

## Electrical components required with Blinds - Somfy 24vDC LW25/LV25 Series

### Matrix

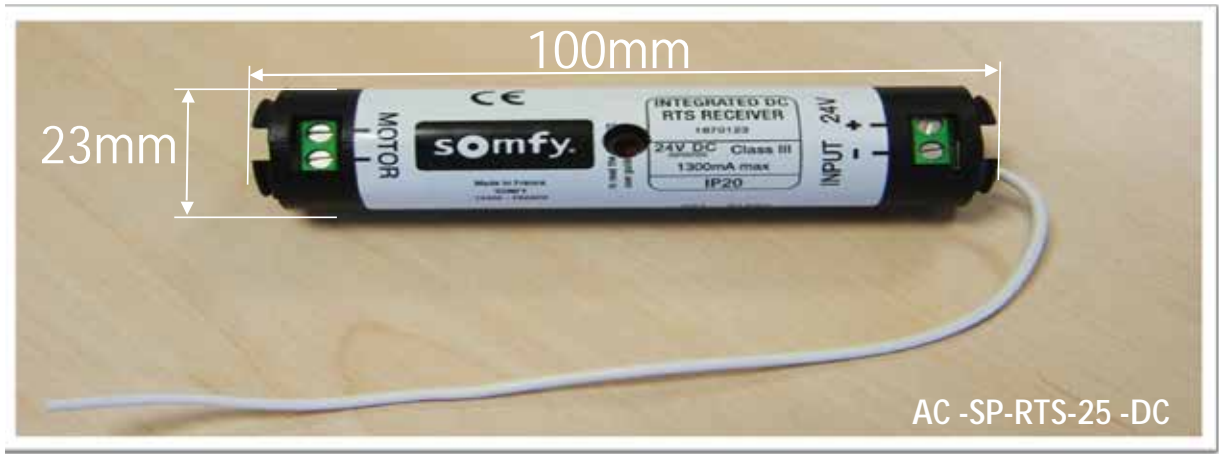
Control Type	SKYSOL						Venetian	Roman Blind
	AO	AB,DB,DBE,PB	STL/STS	Day/Night (inc framed)	Framed AO	Framed AB,DB,DBE,PB		
Switch Constant (DPDT Centre off)	AMS Stop Only  Wiring diagram	TS-24 Wiring diagram Wiring diagram	TS-24 Wiring diagram Wiring diagram	NOT APPLICABLE	AMS Stop Only  Wiring diagram	TS-24 Wiring diagram Wiring diagram	AMS Stop Only  Wiring diagram	AMS Stop Only  Wiring diagram
Switch Momentary (DPDT Centre off)	AMS Stop Only  Wiring diagram	No additional controls Required Wiring diagram	No additional controls Required Wiring diagram	Day / Night Controller Wiring diagram	AMS Stop Only  Wiring diagram	No additional controls Required Wiring diagram	AMS Stop Only  Wiring diagram	AMS Stop Only  Wiring diagram
Radio (RTS)	X<831 & Y<1701 = External RTS X >830 & Y<1701 = Internal RTS X<981 & Y>1700 = External RTS X >980 & Y>1700 = Internal RTS (All with AMS stop ) No timer function Wiring diagram	X>575 = Internal RTS X<576 = External RTS Wiring diagram (Int) Wiring diagram (Ext)	External RTS (NO AMS) Timer function is set -- Programming Instructions Wiring diagram (Int) Wiring diagram (Ext)	Day / Night Controller Wiring diagram	X<878 & Y<1701 = External RTS X >877 & Y<1701 = Internal RTS X<978 & Y>1700 = External RTS X >977 & Y>1700 = Internal RTS (All with AMS stop ) No timer function Wiring diagram	X>687 = Internal RTS X<688 = Ext RTS (NO AMS) Timer function is set -- Programming Instructions Wiring diagram Wiring diagram	External RTS AMS Stop Wiring diagram	External RTS AMS Stop Wiring diagram

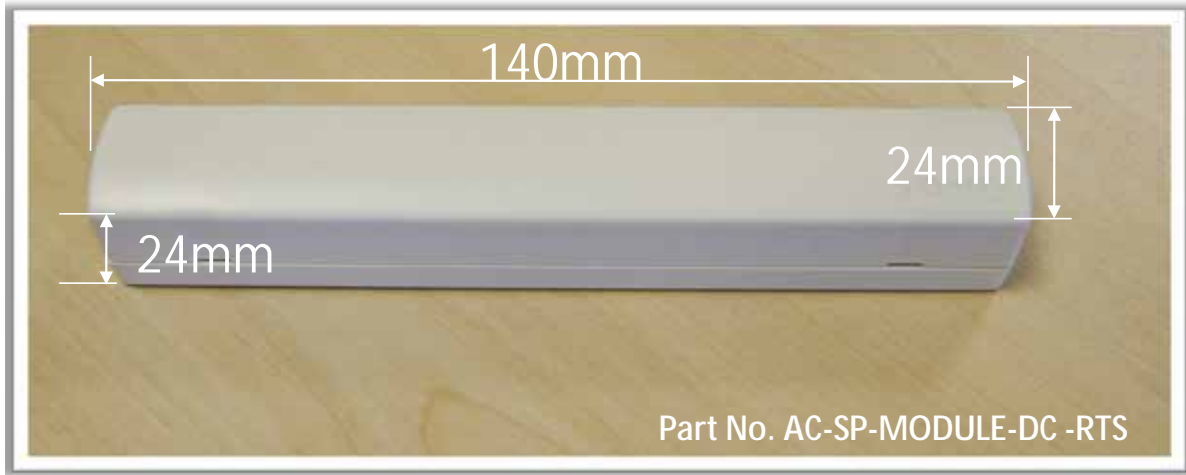
Note:- All sizes shown for Framed types include the 4mm build tolerance.

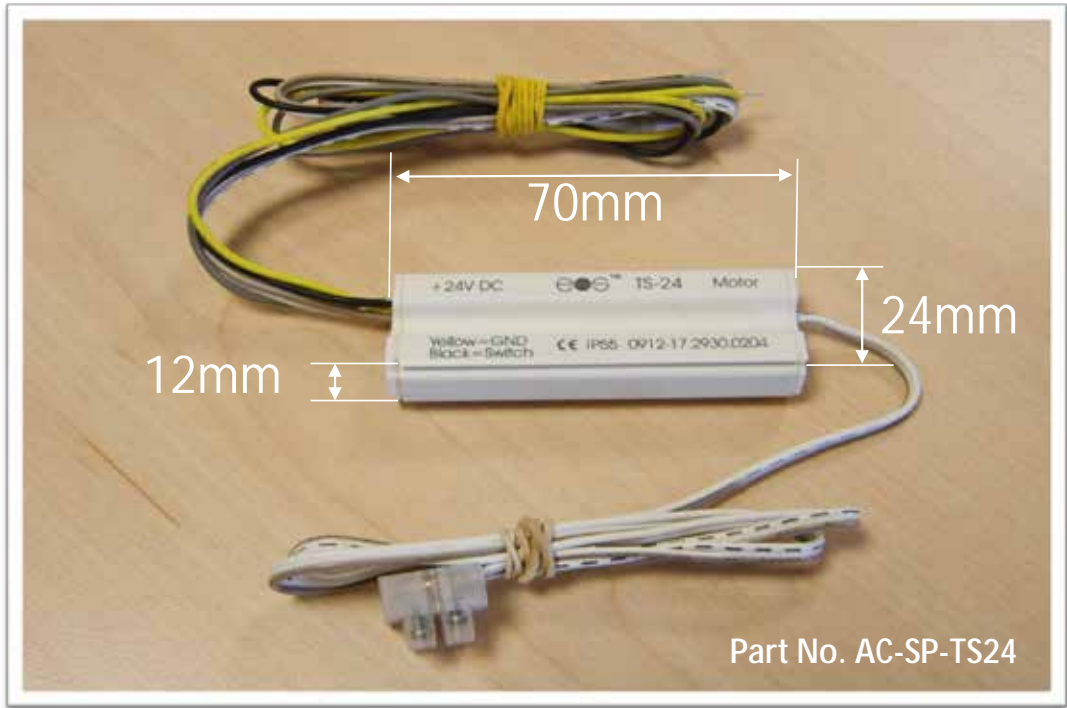


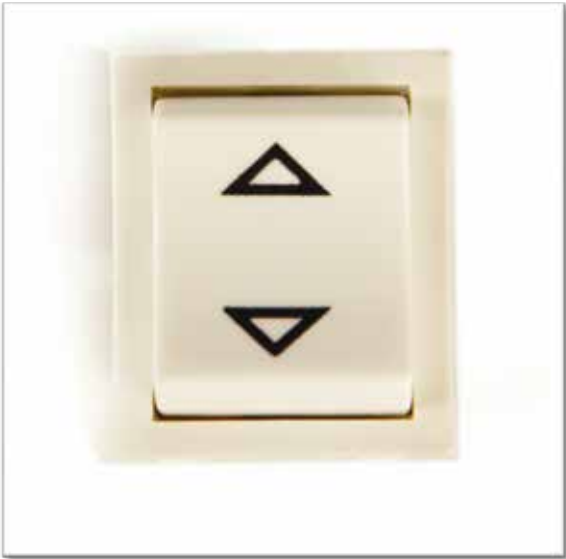
Electrical components required with Blinds - Somfy 24vDC LW25/LV25 Series

