

V1

**SECTION ... ..  
ROLLER WINDOW SHADES  
SOMFY LS 40 MOTOR RANGE**

\* NOTE TO SPECIFIER \* [LS40 is a range of motors, only take the appropriate reference within this range for your project specification.]

**Disclaimer for advice given to architects and engineers**

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**Part 1 – General****1.01 Sections Includes:**

- A. Electrically operated : [pleated and roman shade] [roller blind] [Venetian blind] [Projection Screen].
- B. Local group and master control system for shade operation.
- C. Whole Building Shade Management System: Automated Solar Tracking Control System Computer Shade Control System  
\* NOTE TO SPECIFIER \* [Delete items above not required for project]

**1.02 Related sections:**

- A. Section [08 81 00 – GLAZING]
- B. Section [12 24 13 - ROLLER WINDOW SHADES]
- C. Section [26 09 23.00 40 – LIGHTING CONTROL DEVICES]
- D. Section [26 60 13.00 40 – LOW VOLTAGE MOTORS]  
\* NOTE TO SPECIFIER \* [The section information is given by the architect/engineering]

**1.03 Description:**

- A. Work included:  
\* NOTE TO SPECIFIER \* [EXAMPLE: ]  
Provide motorized shade operation systems designed for lifting shades of type, size, weight, construction, use, and operation frequency indicated. Provide operation systems of size and capacity and with features, characteristics, and accessories suitable for Project conditions and recommended by motors manufacturer.
- B. Power:  
\* NOTE TO SPECIFIER \* [EXAMPLE / Torque information to be adapted according to the motor specified: ]  
The selected motor with needed X Nm Torque should provide not less than 20% safety factor and should be approved by the Manufacturer of the Tubular Motor.  
Every motor should have a label showing its Torque in Nm, Speed in RPM, Voltage, Frequency, Watt Consumption, Electrical Insulation Class, Protection Index, Thermal Overload Protection Duty Cycle, No Interference Symbol and Country of Origin.

**1.04 Related work:**

Coordinate the work with that of other Trade Contractors to ensure proper execution of the work of both trades. Examine Contract Documents for requirements that directly affect or are affected by Work of this Section.

**1.05 Submittals:**

- A. General:  
The specified motor should be able to deal with the applications as [roller shade] [roman shade] [pleated shade] [Venetian blind] [Projection screen]  
\* NOTE TO SPECIFIER \* [Delete items above not required for project]
- B. Product Official Technical Data sheets:  
\* NOTE TO SPECIFIER \* [ Please contact Somfy for official documentation ]
- C. System components:



\* NOTE TO SPECIFIER \* [ Please change this drawing according to the system that you will use with LS 40 ]

**D. System Dimensions:**

Shade min. width = **530 mm**

\* NOTE TO SPECIFIER \* [ To be adapted according to the end product chosen – To be worked with the manufacturer according to the accessories used ]

**E. Shop Drawings:**

Plans, elevations, sections, product details, installation details, operational clearances, wiring diagrams and relationship to adjacent work

**F. Window System:**

\* NOTE TO SPECIFIER \* [ Pay special attention to the following information to fill this part ]

Check that height and weight can be handled by the motor with the different applications.

Verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operable glazed units' operation hardware throughout the entire operating range. Notify Architect of discrepancies. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

**G. Installation and Operating instructions manuals**

\* NOTE TO SPECIFIER \* [ Please contact Somfy for official documentation ]

**H. Sample and Mock up:**

If required by the architect, a sample or a mock up can be provided. The [roller shade] [roman shade] [pleated shade] [Venetian blind] [Projection screen] mock up has for objective to evaluate mounting, appearance, accessories and functioning.

\* NOTE TO SPECIFIER \* [ A mock up is not mandatory. Add this part only if required by the architect. The way this part is written is just an example, please add any relevant information. ]

**I. Manufacturer Certificate:**

For each type of product indicated. Include manufacturer's specifications and installation instructions, styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions.

