, virtual computer keypads and mobile devices	• System is simple to understand, design and build
LEED Certification	• Compliant with Title 24 • Opportunity to gain LEED credits	• The Somfy Specification Team is LEED accredited and provide support during the design phase	• Somfy supports LEED based design and commissioning for the system installed in your building	• LEED buildings show a higher occupant satisfaction in areas like perceived productivity, indoor air quality and thermal comfort.*	• Earn more LEED points during the design phase of a project

** US Green Building Council, "The Business Case for Being Green." July 2012*

animeo® IP System Features

Sun sensor monitoring

Automates natural light management based on the sun's position in the sky and façade direction to minimize glare and maximize the opportunity for daylighting.

Solar entrance depth management

During active sun tracking periods, animeo IP's Solar Entrance Depth Management feature will adjust and maintain the solar shade height to limit the distance that sunlight enters the space. This protects furnishings, maximizes daylight availability and minimizes glare on work surfaces and computer screens.

Control versatility

Programmable wall-mounted keypads, wireless controls and virtual keypads provide occupants control over nearby window coverings. animeo IP can override manual occupant commands during specific time periods (ex: east façade from 8 AM - 12 PM) to keep the building running as efficiently as possible, providing just the right balance of manual and automated control.


Facility Manager View


Somfy Digital Keypad


Virtual Keypad

Compatibility

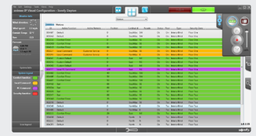
animeo IP is compatible with existing SDN installations, at any point in system design, as well as wind, sun and weather sensors, in-wall keypads and wireless sensors, and third party building management systems.


Sonesse® ULTRA 50


Sonesse® 30

Facility management

Somfy Digital Network™ (SDN Connect) technology provides bi-directional status reporting of window covering positions. With this information, animeo IP displays system status snapshots in convenient table form. Facility managers can also receive systems alerts via email.



Streamlined commissioning process

Auto-discovery of motors and switches expedites installation while drag-and-drop configuration simplifies commissioning.

Real and astronomic timed events

With animeo IP's timed events feature, schedules can be created to keep buildings energy efficient based on certain times of day. Creating timed events around periods of high occupancy (between 8:00AM and 6:00PM, Monday through Friday) and low occupancy (weekends, holidays) ensures the building is running as efficiently as possible.

Sensors

A variety of Somfy weather sensors are compatible with animeo IP, including rain, wind, sun and temperature sensors. Sensor configuration and setup is easy using animeo IP's intuitive user interface.


Compact Sensor

animeo® IP

Intuitive Graphic User Interfaces

A standout feature of animeo IP is its graphic user interface. There are four main system views: Façade, Group, List and Floorplan. The Floorplan view offers facility managers a dynamic snapshot of system status and indicators in an easy-to-understand floor plan format as well as convenient access to controls and critical system information.

- Weather forecast information
- Real-time information from weather sensors
- System errors and notifications
- Color-coded motor statuses
- Hover over motors or keypads to view detailed information
- Easily access other floors
- Switch between multiple views
- Right click to emulate user commands
- Master keypad for facility manager controls
- Scale and zoom

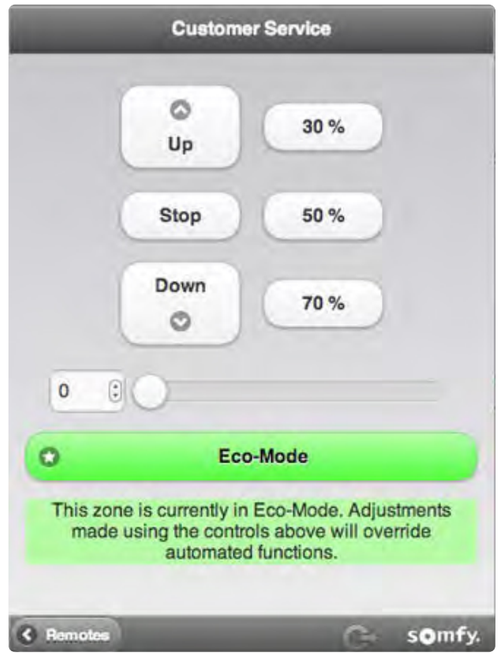
Virtual Keypads

Both facility managers and occupants have access to virtual keypads from their PCs, laptops, tablets or smart phones connected to the site's LAN for convenient local control.

- UP, DOWN, and STOP commands
- Slider for customized settings
- Access system presets: Openness levels and Energy Savings Mode

Facility Manager View

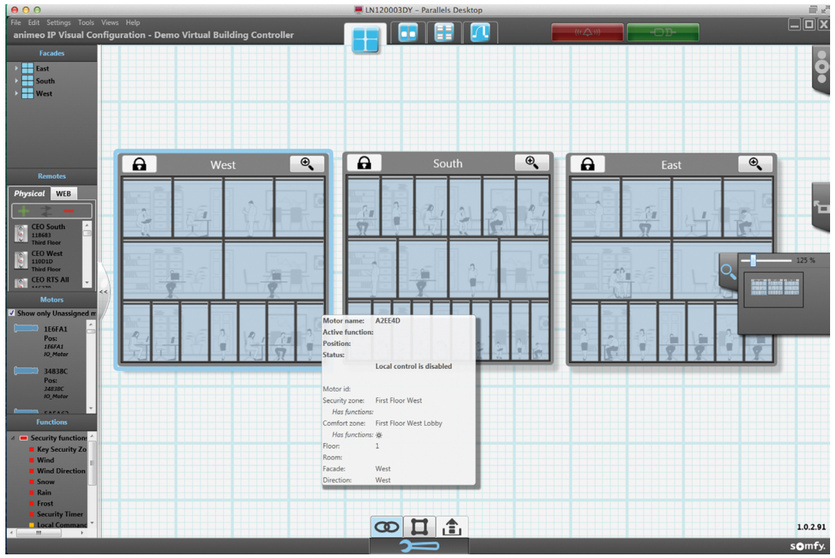
Occupant View



Controls

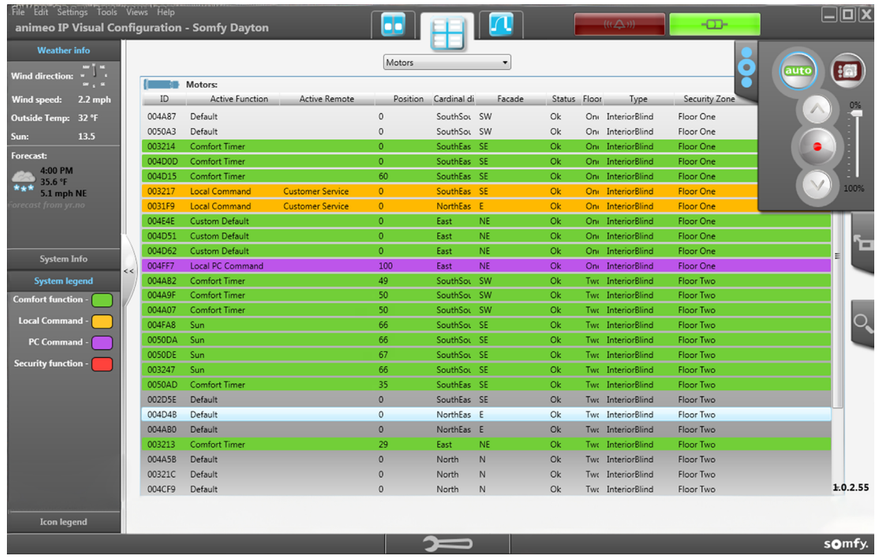
animeo® IP **Configuration Views**

Façade View



Graphical representation of building exterior.

List View

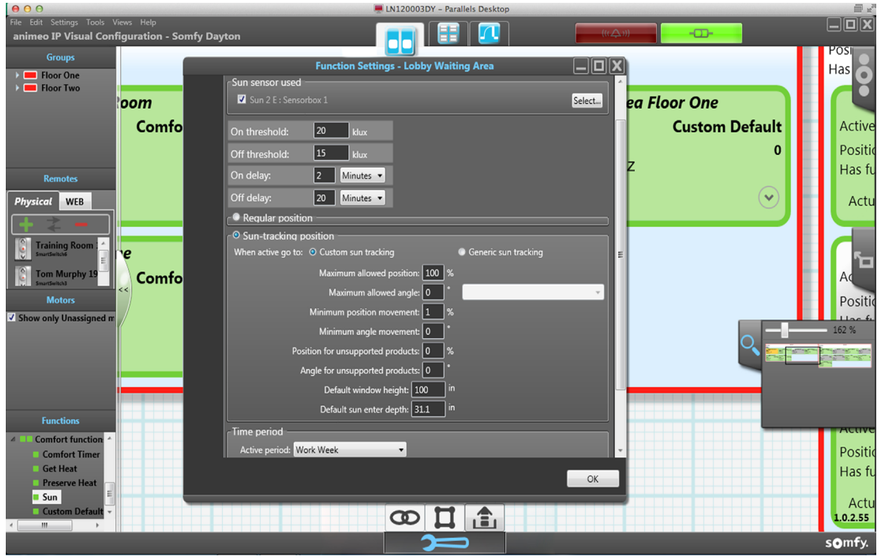


Able to sort database by system status.

Group View

Conceptualized view of groups that make up the system.

Sun Sensor Monitoring

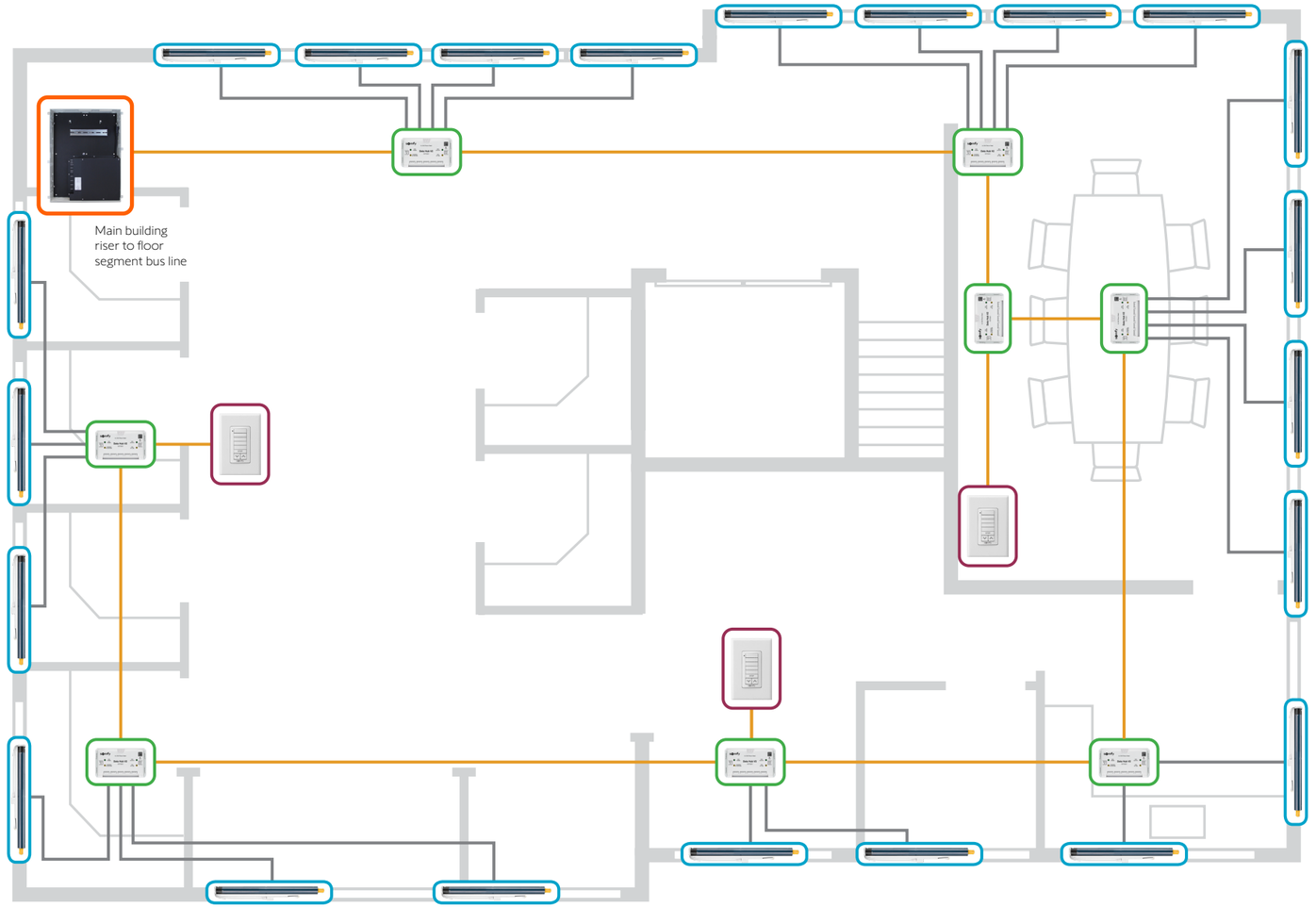


Input from sun sensors effectively automate solar shading. animeo IP can log historical light and temperature values to improve efficient energy management and glare reduction.