Internal RTS









Part No's AC-SP-SWITCH (constant)

**Telis 4 RTS**

Part No.  
AC-SP-TELIS-4-RTS



**Telis 1 RTS**

Part No.  
AC-SP-TELIS-1-RTS

**Electrical components required with Blinds - Somfy 24vDC LW25/LV25 Series  
DAY NIGHT CONTROLLER**

Approximately 33 Seconds per 1 m drop @ 23.5vDC



**Part No.40000796**  
Run Time 5 to 80 seconds

Run Time seconds	DIP 1	DIP 2	DIP 3
5	Off	Off	Off
10	On	Off	Off
15	Off	On	Off
20	On	On	Off
30	Off	Off	On
40	On	Off	On
50	Off	On	On
80	On	On	On

**Part No.400001082**  
Run Time 40 to 75 seconds

Run Time seconds	DIP 1	DIP 2	DIP 3
40	Off	Off	Off
45	On	Off	Off
50	Off	On	Off
55	On	On	Off
60	Off	Off	On
65	On	Off	On
70	Off	On	On
75	On	On	On

# AB,DB,PB BLIND - SWITCHED (Momentary)-NO MECHANICAL STOP

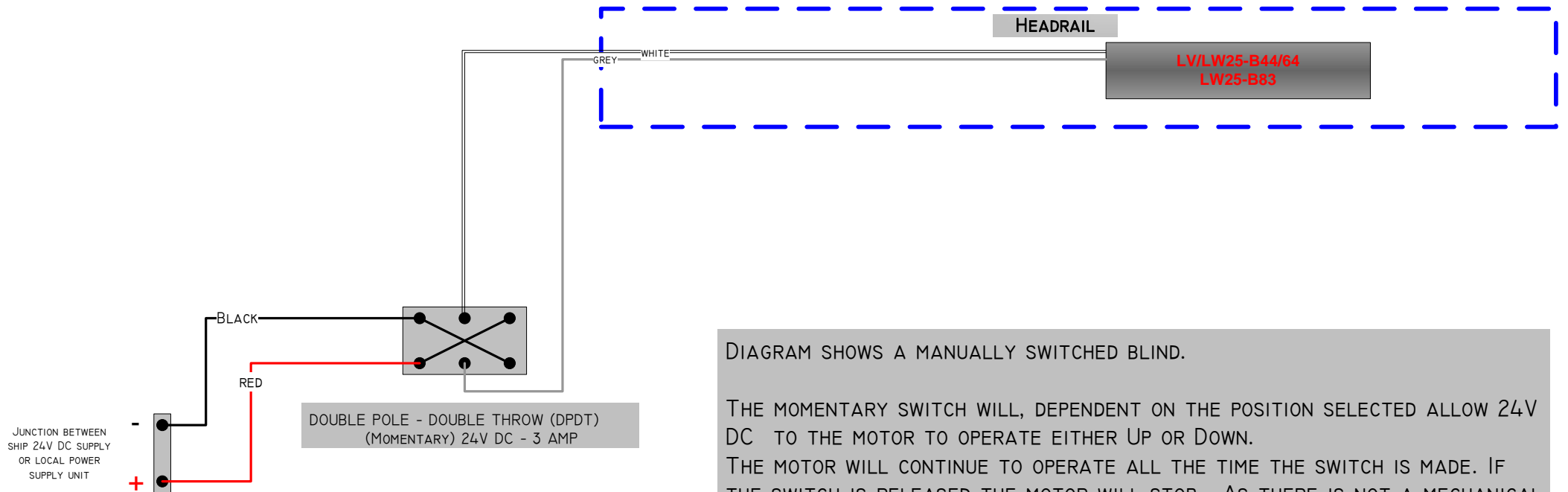


DIAGRAM SHOWS A MANUALLY SWITCHED BLIND.

THE MOMENTARY SWITCH WILL, DEPENDENT ON THE POSITION SELECTED ALLOW 24V DC TO THE MOTOR TO OPERATE EITHER UP OR DOWN. THE MOTOR WILL CONTINUE TO OPERATE ALL THE TIME THE SWITCH IS MADE. IF THE SWITCH IS RELEASED THE MOTOR WILL STOP. AS THERE IS NOT A MECHANICAL OR ELECTRICAL STOP IT MUST BE RELEASED WHEN THE BLIND REACHES ITS LIMITS OR THE DESIRED POSITION.

CONTROLLING PDF FILE:  
700000105-AB DB PB BLIND\_MOMENTARY SWITCHED-NO MECHANICAL STOP.PDF

CONTROLLING VISIO FILE:  
S:\TECHNICAL\ISSUED PRODUCTION SPECIFICATIONS\POWERED\UPDATED DIAGRAMS\_MAR2011\Visio\700000105-AB DB PB BLIND\_MOMENTARY SWITCHED-NO MECHANICAL STOP\_REV I\_17JAN2011.VSD

OCEANAIR MARINE LTD Atlantic House 1 Ellis Square Selsey West Sussex PO20 0AY UK - T: +44 (0) 1243 606909

MATERIAL:  
FINISH:

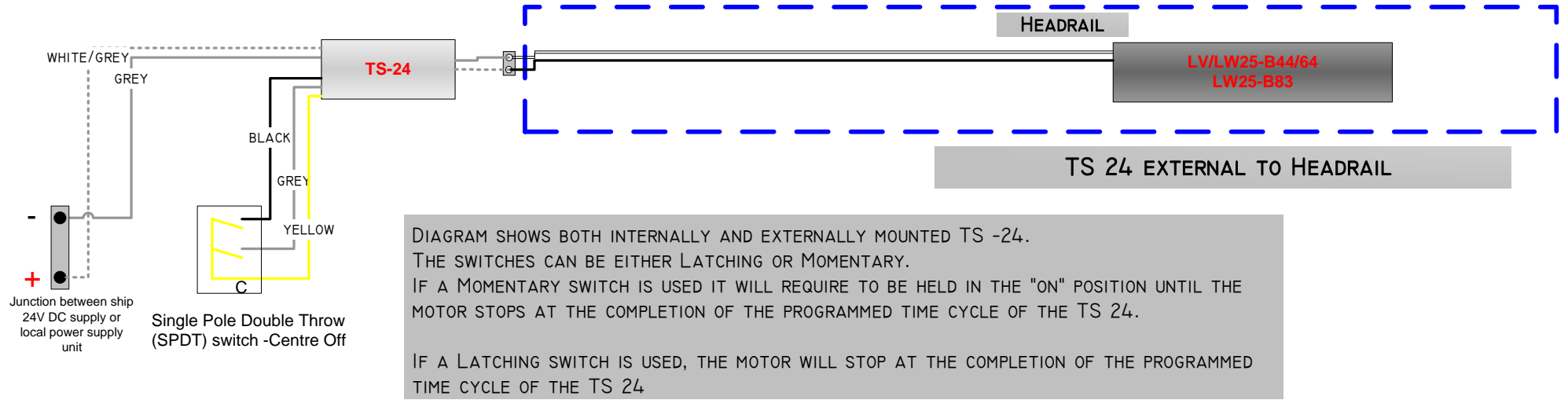
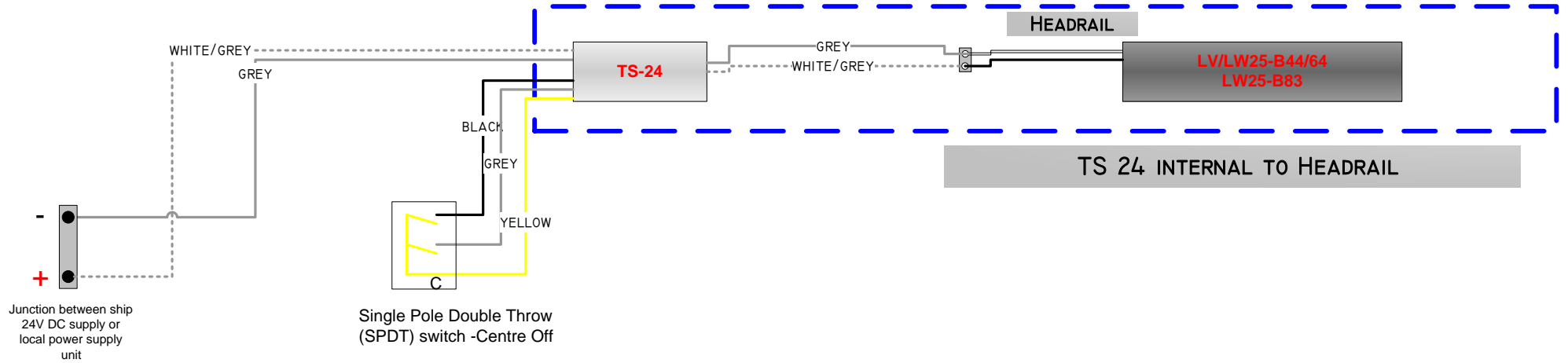
Copyright 2010 Oceanair Marine Ltd