**J. Wiring Diagrams with Automatic Shade Control System and GRMS system**

\* NOTE TO SPECIFIER \* [ As each project has a specific configuration, some wiring diagram submittals have to be adapted. If needed on the project, please contact your local office. ]

**1.06 Quality Insurance :**

- A.** Products shall be manufactured to meet or exceed all SOMFY quality standards as stipulated in the Quality Control Manual, issued by SOMFY.
- B.** A qualified installer or sub-contractor shall perform installation (credentials or installer)
- C.** Installation shall conform to Local / National Building Codes or any applicable local standard
- D.** Sample or Mock up may be provided and installed upon Architect's request
- E.** Electrical Components and Accessories: Listed as defined by a testing agency (i.e. SASO) acceptable to authorities having jurisdiction, and marked for intended use.

\* NOTE TO SPECIFIER \* [ Part E is only required for Saudi Arabia ]

**1.07 Standards:**

\* NOTE TO SPECIFIER \* [ No need to put all the standards on this section, only select or add the ones which are required on your market, please make a local check ]

**A. European conformity:**

**a. CE conformity (Range 230V/50Hz) :**

SOMFY LS® 40 motor range is in conformity with the following European directives:

- o Low voltage directive 2006/95/CE dated 2006/12/12
- o Electromagnetic compatibility 2004/108/CE dated 2004/12/15

The following reference standards were applied to assess the conformity with respect of the above-mentioned European Directives:

- o EN 60335-2-97:2006 - Household and similar electrical appliances - Safety -- Part 2-97: Particular requirements for drives for rolling shutters, awnings, blinds and similar equipment
- o EN 50366:2003 + A1:2006 - Household and similar electrical appliances - Electromagnetic fields - Methods for evaluation and measurement
- o EN 55014-2:1997 + A1:2001 + A2:2008 - Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus -- Part 2: Immunity - Product family standard
- o EN 55014-1:2006 - Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus -- Part 1: Emission
- o EN 61000-3-2:2006 - Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

- EN 61000-3-3:2008 - Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current  $\leq 16$  A per phase and not subject to conditional connection
    - b. ROHS compliance:**
- SOMFY LS® 40 motor complies with RoHS Directive
- 2002/95/EC: Restriction of the use of certain hazardous substances in electrical and electronic equipment

**B. Underwriters Laboratories, Inc. (UL) (Range 120V / 60Hz)**

SOMFY LS® 40 motor range is certified cURus with category code number:

- FDDR2 - Door, Drapery, Gate, Louver and Window Operators and Systems – Component
- FDDR8 - Door, Drapery, Gate, Louver and Window Operators and Systems Certified for Canada – Component

The following reference standards were applied to assess the conformity with respect of the above mentioned US and Canadian certificates:

- ANSI/UL 325 - Door, Drapery, Gate, Louver, and Window Operators and Systems
- CAN/CSA-C22.2 No. 247-92 - Operators and Systems of Doors, Gates, Draperies and Louvers.

**C. C-Tick (Standards for Australia) (Range 230V / 50Hz)**

- Radio communications Labeling (Electromagnetic Compatibility)

**D. K-Mark (Standards for South Korea) (Range 220V / 60Hz)**

- K-Mark certified in accordance with KTL-IEC 60335-1 - Household and similar electrical appliances – Safety – General requirements

**E. Saudi Arabian Standards Organization (SASO) compliance: (Range 220V / 60Hz)**

- Comply with Product Conformity Program for Kingdom of Saudi Arabia

**1.08 Delivery, storage and Handling:**

- A. Product (motors) shall be delivered to the shading system manufacturer (OEM) in original packaging, for integration in end products.
- B. The shading System shall be delivered to the project site in manufacturer's packaging; the end-product manufacturer has to provide a packaging which secures the quality of the shading system.
  - \* NOTE TO SPECIFIER \* [ Please refer to local customer service department ]
- C. The shading system shall be handled and stored to prevent damage to materials, finishes and operating mechanisms.
- D. The shading system shall be stored under normal room temperature range (- 20°C to + 80°C), humidity (85% maxi at 30°C).
- E. Before installation, check if the end product is compatible with the associated equipment and accessories.
- F. Product must be installed by a professional motorization and home automation installer.