SDN Connect AC **Wiring Detail**

Product Type Legend

- Cat-5e or higher
- Motor Data Cable
- Motor
- Bus Distribution
- User Interface
- Bus Power Sources



DecoFlex SDN Keypad V2

- Individual motor and group motor functionality.
- Up to 5 preset positions and full UP, STOP, DOWN functionality.
- Cat-5e and higher cable connections required.

SDN Data Panel

- Bus power source and bus distribution device used to start or expand an SDN system.
- Adds 4 isolated bus segments, perfect for riser installations.

SDN Bus Booster

- Bus power source that provides 24V power to the bus line.
- In-line power extender that can be connected anywhere on bus or provide power to start a bus segment.

SDN Data Hub V2

- Adds 5 device ports to the SDN bus line.
- Devices can include keypads and integration components.

SDN Low-voltage Power & Data Cable

Use the Somfy Low-voltage Motor Cable to achieve the maximum 240 ft. distance for low voltage motors. It is available in plenum or non-plenum versions.

Sonesse® 40 RS485 Motor

- Quiet operation.
- Powerful lifting capacity with a smaller footprint.
- Connects to the bus line via an SDN device port with a Cat-5e or higher cable connected to the data pigtail and RJ45 coupler.

Powered by junction box

Sonesse® ULTRA 50 RS485 Motor

- Ultra quiet operation at less than 38 dB.
- Motors connect to bus line via an SDN device port with a RJ9 to RJ45 data cable.

Powered by standard outlet or junction box

Sonesse® 30 RS485 Motor

- Quiet operation.
- Motors connect to bus line via and SDN device port with a RJ9 to RJ45 data cable.

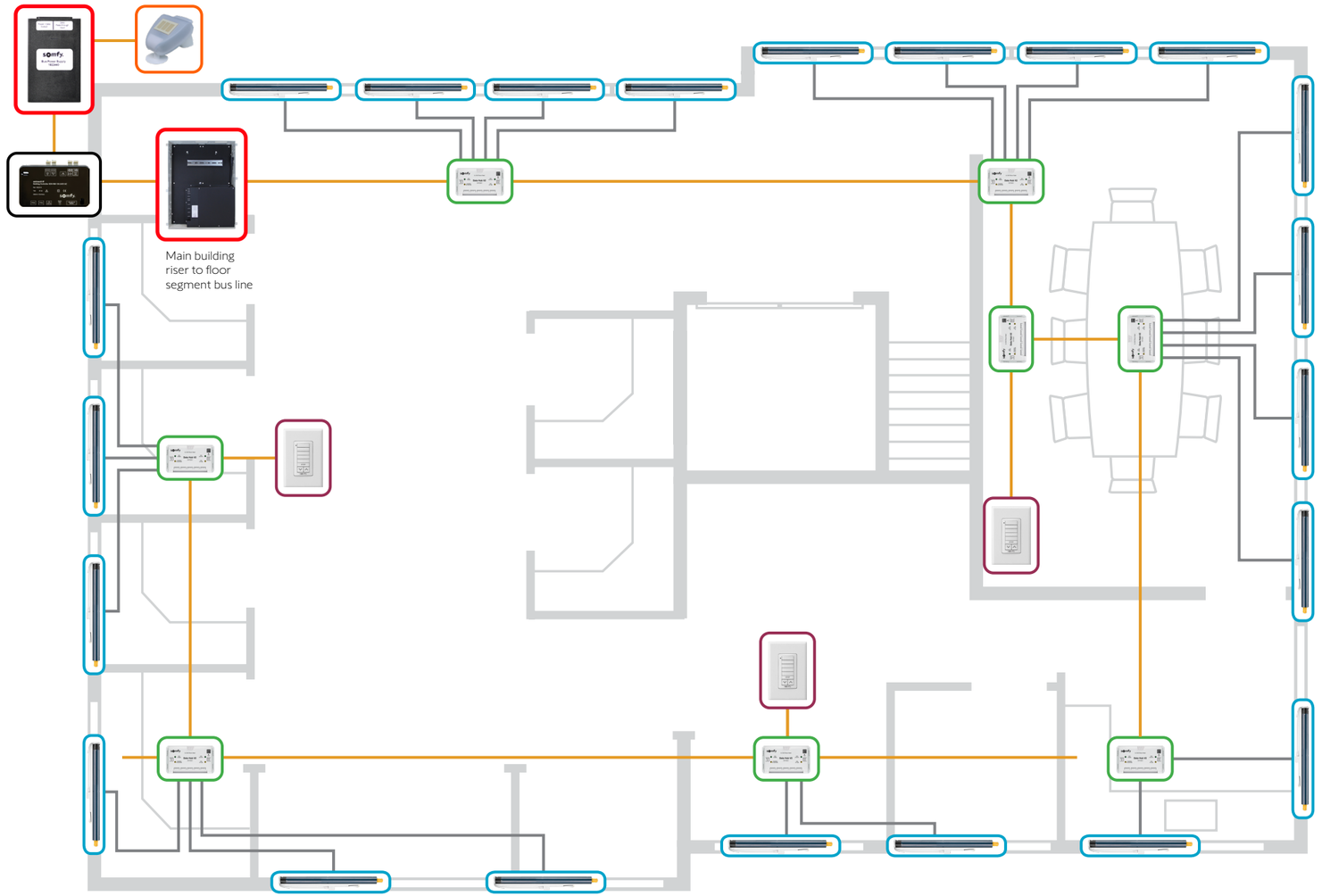
Powered by standard outlet or junction box

Controls

animeo® IP AC **Wiring Detail**

Product Type Legend

- Cat-5e or higher
- Motor Data Cable
- Motor
- Bus Distribution
- User Interface
- Controller
- Bus Power Sources
- Sensor



SDN Data Hub V2

- Adds 5 device ports to the SDN bus line.
- Devices can include keypads and integration components.

DecoFlex animeo® IP Keypad V2

- Provides user interface for animeo IP system to control motors individually, by group, facade, or an entire building
- Configurable button functionality presets
- Single or multi-gang compatible
- Standard Decora size

Compact Sensor Station

- Six independent Sensors
  - Wind Speed
  - Heated Rain
  - Temperature
  - Sun intensity (3)
- Weather tight RJ45 connector

animeo® IP

- Solar depth entrance management for dynamic facade control
- Sensor-threshold-based motor control
- Accurate time & astronomic motor control
- Network-based motor control with user account access
- Facility manager access provides global system status & control
- Integration-ready for third party control systems and BMS systems
- System can be expanded with the addition of a Sub Controller

SDN Data Panel

- Bus power source and bus distribution device used to start or expand an SDN system.
- Adds 4 isolated bus segments, perfect for riser installations.

SDN Bus Booster

- Bus power source that provides 24V power to the bus line.
- In-line power extender that can be connected anywhere on bus or provide power to start a bus segment.

Bus and Sensor Station Power Supply

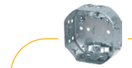
- Provides 24V DC power to the SDN bus and sensor

SDN Low-voltage Power & Data Cable

Use the Somfy Low-voltage Motor Cable to achieve the maximum 240 ft. distance for low voltage motors. It is available in plenum or non-plenum versions.

Sonesse® 40 RS485 Motor

- Quiet operation.
- Powerful lifting capacity with a smaller footprint.
- Connects to the bus line via an SDN device port with a Cat-5e or higher cable connected to the data pigtail and RJ45 coupler.



Powered by junction box

Sonesse® ULTRA 50 RS485 Motor

- Ultra quiet operation at less than 38 dB.
- Motors connect to bus line via an SDN device port with a RJ9 to RJ45 data cable.

Powered by standard outlet or junction box

Sonesse® 30 RS485 Motor

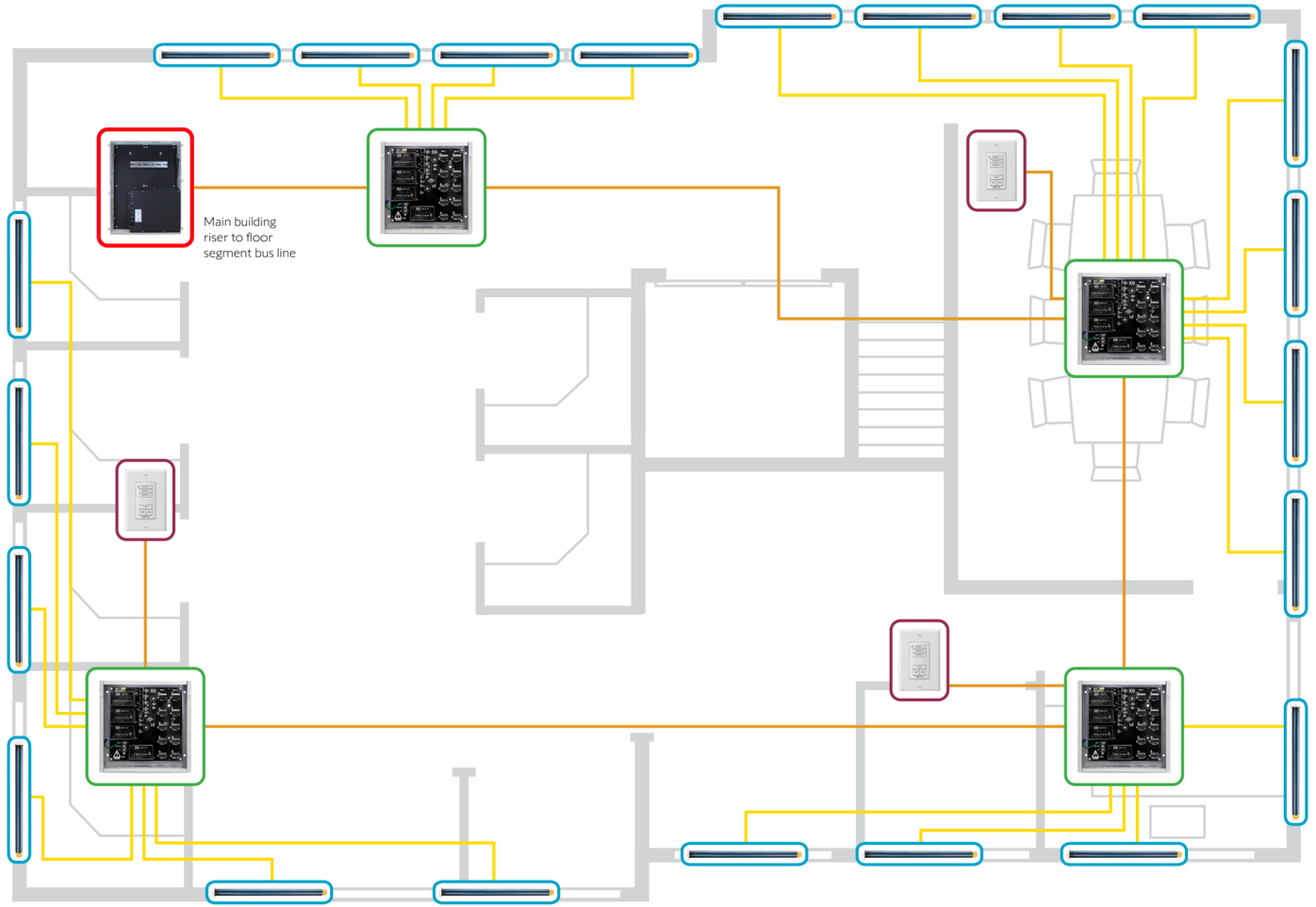
- Quiet operation.
- Motors connect to bus line via and SDN device port with a RJ9 to RJ45 data cable.