SCALE:  
SHEET:  
DRAWN BY: R DAVEY  
DATE: 20 MAY 2010

REVISION HISTORY: ORIGINAL 20 MAY 2010  
REV I: 17JAN2011: CABLE CORE IDENTITY ADDED

GENERAL NOTES:  
700000105

# AB, DB, PB BLIND - SWITCHED - TS 24



THIS IS A COLOURED DIAGRAM AND FOR CLARITY SHOULD ONLY BE REPRODUCED IN COLOUR

CONTROLLING PDF FILE:  
700000104-AB,DB,PB BLIND - SWITCHED - TS 24.PDF

CONTROLLING VISIO FILE:  
S:\TECHNICAL\ISSUED PRODUCTION SPECIFICATIONS\POWERED\UPDATED DIAGRAMS\_MAR2011\Visio\700000104-AB,DB,PB BLIND - SWITCHED - TS 24\_REV I.L10JAN2011.vsd

OCEANAIR MARINE LTD Atlantic House 1 Ellis Square Selsey West Sussex PO20 0AY UK -T: +44 (0) 1243 606909

MATERIAL:  
FINISH:

Copyright 2010 Oceanair Marine Ltd

SCALE:  
SHEET:  
DRAWN BY: R DAVEY  
DATE: 23 MARCH 2010

REVISION HISTORY: ORIGINAL 23 MARCH 2010  
REVISION I.I: 10 JAN 2011 CABLE CORE COLOURS ADDED FOR CLARITY

GENERAL NOTES:  
700000104

# AB, DB, PB Multiple BLINDS - SWITCHED - TS 24

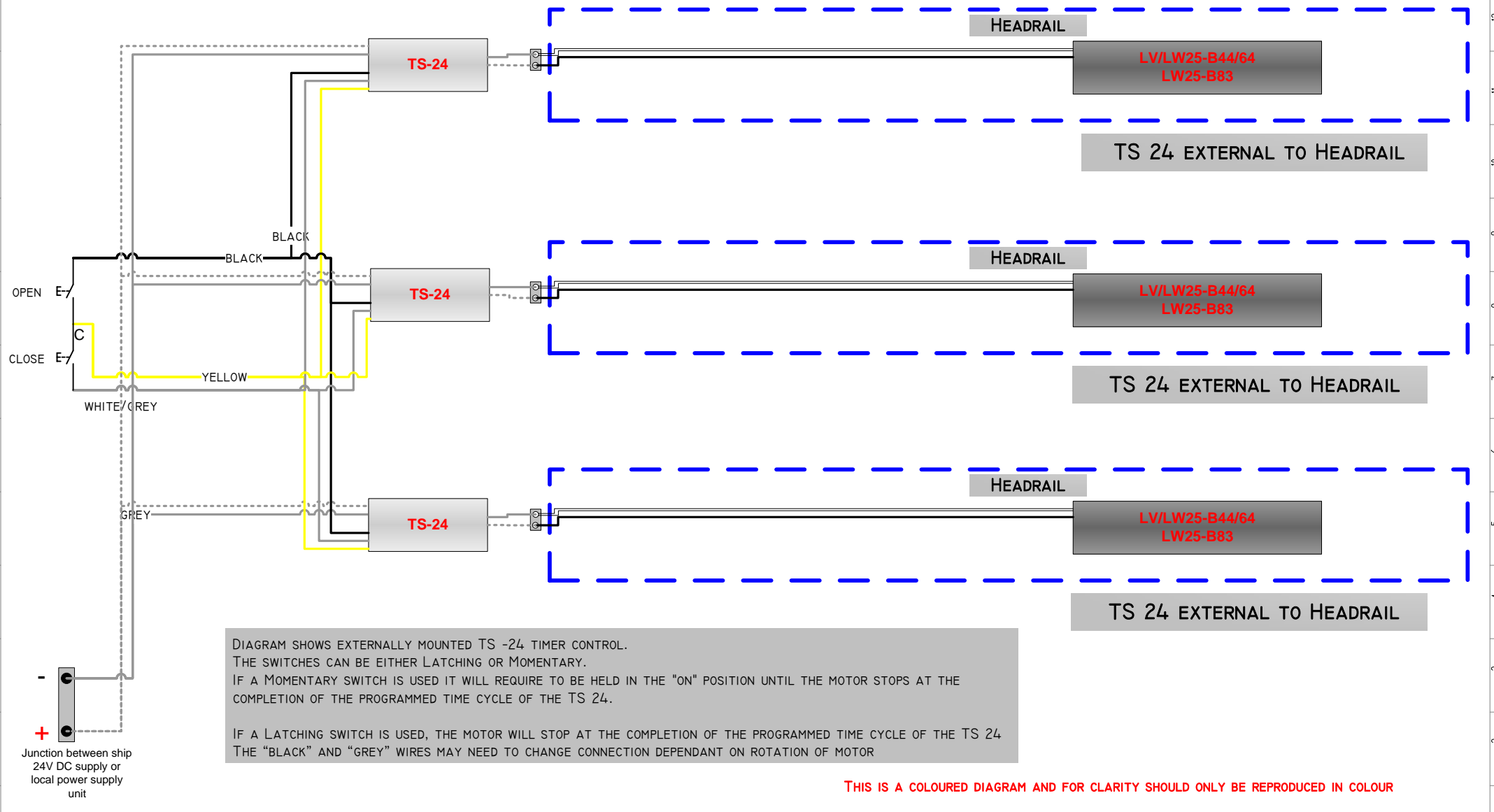


DIAGRAM SHOWS EXTERNALLY MOUNTED TS -24 TIMER CONTROL.  
 THE SWITCHES CAN BE EITHER LATCHING OR MOMENTARY.  
 IF A MOMENTARY SWITCH IS USED IT WILL REQUIRE TO BE HELD IN THE "ON" POSITION UNTIL THE MOTOR STOPS AT THE COMPLETION OF THE PROGRAMMED TIME CYCLE OF THE TS 24.  
 IF A LATCHING SWITCH IS USED, THE MOTOR WILL STOP AT THE COMPLETION OF THE PROGRAMMED TIME CYCLE OF THE TS 24  
 THE "BLACK" AND "GREY" WIRES MAY NEED TO CHANGE CONNECTION DEPENDANT ON ROTATION OF MOTOR

THIS IS A COLOURED DIAGRAM AND FOR CLARITY SHOULD ONLY BE REPRODUCED IN COLOUR

CONTROLLING PDF FILE:  
 700000108-AB,DB,PB\_MULTIPLE BLINDS - SWITCHED - TS 24.PDF  
 CONTROLLING VISIO FILE:  
 S:\TECHNICAL\ISSUED PRODUCTION SPECIFICATIONS\POWERED\UPDATED DIAGRAMS\_MAR2011\Visio\700000108-AB,DB,PB\_MULTIPLE BLINDS - SWITCHED - TS 24\_Rev 1.0\_25JAN2011.VSD  
 OCEANAIR MARINE LTD Atlantic House 1 Ellis Square Selsey West Sussex PO20 0AY UK - T: +44 (0) 1243 606909

MATERIAL:  
 FINISH:  
 SCALE:  
 SHEET:  
 DRAWN BY: R DAVEY  
 DATE: 25 JANUARY 2011

REVISION HISTORY: ORIGINAL 25 JAN 2011

GENERAL NOTES:  
 700000108  
**OCEANAIR**

# AO BLIND - RTS - MECHANICAL STOP

Home

JUNCTION BETWEEN SHIP 24V DC SUPPLY OR LOCAL POWER SUPPLY UNIT

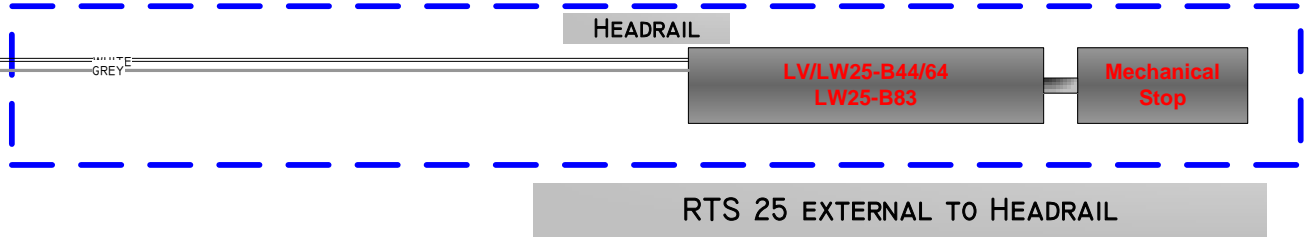
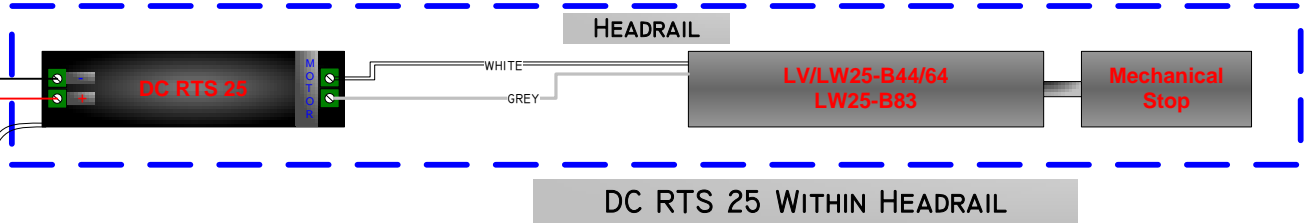
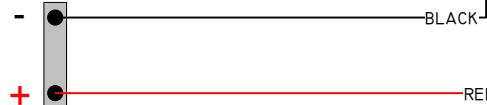


DIAGRAM SHOWS BOTH INTERNALLY AND EXTERNALLY MOUNTED SOMFY RTS 25 UNITS.

