



automation specification sheet

Luxaflex[®]

WINDOW FASHIONS

www.luxaflex.co.nz

INTRODUCTION

The following information gives an overview of automation, detailing the different types of motors and their uses as well as outlining the benefits to be gained from automated window coverings.

Technical information is supplied including some wiring considerations and full specifications of each motor as well as control options including hard wired switch control, single, group or master control, radio remote control and integration to building management systems (BMS) and home automation systems.

For further detailed information contact Luxaflex®.

Benefits of automation

- **Neat aesthetic appearance:** visible manual operating hardware such as wands, chains and cords are eliminated which is ideal for child-safe applications. Blinds can be operated independently or in unison so that neighbouring blinds are aligned.
- **React instantly to the weather conditions:** incorporate sun sensors to ensure shading is deployed automatically when the sun strikes the building façade; wind and rain sensors can ensure external shades are retracted when the weather turns unpleasant to protect them from damage.
- **Optimise your shading for energy savings:** no need to rely on people to remember to raise or lower their shades. By programming control into a building management system or by use of sensors, shading can be lowered when required to reduce the heat load on buildings and raised to allow buildings to cool on summer evenings. Likewise, in winter, blinds can be raised during the day to allow winter sun to warm the building and lowered at night to insulate against heat loss through the windows.
- **Convenience:** whether it's simply to provide one-touch control, to assist children, the elderly and people with disabilities to operate heavy shades with ease or enable operation of shades on high or difficult to reach windows, automated shades offer the ultimate in convenient operation
- **Reduce wear and tear:** particularly in commercial applications, blinds and awnings can experience rough treatment during operation by building occupants. Take the guesswork out of correct operation by automating shades – built in stops and controlled speed guarantee the blinds aren't pushed past their limit.

Applications

- Automation can be utilised on a vast range of situations including presentation rooms, boardrooms, home theatres.
- Buildings where shades should be automatically positioned to ensure solar heat gain and therefore energy costs are minimised e.g. shopping centres, office buildings, health care facilities.
- External shading, where wind sensors are recommended to ensure shades are retracted automatically in windy conditions.
- High windows, where manual controls can be difficult to reach.

Product that can be automated

Internal

- Roman blinds 230 volt
- Timber & alternative timber blinds 230 volt
- Sunscreen and roller blinds 24 volt and 230 volt
- 50mm aluminium venetians 230 volt
- Duette® slhades (indent only) Battery operated, Mains (24v)
- Pleated blinds (indent only) 24 volt and 230 volt
- Slimline aluminium venetians 24 volt

External

- Pergola awnings 230 volt
- Folding arm awnings 230 volt
- Robusta awnings 230 volt
- System 2000 / cassette awnings 230 volt
- Patio / bistro external sunscreens 230 volt

The benefits of automation

- Convenience
- Child safety
- Security
- Building efficiency.

Case comparisons

The comparison was done in Korea between two buildings of similar size:

Building A - without solar protection

Building B - with sunscreen

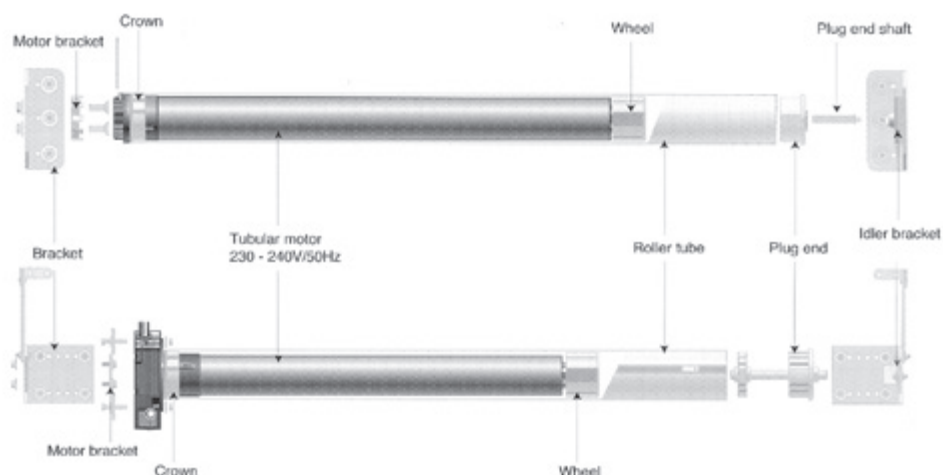
	A	B
No. of windows	60	55
Window surface	360m ²	330m ²
Energy for heating	15467	9136
40% difference		
Energy for cooling	9433	4142
56% difference		
Total energy	24900	3278
46% difference		
Energy for exp/window	415	241
42% difference		

Conclusion

Automation blinds are:

- More efficient
- Require less maintenance
- More comfortable to use
- Can be a security feature
- Profitable

MOTOR RANGE: FUNCTIONING PRINCIPAL



- The motor drives the wheel
- The wheel drives the roller tube
- The roller tube drives the crown
- The crown drives the limit switch within the motor

Warning

Somfy motors are not waterproof.

Do not hose down with water.

All motors mounted externally require covering!

Motor range

LS40 motor (hardwire/home automation switching)

Suitable for roller, roman, 50mm venetian, Woodmates, Timber Venetian Blinds and Pleated Blinds.

