DCT2RTS interface

Product manual

somfy

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 do installation, 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 void the warranty, and Somfy refuses to accept liability.
- The equipment (interface) is for indoor use.

PRODUCT DESCRIPTION

- **DCT2RTS gateway:** Provides communication between third party home automation systems and RTS motors through simple dry contact input interface.

DCT2RTS interface functions description

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 – Reserved for other usage
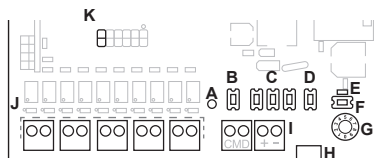E – Reserved for other usage
F – Reset button

G – RTS channel selector
H – 5VDC micro-USB port
I – 12-24V DC input port
K – Switch type selection

Fig.1

Please select either "Fixed position switch mode" or "Momentary switch mode" by the jumper (item K) before powering ON the device.
- Jumper close (short)=Momentary switch (default)
- Jumper open=Fixed position switch

1. DCT2RTS interface setting

1.1 Installation
1.1.1 Disconnect the power
1.1.2 Select which type of switch will be connected (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 programming each motor in advance using an individual Somfy remote control (e.g. Situo) 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 (channel 1 – channel 5) 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. 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.
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.
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.
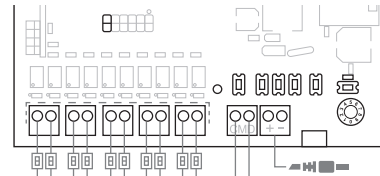
2. Wiring diagram

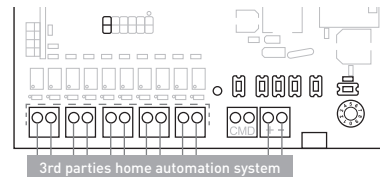Fig.2 Switches direct connect to DCT2RTS interface wiring

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

3. 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.
- **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.

Blind movement	Fixed position switch	Momentary switch
UP	Press UP	Press UP, then release (~1sec)
DOWN	Press DOWN	Press DOWN, then release (~1sec)
STOP	After Press UP or Down over 2 sec, then release #	While moving up, short-press 1 more UP; While moving down, short-press 1 more DOWN; OR While moving, Short-press UP+Down ^
Tilt UP	N/A	To start Tilt, Press UP (>2sec) * To stop Tilt, release UP button
Tilt DOWN	N/A	To start Tilt, Press DOWN (>2sec) * To stop Tilt, release DOWN button

\# If button pressed over 5 minutes, STOP command will not send.
* For non-tilt-able blinds, long-pressing UP/DOWN may trigger moving UP/DOWN fitfully
^ For blinds with My Position, short-press UP+DOWN button while the blinds are not moving, the blinds will go to My Position

4. Technical specification

Item	Value	Remark
Input voltage (DC input port)	12VDC – 24VDC	*Apply for long range radio transmission (30m with 2 concrete walls)
Input voltage (Micro-USB port)	5VDC	
Operating current	200mA(max)	
RTS radio frequency Range distance No of channel	433.42MHz 20m with 2 concrete walls 5	DCT2RTS interface (ch1-5)
Operating Temperature	0°c to 50°c	
Dimension (without cover) Dimension (with cover)	125mm(L) x 88mm(W) x 30mm(H) 125mm(L) x 105mm(W) x 32mm (H)	
Weight	DCT2RTS 134g	
DC power	12-24VDC	DC power transformer excluded

5. TIPS AND RECOMMENDATION FOR DCT2RTS interface

- The DCT2RTS interface requires 12-24VDC power. The power cable is connected to the power terminal (item I) using the screw to fix it.
- To improve the RTS radio range, we recommend the DCT2RTS be placed in an unconfined place in the middle of the house (avoid metallic surfaces and enclosures).
- 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. (fig.4)
- Does not support fixed position switch mode and momentary switch mode simultaneously. See below picture. (fig. 5)
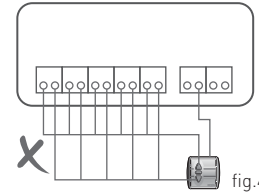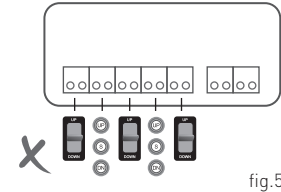

fig.4

fig.5

6. CAUTIONS

- Always remove the micro-USB cable horizontally and gently. Incorrect removal could cause damage to the USB port.
- The output voltage of micro-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 for internal use only.
- Do not disassemble the unit.

7. 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.