



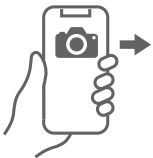
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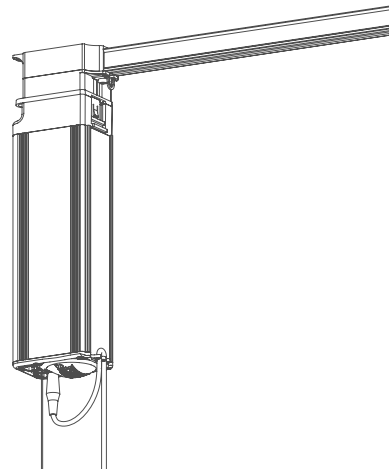
## INSTALLATION MANUAL **FOREST SHUTTLE® S / M / L RECEIVER**



online help  
page



instructional  
video

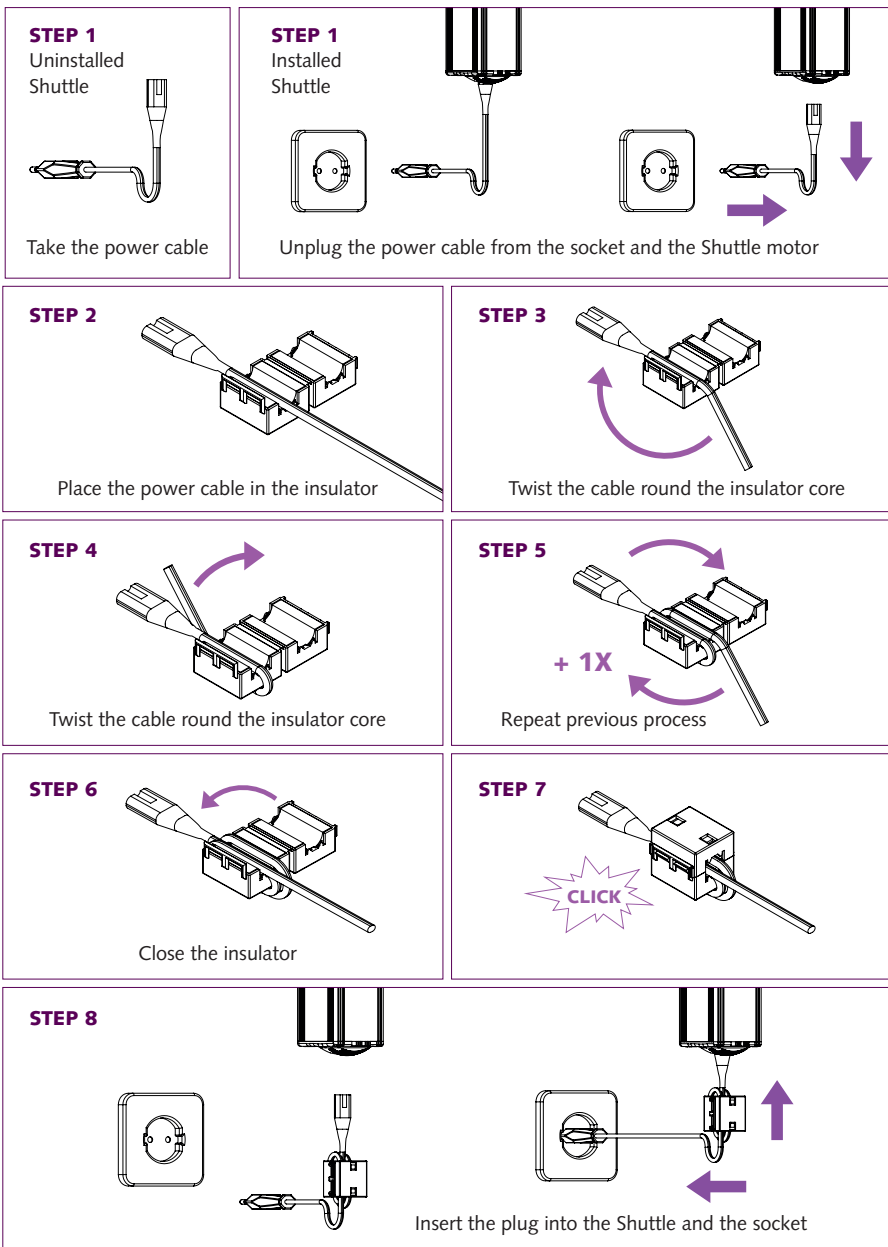


# CONTENTS

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|  | page |
|--|------|
| INSTALLATION FOREST INSULATOR SERVICE KIT (FOR SHUTTLE® L) | 3    |
| EU DECLARATION OF CONFORMITY                               | 4    |
| QUICK START  | 5    |
| INSTALLATION   | 6    |
| CONFIGURATION OVERVIEW                                     | 8    |
| CONNECTING TO HOME AUTOMATION SYSTEMS                      | 10   |
| CONFIGURATION MASTER - SLAVE FUNCTION                      | 11   |
| TECHNICAL SPECIFICATIONS                                   | 13   |
| CONTACT & SUPPORT  | 14   |

# INSTALLATION FOREST INSULATOR SERVICE KIT (FOR SHUTTLE® L MOTOR)



EN



In case a control wire (RJ45) is used on port 1 or 2 of Shuttle -> fix an additional insulator to this control cable in similar way. Additional insulator(s) can be requested at: [info@forestgroup.com](mailto:info@forestgroup.com)

# EU DECLARATION OF CONFORMITY



## EU Declaration of Conformity

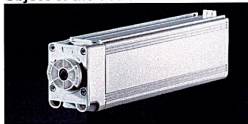
**Hereby we, the undersigned:**

Manufacturer: Forest Group Nederland B.V.  
 Address; city, Country: Teugseweg 42, 7418 AM Deventer, The Netherlands  
 Telephone number: +31 0570 622 850

**Declare that this DoC is issued under our sole responsibility and that this product is:**

Product description: Electronic motorized curtain track system  
 Type designation(s): Shuttle L  
 Trademark: Forest  
 Power Adapter: Chanzeho QZH05-2401500D

**Object of the declaration:**



**The object is in conformity with the relevant Union harmonization legislation:**

|                                     |  |                                     |                               |
|-------------------------------------|--|-------------------------------------|-------------------------------|
| <input checked="" type="checkbox"/> | Radio Equipment Directive – 2014/53/EU                       | <input checked="" type="checkbox"/> | Article 3.2                   |
| <input checked="" type="checkbox"/> | Article 3.1(a)   |                                     | EN 300 220-1 V3.1.1 (2017-02) |