Power cable

Blue = neutral

Brown = active (directional 1)

Black = active (directional 2)

Class 2 double insulated motor (no earth wire)

Nominal supply voltage = 220/240v

Current consumption at nominal torque = 100 watts (maximum)

Running current = 0.5 amps (maximum)

Cable length = 2.5m

Cable size = 3 x 0.75

LT50 motor (hardwire/home automation switching)

Suitable for Roller Blinds (60mm Hardware system) and Awnings

Power cable

Blue = neutral

Brown = active (directional 1)

Black = active (directional 2)

Green / yellow = earth

Nominal supply voltage = 220/240v

Current consumption at nominal torque = 270 watts (maximum)

Running current = 1.2 amps (maximum)

Cable length = 2.5m

Cable size = 4 x 0.75

Important

LS40 / LT50 motors must never be wired in parallel.

Damage caused by parallel wiring will not be covered under warranty.

Altus 40 motor

(BUILT IN R.T.S) (remote control)

Suitable for roller and roman blinds and some pleated blinds.

Power cable

Blue = neutral

Brown = active

Class 2 double insulation motor (no earth wire)

Nominal supply voltage = 220/240v

Current consumption at nominal torque = 100 watts (maximum)

Running current = 0.5 amps (maximum)

Cable length = 2.5m

Cable size = 2 x 0.75

Altus 50 motor

(BUILT IN R.T.S) (remote control).

Suitable for roller and roman blinds plus awnings.

Blue = neutral

Brown = active

Green / yellow = earth

Nominal supply voltage = 220/240v

Current consumption at nominal torque = 270 watts (maximum)

Running current = 1.2 amps (maximum)

Cable length = 3m

Cable size = 3 x 0.75

Concept 25 motors

Suitable for Slimline venetians, pleated and Duette® blinds

Nominal supply voltage = 24v DC

Current consumption = 600 mA (maximum)

Cable length = 2.5m

Cable size = 2 x 0.25

Luxaflex®

WINDOW FASHIONS

www.luxaflex.co.nz

WIRING CONSIDERATIONS

Wiring considerations LS40 and LT50 motors

Do not wire Somfy motors and controls without first consulting the wiring diagrams. Determine which of the brown and black wires correspond to the UP and DOWN direction prior to the final wiring. Connect the earth wire if 50mm motor.

Check that the wire size is in accordance to the number and

Electrical rating of motors as outlined in local authority guidelines. Consider climatic conditions such as temperature and humidity when installing Somfy controllers. Install control boxes indoors, or use waterproof boxes for outdoor installations.

DO NOT use other switches and controls other than those recommended by Somfy. When using a Somfy control box plug in type, make sure the power supply is switched off before plugging in.

Use one switch per motor. Do not wire one motor to several switches without using the appropriate Somfy electronic control!

Problem

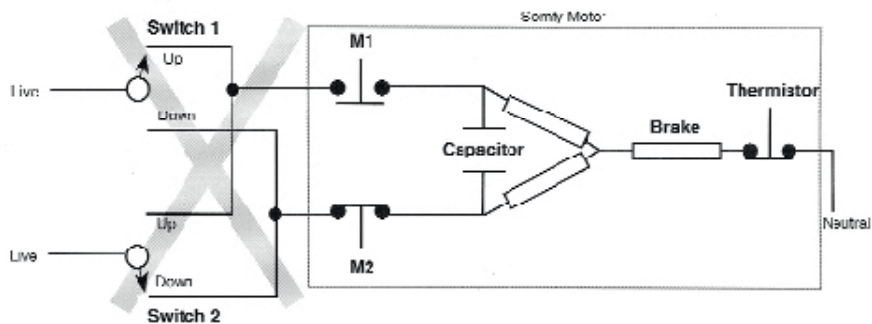
When 'switch 1' is turned to the UP position, the motor will turn. When it reaches its pre-set position, micro-switch "M1" will open and the motor will stop.

If 'switch 2' is then turned to the down position, the motor will turn in the opposite direction. Micro-switch 'M1' will close. This will cause the capacitor to short circuit through micro-switch 'M1' and 'switch 1'.

This will damage the contacts in the micro-switch.

Solution

Use Somfy 1AC or 4AC Somfy electronic controller.



Do not wire motors in parallel!

Problem

When the switch is turned to either the UP or DOWN position, both motors will turn together.

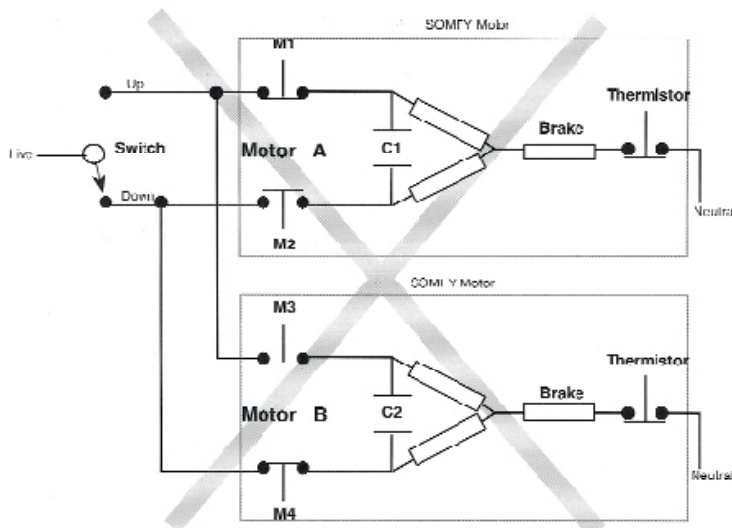
One of the motors (A) will stop at its pre-set limit before the other (B).