Powered by standard outlet or junction box

SDN Connect DC **Wiring Diagram**

Product Type Legend

- Cat-5e or higher
- SDN Low-voltage Power and Data Cable
- Motor
- Bus Distribution
- User Interface
- Bus Power Sources



SDN PowerConnect™ Surface-Mount Panel

- Isolated motor ports support up to 240 feet of power and data wiring to individual low-voltage intelligent motors.
- Used to add 10 isolated motor ports and two isolated device ports to an SDN bus segment.
- Two device ports isolated from the SDN bus.
- In wall or on-wall mountable plenum-rated enclosure.

SDN PowerConnect™ Rack-Mount Panel

- Supports up to 240 feet of power and data wiring to Somfy's range of low-voltage SDN motors.
- Enables control of eight RS485 DC motors per panel.
- Two device ports isolated from the SDN bus.

SDN Data Hub V2

- Adds 5 device ports to the SDN bus line.
- Devices can include keypads and integration components.

SDN Data Panel

- Bus power source and bus distribution device used to start or expand an SDN system.
- Adds 4 isolated bus segments, perfect for riser installations.

SDN Bus Booster

- Bus power source that provides 24V power to the bus line.
- In-line power extender that can be connected anywhere on bus or provide power to start a bus segment.

Sonesse® ULTRA 50 RS485 Motor

- Ultra quiet operation.
- Motors connect to the bus line via a PowerConnect Panel with low voltage power and data cable.

Sonesse® 30 RS485 Motor

- Quiet operation.
- Smaller diameter and shorter length to fit smaller windows.
- Motors connect to the bus line via a PowerConnect Panel with low voltage power and data cable.

Powered by the SDN PowerConnect Panel

DecoFlex SDN Keypad V2

- Individual motor and group motor functionality.
- Up to 5 preset positions and full UP, STOP, DOWN functionality.
- Cat-5e and higher cable connections required.

SDN Low-voltage Power & Data Cable

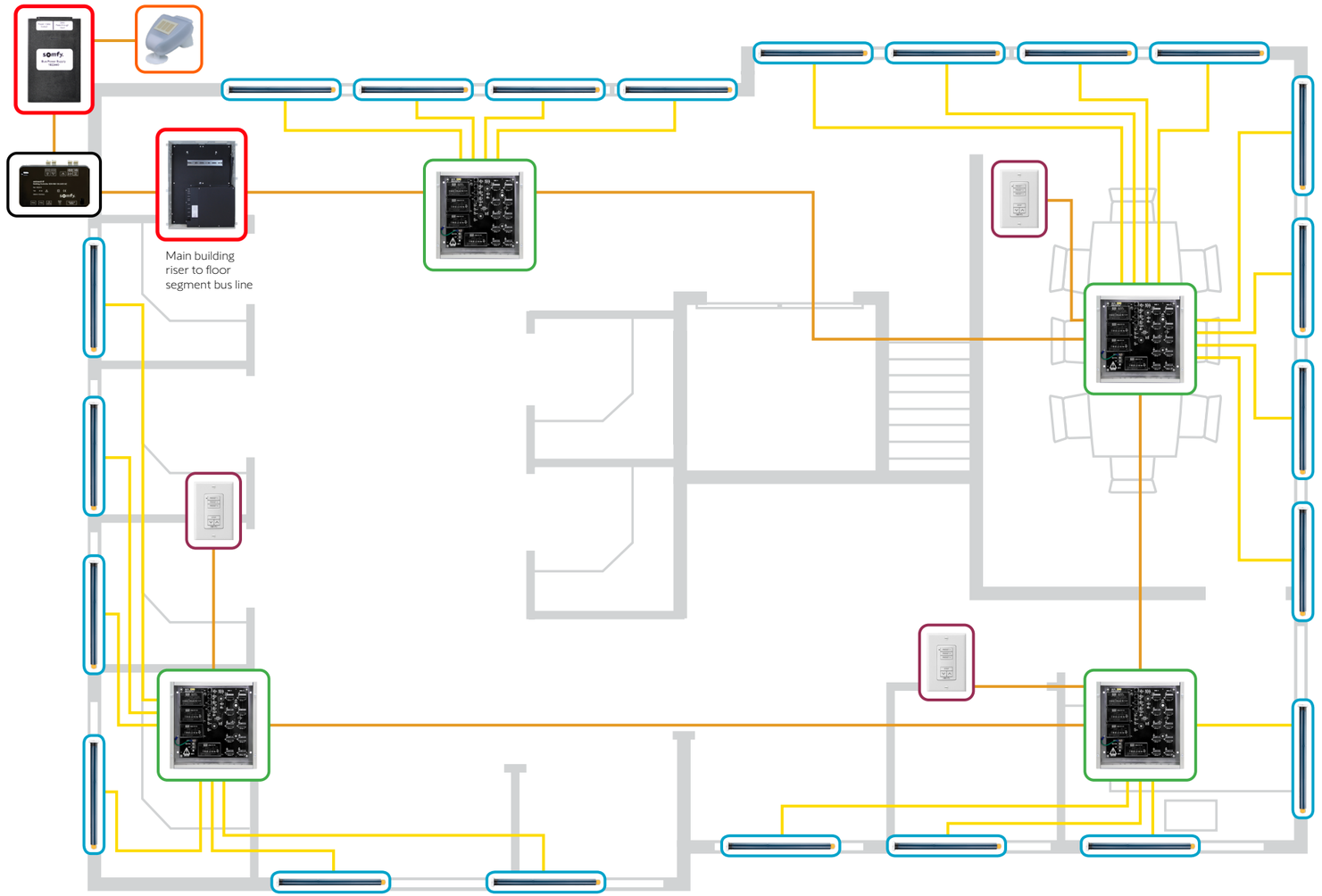
Use the Somfy Low-voltage Motor Cable to achieve the maximum 240 ft. distance for low voltage motors. It is available in plenum or non-plenum versions.

Controls

animeo® IP DC **Wiring Detail**

Product Type Legend

- Cat-5e or higher
- SDN Low-voltage Power and Data Cable
- Motor
- Bus Distribution
- User Interface
- Controller
- Bus Power Sources
- Sensor



SDN Data Panel

- Bus power source and bus distribution device used to start or expand an SDN system.
- Adds 4 isolated bus segments, perfect for riser installations.

SDN Bus Booster

- Bus power source that provides 24V power to the bus line.
- In-line power extender that can be connected anywhere on bus or provide power to start a bus segment.

Bus and Sensor Station Power Supply

- Provides 24V DC power to the SDN bus and sensor

SDN PowerConnect™ Surface-Mount Panel

- Isolated motor ports support up to 240 feet of power and data wiring to individual low-voltage intelligent motors.
- Used to add 10 isolated motor ports and two isolated device ports to an SDN bus segment.
- Two device ports isolated from the SDN bus.
- In wall or on-wall mountable plenum-rated enclosure.

SDN PowerConnect™ Rack-Mount Panel

- Supports up to 240 feet of power and data wiring to Somfy's range of low-voltage SDN motors.
- Enables control of eight RS485 DC motors per panel.
- Two device ports isolated from the SDN bus.

SDN Data Hub V2

- Adds 5 device ports to the SDN bus line.
- Devices can include keypads and integration components.

Sonesse® ULTRA 50 RS485 Motor

- Ultra quiet operation.
- Motors connect to the bus line via a PowerConnect Panel with low voltage power and data cable.

Sonesse® 30 RS485 Motor

- Quiet operation.
- Smaller diameter and shorter length to fit smaller windows.
- Motors connect to the bus line via a PowerConnect Panel with low voltage power and data cable.

Powered by the SDN PowerConnect Panel

Compact Sensor Station

- Six independent Sensors
  - Wind Speed
  - Heated Rain
  - Temperature
  - Sun intensity (3)
- Weather tight RJ45 connector

animeo® IP

- Solar depth entrance management for dynamic facade control
- Sensor-threshold-based motor control
- Accurate time & astronomic motor control
- Network-based motor control with user account access
- Facility manager access provides global system status & control
- Integration-ready for third party control systems and BMS systems
- System can be expanded with the addition of a Sub Controller

DecoFlex animeo® IP Keypad V2

- Provides user interface for animeo IP system to control motors individually, by group, facade, or an entire building
- Configurable button functionality presets
- Single or multi-gang compatible
- Standard Decora size

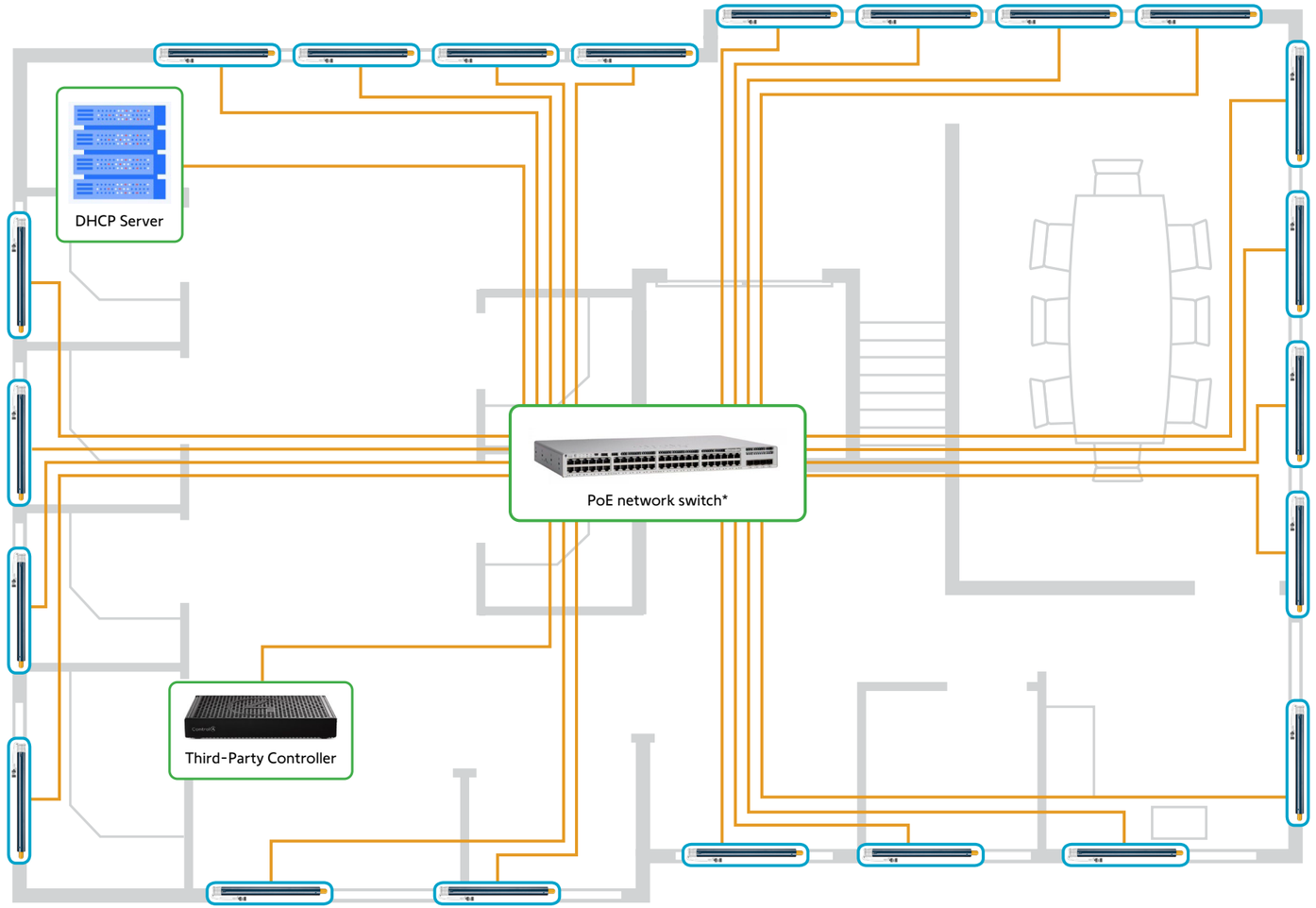
SDN Low-voltage Power & Data Cable

Use the Somfy Low-voltage Motor Cable to achieve the maximum 240 ft. distance for low voltage motors. It is available in plenum or non-plenum versions.

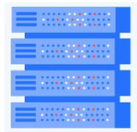
Power over Ethernet (PoE) Motor **Wiring Diagram**

Product Type Legend

- Cat-5e or higher
- Motor
- Third Party component



DHCP Server
(not supplied by Somfy)



DHCP server or residential router (router to manage ethernet network).

Third-Party Controller
(not supplied by Somfy)

Direct integration to third-party control systems via the Somfy Synergy™ API.

PoE Network Switch
(not supplied by Somfy)

Use appropriate model PoE network switch that meets IEEE 802.3 at or bt standard.