|                                     | EN 62368-1:2014 + A11:2017                                   |                                     | EN 300 220-2 V3.1.1 (2017-02) |
|                                     | EN IEC 61558-1:2019  |                                     |                               |
|                                     | EN 61558-2-16:2009   |                                     |                               |
| <input checked="" type="checkbox"/> | Article 3.1(b)   |                                     |                               |
|                                     | EN 301 489-1 V2.2.3 (2019-11) except clause 9.3              |                                     |                               |
|                                     | EN 301 489-3 V2.1.1 (2019-03) except EN 301 489-1 clause 9.3 |                                     |                               |
| <input checked="" type="checkbox"/> | RoHS directive – 2011/65/EU + ammendment (EU) 2015/863       |                                     |                               |

The Notified Body Kiwa Nederland B.V., with Notified Body number 0063, has issued under the conformity assessment procedure as described in Annex III of the Directive, the EU-type examination certificate 232140456/AA/00.

**Signed for and on behalf of:**

Place: Deventer Name: *A.G. ten Have*  
 Date: *19-12-2023* Function: *Head R&D*  
 Signature:

# QUICK START | ASSEMBLED TRACKS

## PROGRAMMING EASYTOUCH/DIAMOND SENSE REMOTE CONTROL

It is not necessary to fix the Shuttle motor to the track for programming a channel to a Shuttle motor.

- ① First select the desired channel
- ② Press button 3x with a pen
- ③ LED moves from 1<sup>st</sup> ▶ 2<sup>nd</sup> ▶ 3<sup>rd</sup> led
- ④ Keep button pressed for 5 sec.
- ⑤ Green LED starts blinking
- ⑥ Within 10 sec. press open



3 x

1 x 5 sec.



If the motor does not respond to the remote control, set the end positions again. See page 7.



EN

## RE-ADJUSTING THE OPEN AND CLOSE END POSITION

The OPEN and CLOSE end positions are already set to the curtain track. Adding extra carriers is taken into account. When the end positions need to be changed, take next steps:



Note: Curtains should be in the open position.