Current from motor (B) will then flow back through to motor (A) through capacitor C2 and micro-switches M3 and M1.

There will be constant feedback from one motor to the other causing the motors to continuously change direction, but with very little travel. The motors will eventually burn out.

Solution

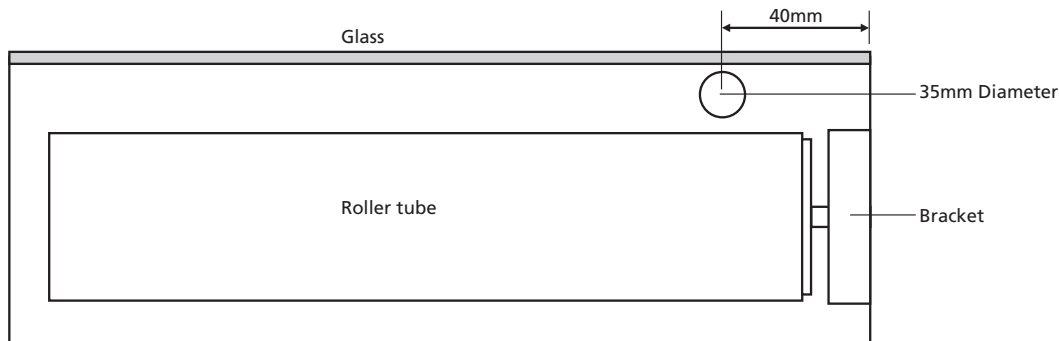
For one or more motors use a Somfy controller.



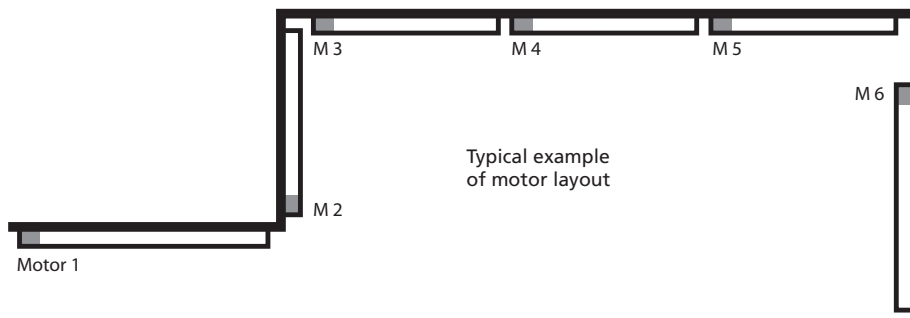
WIRING CONSIDERATIONS

Individual, group and master control R.T.S

The location of the power cable on all Luxaflex® automated products is important and should always be as close to the glass as practical and 40mm from the motor end of the blind. The hole diameter should be a minimum of 35mm allowing connection cover to be fitted.



Plan view of window head



Components used

- 6 x ALTUS 40 motors with built in radio receivers
- 1 x 4 channel remote control transmitter
- Channel 1 operates Motor 1
- Channel 2 operates Motor 2
- Channel 3 operates Motors 3, 4 and 5
- Channel 4 operates Motor 6

Master channel operates all 6 motors together

Remote transmitters available in single channel, 4, 6 and 16 channel versions for larger projects.

Each channel will operate any quantity of motors and each motor may be operated by up to 12 different remotes.



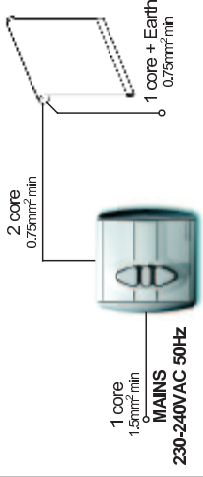
Luxaflex®

WINDOW FASHIONS

www.luxaflex.co.nz

INIS UNO TO A MOTOR

LS40 / LT50



Part(s) Used:

- Inis UNO 1800191 Pg. 17 (controls) OR 1800012 Pg. 17 (controls)
- Inis UNO Momentary OR 1800002 Pg. 17 (controls)
- Inis UNO 5 Position