WHEN THE DC RTS 25/RTS 25 IS ACTIVATED BY THE TELLIS REMOTE CONTROL, IT SUPPLIES 24V DC TO THE MOTOR FOR APPROXIMATELY 3 MINUTES IRRESPECTIVE OF THE SIZE OF THE BLIND. THERE IS NO ADJUSTMENT TO THIS RUN TIME, THEREFORE TO REDUCE THIS A FORM OF MECHANICAL STOP IS REQUIRED.

THIS IS A COLOURED DIAGRAM AND FOR CLARITY SHOULD ONLY BE REPRODUCED IN COLOUR

CONTROLLING PDF FILE:

700000109-AO BLIND\_RTS\_MECHANICAL STOP.PDF

CONTROLLING VISIO FILE:

S:\TECHNICAL\ISSUED PRODUCTION SPECIFICATIONS\POWERED\UPDATED DIAGRAMS\_MAR2011\Visio\700000109-AO BLIND\_RTS\_MECHANICAL STOP\_REV 1.1\_10JAN2011.VSD

MATERIAL:

FINISH:

SCALE:

SHEET:

DRAWN BY: R DAVEY

DATE: 23 MARCH 2010

REVISION HISTORY: ORIGINAL 23 MARCH 2010

REVISION 1.1 10 JAN 2011: CABLE CORE COLOURS ADDED FOR CLARITY

GENERAL NOTES:

700000109

# AO BLIND - SWITCHED (Latching/Momentary) - MECHANICAL STOP

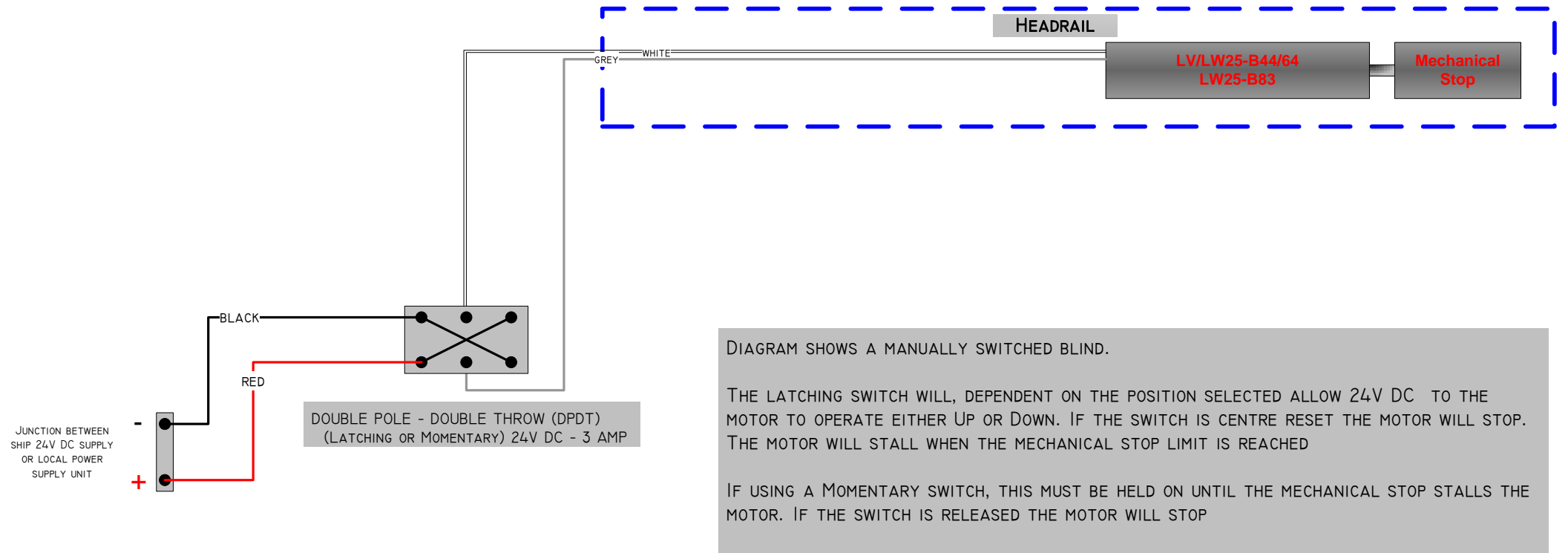


DIAGRAM SHOWS A MANUALLY SWITCHED BLIND.

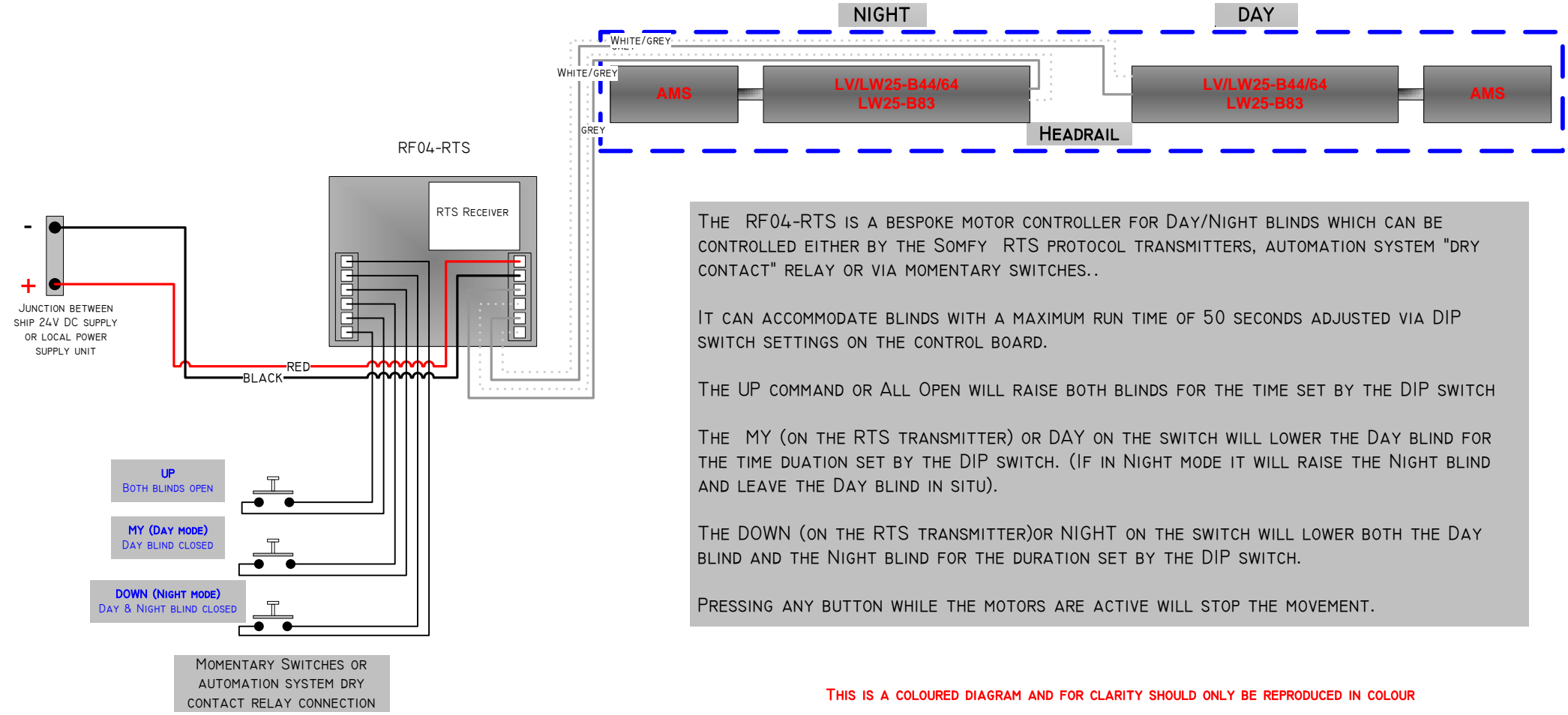
THE LATCHING SWITCH WILL, DEPENDENT ON THE POSITION SELECTED ALLOW 24V DC TO THE MOTOR TO OPERATE EITHER UP OR DOWN. IF THE SWITCH IS CENTRE RESET THE MOTOR WILL STOP. THE MOTOR WILL STALL WHEN THE MECHANICAL STOP LIMIT IS REACHED