- ① Press button 4x with a pen
- ② LED moves from 1<sup>st</sup> ▶ 2<sup>nd</sup> ▶ 3<sup>rd</sup> ▶ 4<sup>th</sup> led
- ③ Keep button pressed for 5 sec.
- ④ Yellow LED blinks and goes off



4 x

1 x 5 sec.

Now the end positions are reset and have to be set again:

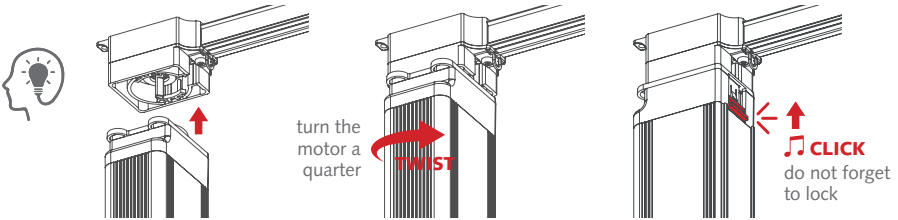
1. Push the curtain towards the CLOSE position until the motor takes over.
2. The motor will open the curtain automatically. When it is reached, the yellow LED flashes.
3. Pull the curtain to the desired OPEN position, this can be done as long as the yellow LED is flashing.
4. Let the curtain hang at the desired OPEN position until the yellow LED goes off.
5. Ready for use!

# INSTALLATION



Make sure your system is fully assembled and mounted on the ceiling or wall before you start installing the Forest Shuttle.

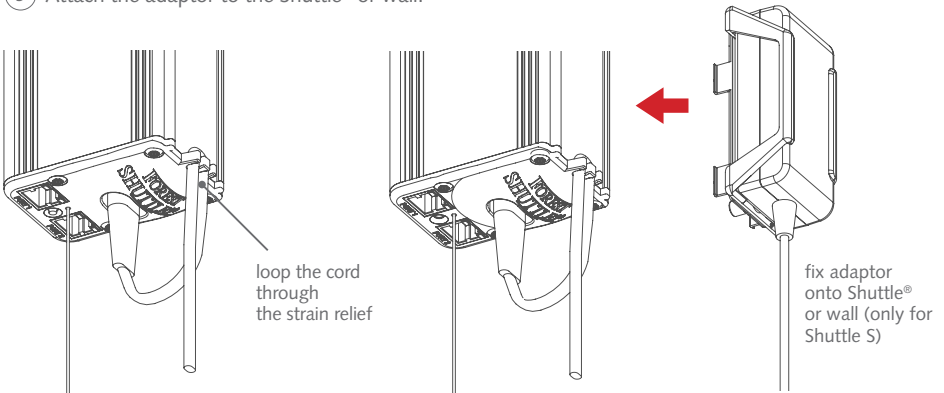
- 1 Attach the curtain motor to the track. Please do this by Twist & Click. Turn the motor a quarter turn so that it is in the correct position on the track. Lock the motor on the track using the locking pin.



- 2 Hang the curtains on the track and slide the curtains into the open position.
- 3 Now connect the power cable to the motor.

**SHUTTLE® L:** Connect the AC plug (100-240V~) to the power socket of Shuttle® L  
**SHUTTLE® S / M RECEIVER:** Connect the 24V plug into the socket of the Shuttle® S / M Rec. and connect the AC plug to the wall socket.

- 4 Pass the connecting cable through the strain relief, this prevents the cable from being pulled out.
- 5 Attach the adaptor to the Shuttle® or wall.



- 6 Setting the end limits of the FOREST SHUTTLE® S/M/L/ Receiver

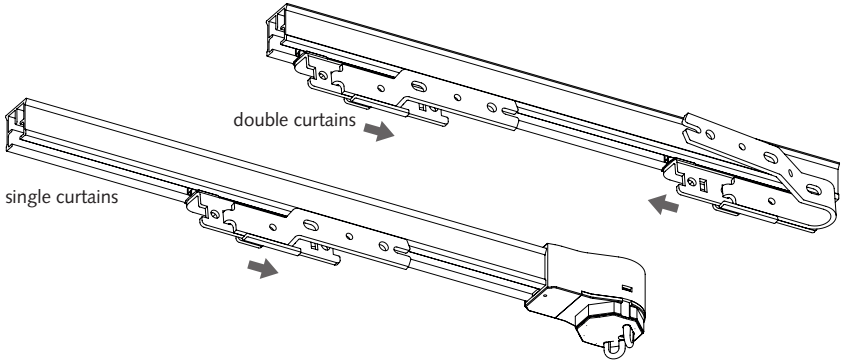


Before setting the end limits, the RF remote or IR remote channel can be programmed. The stack back (adjusted open limit) can be set by remote or switch. For programming see page 8.