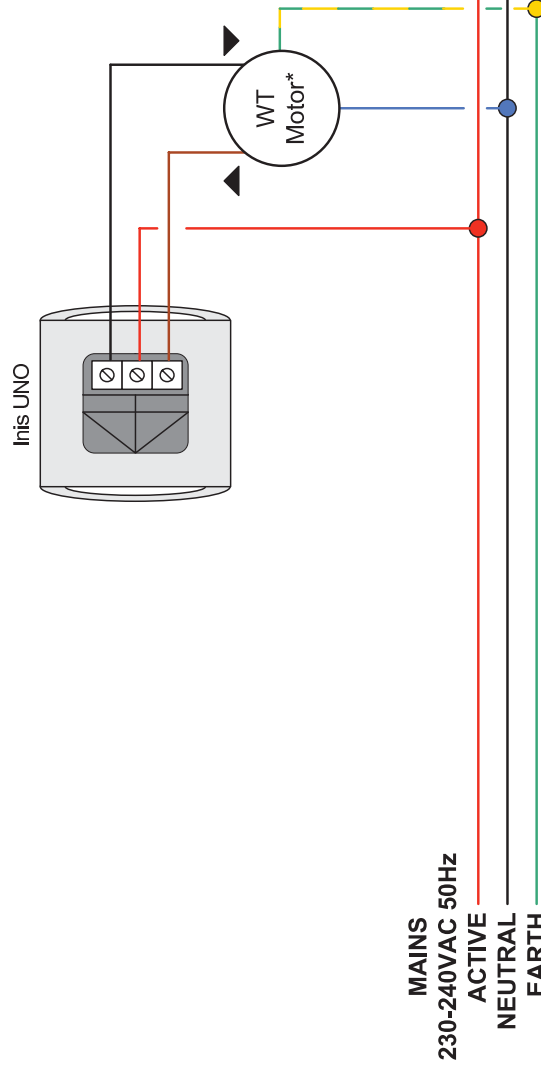


Diagram specific notes:

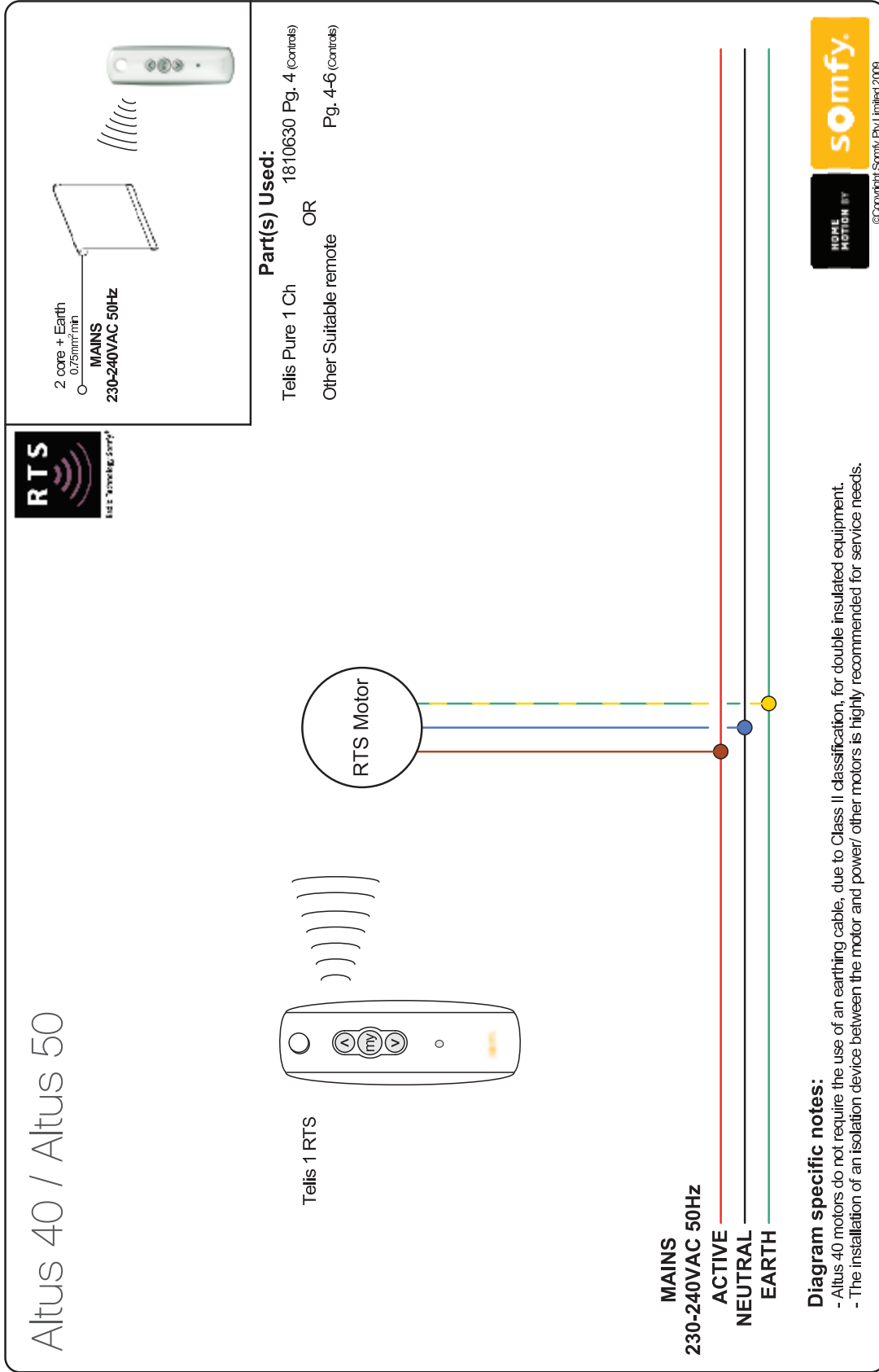
- LS40 motors do not require the use of an earthing cable, due to Class II classification, for double insulated equipment.
- * The Motor's active for a direction is dependant on the installation. Refer to the motor's enclosed documentation to determine the appropriate directional wire colour.



