

## DCT2RTS interface and Z-Wave2RTS interface

### Product manual

#### SAFETY AND IMPORTANT INFORMATION

- This Somfy product must be installed by a professional installer, for whom these instructions are intended.
- Before installation, check that this product is compatible with the associated equipment and accessories.
- These instructions describe how to install, commission and use this product.
- Moreover, the installer must comply with current standards and legislation in the country in which the product is being installed, and inform his customers of the operating and maintenance conditions for the product.
- Any use outside the sphere of application specified by Somfy is not approved. Such use, or any failure to comply with the instructions given herein will invalidate the warranty, and Somfy refuses to accept liability.

#### PRODUCT DESCRIPTION

- **DCT2RTS gateway:** Provides communication between third party home automation systems and RTS motors through simple dry contact input interface.
- **Z-Wave2RTS interface:** Z-Wave enabled device (interoperable, two-way RF mesh networking technology) that is fully compatible with any Z-Wave enabled network. Receives Z-Wave signals and translates them into RTS commands to allow control of Somfy RTS enabled motors.  
The Z-Wave2RTS interface supports multi-channel Command Class for up to 8 devices corresponding to control of up to 8 individual or 8 groups of Somfy motorized products.  
Z-Wave enabled device acts as a signal repeater and multiple devices result in more possible transmission routes which helps eliminate “RF dead-spots”.  
Z-Wave enabled device displaying the Z-Wave logo can also be used with it regardless of the manufacturer, and ours can also be used in other manufacturer’s Z-Wave enabled networks.

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### DCT2RTS and Z-WAVE2RTS interface functions description

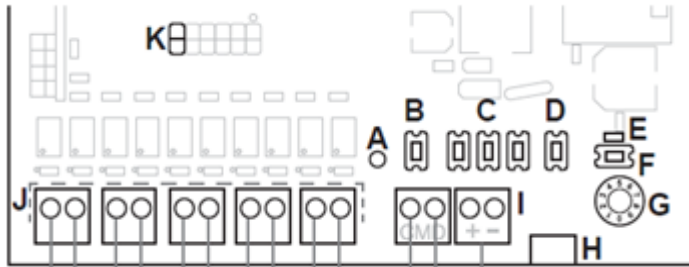


Fig.1

A – RTS LED / Status LED

Green: Power ON

Blue: Transmitting RTS command

Red: Error

B – RTS Program button

C – RTS test buttons for UP/DOWN/STOP

D – Z-WAVE program button

E – Z-WAVE LED

Flash: Open to join Z-WAVE network

OFF: Z-WAVE network joined

F – Reset button

G – RTS channel selector

H - 5Vdc micro-USB port

I – 12-24V DC input port

K – Switch type selection

**Please select either “Fixed position switch mode” or “Momentary switch mode” by the jumper before powering ON the device.**

- Jumper close (short)=Momentary switch (default)
- Jumper open=Fixed position switch

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#### 1. DCT2RTS interface

##### 1.1 Installation

- 1.1.1 Disconnect the power
- 1.1.2 Select which type of switch will be connected (see fig.1)
- 1.1.3 Wire either switches (fig.2) or dry-contact relay outputs (fig.3) to the indicated DCT terminals at the bottom of the DCT2RTS Interface.
- 1.1.4 Connect the power. The status LED will turn green to indicate the device is operating.

##### 1.2 RTS commissioning

Before using the DCT2RTS interface, we recommend to program each motor in advance using an individual Somfy remote control (e.g. Telis) and set the limit positions of each motor.

###### 1.2.1 Procedure

1. Select the channel of the motor on the existing remote control, hold the program button on the remote for 3 seconds, for the motor to jog
2. Select the desired channel via the RTS channel selector.
3. Press and hold the RTS PROG button for 1 second.
4. RTS motor jogs; the motor is now programmed to DCT2RTS gateway.
5. Repeat the same procedure to remove a motor from the DCT2RTS gateway.

###### 1.2.2 RTS motors functional test

1. Select the channel via the RTS channel selector.
2. Press the UP/DOWN button on DCT2RTS interface to control RTS motors.
3. The motor jogs to indicate the connection is successfully established. If the motor does not respond to the command, it means the establishment failed. Repeat 1.2.1 Procedure, Steps 1-4 again. Alternately it may simply mean that the RTS motor has been removed.

##### 1.3 Operation

- 1.3.1 To activate an UP command, a minimum of 0.5 second closure is required between the UP and COM terminals (5Vdc). The status LED turns blue to indicate that RTS signal is sent.
- 1.3.2 To activate a DOWN command, a minimum of 0.5 second closure is required between the DOWN and COM terminals (5Vdc). The status LED turns blue to indicate that RTS signal is sent.
- 1.3.3 To activate a STOP command, a closure is required between UP, DOWN and CMD terminals.

##### Attention:

Press and hold the RTS\_PROG button for 5 seconds, the concerned RTS motor will enter to RTS programming mode.