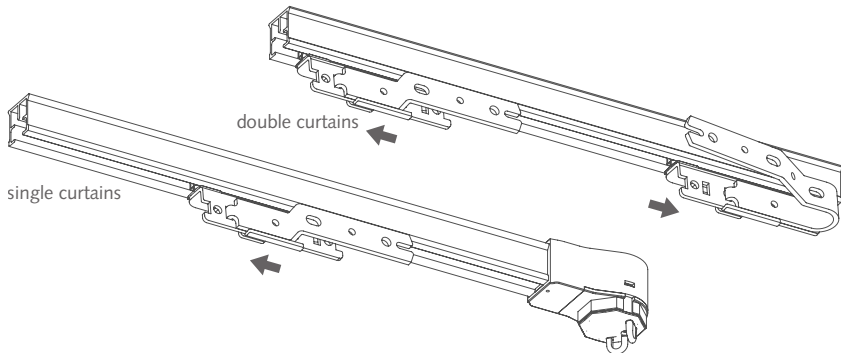
**SETTING MOTOR DIRECTION AND CLOSE LIMIT:**

The Shuttle® detects automatically the motor direction. By pulling the master carrier(s) towards closed position first, the Shuttle® will automatically learn that motor direction. The master carrier will travel automatically towards the closed position.

- 1 Pull the curtain towards the CLOSE position until the motor takes over, this automatically sets the motor direction and determines the end position.



- 2 After the motor has determined the end position, the curtain will automatically return to the OPEN position.



- 3 When the curtain has reached the OPEN position, it will stop automatically (yellow LED4 is on). Do you still want to adjust the stack back? Then adjust it by hand or by remote control. You have to do this within 10 seconds. If the curtain is not moved for 10 seconds, the yellow LED4 goes off and this OPEN end position is stored.



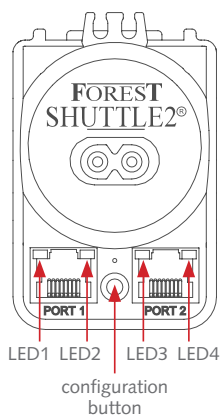
If you are not satisfied with programmed end limits, then re-set the end limits. For resetting see page 5, adjusting open and close end positions.



# CONFIGURATION



Use a pin to change settings in the configuration menu. Choose the setting you want to change (table below) and press the button that many times (corresponding with setting). Confirm the desired setting by pressing the button for 4 seconds until the led blinks 3 times and goes OFF. These settings can also be done when finishing the installation.



| Number of times to press | LEDs<br>1 2 3 4<br>□□□□ | function                                    | factory default |
|--------------------------|-------------------------|---|-----------------|
| 1                        | ■□□□                    | speed low                                   | ●               |
| 2                        | □■□□                    | speed high                                  |                 |
| 3                        | □□■□                    | RF (433)                                    |                 |
| 4                        | □□□■                    | reset endlimits                             |                 |
| 5                        | ■□□□                    | dry-contact pulse                           | ●               |
| 6                        | □■□□                    | dry-contact continuous                      |                 |
| 7                        | □□■□                    | dry-contact single switch                   |                 |
| 8                        | □□□■                    | touch impulse sensitive high                | ●               |
| 9                        | ■□□□                    | touch impulse sensitive low                 |                 |
| 10                       | □■□□                    | touch impulse off                           |                 |
| 11                       | □□■□                    | IR channel 1                                | ●               |
| 12                       | □□□■                    | IR channel 2                                |                 |
| 13                       | ■□□□                    | IR channel 3                                |                 |
| 14                       | □■□□                    | IR channel 4                                |                 |
| 15                       | □□■□                    | IR channel 5                                |                 |
| 16                       | □□□■                    | factory default                             |                 |
| 17                       | ■□□□                    | master mode                                 |                 |
| 18                       | □■□□                    | slave mode on one curtain track             |                 |
| 19                       | □□■□                    | slave mode for FSS system (skylight system) |                 |
| 30                       | □■□□                    | Extend closed position +0cm                 | ●               |
| 31                       | □□■□                    | Extend closed position +1cm                 |                 |
| 32                       | □□□■                    | Extend closed position +2cm                 |                 |



**SPEED (1 & 2):**

Standard speed is 14cm/s. For faster speed, 17cm/s, press 2x button. To confirm, press and hold once more for 4 seconds until the led blinks 3 times and goes OFF.