©Copyright Somfy Pty Limited 2009

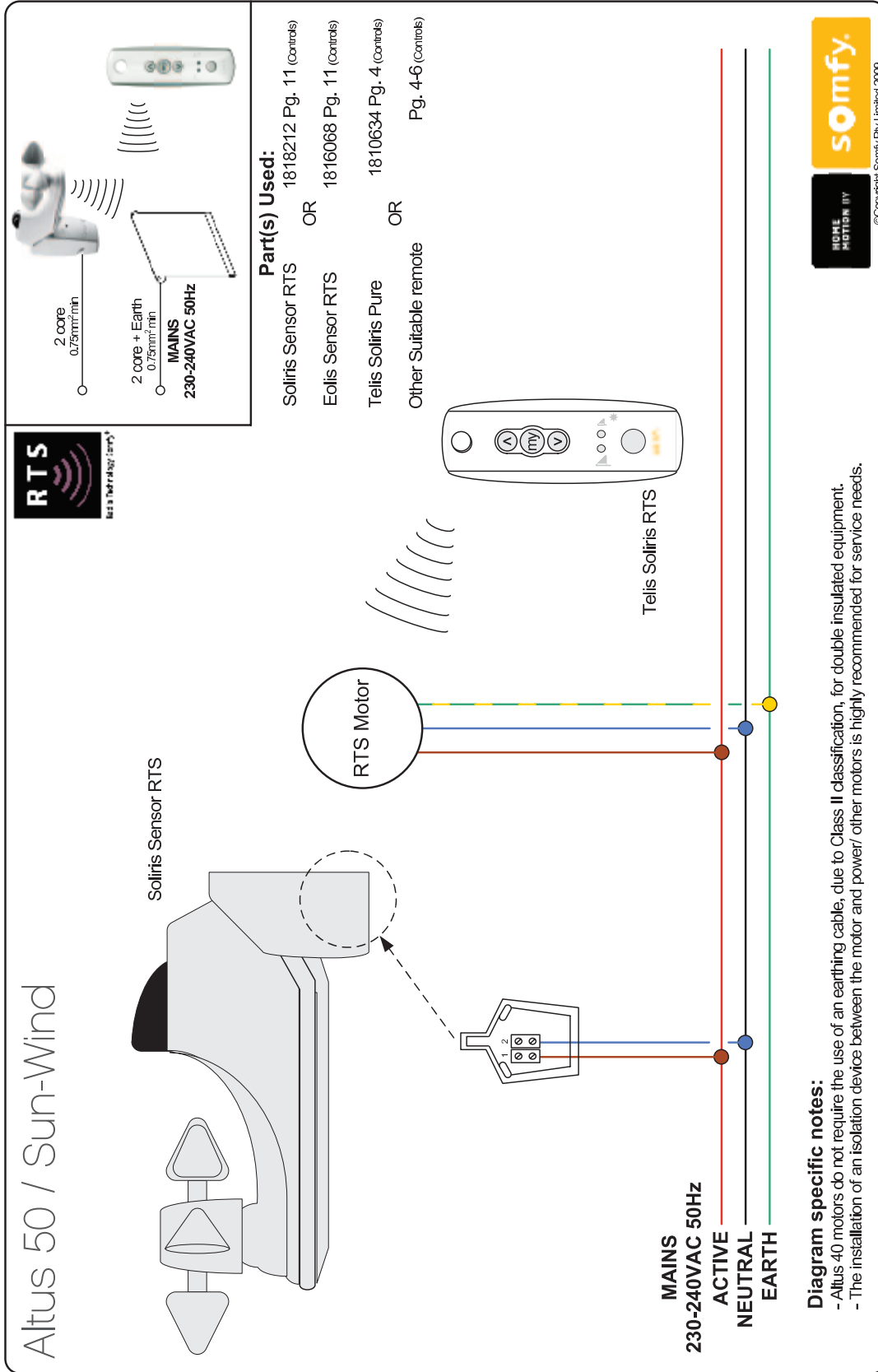
Somfy has provided this Wiring Diagram as general installation advice to its customers. Every effort has been made to ensure the accuracy of this wiring diagram, however it is not meant as a substitute for the recommendations of a licensed electrician. Specific product installation guides are available, please contact us if you require a copy. An electrical license or certificate is required before any electrical work can be undertaken in Australia or New Zealand. All electrical work must conform to AS/NZS 3000, local wiring rules and any other relevant standards. Always make sure that all components are properly fused and grounded (if applicable) for safety. We make no claims about the completeness or accuracy of the information as it may apply to an infinite amount of field conditions. This Wiring Diagram is subject to change without notice. If in doubt, please contact the Somfy Support Centre on (02) 8845 7200.

RTS MOTOR



Somfy has provided this Wiring Diagram as general installation advice to its customers. Every effort has been made to ensure the accuracy of this wiring diagram, however it is not meant as a substitute for the recommendations of a licensed electrician. Specific product installation guides are available, please contact us if you require a copy. An electrical licence or certificate is required before any electrical wiring work can be undertaken in Australia or New Zealand. All electrical work must conform to AS/NZS 3000, local wiring rules and any other relevant standards. Always measure that all components are properly used and grounded (if applicable) for safety. We make no claims about the completeness or accuracy of the information they apply to an infinite amount of field conditions. This Wiring Diagram is subject to change without notice. If in doubt, please contact the Somfy Support Centre on (02) 9846 7200.