**1.09 Warranty standards:**

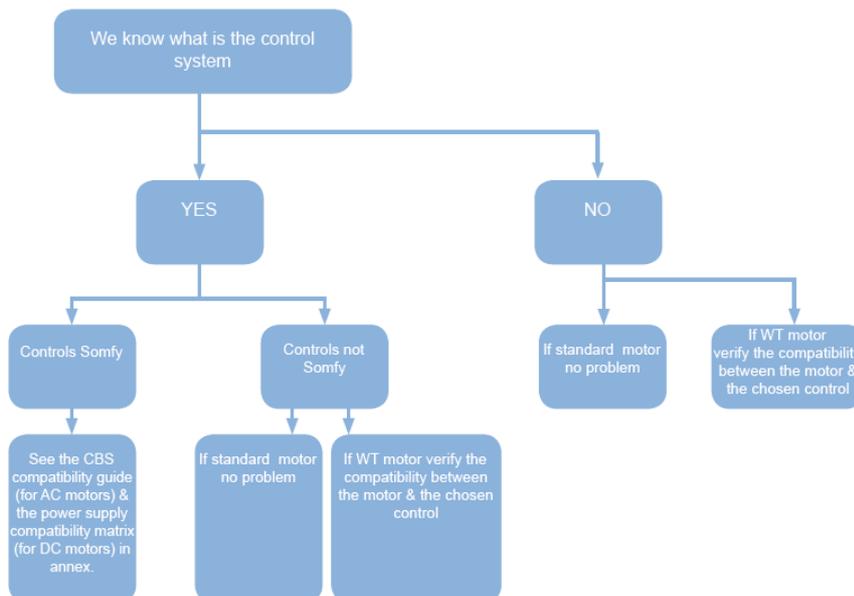
- A. Motors are warranted by SOMFY to be free from defects and workmanship for a period of 5 years.
- B. Any use outside the sphere of application specified by Somfy is not approved. Such use, or any failure to comply with the instructions will invalidate the warranty, and Somfy refuses to accept liability.
  - \* NOTE TO SPECIFIER \* [ If spare parts are required add the following paragraph ]
- C. Spare Parts: Provide spare parts, special tools and replacement components recommended by the manufacturer to be delivered and stored at the site for ready access. These are items which can reasonably be anticipated to require early or routine replacement during the first two years of operation of the facilities.
  - a. Quantity of spares for each item shall be 2 percent, or where items are in small numbers, a minimum of 2 and as acceptable to the Engineer.
- D. Critical Spare Parts: Provide the necessary critical spare parts for systems for one failure event. These critical spare parts are defined as spares which if not immediately available could significantly delay the reinstatement of a critical system and therefore stop the facility from operating normally. The items and quantities shall be proposed by the system suppliers on the basis of their knowledge and understanding of the systems and the following guidelines:
  - a. Criticality of the component to the continued safe and normal operation of the system and severity of any potential disruption.
  - b. The EWL (Estimated Working Life).
  - c. Anticipated frequency of failure.
  - e. A list of alternative parts in case of the non-availability or discontinuity of the original spare parts.

**Part 2 – Products****2.01 Manufacturer:**

- A. Manufacturer:**  
SOMFY LS® 40 motors are manufactured by:  
SOMFY SAS - 50 rue du Nouveau Monde - 74300 CLUSES - FRANCE  
Tel: 0033 450 967 060 - <http://www.somfy.com>
- B. System:**  
SOMFY LS® 40 motor  
\* NOTE TO SPECIFIER \* [ If more than the motor and/or controls are specified, please mention the other products specified]
- C. Alternates:**  
Equal approved by architect/engineer.

**2.02 Motor Unit:**

- A. Functionalities / benefits :**  
\* NOTE TO SPECIFIER \* [ Please indicates the specific arguments relative to the project]
- o Easy connection to power supply
  - o Double insulation safeguard
  - o Allows for optimized light gap thanks to round head version
- B. Geared Motor:**  
Torque =  
Speed =  
Running time = ... mn  
\* NOTE TO SPECIFIER \* [ To be adapted according to the motor specified – Refer to Datasheets that can be downloaded from SOMFY Products & Surveys database ]  
Motor is equipped with a thermal protection
- C. Power Supply:**  
... V / ... Hz, current draw from ... A to ... A for a power from ... W to ... W.  
SOMFY LS® 40 motor range is class II (3 wires, 0.75 mm<sup>2</sup> section).  
• NOTE TO SPECIFIER \* [ To be adapted according to the motor specified – Refer to Datasheets that can be downloaded from SOMFY Products & Surveys database ]
- D. Limit Switch:**  
Mechanical limit switch:  
• Progressive limit settings thanks to the progressive adjusting knob on the head
- E. Accuracy**  
Extreme positions will remain within +/- 15° from the set positions over 10 000 cycles.  
\* NOTE TO SPECIFIER \* [ To be adapted according to the motor specified – Refer to Datasheets that can be downloaded from SOMFY Products & Surveys database ]
- F. Operating Mode:**  
Motorized shades shall be controlled by centrally-controlled units or room management system, as required.  
\* NOTE TO SPECIFIER \* [ To be adapted according to the motor specified. See the diagram below for compatibility information]