IF USING A MOMENTARY SWITCH, THIS MUST BE HELD ON UNTIL THE MECHANICAL STOP STALLS THE MOTOR. IF THE SWITCH IS RELEASED THE MOTOR WILL STOP

THIS IS A COLOURED DIAGRAM AND FOR CLARITY SHOULD ONLY BE REPRODUCED IN COLOUR

<p>CONTROLLING PDF FILE: 700000110-AO BLIND_SWITCHED_MECHANICAL_STOP.PDF</p> <p>CONTROLLING VISIO FILE: S:\TECHNICAL\ISSUED PRODUCTION SPECIFICATIONS\POWERED\UPDATED DIAGRAMS_MAR2011\Visio\700000110-AO BLIND_SWITCHED_MECHANICAL_STOP_VEP I.1_10JAN2011.VSD</p> <p>OCEANAIR MARINE LTD Atlantic House 1 Ellis Square Selsey West Sussex PO20 0AY UK -T: +44 (0) 1243 606909</p>	<p>MATERIAL: FINISH:</p> <p>Copyright 2010 Oceanair Marine Ltd</p>	<p>SCALE: SHEET: DRAWN BY: R DAVEY DATE: 23 MARCH 2010</p>	<p>REVISION HISTORY: ORIGINAL 23 MARCH 2010 REVISION I.1 10 JAN 2011: CABLE CORE COLOURS ADDED FOR CLARITY</p>	<p>GENERAL NOTES: 700000110</p> <p><b>OCEANAIR</b></p>
--	--	--	--	--

# Oceanair RF04-RTS Day/Night Blind Control



THE RF04-RTS IS A BESPOKE MOTOR CONTROLLER FOR DAY/NIGHT BLINDS WHICH CAN BE CONTROLLED EITHER BY THE SOMFY RTS PROTOCOL TRANSMITTERS, AUTOMATION SYSTEM "DRY CONTACT" RELAY OR VIA MOMENTARY SWITCHES..

IT CAN ACCOMMODATE BLINDS WITH A MAXIMUM RUN TIME OF 50 SECONDS ADJUSTED VIA DIP SWITCH SETTINGS ON THE CONTROL BOARD.

THE UP COMMAND OR ALL OPEN WILL RAISE BOTH BLINDS FOR THE TIME SET BY THE DIP SWITCH

THE MY (ON THE RTS TRANSMITTER) OR DAY ON THE SWITCH WILL LOWER THE DAY BLIND FOR THE TIME DUATION SET BY THE DIP SWITCH. (IF IN NIGHT MODE IT WILL RAISE THE NIGHT BLIND AND LEAVE THE DAY BLIND IN SITU).

THE DOWN (ON THE RTS TRANSMITTER)OR NIGHT ON THE SWITCH WILL LOWER BOTH THE DAY BLIND AND THE NIGHT BLIND FOR THE DURATION SET BY THE DIP SWITCH.

PRESSING ANY BUTTON WHILE THE MOTORS ARE ACTIVE WILL STOP THE MOVEMENT.

THIS IS A COLOURED DIAGRAM AND FOR CLARITY SHOULD ONLY BE REPRODUCED IN COLOUR

# AB, DB, PB BLIND - RTS (B – Code) Internal

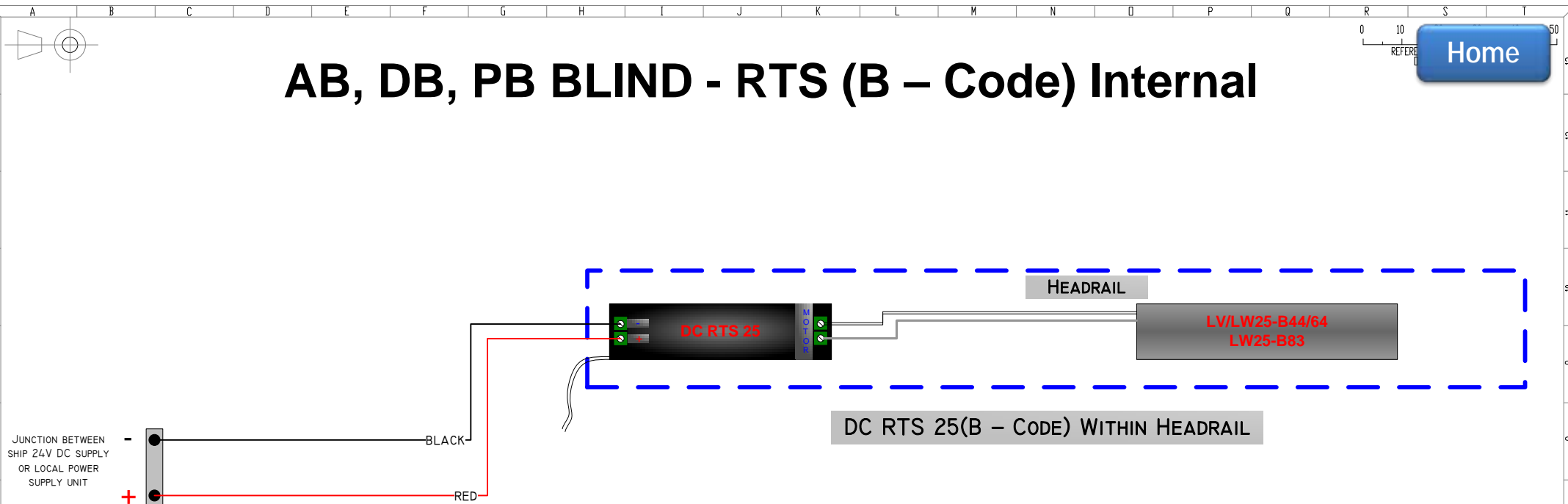


DIAGRAM SHOWS AN INTERNALLY MOUNTED SOMFY RTS 25 (B – CODE) UNIT.

WHEN THE DC RTS 25/RTS 25 IS ACTIVATED BY THE TELLIS REMOTE CONTROL, IT SUPPLIES +24V DC TO THE MOTOR ON EITHER THE GREY OR WHITE CORE DEPENDENT ON THE DIRECTION SELECTED.

THE BLIND RUN TIME WILL BE DETERMINED BY THE TIMER PARAMETER SETTING OF THE DC RTS 25 (B – CODE) FOR WHICH A NEW SETUP PROCEDURE IS REQUIRED.

A -CODE REVISION DEVICES DO NOT HAVE THE TIMER FACILITY

THIS IS A COLOURED DIAGRAM AND FOR CLARITY SHOULD ONLY BE REPRODUCED IN COLOUR

<p>CONTROLLING PDF FILE: 700000106-AB,DB,PB BLIND_RTS(B CODE)_INTERNAL.PDF</p> <p>CONTROLLING VISIO FILE: S:\TECHNICAL\ISSUED PRODUCTION SPECIFICATIONS\POWERED\UPDATED DIAGRAMS_MAR 2011\Visio\700000106-AB,DB,PB BLIND_RTS(B CODE)_INTERNAL_ORIGINAL_01MAR2011.VSD</p> <p>OCEANAIR MARINE LTD Atlantic House 1 Ellis Square Selsey West Sussex PO20 0AY UK - T: +44 (0) 1243 606909</p>	<p>MATERIAL: FINISH:</p> <p>Copyright 2010 Oceanair Marine Ltd</p>	<p>SCALE: SHEET: DRAWN BY: R DAVEY DATE: 01 MARCH 2011</p>	<p>REVISION HISTORY: ORIGINAL 01 MARCH 2011</p>	<p>GENERAL NOTES: 700000106</p> <p><b>OCEANAIR</b></p>
---	--	--	---	--