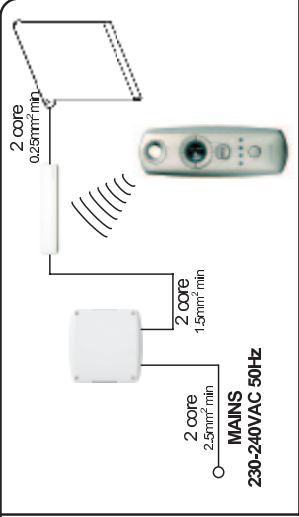
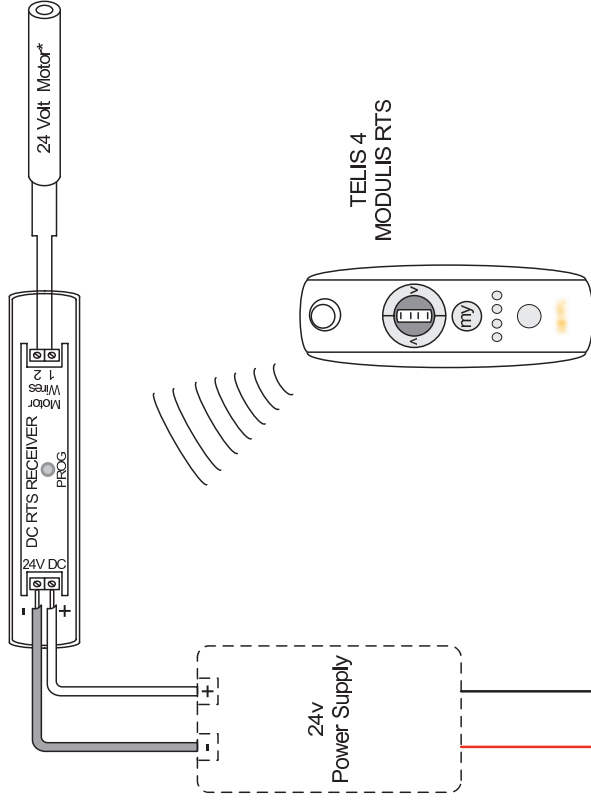
RTS MOTOR WITH SUN & WIND SENSOR



DC RTS RECEIVER TO A DC MOTOR

Concept 25

-- See notes for specific wiring information --



Part(s) Used:

- DC RTS Receiver 1870139 Pg. 32 (Controls)
- Telis 4 Modulis Silver 1810663 Pg. 5 (Controls) OR
- Other Suitable remote Pg. 4-6 (Controls)
- Suitable Power Supply Pg. 31 (Controls)

MAINS
230-240VAC 50Hz
ACTIVE
NEUTRAL
EARTH

Diagram specific notes:

- The required 24v DC power supply for a particular DC motor application is shown on the selection chart on Pg. 29 (Controls), Wiring configuration may differ between power supplies.
- * The motor's rotational direction is dependant on the installation. Refer to the motor's enclosed documentation to determine the appropriate directional wire colour.

Somfy has provided this Wiring Diagram as general installation advice to its customers. Every effort has been made to ensure the accuracy of this wiring diagram, however it is not meant as a substitute for the recommendations of a licensed electrician. Specific product installation guides are available, please contact us if you require a copy. An electrical licence or certificate is required before any electrical wiring work can be undertaken in Australia or New Zealand. All electrical work must conform to AS/NZS 3000, local wiring rules and any other relevant standards. Always make sure that all components are properly used and grounded (if applicable) for safety. We make no claims about the completeness or accuracy of the information as it may apply to an infinite amount of field conditions. This Wiring Diagram is subject to change without notice. If in doubt, please contact the Somfy Support Centre on (02) 8845 7200.



©Copyright Somfy Pty Limited 2009



Luxaflex[®]