Sonesse® 30 PoE Motor

- Designed for silence.
- Smaller diameter and shorter length to fit smaller windows.
- Controllable by major third-party systems.

Sonesse® 40 PoE Motor

- Ultra-quiet operation.
- Wide range of lifting capacities.
- Controllable by major third-party systems.

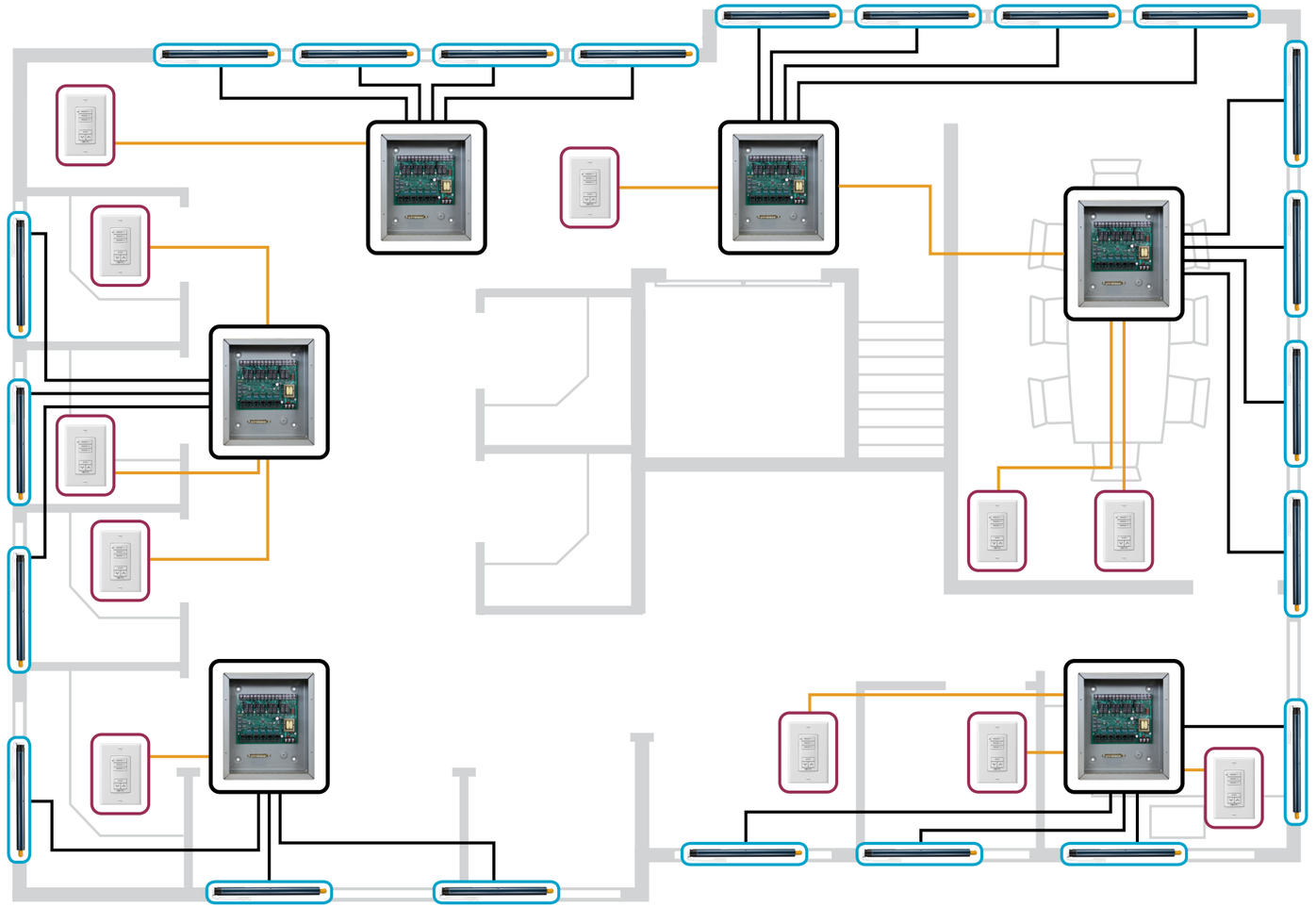
Standard Category Cable

- CAT-5e SF/UTP (Shielded & Foiled Unshielded Twisted Pair).
- TIA-568B Standard with shielded RJ-45 Connectors.
- Max Distance from Switch is 328'.

Standard Motor **Wiring Diagram**

Product Type Legend

- Cat-5e or higher
- Motor
- User Interface
- Controller



IGC 4n1 Motor Controller

- Individual and group control.
- Connect up to four WT motors to each controller.
- Connect multiple controllers to control larger groups.
- Three intermediate positions available per group.

DecoFlex Dry Contact Keypad

- Individual group motor control.
- Up to 3 preset positions and UP, STOP, DOWN functionality.
- Cat-5e and higher cable connections required.

Sonesse® 40 WT Motor

- Quiet operation.
- Wide range of lifting capacities.
- Fully programmable.

Powered by standard outlet or junction box

Sonesse® ULTRA 50 WT Motor

- Ultra quiet operation.
- Fully programmable.

Powered by standard outlet or junction box

Sonesse® 50 WT Motor

- Quiet operation.
- Wide range of lifting capacities.
- Wide range of control options.
- Fully programmable.

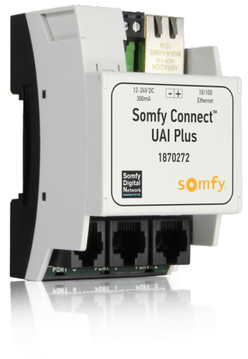
Powered by standard outlet or junction box

Controls

Somfy Integration

Third-party Control Systems

Through RS485, RS232, Zigbee and dry contact automation systems can be programmed to directly interact with Somfy products. The Somfy Connect™ Universal Automation Interface (UAI) Plus allows for commissioning and integrating Somfy Digital Network™ (SDN) over IP.



Somfy Digital Network RS485

Partnerships

Control4 · CRESTRON · ELAN · JOSH · QSC · RTI · SAVANT · Smart ONE · URC

Building Management Systems (BMS)

Utilizing the Somfy BACnet gateway, SDN Connect and animeo IP systems are able to send and receive data points on a BACnet system.

BTL BACnet Testing Laboratories · BACnet International

BMS Communication Protocols

BACnet IP · BACnet MS/TP · Modbus

Power Over Ethernet

With SDN Power over Ethernet (PoE) Gateways and PoE native motors, it's simple to integrate Somfy-powered motorized shade and draperies connected to PoE control systems.

PoE Power over Ethernet

Partnerships

cisco · Control4 · CRESTRON · ELAN · MHT · PoE Texas · RTI · SINCLAIR DIGITAL · URC

SDN 0-10V interface V2

The SDN 0-10V Interface is a Somfy Digital Network™ device which receives industry standard 0-10V control input to operate SDN RS485 motors.

Somfy Digital Network RS485 · 0-10V

Integration

Somfy Connect™ Universal Automation Interface (UAI) Plus

Overview

The Somfy Connect™ Universal Automation Interface (UAI) Plus allows for commissioning and integrating Somfy Digital Network™ (SDN) over IP/Ethernet. Embedded motor commissioning software streamlines SDN system configuration. The Somfy Connect™ UAI Plus is compatible with the Somfy Synergy™ API as well as drivers from popular home automation systems, making it easy to integrate custom automation programming.

Features Summary

- Embedded commissioning software
- Simplified SDN programming
- Requires an external power supply
- Single integration point for third-party automation systems over IP or RS232
- Compatible with SDN 2.0 and SDN Connect
- Works with Somfy Synergy™ API
- Controls up to 250 motors
- Powered from the SDN bus line (SDN 2.0 only)
- SDDP Integration

Technical Specifications

- Input: 12-24V DC
- Power Consumption: 60mA
- SDN Power Units: Consumes 6 Power Units (SDN 2.0 only)
- Material: ABS
- Operating Temperature Range: Ambient temperature
- Dimensions: 3.53" L x 2.375" W x 2.125" H
- Maximum Wiring Distance (Ethernet): 328' from the router using standard Cat-5e cable
- Maximum Wiring Distance (SDN): 4,000' total wire length
- Indoor use only

Compliance Specifications

- UL Listed
- CE Approved

What's in the Box

- Somfy Connect™ UAI Plus
- 8" Din Rail
- 7' Ethernet Cable
- Quick Start Guide

Optional Accessories

- DB9 to RJ45 adaptor for RS485 (9015029)

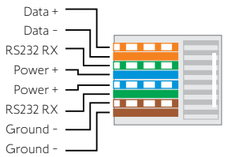
Supported Protocols

- TCP, UDP, TELNET Client, WEB Server, HTTP, UPNP, SDDP, Somfy Digital Network™ (SDN) & The Somfy Synergy™ API

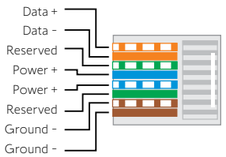
Cable Pinouts

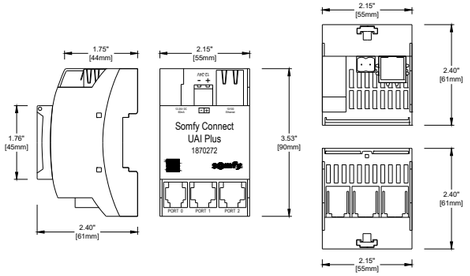
Port 0
Not used

Port 1
RS232 input or RS485 input

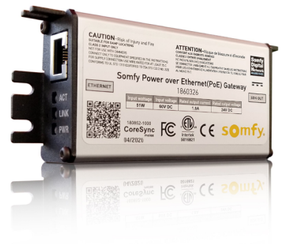


Port 2
SDN input





SDN Power over Ethernet (PoE) Gateway



Overview

The SDN Power over Ethernet (PoE) Gateway is a low-voltage power distribution and network-connected module that utilizes PoE (Power over Ethernet) technology to power and control the Somfy® 24V RS485 motorization offer for shades and draperies. The SDN PoE Gateway delivers up to 51W of power and Ethernet-based connectivity. The device supports both Somfy Synergy™ API and CoAP Digital Building API, and is compatible with Molex Transcend Network Connected System. The Gateway is powered and connected via standard Cat-5e/6 UTP cable and controls Somfy Digital Network™ (SDN) devices.

Features Summary

- Compatible with Molex Transcend Control System, distributes power and data to shade and drapery motors
- Uses Power over Ethernet Switches for power and data (Poe Switch must support LLDP, and be a Cisco UPoE compliant device)
- Capable of powering a single or multiple motors
- Ability to program up to 16 intermediate positions per motor
- Offers a control for groups of motors with stop and align command
- Compatible with third-party control drivers
- Easy and secure convergence of IP infrastructure
- Easy to connect/disconnect; allow daisy-chain capability
- Safe operation and industry-standard compliance (UL 2108/ UL 1310)
- Metal enclosure meets Plenum requirements

NOTE: Not allowed to be on the same subnet as Molex Gateways.

Technical Specifications

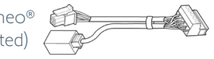
- Input Power: UPoE up to 60W
  Output Power: 24V DC @ 2A
  Input Data: Ethernet CoAP
  Output Data: SDN RS485
- Standby Power Consumption 0.5 W
- Material: Extruded Aluminum
- Operating Temperature Range: 32°F (0°C) to 104°F (40°C)
- Dimensions: 4.7 in. L x 2.1 in. W x 1.0 in H
- Maximum Wiring Distance:
  - Cumulative from Network switch to Gateway: 328 ft. using non-shielded Category 5e cable
  - Cumulative from Gateway to all motors: 240 ft. when using SDN Low-voltage Motor Power and Data cable
  - Cumulative from Gateway to Keypad: 200 ft. using Cat-5e cable
    Shipping Weight: 1 lb.
- Indoor use only

NOTE: Caution when mounting PoE Gateway to metal surfaces or pockets. Gateway must be isolated from possible earth or building electrical grounding, as well as from other gateways.

Required Pinout and Cables

- Gateway input pinout:
  - Supports both ANSI/TIA/EIA 568 A & B Standards
- Gateway Output cables:
  - PoE Gateway to Motor Adaptor (9025010), Cable length: 13 in.