# AB, DB, PB BLIND – RTS (B - Code) - EXTERNAL

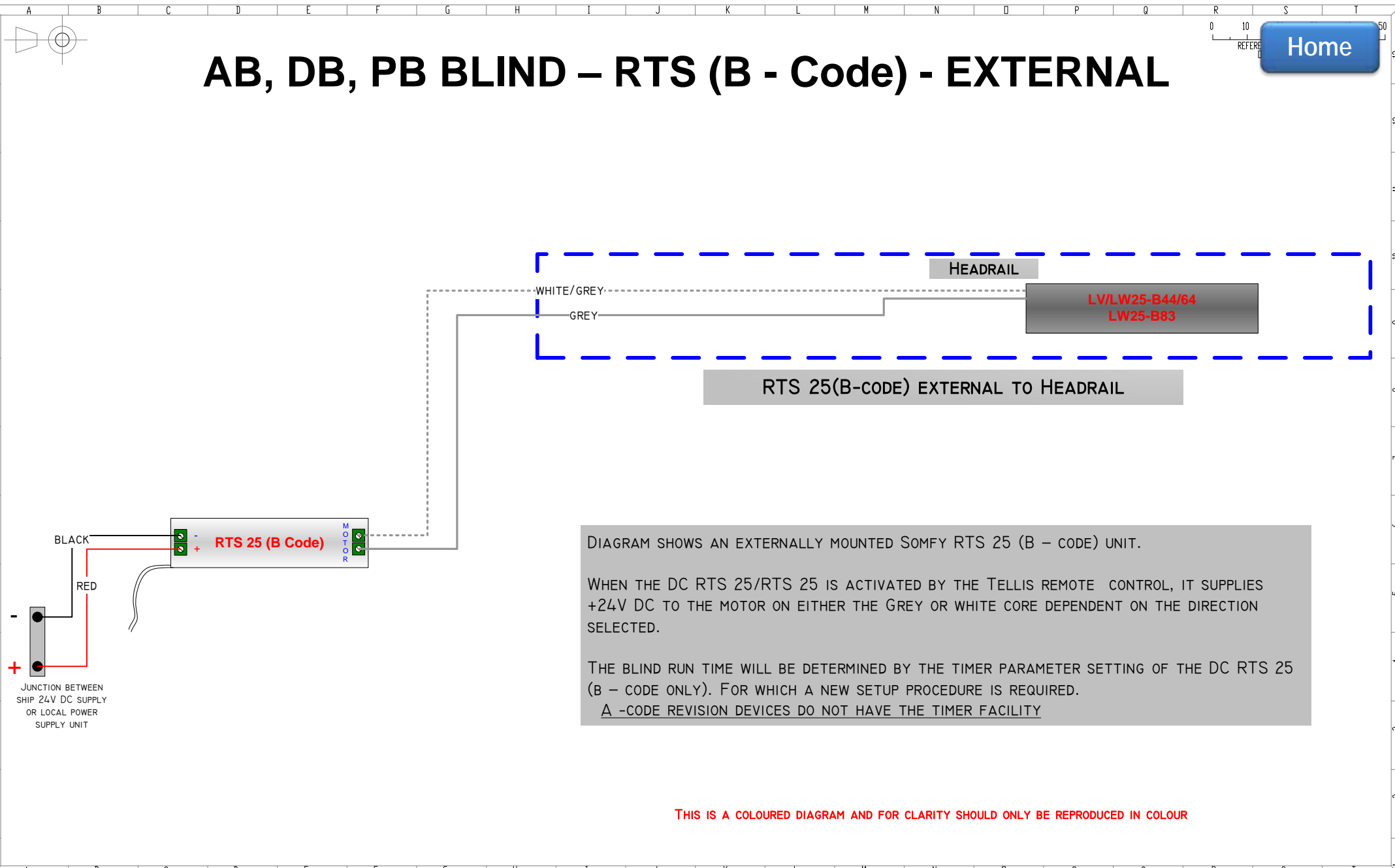


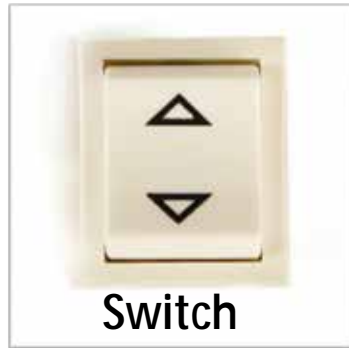
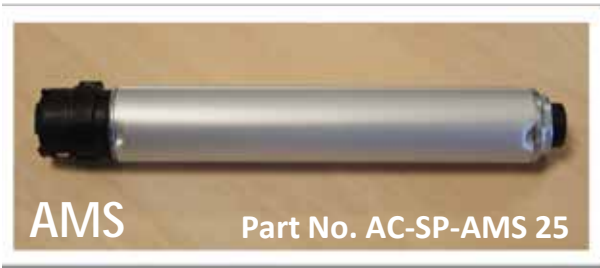
DIAGRAM SHOWS AN EXTERNALLY MOUNTED SOMFY RTS 25 (B – CODE) UNIT.

WHEN THE DC RTS 25/RTS 25 IS ACTIVATED BY THE TELLIS REMOTE CONTROL, IT SUPPLIES +24V DC TO THE MOTOR ON EITHER THE GREY OR WHITE CORE DEPENDENT ON THE DIRECTION SELECTED.

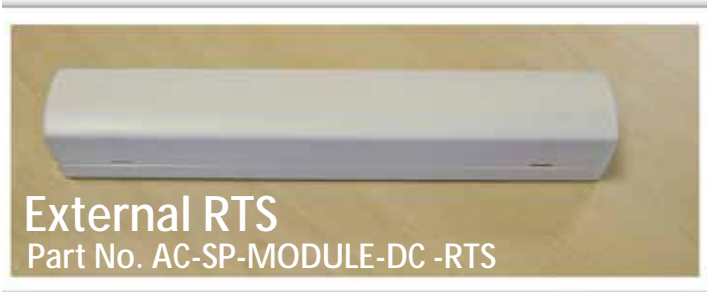
THE BLIND RUN TIME WILL BE DETERMINED BY THE TIMER PARAMETER SETTING OF THE DC RTS 25 (B – CODE ONLY). FOR WHICH A NEW SETUP PROCEDURE IS REQUIRED.

A -CODE REVISION DEVICES DO NOT HAVE THE TIMER FACILITY

THIS IS A COLOURED DIAGRAM AND FOR CLARITY SHOULD ONLY BE REPRODUCED IN COLOUR

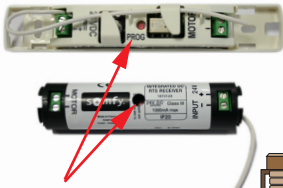


Part No's AC-SP-SWITCH (constant)

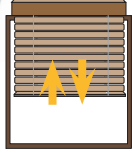


# Somfy 24v Receiver Programming

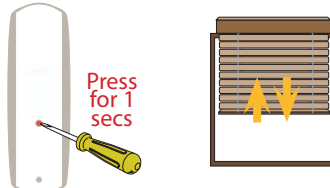
1 Place the RTS receiver into the programming mode



Press the program button for approximately 3 seconds until the Blind shuts once (moves a short distance in both directions & stops)



2 Recording the RTS controller:



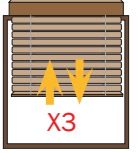
Press the button to the rear of the handset for approximately 1 second, the blind will shunt once when the controller is recorded, (see notes below).

3 Erasing the memory of the RTS receiver:



Press the program button for approximately 20 seconds, the Blind will shunt 3 times and returns to factory settings.

Memory deleted



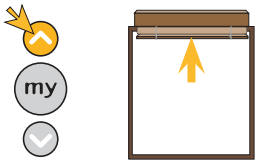
Notes: Tellis 1 TRS: 1 individual Blind or 1 group of 7 Blinds.  
Telis 4 RTS: Up to 5 individual blinds or up to 4 groups of 7 Blinds or a combination of the above ( Max 28 Blinds).

When using a Multi-channel RTS control, remember to select the desired channel prior to programming.

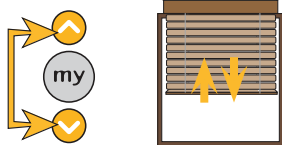


## Setting the run time (Top Stack configuration shown)

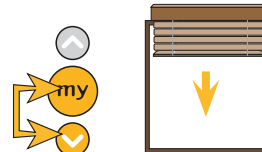
1 Press the UP button to raise blind, if the blind move down, reverse the motor wires at the RTS unit.



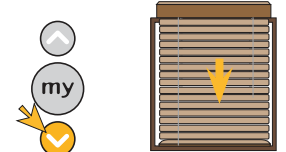
2 Press and hold the UP & DOWN buttons together for 3 seconds until the blind shuts once.



3 Press and hold the MY & DOWN buttons simultaneously for a maximum 0.5 seconds. The Blind will move down for 10 seconds. Use the MY button to stop the blind if less than 10 seconds travel is required (remember to allow for a 4 to 6 second overrun).



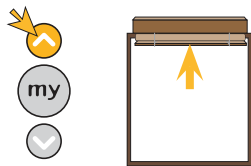
4 If the Blind has not reached its full travel, hold the DOWN button to initiate a further 10 seconds travel, repeat this process until the lower limit has been reached, (remember to allow for a 4 to 6 second overrun). Releasing the DOWN button at any time will stop the blind moving.



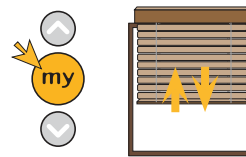
5 Press and release the MY & UP buttons simultaneously for a maximum of 0.5 seconds, the Blind will move up for 10 seconds.



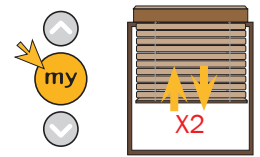
6 If the Blind has not reached its full travel, Hold the UP button to initiate a further 10 seconds travel, repeat this process until the upper limit has been reached (blind should stall automatically).



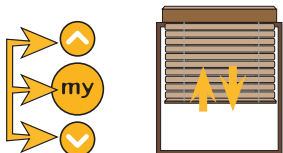
7 Press & hold the MY button for approximately 3 seconds until the blind shuts once.