WINDOW FASHIONS

www.luxaflex.co.nz

BMS & HAS



Building management & home automation system

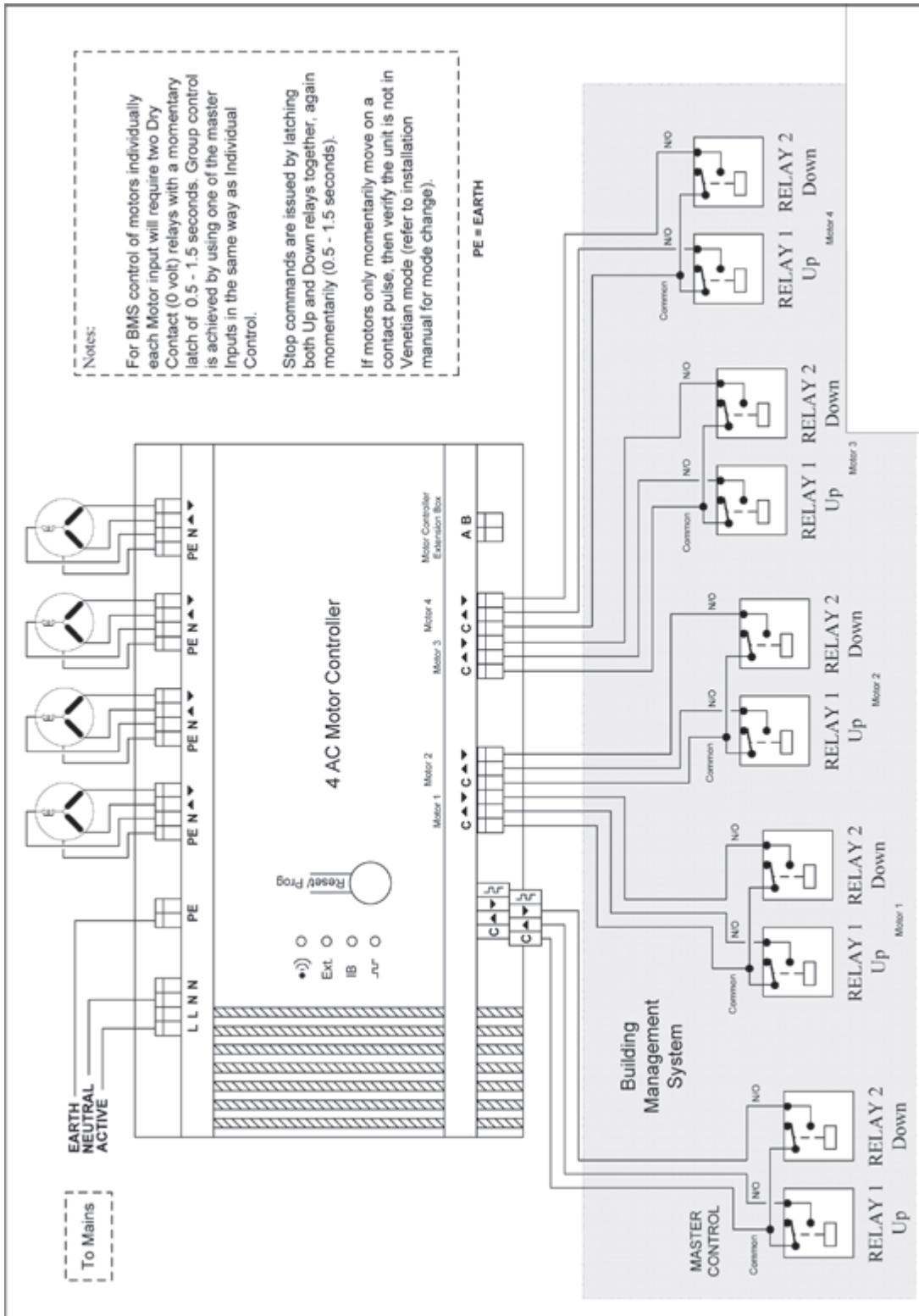
There are several options available to connect Luxaflex® Automated blinds to a Building Management System (BMS) or Home Automation System (HAS).

Integration to BMS using LS40 or LT50



Integration to BMS using LS40 or LT50

Option 2



BMS & HAS

Integration to BMS using Altus motors

Option 3

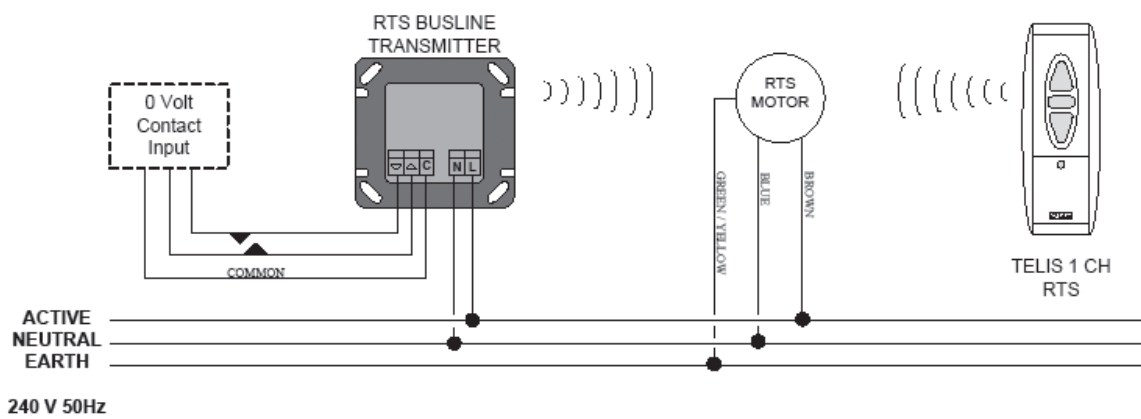
Busline transmitter (single channel)

- Requires 240V power supply
- Converts dry contact closure to radio frequency
- Dry contact impulse switching (impulse contact closure of 5 seconds minimum)
- Contact between common and up or common and down to activate motor

- Simultaneous contact between a common up and down to create a stop
- One transmitter for each command required
- Transmission range 30m in open space
- Dimensions: 80 (h) x 80 (w) x 18 (d) (surface mount)
- Dimensions: 80 (h) x 80 (w) x 45 (d) (flush mount)

Important:

Do not activate more than 1 transmitter at a time. Activation of multiple transmitters simultaneously will result in radio interference and motors will not operate.