**PROGRAMMING RF REMOTE CONTROL / CHANNEL (3):**

To program a RF remote to a Shuttle®, press configuration button 3 times. LED3 is ON. Press and hold once more for 4 seconds, LED will start blinking for 10 seconds. In these 10 seconds press OPEN button on remote to program the channel to the Shuttle®. Same procedure, but press CLOSE instead of OPEN, will erase the programmed channel. Adding another channel, or another remote, can be done by pressing the P button 2 times, switch to new channel/remote and press the OPEN button once. Now the new channel/remote will also control the Shuttle®.

**COPYING OF PROGRAMMED RF REMOTE CONTROL:**

Use this function to pair multiple remote controls with the same motor(s). Select the desired channel on the new remote control, then press the P-button on the back of the current remote control twice, with a one-second interval. Next, press the OPEN-button on the new remote control. The channel settings are now copied.

**RESET END LIMITS (4):**

For resetting only the end limits: press button 4x. To confirm, press and hold once more for 4 seconds until the led blinks 3 times and goes OFF. When a Forest remote is programmed to the Shuttle®, the end limits can also be reset by pressing 5 times the P button and 5 times the STOP button on the remote. End limits of all Shuttles® in range on this channel will reset end limits.

**DRY CONTACT INPUTS (5, 6 & 7):**

Standard input is pulse contact. To set to continuous or single switch, press button 6 or 7 times respectively. To confirm, press and hold once more for 4 seconds until the led blinks 3 times and goes OFF. Please see page 10 for detailed explanation. Make sure the contact is free of potential.

**TOUCH IMPULSE (8, 9 & 10):**

The Shuttle® recognizes when the curtain is pulled by hand to open or close. The Shuttle® will then open or close the curtain all the way. Default setting is high sensitive. Touch Impulse can be set to less sensitive or off, with 9 or 10 presses respectively. To confirm, press and hold once more for 4 seconds until the led blinks 3 times and goes OFF.

**IR CHANNEL SETTING (11, 12, 13, 14 & 15):**

For Infra Red control an IR remote and an IR receiver is required, connected to port 1. Place the eye of the receiver cord in view of the IR remote. Standard the Shuttle® is set to channel 1 and 'ALL'. To change to channel 2, 3, 4 or 5, press resp. 12x, 13x, 14x or 15x button. Press and hold once more for 4 seconds until the led blinks 3 times and goes OFF.

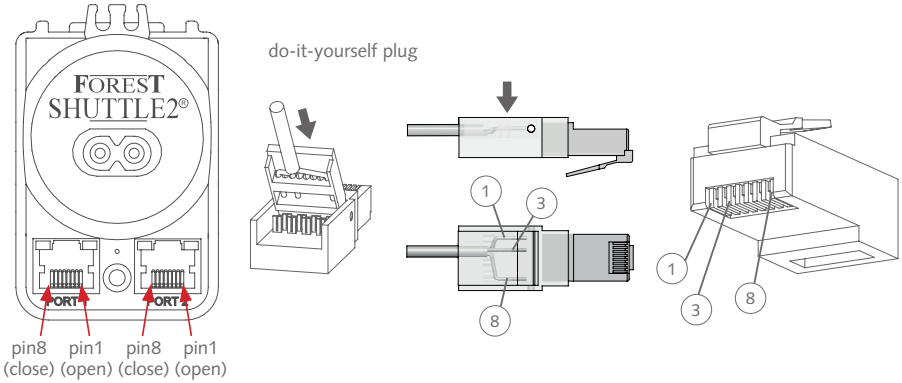
**FACTORY DEFAULT (16):**

To reset all settings, press button 16x. To confirm, press and hold once more for 4 seconds until the led blinks 3 times and goes OFF.

**EXTEND CLOSE POSITION (30, 31 & 32):**

The close position can be extended by 1 or 2 cm when the curtain does not close completely. To extend by 1 or 2 cm, press the button 31 or 32 times respectively. To confirm, press the button once more for 4 seconds until the LED blinks 3x and goes off.

# CONNECTING TO HOME AUTOMATION SYSTEM



## MANUAL SWITCH CONNECTED TO DRY CONTACT INPUTS

A manual switch or a relay output of a Home Automation System can easily be connected to the Shuttle®.