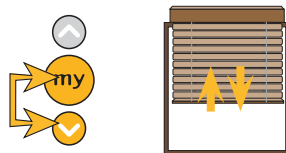
8 Press & hold the MY button for approximately 3 seconds until the blind shuts twice.



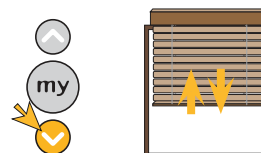
9 Press & hold all three buttons Simultaneously for approximately 3 seconds until the blind shuts once.



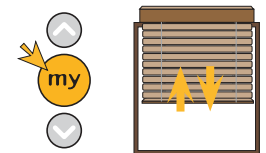
10 Press both MY & DOWN buttons Simultaneously for approximately 3 seconds until the blind shuts once.



11 Press & hold the DOWN button for approximately 3 seconds Until the blind shuts once.



12 Press & hold the MY button for approximately 10 seconds until the blind shuts once.



# OPERATION MANUAL

Doc RF04-RTS  
Version 1.3 May 2009  
For 53P41D11  
Software



**RF04-RTS**

**CONTROL UNIT**

**Fitted With Prototype DNC / RFB Application Software for Evaluation**

Run Times 5 to 80 seconds

Part No. 400000796

## Introduction

The RF04-RTS control unit is a versatile unit running on 24VDC, which can be controlled by either RTS protocol transmitters or push button inputs and has two motor output channels.

Specific software enables it to be used to control either window day/night or roof blinds. It has built in self-resetting over current protection and the run time for the motor outputs can also be adjusted to suit the application.

## How to Install the RF04-RTS Control Unit

### Fit the control unit

The controller should be mounted in an easily accessible position, to allow initial connection of the unit and subsequent setting of the DIP switches. Wiring should be installed as shown in the diagram.

### Inputs

The unit should be fed from a regulated 24v DC power supply rated at 5 A max.

Normally Open (N/O) push buttons can be connected as shown to J3.

Transmitters from the Telis range with RTS protocol can be loaded onto the control system. The system can accept up to a maximum of 36 transmitters.

There are also 3 push buttons mounted on the board to enable easy commissioning of the system.

### Outputs

Motor connection, the polarity of the motor wires depends on whether the motor is left or right hand mounted. Motor output A goes +ve and B -ve during an UP command so motors should be connected accordingly.

### Set the DIP Switches

DIP switches 1-3 set the time period that the motors run for on receipt of a command.

The preset minimum time is 5 seconds; this can be increased in increments as shown in the following table up to a maximum of 80 seconds.

DIP 4 OFF = unit in DNC mode, for window blinds

DIP 4 ON = unit in RFB mode for roof blinds

Run Time seconds	DIP 1	DIP 2	DIP 3
5	Off	Off	Off
10	On	Off	Off
15	Off	On	Off
20	On	On	Off
30	Off	Off	On
40	On	Off	On
50	Off	On	On
80	On	On	On

## Mode Selection

There are two selectable modes, RFB for roof blinds and DNC for window blinds. Upon receiving a command, the output relays energise in a set sequence as shown below to control the motors fitted to the blinds. Any subsequent commands received during the run time are treated as a stop command, as the motors may have already stopped on their own limit switches this can cause confusion to the operator so it is important to set the run time as close as possible to the actual run time of the blind. It is however recommended to build in an additional margin to allow for motor speed fluctuations.

<b>DIP 4 OFF = DNC Mode</b>		
<b>COMMAND</b>	<b>MOTOR 1</b>	<b>MOTOR 2</b>
Up	Up	Up
MY	Down	Up
Down	Down	Down

<b>DIP 4 ON = RFB Mode</b>		
<b>COMMAND</b>	<b>MOTOR 1</b>	<b>MOTOR 2</b>
Up	Up	Down
MY	Down	Down
Down	Up	Up

## Adding and Deleting Transmitters

Up to 36 transmitters from the Telis range can be loaded onto the control unit. Transmitters are added and deleted by pressing the *Add/Delete Transmitter Button* located on the raised board in the top right hand corner of the main board, as shown on the diagram.

### Adding Transmitters

Press and hold the *Add/Delete Transmitter Button* for 2 seconds until the receiver LED comes on, within 2 minutes press the *prog* button on the back of the transmitter you need to add. The receiver LED will flash 7 times to confirm that the transmitter has been added. Repeat this process for further transmitters.

### Deleting Transmitters

To delete an individual transmitter, press and hold the *Add/Delete Transmitter Button* for 2 seconds until the receiver LED comes on, within 2 minutes press the *prog* button on the back of the transmitter you need to delete. The receiver LED will flash 7 times to confirm that the transmitter has been deleted. Repeat this process for further transmitters. To delete all transmitters on the system, press and hold the *Add/Delete Transmitter Button* for 7 seconds total, after 2 seconds the receiver LED comes on solid, keep the button held in for the remaining 5 seconds until the LED flashes, all transmitters are now deleted.

## User Operating Information

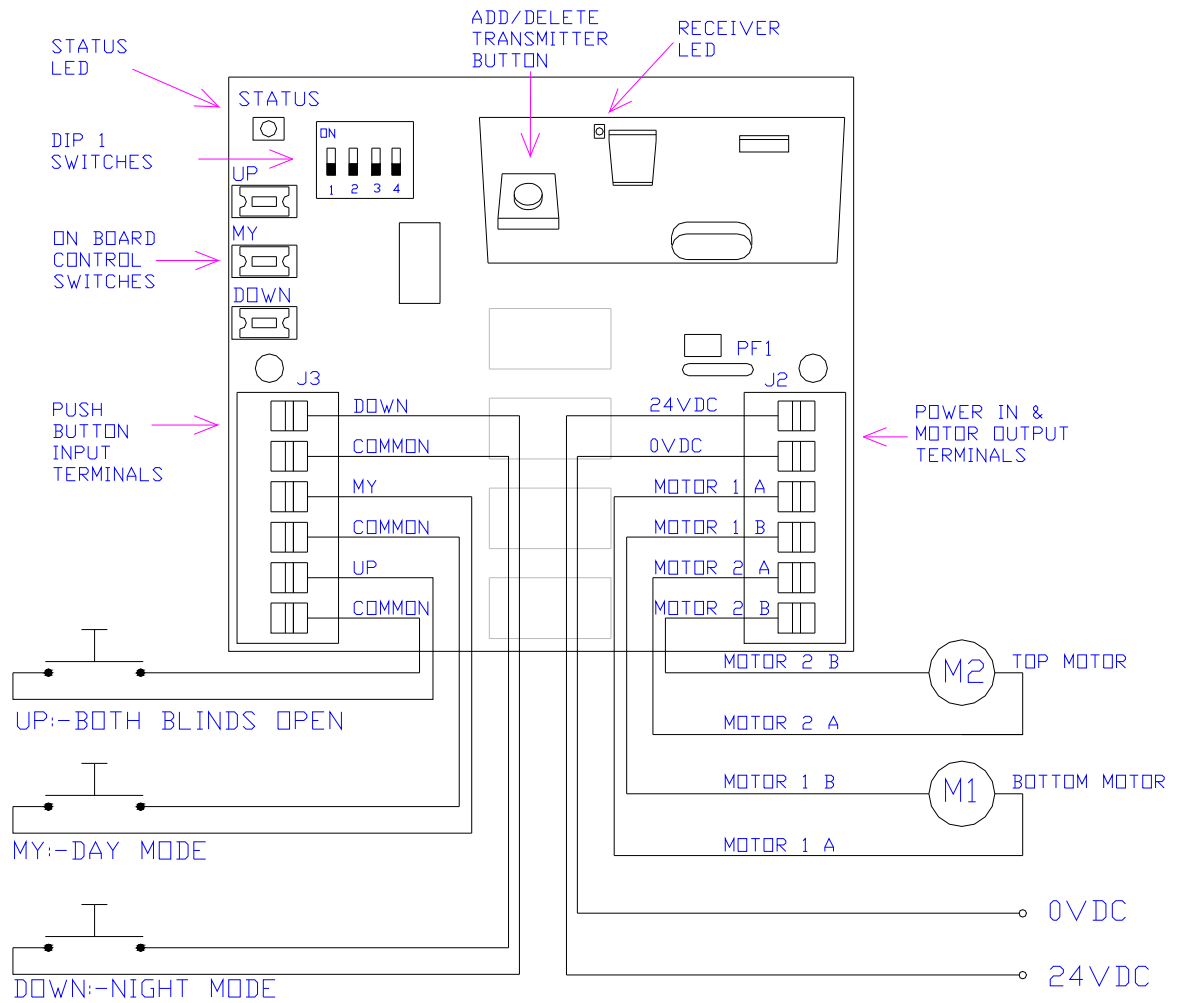
Pressing the UP button moves both blinds to the fully up position leaving the window un-obscured. The blinds automatically stop at the end of travel limit, pressing any button while the motor outputs are still active stops the movement.

Pressing the MY button closes the DAY blind leaving the window semi-obscured.

Pressing the DOWN button closes the NIGHT blind leaving the window fully obscured.