  - PoE Gateway to Motor/animeo® Keypad Adaptor (Plenum Rated) (9025011), Cable length: 13 in. overall, 8 in. to keypad



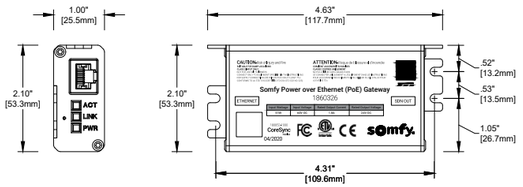
What's in the Box

- SDN Power over Ethernet (PoE) Gateway
- Instructions

NOTE: Ref. # 1870445 includes the SDN Power over Ethernet (PoE) Gateway and PoE Gateway to Motor Adaptor Cable (9025010) sold as a kit.

Optional Accessories

- Motor Daisy Chain Adapter for PoE Gateway (9020451) Cable length: 36 in.
- SDN Low-voltage Motor Power and Data Cables:
  - 5 Conductor Cable Plenum Rated (9020127)
  - Non-plenum Rated (9020126)
  - SDN Motor Female Connector (9025113)
  - SDN Motor Male Connector (9020743)



Integration

Somfy Connect™ BMS Interface V2

Overview

The Somfy Connect™ BMS Interface V2 for SDN and animeo® IP provides communication and control between Building Management Systems and Somfy Digital Network™ (SDN) motorized shading systems, either as a stand-alone installation or when part of an animeo® IP system. This interface communicates to the building management system via IP or serial to send and receive signals.

Features Summary

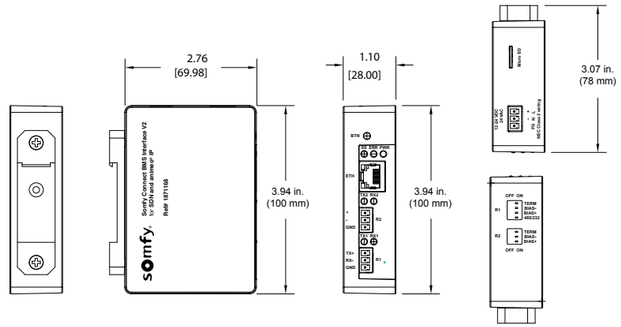
- System control
  - Stand-alone SDN - control individual or motor groups
    - Position (%) — feedback from motors only
    - Position (absolute) — feedback from motors only
    - Intermediate position
    - Up, Stop, and Down control
  - animeo® IP — control individual or motor groups, sensors, and virtual keypads
    - Position (%) — feedback from motors and virtual keypads
    - Up, Stop, and Down control/commands
    - Priority control
    - Sensor data — provides feedback to BMS system
- Supports up to 4500 device objects
- Embedded BACnet Explorer Tool
- Integration capabilities:
  - BACnet IP
  - BACnet MS/TP
  - Modbus TCP/IP
  - Modbus RTU
  - Metasys N2 by JCI
- Programmable through user-friendly interface
- Auto discovery for animeo® IP
- DIN rail mount

Technical Specifications

- Input: 9-30V DC or 24V AC
- Power Consumption: 24V AC 0.125A
  - Max Power: 3 Watts 9-30V DC .25A @12V DC
- Dimensions: 4" L x 1.1" W x 2.7" H (10.16cm x 2.8cm x 6.8cm)
- Operating Temperature Range: -4° F to 158° F (-20° C to 70° C)
- Relative Humidity: 10-95% RH, non-condensing
- Shipping Weight: 1 Lb.
- Approvals:
  - CE and FCC class B & C part 15
  - UL 62368-1
  - WEEE compliant
  - IC Canada
  - RoHS3 compliant
  - DNP 3.0 conformance tested
  - REACH compliant

What's in the Box

- Somfy Connect™ BMS Interface V2
- 24V DC 1.66A Wall Mount Power Supply (Cat. No. 1822209)
- 3" DIN-rail
- Somfy Connect™ BMS Interface V2 Quick Guide



NOTE: For more detailed information concerning BMS Interface V2, see the animeo IP Databook appendix.

SDN 0-10V Interface V2

Overview

The SDN 0-10V Interface is a device which accepts the lighting industry standard 0-10V analog dimming signal and converts it to an SDN or animeo® IP command to drive a single or a group of motors.

The control is housed in a junction-box-mountable, plenum-rated enclosure and powered by line voltage. There is a single RJ45 jack on the device which provides the connection to the SDN bus via a standard CAT-5 cable.

Somfy Digital Network™ System Overview

Somfy Digital Network™ (SDN) is Somfy's intelligent wired shading network. An SDN system is comprised of bus distribution devices that create a network for user interfaces, motorized applications, and sensors to be connected. SDN is scalable, suitable for both small and large projects, and the same components are used whether an SDN system remains stand-alone, integrated into third-party automation systems.

Technical Specifications

- Powered by line voltage. Input: 120V AC/60 Hz @ 20mA
- AC main and 0-10V wires are 18 AWG stranded copper
- Switchable SDN Power Output: 24V DC @ 200mA
- Single output with standard SDN pinouts
- Capable of providing Group All or Group-Specific Addressing
- 10 and 11 programmable intermediate positions
- Can support 30 motors through 6 Data Hubs. Additional motors can be added with an SDN Bus Power Supply (Item #: 1822440).*
- Toggle switch to turn SDN Bus power on/off
- Compatible with animeo IP and UAI Plus
- Junction Box Mounted Plenum Rated
- Enclosure
- UL Listed
- For indoor use only

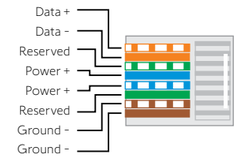
**When being used as a Bus Power Source only.*

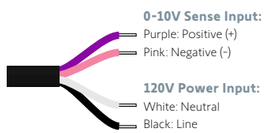
What's in the Box

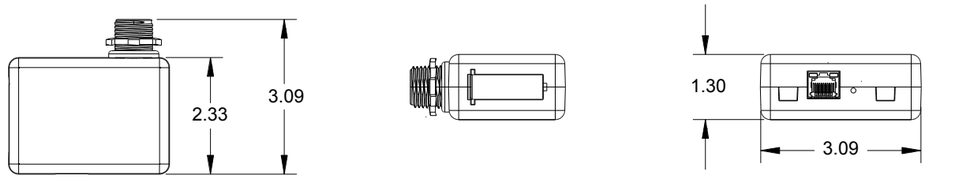
- SDN 0-10V Interface V2
- 1/2" NPT Lock Nut for Junction Box
- Instructions

Cable Pinouts

SDN Pinout
ANSI/TIA/EIA 568-B Standard







Somfy **Support**

Access CSI Specifications

Consider using Somfy specifications during the design phase of your future projects. Thousands of shade manufacturers around the world choose Somfy solutions to optimize natural light management in buildings.

Somfy's nationwide Architectural Specification Team will work with you to find the right manufacturer and support your project every step of the way.

Our CSI 3 part specifications are available for download:

CSI somfysystems/csispecs

ARCAT arcat.com

MasterSpec deltekspecpoint.com/MasterSpec

bibliotech bibliotech.ca

Contact Somfy for Project Support

Contact your local Somfy LEED accredited experts to learn more about Somfy specification solutions.

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CSI Specifications

Section 12 25 09

Specifications

SECTION 12 25 09

WINDOW TREATMENT MOTORS, CONTROLS, AND NETWORKED AUTOMATION SYSTEMS

SECTION 12 22 16

SOMFY GLYDEA® 60e MOTORIZED DRAPERY TRACK

SECTION 12 25 09

WINDOW TREATMENT MOTORS, CONTROLS, AND NETWORKED AUTOMATION SYSTEMS

Display hidden notes to specifier by using "Tools"/"Options"/"View"/"Hidden Text".

PART 1: GENERAL

1.1 SECTION INCLUDES

A. Motor Operators and Controls for Roller Shades:

1. Wired technology.
2. Wireless technology.
3. Digital network technology.

1.2 RELATED SECTIONS

A. Section 06 10 00 - Rough Carpentry. For wood blocking and grounds for mounting motors, controls, and accessories.

B. Section 09 22 00 - Support Systems for Gypsum Board; for mounting motors, controls, and other system accessories.

C. Section 12 24 13 - Roller Window Shades. For window shades.

D. Section 26 05 00 - Common Work Results for Electrical. For Low-voltage and line voltage electrical power when scope of work to be by others. For identification of products and requirements. For wiring devices, and motorized shade wall switches.

E. Section 26 09 43 - Network Lighting Controls. For lighting control system for control of motorized window shades via 0-10v technology.

1.3 ADMINISTRATIVE REQUIRMENTS

A. PRE-INSTALLATION CONFERENCE

1. Preinstallation Conference: Conduct conference at Project site to review the following:
   a. Low voltage wiring requirements and responsibilities.
   b. Separation of power and low voltage / data wiring.
   c. Wire labeling.
   d. Control locations.
   e. Connections to other equipment.
   f. Installer responsibilities.
   g. Pocket and/or mounting conditions.

1.4 ACTION SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Submittal Procedures.

B. Shop Drawings:

1. Include plans, elevations, sections, and mounting details.
2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
3. Description of Operations pertaining to automation schedule.

4. Motor-Operator and Control Systems:
   a. Include details for power, signal, wiring, and:
      1) Line-voltage 120 Vac.
      2) Low-voltage 24 Vdc.
      3) Wired technology motors.
      4) Wireless technology motors.
      5) Digital network technology motors.
   b. Installation instructions.
   c. System riser diagrams.
   d. Sensor positioning diagrams.
   e. Include requirements for interfacing with other systems.
   f. Include wiring detail for interconnection between components; gauge of wiring, wire limitations, connection to building electrical to follow local electrical code.
   g. Include final document package reflecting all changes to infrastructure, equipment type, locations, and other changes from original documentation.
   h. Include floor plan drawings to meet designated requirements of the building infrastructure and locations of all system components.
   i. Provide completed operation and maintenance manual including list of components and part numbers, and operation and maintenance instructions.

1.5 RELATED SECTIONS

A. Submit under provisions of Section 01 33 00 - Submittal Procedures.

B. Product Data: For each type of product.

1. Include component assembly details, material descriptions, dimensions of individual components and profiles, features, finishes, operating equipment, control systems, power, and signal types, electrical and communications requirements and connections, wiring diagrams, and installation instructions.

C. Sustainability Submittals refer to Division 01.

D. Product Schedule: For each motor-operator unit and network controls, and controllers. Use the same designations indicated on Drawings.

E. Operation and Maintenance Data: For motor operators and control systems to include in operation and maintenance manuals.

F. Warranty: Manufacturer's executed warranty documentation.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Motor operators, controls, and controllers certified by a Nationally Recognized Testing Laboratory to provide CE Compliant, UL-listed and/or cURus certified wired ac and dc powered motors.

1. ISO 9001 certified including in-house engineering and product design activities.
2. Motor manufacturer capable of supplying a full range of low-voltage (24 Vdc), main or line-voltage (120 Vac) motor and control products.

B. Installer Qualifications: Trained by manufacturer of motor-operator and control system products.

C. Controls manufacturer capable of supplying commissioning services for control systems.

D. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

E. Mock-Up: Construct a mock-up with actual materials in sufficient time for Consultant's review and to not delay construction progress. Locate mock-up as acceptable to consultant and provide temporary foundations and support.

1. The intent of mock-up is to demonstrate quality of workmanship and visual appearance.
2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
3. Retain mock-up during construction as a standard for comparison with completed work.
4. Do not alter or remove mock-up until work is completed or removal is authorized.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver complete motorized roller shade and control systems and accessories in factory packages, marked with manufacturer, product name, unique motor identification code, and location of installation using same designations indicated on Drawings.

B. Store equipment indoors in clean, dry space with uniform temperature to prevent condensation. Protect from exposure to dirt, fumes, water, corrosive substances, and physical damage.

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1.8 PROJECT CONDITIONS

A. Ambient Limitations: Do not install motor operators and control systems until spaces are dry with ambient temperature and humidity conditions maintained at levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where motor operators and control systems are indicated to fit to other construction, verify dimensions of other construction by field measurements and indicate measurements on Shop Drawings.

1. Allow clearances for operating hardware through entire operating range.
2. Notify Consultant of installation conditions that vary from Drawings. Coordinate fabrication fabrication schedule with construction progress to avoid delaying the Work.

1.9 WARRANTY

A. Manufacturer's Special Non-Prorated Warranty for Motor Operators and Control Systems: Manufacturer agrees to repair or replace motor and control system products not free from defects in material and workmanship under normal and proper use within specified warranty period.