Make sure that the switch/relay contact is de-energised.

**OPEN** : when pin 1 is connected to pin 3 (COMMON) the Shuttle® will open the curtain.

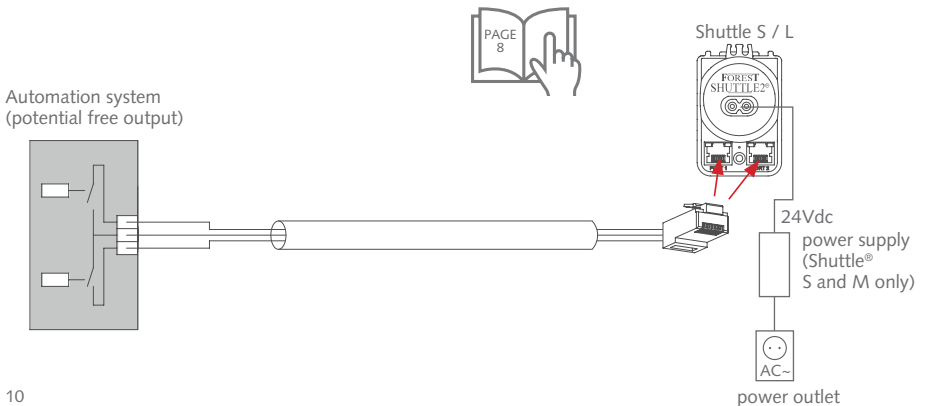
**CLOSE** : when pin 8 is connected to pin 3 (COMMON) the Shuttle® will close the curtain.

**STOP** : when pin 1 and 8 are connected to pin 3 (COMMON) the Shuttle® will stop moving the curtain.

## MODES:

- Pulse: when short contact is made the curtain will open or close fully (default setting)
- Continuous: the curtain will move as long as the contact is made (mostly used for Home Automation Systems)
- Single button switch (door bell principle): either one of the four inputs will act as following: open ► stop ► close ► stop ► open ► stop ► close ► stop etc.

To change this setting see page 8.

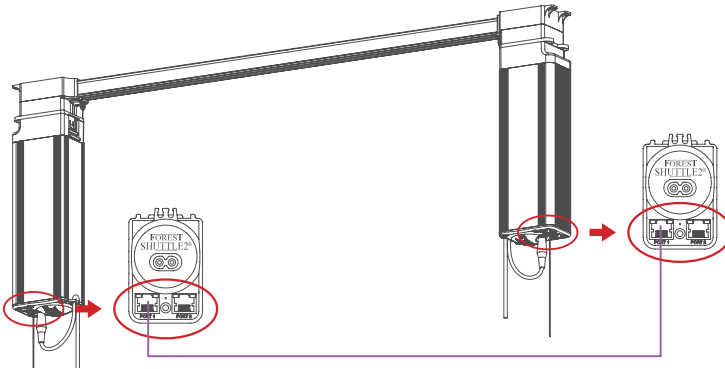


# CONFIGURATION MASTER – SLAVE FUNCTION



The Forest Shuttle M Receiver can be configured as MASTER or SLAVE, requiring two motors. MASTER: the controlling motor. SLAVE: the MASTER following motor.

MASTER – SLAVE FUNCTION 1 (NORMAL SHUTTLE® M RECEIVER 5232000003):



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In this master - slave function, two Shuttle M motors are used on one track.

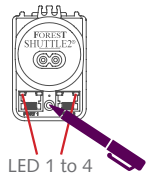


Direction of rotation of both motors is the same.

INSTALLATION STEPS:

- 1 Make sure your system is fully assembled and mounted on the ceiling or wall before you start installing the two motors.
- 2 Connect port 1 (motor A) to port 1 (motor B) with a UTP, FTP cable or an 8 wire flat cable.

- 3 Program the MASTER motor: push the configuration button 17 times shortly, LEDs 1 to 4 light up one more time with each push. After 17 presses, once more push the button and hold for 4 seconds. LEDs 1 to 4 will move with every press. (see configuration overview on page 8)



- 4 Program the SLAVE motor: press the configuration button 18 times shortly, LEDs 1 to 4 will move with every press. After 18 presses, press the button once more and hold for 4 seconds. LED 2 will blink 3 times and go out.
- 5 Now the SLAVE motor will follow the movement of the MASTER motor. Only the MASTER motor can be controlled.
- 6 End limits can be set now and remotes can be programmed.