### G. Motor Unit Fixing:

\* NOTE TO SPECIFIER \* [ To be adapted according to the motor specified – See example for wired controlled asynchronous motors below. ]

The motor shall be tubular asynchronous and concealed inside an extruded aluminium tube with asymmetrical channels to which the shade and the mounting spline are affixed. All motors shall be wired to a local junction box; which will then be wired to control units per manufacturer's published electrical details.

### H. Wires and cables:

Power cord is supplied with free termination wires allowing for easy cabling to any power control box.

## 2.03 Control Accessories to be supplied:

- A. Local or Group Control:
- B. Automatic Control:
- C. Control operation mode:
- D. Multi-Level Control:

\* NOTE TO SPECIFIER \* [ To be adapted according to the project and the motor selected for the project ]

## 2.04 Brackets:

\* NOTE TO SPECIFIER \* [ To be adapted according to the project and the end product specified for the project. The brackets have to be secured by the responsible assembler. Connect to the Customer Service Department in your country for details]

## 2.05 Motor Installation and Settings:

\* NOTE TO SPECIFIER \* [ To be adapted according to the motor specified – See example for wired controlled asynchronous motors below. ]

Example:

The motor shall be tubular asynchronous and concealed inside an extruded aluminium tube with asymmetrical channels to which the shade and the mounting spline are affixed. All motors shall be wired to a local junction box; which will then be wired to control units per manufacturer's published electrical details.

Every Wired Motor should be supplied with the adequate accessories, to fit exactly in the Selected Tube without any tolerances. The Basic required Accessories are: Crown, Wheel, Motor Bracket, Plug End and Plug End Bracket.

Crown: It is made of Plastic for most applications. It will be clipped to the motor and used to count the number of rotations done. Its Minimum Life Time should be 10 000 cycles.

Wheel: It is made of Plastic for most applications. It will be clipped to the motor and used to fix it to the Tube by the mean of Screws. Its role is to drive the Tube. Its Minimum Life Time should be 10 000 cycles.

Motor Bracket: It is an Angle Bracket made of Zamak 5 Material. Bracket shape should suit the Motor Head. Its Minimum Life Time should be 10 000 cycles.

Plug End: It should be of the Adjustable Type, made of Plastic, adapted to the Selected Tube by the mean of 1 adequate Wheel and 1 adequate Crown clipped to it and screwed to the Tube or fitted exactly in the Selected Tube without any tolerances. Its Minimum Life Time should be 10 000 Cycles. Every Plug End should be equipped with its adequate Angle Bracket.

**Part 3 – Execution**

**3.01 Examination**

- A. Refuse delivery of any damaged packaging.
- B. Ensure all parts specified in the purchase order have been delivered

**3.02 Installation:**

- A. This motor can be used indoor and/or outdoor.
- B. Motors have to be installed, connected and set in accordance with SOMFY instructions and in compliance with federal, state or local regulation.
- C. Installation contractor is responsible for site measurements and suitability of mounting surface.
- D. Adequate clearance has to be provided to permit unencumbered operation of the entire system.

**3.03 Use:**

- A. This motor can only be used under normal utilization temperature: from -20°C to +70°C, Humidity: max 85% to 30°C (IP44)

**3.04 Maintenance:**

- A. The installer has to inform his customers of the operating and maintenance conditions for the product.
- B. This motor should not require routine maintenance under normal utilization (from -20°C to +70°C, Humidity: max 85% to 30°C).

----- END OF SECTION -----