CONTROLS, SWITCHES & REMOTES

Wall mounted controls

Somfy's wall mounted controls combine functionality with style. They allow individual control of a blind, awning or roller shade, several applications simultaneously (group control), or all at once, as a master control switch.

Wall switches are available hardwired or, for complete ease of installation, using Somfy's innovative wireless RTS technology.



Inis

Individual control (single or dual switch).



Centralis

Individual, group and master control.



Situo

Individual and group control.

Intelligent controls

Want to control your blinds and roller shades without lifting a finger? Somfy's timer controls can remember pre-programmed times you would like your blinds and shades to open and close. You don't even need to be home!



Memoris

The Memoris can remember one up and one down command per day, reproducing these actions every 24 hours.



Chronis

The Chronis remembers one up and one down command per day, allowing different times on different days. It can also simulate your presence whilst on holiday, aiding in protecting your home.

Luxaflex[®]

WINDOW FASHIONS

www.luxaflex.co.nz

CONTROLS, SWITCHES & REMOTES

Remote controls

Our new remote controls have been designed with flair, and come in a range of colours to suit every décor! The remotes also come with a convenient wall hanging option.

All remotes feature our new 'MY' button, allowing you to move your blinds, awnings and roller shades to your favourite position with the simple touch of a button!

With a range of 200 meters in open space, or 20 meters through 2 reinforced concrete walls, you can operate your blinds, awnings or roller shades from anywhere in the house or yard.

For added convenience, models come with either 1, 4 or 20 channels. The Telis Pure and Telis Patio also come in Telis Soliris models, allowing you to turn off the automatic sun function.



Telis Silver

The flexibility, convenience and style of the Telis Silver is perfect for contemporary interiors.



Telis Patio

The shock proof and splash proof qualities of the Telis Patio make it ideal for outdoors and general family use.



Telis Lounge

The sleek black exterior of the Telis Lounge is designed to compliment any sophisticated interior.



Telis Pure

The clean, simple design of the Telis Pure is the perfect compliment to any décor.



Keytis

The convenience of a Telis remote designed especially for a keyring.

Sensors

Making sun protection for your family and home incredibly simple, Somfy's range of sensors are designed to provide automatic protection for your home when it needs it the most. Our sun sensors will extend your awning, or close your blinds, roller shades and external venetian blinds when the sun reaches a pre-set intensity. As soon as the sun disappears, the awning retracts and everything opens! The sun sensors regulate the temperature of

your home – even while you are at work, while also protecting your furniture from fading due to sun exposure.

Somfy's wind sensors protect the products that protect you! When the wind reaches a pre-determined strength, the sensor will retract your awning or sun screen to help prevent damage.

We also offer rain sensors, which will retract your awning when raining to prevent water damage.



CONTROLS, SWITCHES & REMOTES

Commonly used components

Individual and master control or multiple control

Centralis uno IB -30.1810208
The Centralis Uno IB enables the individual control of a motor or a group of motors using the integrated push buttons. Master control is possible via a bus line, providing that the selector switch is in the 'auto' position.



Individual and master control or multiple control

Centralis IB - 30.1810094
The centralis IB is a master control for a BUS line. A switch at the back of the Centralis IB enables it to be configured for compatibility with Centralis Uno IB or CD4, SL8000n and ML8000. It is not possible to have a combination of Centralis uno IB and CD4 or SL8000n or ML8000 on the same installation.



Automatic timer control

Chronis RTS - 30.1805040
Battery: AAA batteries.
Somfy rolling code (SRC) for extra security: Yes.
Compatible with: LT50RTS, Centralis indoor receiver.
RTS 30.1810096, Centralis outdoor receiver RTS 1810005 and Centralis Uno RTS 1810217.



RT Transmitters

Centralis RTS - 30.1810090
Transmission range: 200m in free space and 20m with 2 reinforced concrete walls in between.
Somfy rolling code (SRC) for extra security: Yes.
Compatible with: LT50 RTS, Centralis indoor receiver RTS 30.1810096, Centralis outdoor receiver RTS 30.1810005, Centralis Uno RTS 30.1810217 and Eolis receiver RTS 30.1816027.



RTS 25 DC - 30.1870007

The new RTS 25 DC is a radio receiver designed to operate with Concept 25 and LT28 motors. It is compatible with all RTS transmitters and can be used with all lift/tilt and lift only blind applications. The RTS 25 DC can be discreetly mounted in a 25 x 25mm venetian blind headrail with the relevant headrail adaptors or, if there is limited space, can be mounted outside the headrail with mounting brackets. There is no need for line of sight between the receiver and transmitter, so the RTS 25 DC can be conveniently mounted out of sight. The RTS 25 DC also offers up to 2 intermediate positions. Size: 100mm long 24 x 24mm



Luxaflex[®]

WINDOW FASHIONS

www.luxaflex.co.nz



Luxaflex[®]

WINDOW FASHIONS

www.luxaflex.co.nz

Luxaflex[®] is a division of New Zealand Window Shades Ltd. Luxaflex[®] is a registered trade mark of New Zealand Window Shades Ltd.

New Zealand Windows Shades Limited, 2 - 6 Niall Burges Road, Mt Wellington, Auckland, New Zealand.
PO Box 12 785, Penrose, Auckland 1642. Telephone 0800 223 224, Facsimile 0800 843 857