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## MASTER – SLAVE FUNCTION 2 :

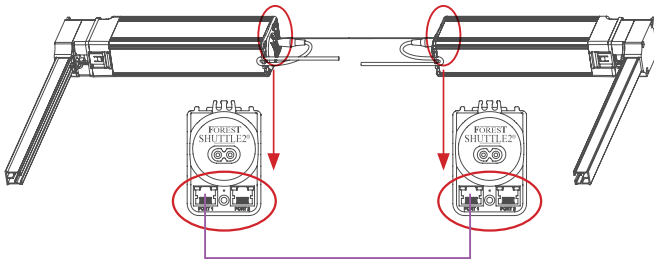
In this master -slave function two Shuttle M motors drive a Forest Skylight System (FSS).



Direction of rotation of both motors is opposite. The motors have no automatic declutch.

### INSTALLATION STEPS:

- 1 Make sure your system is fully assembled and mounted on the ceiling or wall before you start installing the two motors.
- 2 Connect port 1 (motor A) to port 1 (motor B) with a UTP, FTP cable or an 8 wire flat cable.
- 3 Programm the MASTER motor: press the configuration button 17 times shortly, LEDS 1 to 4 will move with every press. After 17 presses, once more press the button and hold for 4 seconds. Then push the button again for 4 seconds. LED 1 will blink three times and go off (see configuration overview on page 8)
- 4 Program the SLAVE motor: Press the configuration button 19 times shortly, LEDS 1 to 4 will move with every press (see configuration overview on page 8). After 19 presses, once more press the button and hold for 4 seconds. LED 3 will blink three times and goes off.
- 5 For both motors: press the configuration button 26 times, then press again for 4 seconds to confirm.
- 6 Now the SLAVE motor will follow the movement MASTER motor. Only the MASTER motor can be controlled.
- 7 End limits can be set and remotes can be programmed now. Manual movement is heavy, this is normal.



# TECHNICAL SPECIFICATION

FOREST SHUTTLE® S/M/L RECEIVER

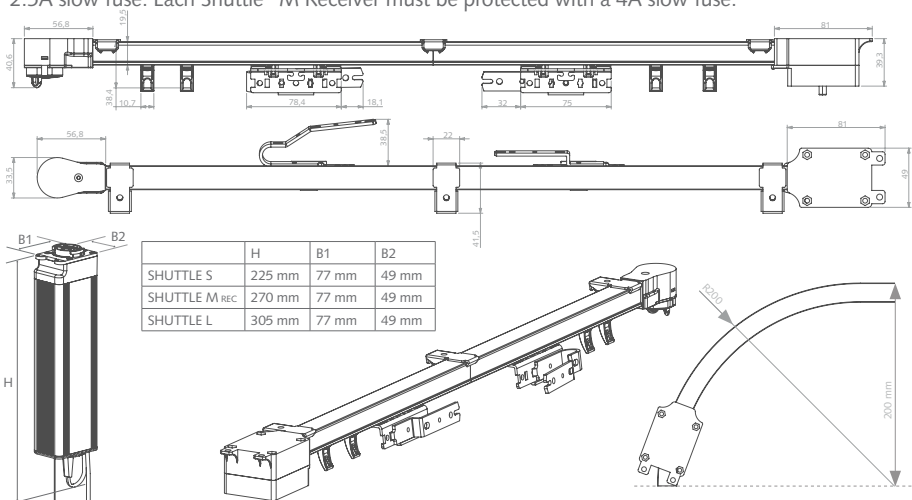
|   | SHUTTLE® S            | SHUTTLE® M            | SHUTTLE® L                 |
|---|-----------------------|-----------------------|----------------------------|
| Part #                                    | 5232000000            | 5232000003            | 5232000001                 |
| Voltage Shuttle®:                         | 24Vdc                 | 24Vdc                 | 100 - 240V~ 50 - 60Hz 0.8A |
| Max. power:                               | 40W                   | 72W                   | 40W                        |
| Torque:                                   | 1Nm                   | 1.5Nm                 | 1Nm                        |
| Receiver:                                 | 433MHz/ASK            | 433MHz/ASK            | 433MHz/ASK                 |
| Speed 1:                                  | 14 cm/s               | 14cm/s                | 14 cm/s                    |
| Speed 2:                                  | 17 cm/s               | 17cm/s                | 17 cm/s                    |
| Max. curtain weight:                      | 40kg (no curves)      | 70kg (no curves)      | 40kg (no curves)           |
| Length:                                   | 20cm (7.9")           | 25cm (10")            | 28cm (11")                 |
| Net. weight motor:                        | 700 gr.               | 980 gr.               | 930 gr.                    |
| Protection degree:                        | IP20                  | IP20                  | IP20                       |
| Max. running time (in one direction):     | 240 sec.              | 240 sec.              | 240 sec.                   |
| Sound level:                              | < 40dB                | < 40dB                | < 40dB                     |
| Ambient temperature:                      | 0 - 40°C (32 - 104°F) | 0 - 40°C (32 - 104°F) | 0 - 40°C (32 - 104°F)      |
| Relative humidity:                        | 10 - 80%              | 10 - 80%              | 10 - 80%                   |
| Maximum useable altitude above sea level: | 2000m (6561ft.)       | 2000m (6561ft.)       | 2000m (6561ft.)            |
| Certification & Marking:                  | CE                    | CE                    | CE                         |
| Warranty                                  | 10 Year               | 10 Year               | 10 Year                    |