### Status LED Indication

Red Flash	Reset Signal During Power Up
Constant Red	Push Button Input Active During Power Up
Green Flash Every Second	Unit Powered up – Relay Outputs Idle
Red/Green Flash Every Second	Unit Powered Up – Relay Outputs Active



Specification	
Supply Voltage	24v DC Regulated
Supply current	5A
Max Motor Power	650mA (Somfy LW 25)
Radio Frequency	433.42 MHz
Radio Protocol	RTS
Max No. Transmitters	36
IP Rating	44
Dimensions (mm)	H 108 / W 110 / D 40

**Oceanair Marine Ltd.**  
 Atlantic House, 1 Ellis Square,  
 Selsey, Chichester PO20 0AY  
 United Kingdom

# OPERATION MANUAL

Doc RF04-RTS  
Version 28<sup>th</sup> Jan 2010  
For 53P41D12  
Software



**RF04-RTS**

**CONTROL UNIT**

**Fitted With Prototype DNC / RFB Application Software for Evaluation**

Run Times 40 to 75 seconds

Part No. 400001082

## Introduction

The RF04-RTS control unit is a versatile unit running on 24VDC, which can be controlled by either RTS protocol transmitters or push button inputs and has two motor output channels.

Specific software enables it to be used to control either window day/night or roof blinds. It has built in self-resetting over current protection and the run time for the motor outputs can also be adjusted to suit the application.

## How to Install the RF04-RTS Control Unit

### Fit the control unit

The controller should be mounted in an easily accessible position, to allow initial connection of the unit and subsequent setting of the DIP switches. Wiring should be installed as shown in the diagram.

### Inputs

The unit should be fed from a regulated 24v DC power supply rated at 5 A max.

Normally Open (N/O) push buttons can be connected as shown to J3.

Transmitters from the Telis range with RTS protocol can be loaded onto the control system. The system can accept up to a maximum of 36 transmitters.

There are also 3 push buttons mounted on the board to enable easy commissioning of the system.

### Outputs

Motor connection, the polarity of the motor wires depends on whether the motor is left or right hand mounted. Motor output A goes +ve and B –ve during an UP command so motors should be connected accordingly.

### Set the DIP Switches

DIP switches 1-3 set the time period that the motors run for on receipt of a command.

The preset minimum time is 5 seconds; this can be increased in increments as shown in the following table up to a maximum of 80 seconds.

DIP 4 OFF = unit in DNC mode, for window blinds

DIP 4 ON = unit in RFB mode for roof blinds

Run Time seconds	DIP 1	DIP 2	DIP 3
40	Off	Off	Off
45	On	Off	Off
50	Off	On	Off
55	On	On	Off
60	Off	Off	On
65	On	Off	On
70	Off	On	On
75	On	On	On

## Mode Selection

There are two selectable modes, RFB for roof blinds and DNC for window blinds. Upon receiving a command, the output relays energise in a set sequence as shown below to control the motors fitted to the blinds. Any subsequent commands received during the run time are treated as a stop command, as the motors may have already stopped on their own limit switches this can cause confusion to the operator so it is important to set the run time as close as possible to the actual run time of the blind. It is however recommended to build in an additional margin to allow for motor speed fluctuations.

DIP 4 OFF = DNC Mode		
COMMAND	MOTOR 1	MOTOR 2
Up	Up	Up
MY	Down	Up
Down	Down	Down

DIP 4 ON = RFB Mode		
COMMAND	MOTOR 1	MOTOR 2
Up	Up	Down
MY	Down	Down
Down	Up	Up

## Adding and Deleting Transmitters

Up to 36 transmitters from the Telis range can be loaded onto the control unit. Transmitters are added and deleted by pressing the *Add/Delete Transmitter Button* located on the raised board in the top right hand corner of the main board, as shown on the diagram.

### Adding Transmitters

Press and hold the *Add/Delete Transmitter Button* for 2 seconds until the receiver LED comes on, within 2 minutes press the *prog* button on the back of the transmitter you need to add. The receiver LED will flash 7 times to confirm that the transmitter has been added. Repeat this process for further transmitters.

### Deleting Transmitters

To delete an individual transmitter, press and hold the *Add/Delete Transmitter Button* for 2 seconds until the receiver LED comes on, within 2 minutes press the *prog* button on the back of the transmitter you need to delete. The receiver LED will flash 7 times to confirm that the transmitter has been deleted. Repeat this process for further transmitters. To delete all transmitters on the system, press and hold the *Add/Delete Transmitter Button* for 7 seconds total, after 2 seconds the receiver LED comes on solid, keep the button held in for the remaining 5 seconds until the LED flashes, all transmitters are now deleted.

## User Operating Information

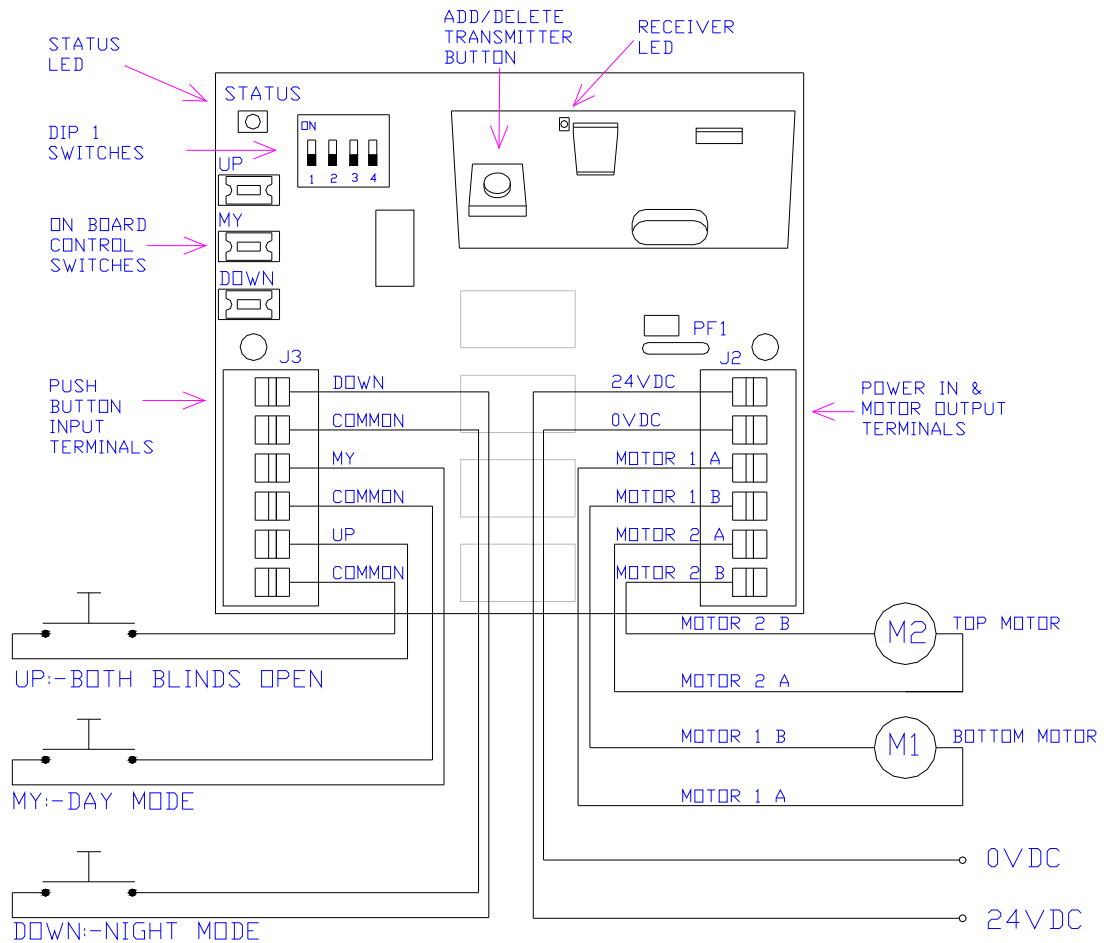
Pressing the UP button moves both blinds to the fully up position leaving the window un-obscured. The blinds automatically stop at the end of travel limit, pressing any button while the motor outputs are still active stops the movement.

Pressing the MY button closes the DAY blind leaving the window semi-obscured.

Pressing the DOWN button closes the NIGHT blind leaving the window fully obscured.

## Status LED Indication

Red Flash	Reset Signal During Power Up
Constant Red	Push Button Input Active During Power Up
Green Flash Every Second	Unit Powered up – Relay Outputs Idle
Red/Green Flash Every Second	Unit Powered Up – Relay Outputs Active



Specification	
Supply Voltage	24v DC Regulated
Supply current	5A
Max Motor Power	650mA (Somfy LW 25)
Radio Frequency	433.42 MHz
Radio Protocol	RTS
Max No. Transmitters	36
IP Rating	44
Dimensions (mm)	H 108 / W 110 / D 40

**Oceanair Marine Ltd.**  
 Atlantic House, 1 Ellis Square,  
 Selsey, Chichester PO20 0AY  
 United Kingdom