1. Warranty Period: Five years from date of manufacture.

PART 2: PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Somfy Systems, Inc., which is located at: 121 Herrod Blvd.; Dayton, NJ 08810;
Toll Free Tel: 800-64-SOMFY; Tel: 609-395-1300; Fax: 609-395-1776; Email: request info (commercial_solutions_na@somfy.com);
Web: https://www.somfysystems.com/commercial Email: commercial_solutions_na@somfy.com;
Web: https://www.somfysystems.com/commercial

B. Acceptable Manufacturer: Somfy Systems Inc., which is located at: 6411 Edwards Blvd, Mississauga, ON L5T 2P7;
Phone: 800-66-SOMFY; 905-564-6446; Email: request info (commercial_solutions_na@somfy.com);
Web: https://www.somfysystems.com/commercial

C. Basis of Design Manufacturer: Subject to compliance with requirements, provide Somfy Systems; named motor operators and control systems.

D. Substitutions: Not permitted.

E. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00 - Product Requirements.

2.2 WIRED MOTOR OPERATORS AND CONTROLS - ROLLER SHADES

A. Electric Low Voltage Motor: cULus listed tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse 30 DCT.
2. Control Interface: Wired; local control and group control via dry contact switching.
3. Electrical Characteristics: 24 Vdc, 0.8 Amps.
   a. Sound Level: 42 dBA or less.
4. Low Voltage Power and Data Cable: Two Cables; Two-wire for power, Four-wire for dry contact control; non-removable, 6 ft (1.8 m).
5. Low Voltage Power Distribution: cULus Listed.
   a. Basis of Design: Somfy Systems; Power Distribution Enclosure Kit; for up to twenty 24v DC motors per kit.
   b. Electrical Characteristics: 120 Vac 2.8 A - 11A; coordinate with Division 26.
6. Motor Control: Dry Contact Open, Close, Stop Wall Switch (White).

B. Electric Motor: cURus certified tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse 50 RA.
2. Control Type: Wired; local control via 120 Vac Momentary or Maintained Single Pole Double Throw Decora Switch.
3. Control Type: Wired; group control, 120 Vac Momentary or Maintained Double Pole Double Throw Decora Switch.
4. Control Type: Wired; local control and group control, low voltage dry contact switch, low voltage Momentary or Maintained Decora Switch via Motor Controller.
5. Electrical Characteristics: 120 Vac, 60 Hz, 1.2 - 1.67 Amps.
   a. Torque: 53.1 in-lbsf (6 N/m) - 88.5 in-lbsf (10 N/m).
   b. Sound Level: 47 dBA or less.
6. Power Cable: Four-wire SJTW cable. 6.5 ft (1.98 m) hardwired with quick disconnect plug.
7. Power Cable: Four-wire SJTW cable on Motor with Fast Connector; 1.6 ft (480 mm).
   a. Extension cable to be supplied by roller shade contractor.
   b. Four-wire Fast Connector Extension Cable with Open Leads:
      1) Length: 4.4 ft (1.3 m). - 22.4 ft (6.8 m).
8. Product Environmental Profile Type III EPD Certified.

C. Electric Motor: cURus certified tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse ULTRA 50 RA.
2. Control Type: Wired; local control via 120 Vac Momentary or Maintained Single Pole Double Throw Decora Switch.
3. Control Type: Wired; group control, 120 Vac Momentary or Maintained Double Pole Double Throw Decora Switch.
4. Control Type: Wired; local control and group control, low voltage dry contact switch, low voltage Momentary or Maintained Decora Switch via Motor Controller.
5. Electrical Characteristics: 120, 60 Hz, 0.95 Amps.
   a. Sound Level: 38 dBA ultra-quiet.
6. Power Cable: Four-wire SJTW cable. 6.5 ft (1.98 m) hardwired with quick disconnect plug.
7. Power Cable: Four-wire SJTW cable on Motor with Fast Connector; 1.6 ft (480 mm).
   a. Extension cable to be supplied by roller shade contractor.
   b. Four-wire Fast Connector Extension Cable with Open Leads:
      1) Length: 4.4 ft (1.3 m) - 22.4 ft (6.8 m).

D. Motor Control Key Switch: Three-position, key switch-operated control station with open, close, and center off (stop) function.

1. Contact: Maintained.
2. Contact: Momentary.
3. Basis of Design Product: Somfy Systems; Indoor key switch.
4. Switch Type: Single Pole Double Throw.
5. Switch Type: Double Pole Double Throw.
6. Electrical Characteristics: 120Vac, 60Hz.

E. Motor Control Wired Decora Switch: Three-position, switch-operated control station with open, close, and center off (stop) functions for 120 Vac Motors.

1. Contact: Maintained.
2. Contact: Momentary.
3. Basis of Design Product: Somfy Systems.
   a. Decorator: AC.
   b. Switch Style: Paddle.
   c. Switch Style: Toggle.
   d. Switch Style: Rocker.
   e. Switch Type: Single Pole Double Throw.
   f. Switch Type: Double Pole Double Throw.
   g. Electrical Characteristics: 120 Vac, 60 Hz.
   h. Finish: White.
   i. Finish: Ivory.

F. Motor Control Wired Individual/Group Motor Controller: Programmable microprocessor controller with open, stop, close, and preset intermediate position functions for 120 Vac motors.

1. Basis of Design Product: Somfy Systems; IGC 4n1 Motor Controller.
2. Motor Connections: Four or less per Motor Controller.
3. Control Device Types: Key Switch
4. Control Device Types: Keypad.
5. Control Device Types: Radio receiver.
6. cULus Rated - UL certified E160923.
7. Plenum Rated NEMA Enclosure.

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8. Accessories:
   a. IGC 4n1 RTS Radio Receiver to be used with Somfy RF transmitters, providing wireless open, stop, close functions.
   b. Decoflex Dry Contact Keypad for IGC 4n1 provides three intermediate shade positions, open, stop, and close functions.
   c. Momentary Indoor Key or Momentary Decorator Paddle Switch providing open, or close functions.
9. Operating Features:
   a. Configurable individual or group control of roller shades.
   b. Capable of accepting input from third-party automation control system via momentary Dry Contact signal.

G. Factory-assembled, electric motor and factory-prewired motor controls with connector that disconnects motor from power.

H. Enclosures protecting controls and operating parts.

I. Accessories necessary for complete installation.

J. Coordinate operator wiring requirements and electrical characteristics with building electrical system and contractor.

K. Electrical Components: Listed and labeled as defined in NFPA 70.

L. Electric motor tested for standards CAN/UL 325, and CSA-C22.2 No. 247 by a qualified testing agency and marked for intended location and application.

2.3 WIRELESS CONTROLLED MOTOR OPERATORS AND CONTROLS - ROLLER SHADES

A. Electric motor tested for standards CAN/UL 325, and CSA-C22.2 No. 247 by a qualified testing agency and marked for intendedd location and application.

B. Electric Low Voltage Motor: cULus listed tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse 30 RTS.
2. Control Type; Radio: Local control and group control via Switches.
3. Electrical Characteristics: 24 Vdc, 0.8 Amps.
   a. Sound Level: 42 dBA or less.
4. Low Voltage Power Cable: Two-wire with weidmuller; 10 in. (250 mm).
5. Low Voltage Power Distribution: cULus Listed.
   a. Basis of Design: Somfy Systems; Power Distribution Enclosure Kit; for up to twenty 24v DC motors per kit.
   b. Electrical Characteristics: 120 Vac 2.8 A - 11A; coordinate with Division 26.

C. Electric Low Voltage Motor: cULus listed tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse ULTRA 50 DC RTS.
2. Control Type; Radio: Local control and group control via Switches.
3. Electrical Characteristics: 24 Vdc, 1.5 Amps.
   a. Sound Level: 38 dBA ultra-quiet.
4. Low Voltage Power Cable: Two-wire with weidmuller; 10 inches (250 mm).
5. Low Voltage Power Distribution: cULus Listed.
   a. Basis of Design: Somfy Systems; Power Distribution Enclosure Kit; for up to twenty 24v DC motors per kit.
   b. Electrical Characteristics: 120 Vac 2.8 A - 11A; coordinate with Division 26.

D. Electric Motor: cURus certified tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse 50 RTS.
2. Control Type; Radio: Local control and group control via Switches.
3. Electrical Characteristics: 120 Vac, 60 Hz 1.2 - 1.67 Amps.
   a. Torque: 53.1 in lbsf (6 N/m) - 88.5 in lbsf (10 N/m).
   b. Sound Level: 47 dBA or less.
4. Power Cable: Three-wire SJTW cable. 9.8 ft (3 m) hardwired with quick disconnect.
5. Power Cable: Three-wire cable with molded three prong plug. 9.8 ft (3 m).
6. Power Cable: Three-wire SJTW cable on Motor with Fast Connector; 1.6 ft (480 mm).
   a. Extension cable to be supplied by roller shade contractor.
   b. Three-wire Fast Connector Extension Cable with Open Leads:
      1) Length: 4.4 ft (1.3 m). - 22.4 ft (6.8 m).
7. Product Environmental Profile Type III EPD Certified.

E. Electric Motor: cURus certified tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse ULTRA 50 RTS.
2. Control Type; Radio: Local control and group control via Switches.
3. Electrical Characteristics: 120 Vac. 60 Hz, 0.95 Amps.
   a. Sound Level: 38 dBA ultra-quiet.
4. Power Cable: Three-wire SJTW cable. 9.8 ft (3 m) hardwired with quick disconnect.
5. Power Cable: Three-wire cable with molded three prong plug. 9.8 ft (3 m).
6. Power Cable: Three-wire SJTW cable on Motor with Fast Connector; 1.6 ft (480 mm).
   a. Extension cable to be supplied by roller shade contractor.
   b. Three-wire Fast Connector Extension Cable with Open Leads:
      1) Length: 4.4 ft (1.3 m). - 22.4 ft (6.8 m).

F. Wireless Remote Control: Electric controls with NEMA ICS 6, Type 1 enclosure for handheld remote-control activation of shades:

1. Basis of Design Product: Somfy Systems; Telis 16 has an LCD display for channel selection; Sixteen channel.
2. Basis of Design Product: Somfy Systems; Situo 1; Single channel.
3. Basis of Design Product: Somfy Systems; Situo 5; Five channel.
4. Finish: Pure.
5. Electrical Characteristics: Battery operated.
6. Optimal RF Range: 65 ft (20 m) radius under optimal conditions, FCC Approval Part 15, Class B.
7. Control Functions: Open, Close, My (stop).
8. Accessories:
   a. Wall mount holder with screw cover and screw kit.

G. Wireless Control Wall Switch: Button-operated keypad station, fitting standard decora style wall switches.

1. Basis of Design Product: Somfy Systems; DecoFlex WireFree RTS Switch.
2. Mounting: Surface.
3. Mounting: Recessed.
4. Mounting: Flushed.
5. Wall Switch Finish: White.
6. Wall Switch Finish: Black.
7. Wall Switch Finish: Ivory.
8. Custom Engraved Buttons: Yes.
9. Custom Engraved Buttons: No.
10. Wireless Transmitter: Up to five channels of individual or group control of roller shades, consultant to select channel options during shop drawings.
11. Electrical Characteristics: Battery operated.
12. Optimal RF Range: 65 ft (20 m) radius under optimal conditions, FCC Approval Part 15, Class B.
13. Control Functions: Open, Close, My (stop).

H. Wireless Control Surface-Mounted Wall Switch: Button-operated keypad station.

1. Basis of Design Product: Somfy Systems; Smoove RTS.
2. Wall Switch Finish: Pure.
3. Wall Switch Finish: Black.
4. Wall Switch Finish: Silver matte.
5. Wall Switch Finish: Light Bamboo.
6. Wall Switch Finish: Walnut.
7. Wall Switch Finish: Cherry.
8. Wall Switch Finish: Amber bamboo.
9. Custom Engraved Buttons: Yes.
10. Custom Engraved Buttons: No.
11. Wireless Transmitter: Up to four channels of individual or group control of roller shades, consultant to select channel options during shop drawings.
12. Electrical Characteristics: Battery operated.
13. Optimal RF Range: 65-ft (20-m) radius under optimal conditions, FCC Approval Part 15, Class B.

14. Control Functions: Up, Down, My (stop).

I. App Control: Wireless Control Interface: RTS 433.42 MHz, 2.4 GHz WiFi, or direct wired network connection with WEP, WPA2, TKIP, open and mixed mode encryption; multiple single-zone units may be joined to create a multi-zone system; capable of serving as an Internet protocol (IP) to radio bridge for third-party control systems.