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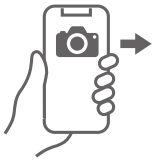
## 24V ADAPTOR:

|                          | SHUTTLE® S:                | SHUTTLE® M:                |
|--------------------------|----------------------------|----------------------------|
| Model:                   | QZH05-2401500D             | KS75DU-2400300             |
| Voltage input:           | 100 - 240V~ 50 - 60Hz 0.8A | 100 - 240V~ 50 - 60Hz 1.2A |
| Voltage output:          | 24Vdc                      | 24Vdc                      |
| Insulation class:        | II                         | II                         |
| Certification & Marking: | CE, cULus, FCC, CCC        | CE, cULus, FCC, CCC        |

If another power supply is used or a central power supply, each Shuttle® S must be protected with a 2.5A slow fuse. Each Shuttle® M Receiver must be protected with a 4A slow fuse.



# CONTACT & SUPPORT



FAQ and more  
technical support

## MAINTENANCE INSTRUCTIONS FOR FOREST FMS MOTORISED TRACK SYSTEM WITH FOREST SHUTTLE® S/M/L RECEIVER MOTOR

Ensure the tracks and motors have been installed according to the product manual, and have at all times been protected from dust and humidity, prior to and after installation, before and after the project handover. The motors must be connected to a 230V mains at all time; power to the motor may not be cut via the building management system or hotel room key card slot. If this is the case, the warranty will not be valid.

Curtains made up with the Forest Easyfold® system must have been manufactured in such a way that the top heading doesn't slide against the track profile itself, which would act as a brake and increase friction and strain the motor.

The motorised systems should be inspected by housekeeping services on a regular basis, at least once every 3 months, to ensure a smooth operation of the curtains. A full operating cycle of opening/closing/opening is sufficient for this.

The Forest® motorised track systems require an annual re-lubrication with the patented Forest® dry lubricant spray, article 5109010000. Do not use a different type of lubricant like WD-40 or grease, as these react with the factory applied lubricant. Apply the lubricant spray on the inside of the track profile, with the curtains fully opened. After lubrication, wait a few minutes for the lubricant to settle, then initiate a complete cycle, by closing and opening the curtains fully. Repeat this procedure on annual basis. No further maintenance procedures are required.



Follow the instructions in this document to ensure safe operation of the Forest Shuttle S/M/L. Keep this document close to the product at all times. Use the product only as intended. This product is not suitable for use in humid spaces such as bathrooms or outdoors. In order for the Forest Shuttle S/M/L Receiver to function correct and safe, the complete curtain track system must be assembled with original & undamaged parts and devices of Forest Group Nederland B.V.

This product is not suitable for use by children, it is not a toy. Keep (the remote control) out of the reach of children at all times. Frequently examine the installation for imbalance and signs of wear or damage.

In case of ESD pulse (static discharge), when a person touches the Shuttle motor, the motor might stop working. When this happens, disconnect and connect the power plug, and the motor will work as normal again.

Forest Group does not assume liability for resulting damages to persons, animals and/or property, defects, labour on location, service calls, reinstallation or expenses involved shipping, packing or returning goods, if the product has been abused/modified in any way or damaged by improper use or failure to observe these operating instructions. In such situation, the right to any form of warranty, service and reimbursement of expenses shall cease.