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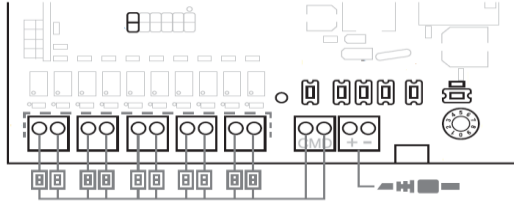


Fig.2 Switches direct connect to DCT2RTS interface wiring

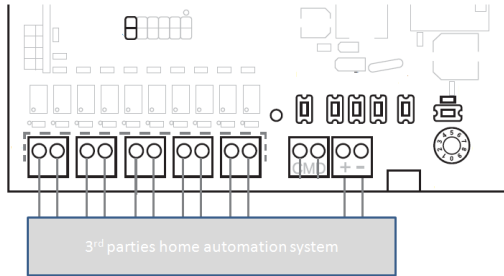


Fig.3 Home automation system directs connect to DCT2RTS interface wiring

## DCT2RTS interface and Z-Wave2RTS interface

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## 2. Z-Wave HUB – Adding and Removing RTS motors

### 2.1 Installation

- 2.1.1 Disconnect the power
- 2.1.2 Locate the Z-Wave2RTS interface within direct range of the Z-Wave HUB.
- 2.1.3 Select the “appropriate channel number” on the RTS channel selector.
- 2.1.4 Connect the power. The status LED will turn green to indicate the device is operating.
- 2.1.5 The Z-WAVE LED will blink to indicate Z-WAVE2RTS interface is opened to join Z-WAVE network.

**!! The channel number selected should reflect the number of RTS channels being applied on Z-Wave Hub, for example, if 3 channels will be used, then select number 3 on the RTS channel selector before powering on the Z-WAVE2RTS interface.**

### 2.2 RTS commissioning

Refer to section 1.2

### 2.3 Z-Wave network commissioning

#### 2.3.1 Inclusion

1. Enable the Z-Wave HUB into the Inclusion mode.
2. Short press the Z-Wave PROG button for 3 times. Z-Wave2RTS interface will be included in the Z-Wave network automatically.
3. The Z-WAVE LED turns OFF indicating that the Z-Wave2RTS interface has successfully joined the Z-Wave network.

#### 2.3.2 Exclusion

1. Power ON the Z-Wave2RTS interface.
2. Enable the Z-Wave HUB into exclusion mode.
3. Short press the Z-Wave PROG button for 3 times.
4. The Z-WAVE LED flashes indicating that the Z-Wave2RTS interface has successfully been removed from the Z-Wave network.

#### 2.3.3 Reset the Z-Wave module to factory mode

Please use this procedure only in the event that your network primary controller is missing or otherwise inoperable.

1. Power OFF the Z-Wave2RTS interface.
2. Press and hold the Z-Wave PROG button.
3. Power ON the Z-Wave2RTS interface and wait for 10 seconds.
4. The Z-Wave LED flashes indicating that the data is cleared and it is open to join Z-Wave network.

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### 3. DCT2RTS and Z-Wave2RTS interface RTS channel

- RTS channel 1-5 can be controlled by either DCT2RTS or Z-WAVE2RTS interface
- RTS channel 6-8 can be controlled by Z-WAVE2RTS interface only.

### Z-Wave manual

<b>1. Include/Exclude ZWAVE network</b>	
Press the Learn switch THREE times.	ZWave2RTS interface will send signals to Zwave Hub to perform the Include/Exclude action.  The red LED on the ZWave2RTS interface blinks indicating that it has not joined the ZWave network.  The red LED remains off when it has successfully joined ZWave network. ☺
<b>2. RTS Output Control (Control RTS motors via Zwave Hub)</b>	
Binary Switch Set (0xFF)	The blind goes UP.
Binary Switch Set (0x00)	The blind goes Down.
Note: Multi Channel CMD ENCAP V4 Command.	
<b>3. MultiChannel Association(Control RTS motors via DCT switch)</b>	
Group 1 supports 1 node / EndPoint.	Report ZWave2RTS interface address to ZWAVE Hub (node) after reset.
Group 2 supports 5 nodes / EndPoints.	Report DCT status to Hub (node) when DCT port is triggered. The DCT status feedback send to Hub automatically. If EndPoint is defined, it will be use MultiChannel Command to report the DCT status
<b>4. RESET Zwave module to factory mode</b>	
Press and hold the ZWAVE_PROG button + Power UP ZWave2RTS interface for 3 seconds	Clear all the data and return to the Inclusion mode
<b>5. Repeater function</b>	
ZWave2RTS gateway ZWave2RTS interface supports standard repeater function	Support repeaters for routing (include FLIRS devices).
<b>6. OTA function</b>	
ZWave2RTS gateway supports "Over The Air" to upgrade firmware.	Support OTA-Firmware update.