1. Basis of Design Product: Somfy Systems; TaHoma.
2. Integration to third-party systems; App Control and Voice Control
3. Control Functions: Open, Close, My (stop), Timers, and Scenes.
4. Channels: 40 RTS Channels available.
5. Enclosure: ABS; cULus listed; UL 94 V-0 flame rating; RoHS compliant.
6. Electrical Characteristics: 120 Vac; 60 Hz; wall-mounted power supply.
7. Timer Control: Clock timer based on astronomic timeclock with 60-minute sunrise and sunset offset.
8. Ethernet Adaptor for direct wired network connection.

J. Third Party Integration Universal RTS Interface: Allow third-party automation systems to control RTS motorized solutions.

1. Basis of Design Product: Somfy Systems; Universal RTS Interface II (URTSI II).
2. Channels: 16; RTS controls per URTSI.
3. Power Input: 9 Vdc, 200 mA; UL approved, electrical outlet required.
4. RF Range: 65 ft (20 m) radius under optimal conditions, FCC Approval Part 15, Class B.
5. Serial Inputs: RS232, RS485, or IR.

K. Factory-assembled, of size and capacity and with features, characteristics, and accessories suitable for conditions indicated.

L. Enclosures protecting controls and operating parts.

M. Accessories required for reliable operation without malfunction.

N. Coordinate operator wiring requirements, radio control requirements, and electrical characteristics with building electrical system and contractor.

O. Electrical Components: Listed and labeled as defined in NFPA 70.

P. Electric motor tested for standards CAN/UL 325, and CSA-C22.2 No. 247 by a qualified testing agency and marked for intended location and application.

2.4 DIGITAL NETWORK MOTOR OPERATORS AND CONTROLS - ROLLER SHADES

A. Electric Motor: cULus listed tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse 30 DC RS485.
2. Control Type Network: Automated control or Standalone window treatment control system.
3. Control Type Network: Control via lighting control system.
4. Control Type Network: Control via audio-visual system.
5. Control Type Network: Control via BMS.
6. Communication Network: Bus connected SDN PowerConnect Power Panel.
7. Electrical Characteristics: 24 Vdc, 0.8 Amp.
   a. Sound Level: 42 dBA or less.
8. Low Voltage Power and Data Cable: Five-wire with weidmuller; 10 inches (250 mm).

B. Electric Motor: cULus listed tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse ULTRA 50 DC RS485.
2. Control Type Network: Automated control or Standalone window treatment control system.
3. Control Type Network: Control via lighting control system.
4. Control Type Network: Control via audio-visual system.
5. Control Type Network: Control via BMS.
6. Communication Network: Bus connected SDN PowerConnect Power Panel.
7. Electrical Characteristics: 24 Vdc, 1.5 Amps.
   a. Sound Level: 38 dBA ultra-quiet.
8. Low Voltage Power and Data Cable: Five-conductor pigtail with inline detachable terminal block; 10 inches (250 mm).

C. Electric Motor: cURus certified tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse ULTRA 50 RS485.
2. Control Type Network: Automated control or Standalone window treatment control system.
3. Control Type Network: Control via lighting control system.
4. Control Type Network: Control via audio-visual system.
5. Control Type Network: Control via BMS.
6. Electrical Characteristics: 120 Vac. 60 Hz, 0.95 Amps.
   a. Sound Level: 38 dBA ultra-quiet.
7. Power Cable: Three-wire SJTW cable. 9.8 ft (3 m) hardwired with quick disconnect.
8. Power Cable: Three-wire cable with molded three prong plug. 9.8 ft (3 m).
9. Power Cable: Three-wire SJTW cable on Motor with Fast Connector; 1.6 ft (480 mm).
   a. Extension cable to be supplied by roller shade contractor.
   b. Three-wire Fast Connector Extension Cable with Open Leads:
      1) Length: 4.4 ft (1.3 m) - 22.4 ft (6.8 m).
10. Data Cable: RJ9/RJ45, Black..
    a. Length: 2.5 ft (0.76 m) - 24 ft (7.32 m).

D. Electric Motor: cURus certified tubular, enclosed in roller.

1. Basis of Design Product: Somfy Systems; Sonesse 50 RS485.
2. Control Type Network: Automated control or Standalone window treatment control system.
3. Control Type Network: Control via lighting control system.
4. Control Type Network: Control via audio-visual system.
5. Control Type Network: Control via BMS.
6. Electrical Characteristics: 120 Vac, 60 Hz 1.2 - 1.67 Amps.
   a. Torque: 53.1 in lbsf (6 N/m) to 88.5 in lbsf (10 N/m).
   b. Sound Level: 47 dBA or less.
7. Power Cable: Three-wire SJTW cable. 9.8 ft (3 m) hardwired with quick disconnect.
8. Power Cable: Three-wire cable with molded three prong plug. 9.8 ft (3 m).
9. Power Cable: Three-wire SJTW cable on Motor with Fast Connector; 1.6 ft (480 mm).
   a. Extension cable to be supplied by roller shade contractor.
   b. Three-wire Fast Connector Extension Cable with Open Leads:
      1) Length: 4.4 ft (1.3 m). - 22.4 ft (6.8 m).
10. Data Cable: RJ9/RJ45, Black.
    a. Length: 2.5 ft (0.76 m) - 24 ft (7.32 m).

E. Electric Motor: cURus certified tubular, enclosed in roller.

1. Basis of Design Product: Somfy; LT50 RS485.
2. Control Type Network: Automated control or Standalone window treatment control system.
3. Control Type Network: Control via lighting control system.
4. Control Type Network: Control via audio-visual system.
5. Control Type Network: Control via BMS.
6. Electrical Characteristics: 120 Vac. 60 Hz, 1.8 - 2.1 Amps.
   a. Torque: 132 in-lbsf (15 N/m) - 308 in lbsf (35 N/m).
   b. Sound Level: 55 dBA or less.
   c. Speed: Depending on motor torque, roller shade contractor to use same motor torque for all roller shades.
7. Power Cable: Three-wire SJTW cable. 9.8 ft (3 m) hardwired with quick disconnect.
8. Power Cable: Three-wire cable with molded three prong plug. 9.8 ft (3 m).
9. Power Cable: Three-wire SJTW cable on Motor with Fast Connector; 1.6 ft (480 mm).
   a. Extension cable to be supplied by roller shade contractor.
   b. Three-wire Fast Connector Extension Cable with Open Leads:
      1) Length: 4.4 ft (1.3 m) - 22.4 ft (6.8 m).
10. Data Cable: RJ9/RJ45, Black.
    a. Length: 2.5 ft (0.76 m) - 24 ft (7.32 m).

F. Balanced multi-point digital intelligent motors integrated into the following:

1. System: Standalone.
2. System: Building Management.
3. System: Audio/Video.
4. System: Low Voltage Lighting Control.

G. Basis of Design Product: Somfy Systems; Somfy Digital Network™ (SDN) RS485.

1. Linear Bus Wiring: ANSI/TIA/EIA RS-485 standard, capacitance controlled, unshielded twisted pair cable.
2. Bus Distribution Components:
   a. Sound Level: 42 dBA or less.
   b. Data Hub Mini.
   c. SDN Data Panel.
   d. SDN PowerConnect Power Panel.
3. Electrical Characteristics: Bus-connected control devices for SDN data such as keypads, sensors and receivers powered directly from bus line using a 24 Vdc NEC Class 2 power supply.
4. Wire and Connectors: Category 5e balanced twisted pair cable, ethernet patch cables, RJ45 connectors and Weidmuller connectors.

H. Solar Management System: Digital network system integrating solar tracking, timed events, digital keypads, and weather sensors to operate motorized window coverings. Microprocessor controller for setting, changing, and adjusting control features of motorized window coverings.

1. Basis of Design Product: Somfy Systems; animeo IP.
2. Electrical Characteristics: 120 Vac, 1.25 Amps.
3. Motor Technology: Somfy Digital Network™ RS485 Networked Motors.
4. Network Characteristics:
   a. Manage individually addressed intelligent motors and controls.
   b. Allow intelligent keypads, schedules, motor grouping and virtual switches to be configurable and managed from its own internal IP network, building internal network, or remotely over the internet.
   c. Up to 200 motors on Building Controller, system expansion using animeo IP Sub Controllers.
   d. Dedicated Motor Bus Segment and Sensor Bus Segment.
5. Interface Controls: Personal computer.
6. Interface Controls: Virtual Keypad.
7. Interface Controls: Low voltage lighting control system integration.
8. Interface Controls: Dry Contact to Audio Video system integration.
9. Interface Controls: Building Management System Integration.
10. Sensors: Outside Sensor Box, all mounting installation brackets, and Sun Sensors.
11. Sensors: Outside Sensor Box, Outside Sensor Box Extension, all mounting installation brackets, and Sun Sensors.
12. PC Software: animeo IP Visual Configuration graphical user interface.
13. Certifications: UL Listed.

I. Digital Keypad: Digital button-operated wall station, fitting standard decora style wall switches.

1. Basis of Design Product: Somfy Systems; DecoFlex digital keypad animeo IP.
2. Basis of Design Product: DecoFlex digital keypad for SDN.
3. Basis of Design Product: SDN DecoFlex digital keypad for group control.
4. Electrical Characteristics: Cable and connector to SDN bus power.
   a. Power: 24 Vdc, supplied by SDN Bus with LED status indicators.
   b. Wire and Connectors: Category 5e balanced twisted pair cable, Ethernet patch cables, and RJ45 connectors.
5. Control Functions: Up, Down, Stop, three presets.
   a. Button Configurations: Six button digital keypad.
6. Control Functions: Up, Down, Stop, five presets.
   a. Button Configurations: Eight button digital keypad.
7. Control Functions: Up, Down, Stop, ECO-MODE.
   a. Button Configurations: Six button digital keypad.
   b. Button Configurations: Eight button digital keypad.
8. Control Functions: Up, Down, Stop, groups.
   a. Button Configurations: Six button digital keypad for 3 groups.
   b. Button Configurations: Eight button digital keypad for 5 groups.
9. Face Plate: Lexan 945U material in standard Decora-style with color to match switch.
   a. Color: Black.
   b. Color: Ivory.
   c. Color: White.
10. Temperature Range: Ambient temperature; indoor use only.

J. Bus Power Supply for Digital Network: Provides power to the digital network and sensor bus.

1. Basis of Design Product: Somfy Systems; Bus and Sensor Station Power Supply.
2. Electrical Characteristics: Input 120 Vac; plugs into outlet; Output: 24 Vdc 1 Amps.
3. Power Cord: 26 inches (660 mm) line-voltage, ac (IEC-320 C6).
4. UL listed and CE approved.

K. Power Panel: provides power and data to a maximum of 10 Motors.

1. Basis of Design Product: Somfy Systems; SDN PowerConnect Power Panel.
2. Electrical Characteristics: Input 120 Vac 7.2A; Output 24Vdc fused 2A per motor.
   a. Power and Data wiring up to 240 ft (73 m) from motor to power panel using Somfy SDN Low-Voltage Motor Cable.
   b. Two isolated device ports up to 200 ft (20 m).
3. Listed: cULus.

L. Data Panel: Creates head-end and riser bus distribution network.

1. Basis of Design Product: Somfy Systems; Data Panel.
2. Electrical Characteristics: Input 120 Vac 3.35 A; Output 24 Vdc 1 Amp per segment.
3. Provides four isolated digital network bus segments to the SDN system.
4. Built-in override Decoflex Digital Keypad.

M. Third Party Integration Building Management System (BMS) Interface: Provide communication between BMS and network intelligent motors, operating either individual motors, or groups via Standalone SDN or animeo IP. Additional features of retrieving sensor data from animeo IP sensor bus.

1. Basis of Design Product: Somfy Systems; Somfy Connect BMS Interface V2.
2. Power Input: 9 to 24 Vdc power supply plugs into an ac outlet.
3. Data Point Capacity: 4500 maximum.
4. Integration Capabilities: Modbus, BACnet MS/TP, BACnet IP, Metasys N2 by JCI.
5. Certifications: CE, FCC, IC Canada, RoHS3 and REACH complaint.

N. Third Party Integration Audio Visual Control System: Allows third-party automation systems to control network intelligent motors; one interface per motorized system for up to 250 motors per interface.

1. Basis of Design Product: Somfy Systems; Somfy Connect Universal Automation Interface (UAI) Plus.
2. Power Input: 24 Vdc, powered via Bus and Sensor Station Power Supply.
3. Communication Input: RS232 protocol or IP Ethernet protocol.
4. Communication Output: Somfy's "SDN RS485" protocol.
5. Integration: Third-party drivers utilizing Somfy Synergy API.
6. UL listed and CE approved.
7. Operating Characteristics: Indoor conditioned space use only.

O. Third Party Integration Low Voltage Lighting Control System: Provides integration between low voltage lighting control systems 0-10V analog output and network intelligent motors, operating either individual or groups via Standalone SDN or animeo IP..

1. Basis of Design Product: Somfy Systems; SDN 0-10 V Interface V2.
2. Electrical Characteristics: 120C AC 60Hz 20mAmps.
3. Power and Data Output: 24 Vdc SDN bus output.
4. Integration Capabilities: Industry standard 0-10 V analog input.
5. Mounting: Junction box mounted plenum rated enclosure.
6. UL Listed.
7. Operating Characteristics: Indoor conditioned space use only.

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8. Factory-assembled, of size and capacity and with features, characteristics, and accessories suitable for conditions indicated.

P. Enclosures protecting controls and operating parts.

Q. Accessories required for reliable operation without malfunction.

R. Low voltage wiring from motor controls to motors through digital network communication supplied by roller shade contractor.

S. Low voltage wiring from motor controls to motors supplied by Division 26.

T. Coordinate operator wiring requirements and electrical characteristics with building electrical system and contractor.

U. Electrical Components: Listed and labeled as defined in NFPA 70.

V. Electric motor tested for standards CAN/UL 325, and CSA-C22.2 No. 247 by a qualified testing agency and marked for intended location and application.

PART 3: EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, blocking, accurate locations of connections to building electrical system, lighting, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 MOTOR CONTROLLER INSTALLATION

A. Comply with reviewed Shop Drawings for system equipment placement in accordance with Somfy guidelines and instructions.

B. Comply with NFPA 70, Article 400, for flexible cords and cables.

C. Comply with NECA 1 and NECA 130.

D. Comply with FCC guidelines.

E. Install window treatment motor operators and stationary control systems level, plumb, and aligned with adjacent units in accordance with manufacturer's written instructions.

F. Electrical Connections: Connect wired motor operators and stationary control systems to building electrical system in accordance with NEC requirements.

1. Grounding: Provide electrical grounding in accordance with NFPA 70.

G. Networked BMS: Connect networked automation controls for motorized equipment to BMS.

H. Sun Sensor Locations: Mount on exterior in accordance with manufacturer's written instructions.

3.4 ADJUSTING

A. Adjust motorized equipment to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

1. Adjust motor-limit settings in accordance with manufacturer's written instructions for specific locations and placements.
2. Program each motor-operator control system to manufacturer's standard settings or Owner-provided program settings.

B. Commissioning Control Systems: Perform commissioning of integrated automation control systems and connection to BMS in accordance with Division 01.

1. Managed by shade manufacturer/supplier.
2. Managed by motor and control manufacturer.
3. Managed by digital network integrator.
4. Managed by _____ aka, The Commissioning Agency.

3.5 CLOSEOUT ACTIVITIES

A. Demonstration and Training: Engage Somfy factory-authorized service representative to demonstrate and train Owner's maintenance personnel to adjust, operate, and maintain units.

END OF SECTION

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MASTER SPECIFICATION FOR SOMFY SYSTEMS SOMFY GLYDEA® 60e MOTORIZED DRAPERY TRACK

PART 1: GENERAL

1.1 SUMMARY

A. The Glydea motors are a product of years of industry experience and expertise. The reliable motor solution offers a superior user experience as well as a wide array of features. Glydea is available for pinch pleat, RippleFold® and Accordia® style draperies. It has been designed to easily adapt to various control technologies via plug-and-play modules including; dry contact, Radio Technology Somfy® (RTS), Z-Wave®, Zigbee® and RS-485. Glydea has a touch-motion feature allowing a user to easily adjust the drapery position. In addition, there is a manual override capability which can be used when power is lost. The simple power and communication cabling will keep installation costs to a minimum.

B. Motorized drapery track system.

C. Drapery control, local, group and master.

D. Building shade management system.

1.2 RELATED SECTIONS

A. Division 01 — General Requirements

B. Division 09 — Gypsum Board Assemblies

C. Division 09 — Acoustical Ceilings

D. Division 12 — Window Treatments

E. Division 26 — Electrical

F. Division 27 — Communications

1.3 SYSTEM DESCRIPTION

A. Motorized drapery track system: quiet operation, timing belt for precise control, touch motion, manual override and adjustable speeds.

B. Track: [Single drapery track.] [Single tandem drapery track.]

C. Track Type: [One way.] [Center opening.] [Asymmetrical.] [One way with a bend.] [Center opening with bend.] [One way with two bends.] [Center opening with two bends.] [One way with continuous curve.] [Center opening with continuous curve.]

D. Motor Mount: [Left side] [Right side] and [top mount.] [bottom mount.]

E. Track Mount: [Wall mounted.] [Ceiling mounted.]

F. Drapery Style: [Pinch pleat.] [RippleFold.] [Accordia.]

G. Local Controls: [Hand-held remote.] [DecoFlex Wire-free™ wall switch.] [Wired DecoFlex wall switch].

1.4 SUBMITTALS

A. Product Data:

1. Submit cut sheets to the Architect for the Glydea® motor and for each component required for the complete installation. The Contractor shall notate any deviations from the bid proposal.
2. Identify the system performance criteria, controls, limitations and trouble-shooting protocol on the cut sheets.
3. Identify storage, handling and installation requirements.
4. Submit cut sheets for the components required for integration with Building Automation Systems, audiovisual systems, lighting control systems or other control systems as specified.

B. Shop Drawings:

1. Submit elevations and sections of the motorized drapery track system indicating the finishes, materials and dimensions to adjacent construction components.
2. Submit a description of the drapery track system that includes the opening direction, motor location and mount.
3. Submit complete wiring diagrams of the motorized drapery track system.
4. Submit control diagram of the motorized drapery track system indicating groups, switches and sequence of operation.

C. Close-Out Documentation:

1. Submit all close-out documentation to the Architect and the Owner to incorporate into the project Operations and Maintenance manuals.
2. Identify the location of each motorized drapery track per the Architects space numbers. Include the name plate information, model year, number of units and serial number.
3. Include a functional description of the motorized drapery track system detailing operation and control.
4. Identity safety precautions.
5. Provide the Owner with the contact information for a supplier that carries spare parts for the components of the motorized drapery track system.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Minimum of 20 years of experience manufacturing motors for shade systems.
2. Lloyds Registered ISO 9001 certified.
3. Test 100% of motors prior to leaving factory.

B. Installer Qualifications:

1. Trained and certified by the manufacturer.
2. Experience installing and commissioning motorized drapery track systems.

C. Motor Qualifications:

1. Have a minimum life expectancy of 5 years.
2. Tested and approved by TUVUS, TUVGS, CE.

D. Mock-Up:

1. Construct a mock-up of the one typical motorized drapery track system in a location designated by the Architect.
2. Review the mock-up with the Architect and acceptance and approval prior to proceeding with the scope of work.

1.6 DELIVERY, STORAGE AND HANDLING

A. The installer shall deliver the motorized drapery track system in a package that indicates the manufacturer, product type and room and window designation as indicated on the architectural finish schedule.

1.7 PROJECT CONDITIONS

A. The motorized drapery track system shall not be installed until the adjacent work is complete.

1.8 WARRANTY

A. The motors shall have a minimum five year warranty with 100% motor replacement.

PART 2: PRODUCTS

2.1 MANUFACTURER

A. The manufacturer of the Glydea® motorized drapery track system:

1. 1. Somfy Systems, Inc.
   121 Herrod Boulevard
   Dayton, NJ 08810
   (800) 22-SOMFY

Somfy Glydea® 60e Motorized Drapery Track • 12 22 16

2.2 GLYDEA DRAPERY TRACK SYSTEM

A. Tracks:

1. Headrail: manufactured from 6063-T5 AL (coated) extruded aluminum of 30.5 mm (1.2") in width, 25.1 mm (1-1/32") in height, curvable to a minimum radius of 300 mm (11.8"). Curves shall be factory made according to template or specification.
2. Drive Belt: synchronous, pre-lubed, toothed belt that circulates internally within the headrail to ensure smooth travel for all track types.
3. Drive and Return Assembly: Manufactured from injection molded plastic, equipped with a bush bearing and allows for multiple curtain hook attachments.
4. Carriers: Wheel mounted type with rotating eyelet and able to accommodate a pinch pleat or ripple-fold heading.
5. Brackets: Manufactured from steel [one touch type for easy mount] [a swivel type for a maximum of 2 mm light gap].

B. Glydea® Drapery Track 60e Motor and Components:

1. Geared Motor: A DC motor with precision planetary gear reduction integrating the lyre release system. Rated at 1 Amp at 110 VAC, to provide a nominal torque of 1Nm. Operates a curtain up to 132 lbs on a two way 36 foot straight track with an adjustable linear speed from 4.9 inches/second to 7.86 inches/second. For exact weight capacity on different track configurations and lengths refer to manufacturer's width/weight capacity chart.
2. Manuel Override: Achieved through the lyre release system which automatically disconnects the gearbox from the track to allow manual operation of the drapery. The drapery can be operated manually in both directions when the motor unit is not running or when power is interrupted.
3. Limit Switching: Motor has an electronic encoder that is used to set the end stops and intermediate position during installation. The end stops and the intermediate position do not need to be readjusted during the motor's lifetime or after manual operation.
4. Motor Control: Logic circuit with programmable microprocessor. Motor has overload current sensing, maximum run timer and speed management. Soft start and stop and speed adjustment from 4.9 inches/second to 7.86 inches/second.
5. Integration: Motors can integrate with systems such as audio visual, lighting or building automation system. The motor comes standard with one RJ12 connector to allow connection to a two or three dry contact control device or Somfy Infrared Sensor. In addition, one of the below control modules can be added to the base of the motor.
   a. [Radio frequency plug-in module (RF) to allow wireless control with Somfy RTS transmitters.]
   b. [Wired RS-485 communication plug-in module.]
   c. [Z-Wave® plug-in module.]
   d. [Zigbee® plug-in module.]
6. Operating Mode: Momentary contact directional control for closing, opening, stopping and one programmable intermediate position. Optional "touch motion" feature which allows the user to initiate the drapery to open or close pulling on the fabric in intended direction of travel.
7. Accuracy: Fully opened and fully closed positions will remain within +/- 10 mm from the set positions over 10,000 cycles (one cycle is a full open and close on a 10 meter track length).
8. Noise Level: Motor is rated at 44 dB.
9. Motor Design: Patented design that allows the connectors, cables and control modules to be completely concealed. The motor is also concealed by the fabric.

C. Controls and Grouping:

1. [Local control] and/or [group control] via [dry contact switches], [smart switches], [Single or multiple channel Infrared transmitters], [Chronis RTS Timer] or [Sun Sensor].
2. Automated control via [lighting control system], [audio visual system] or [building management system].

D. Wall Mount Controls

1. Dry Contact Switch
   a. Three button switch, up, down and stop.
2. DecoFlex Wirefree™ Wall Switch.
   a. [One channel RTS with two programmable buttons and a raise and lower button.]
   b. [Two channel RTS with three programmable buttons and a raise and lower button.]
   c. [Three channel RTS with three programmable buttons and a raise and lower button.]
   d. [Four channel RTS with four programmable buttons and a raise and lower button.]
   e. [Five channel RTS with five programmable buttons and a raise and lower button.]

E. Remote Controls

1. [One channel RTS three button remote with up, stop and down.]
2. [Five channel RTS four button remote with UP, STOP, DOWN and channel selector for individual or group control.]
3. [Sixteen channel RTS with digital display.]

PART 3: EXECUTION

3.1 EXAMINATION

A. Prior to installation the installer shall verify the condition and dimensions of the area the intelligent motors are to be installed. The installer shall notify the Architect if the conditions are inadequate.

3.2 PREPARATION

A. The installer shall prepare and clean the area of work the intelligent motors are to be installed.

3.3 INSTALLATION

A. The installer shall install the motorized drapery track system per the manufacturer's instructions and in accordance with the reviewed shop drawings.

3.4 PROTECTION

A. The installer shall protect the motorized drapery track system from the construction environment until the completion of the project. The installer shall be responsible to replace any broken or damaged parts prior to turn over of the space.

END OF SECTION

Somfy Glydea® 60e Motorized Drapery Track • 12 22 16

somfy®

Make the move

About Somfy®

For over 50 years, Somfy has been pioneering innovative motorization and automated solutions for window coverings and exterior shading products. With comfort, ease of use, security, and sustainability in mind, our seamless and connected solutions are designed to help people make the move to living spaces impactful for humans and with a reduced impact on nature.

A BRAND OF SOMFY GROUP

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