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#### Z-Wave command Class

**Device Type : Window Covering No Position/Endpoint**

**Generic Device Class : GENERIC\_TYPE\_SWITCH\_MULTILEVEL**

**Specific Device Class : SPECIFIC\_TYPE\_CLASS\_A\_MOTOR\_CONTROL**

**Icon : ICON\_TYPE\_GENERIC\_WINDOW\_COVERING\_NO\_POSITION\_ENDPOINT**

COMMAND\_CLASS\_Z-WAVEPLUS\_INFO  
 COMMAND\_CLASS\_ASSOCIATION\_V2  
 COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO  
 COMMAND\_CLASS\_DEVICE\_RESET\_LOCALLY  
 COMMAND\_CLASS\_FIRMWARE\_UPDATE\_MD\_V2  
 COMMAND\_CLASS\_MANUFACTURER\_SPECIFIC\_V2  
 COMMAND\_CLASS\_MULTI\_CHANNEL\_V4  
 COMMAND\_CLASS\_MULTI\_CHANNEL\_ASSOCIATION\_V3  
 COMMAND\_CLASS\_POWERLEVEL  
 COMMAND\_CLASS\_SECURITY  
 COMMAND\_CLASS\_SWITCH\_BINARY  
 COMMAND\_CLASS\_SWITCH\_MULTILEVEL\_V4  
 COMMAND\_CLASS\_VERSION\_V2

#### Technical specification

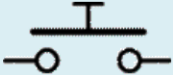
Item	Value	Remark
Input voltage (DC input port)	12Vdc – 24Vdc	Apply to DCT2RTS interface or Z-WAVE2RTS interface
Input voltage (Micro-USB port)	5Vdc	For Z-WAVE2RTS interface only
Current consumption	100mA(max)	
Dry contact input (DCT) voltage	5Vdc – 24Vdc	Logic HIGH (Vdc) triggers action. Logic LOW (0V) clears action.
RTS radio frequency	433.42MHz	
Range distance	20m with 2 concrete walls	
No of channel	5	For DCT2RTS interface
No of channel	8	For Z-Wave2RTS interface
Z-Wave radio frequency	868.4 MHz	
Range of distance	10m in indoor	
Operating Temperature	0°c to 50°c	
Dimension (without cover)	125mm(L) x 88mm(W) x 30mm(H)	
Dimension (with cover)	125mm(L) x 105mm(W) x 32mm (H)	
Weight	Tbc	
AC/DC power adaptor	12-24VDC adaptor	Excluded

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#### Switch compatibility table

- Momentary switch (Default mode): It is only on when the button is pressed. As soon as you release the button, the circuit is opened.

Switch Type	Blind movement	How to achieve
	UP	Press and release the UP button for less than 1 sec.
	DOWN	Press and release the DOWN button for less than 1 sec.
	STOP	Press and release both UP and DOWN buttons together for less than 1 sec. Toggle the UP/DOWN button.
	Tilt UP*	Long press the UP button for over 2 seconds.
	Tilt DOWN*	Long press the DOWN button for over 2 seconds

\* Each tilting increment is by 0.5 second.

- Fixed position switch: An on/off switch that rocks when pressed, which means one side of the switch is raised while the other side is depressed much like a rocking horse rocking back and forth.

Switch Type	Blind movement	How to achieve
	UP	Press the UP button.
	DOWN	Press the DOWN button.
	STOP	Press either UP or DOWN button for over 2 seconds, then release it to stop. ! If button is pressed continuously for over 5 minutes, nothing will happen.

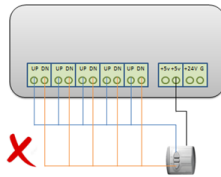


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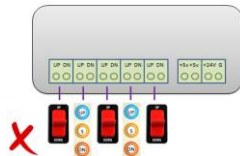
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#### TIPS AND RECOMMENDATION FOR DCT2RTS interface

- Supply power is only allowed 12-24Vdc input port.
- In momentary switch mode, only press one button at a time.
- Tilting motion only apply on 1 channel at one time via DCT interface
- The DCT input must have at least 1.5 second suspension in between successive RTS commands.
- All DCT input port cannot be connected (short circuit) together. See below picture



- Does not support fixed position switch mode and momentary switch mode simultaneously. See below picture



#### TIPS AND RECOMMENDATION FOR Z-Wave2RTS interface

- Supply power either 5Vdc Micro USB or 24Vdc input port. The device cannot be operated by both power inputs together. The output power of USB power adaptor cannot exceed 5Vdc @500mA
- Before power ON the device, please set the maximum number of RTS channels on RTS channel selector

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#### CAUTIONS

- Always remove the USB input horizontally and gently. Incorrect removal could cause damage to the USB port.
- The output power of USB power adaptor cannot exceed 5Vdc @500mA
- The interface must be installed securely in a fixed position which allows a steady and level USB input.
- Do not install the interface in metal cases as it may affect the radio signal strength.
- Install the device on the fixed mounting, e.g wall.
- Avoid dust and water, which may damage the device.
- The DCT2RTS interface and Z-WAVE2RTS interface are for internal use only.
- Do not disassemble the unit.

#### ENVIRONMENT

Damaged electric products and batteries should not be disposed of with normal household waste. Make sure to drop them in specially provided containers or at an authorized organization that will ensure they are recycled.

