Integration Note

Manufacturer:	Somfy
Model Number(s):	**Universal RTS Interface II**
Minimum Core Module Version:	4.0 Build 1552
Document Revision Date:	2/12/2013

OVERVIEW AND SUPPORTED FEATURES

The Somfy Universal RTS Interface II (URTSI II) is a multi-channel RF shade controller which supports standalone control of up to 16 channels via RS-232. Multiple URTSI II's may be bussed together and controlled via RS-485, enabling extended shade control networks.

THE SOMFY URTSI II SYSTEM SUPPORTS THE FOLLOWING FEATURES:

Various Motors Supported: The Somfy URTSI II system supports different types of motors for various installation scenarios, including battery powered, AC powered and DC powered. See Somfy for details.

Positions: Somfy URTSI II supports momentary up and down, as well as fully up and down.

Presets: Somfy URTSI II supports one preset position.

Channels: The URTSI II has 16 separate channels. This allows you to control up to 16 motors independently, 16 groups independently, or any combination of motors and groups totaling 16 or less.

Multiple URTSI II: URTSI II may be bussed together via RS-485 and provide up to 16 addressed control units each controlling 16 channels.

THE SOMFY URTSI II SYSTEM DOES NOT SUPPORT THE FOLLOWING FEATURES:

Two-Way Control: The Somfy shade control system does not provide any acknowledgement or status when commands are sent, so **g!** assumes commands sent are successful for feedback controls.

Feedback: The Somfy shade control system does not report back to an external controller when local input (such as from a handheld remote) is used to move the shades. **g!** will attempt to maintain the state of shades based on the last command sent *from **g!*** for feedback controls. If local remotes are used, it is recommended to use only non-feedback controls (see **g!** Configuration Details) to prevent incorrect display.

Any feature not specifically noted as "supported" is not supported.

INSTALLATION OVERVIEW

1. During the rough-in phase, pull power and control wiring as needed for the particular set of motors installed. Refer to Somfy documentation for details.
2. During the rough-in phase, pull a Cat5 cable to the location of a URTSI II. See **Connection Diagram**.
3. Configure the URTSI II motors and shade system according to typical Somfy procedures. See **Somfy Programming Details**.
4. Connect the URTSI II Interface to the **g!** system electrically.
5. Configure the **g!** system for the Somfy shades. See **g! Configuration Details**.

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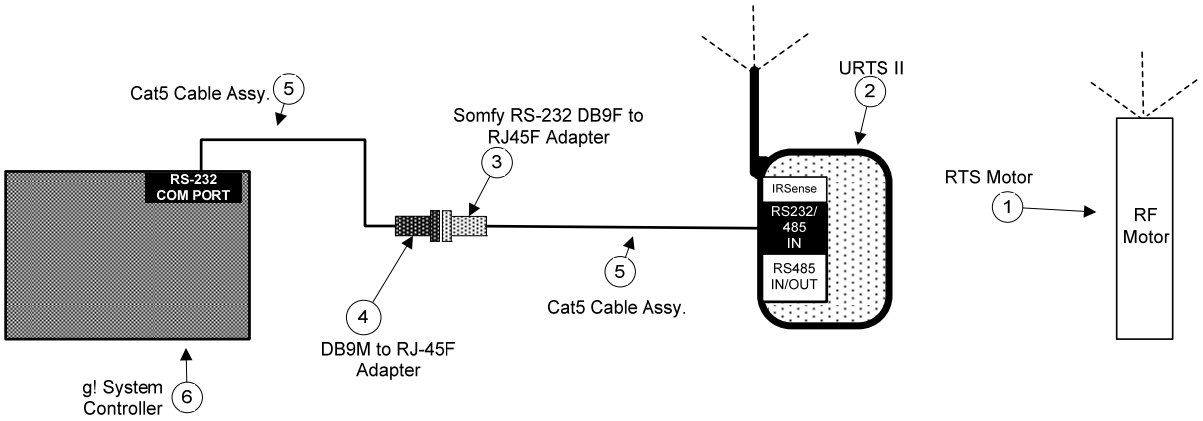
CONNECTION DIAGRAMS

Wiring Diagram 1: Connect a single Somfy URTSI II for RS-232 control



BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	Motor	Somfy	Various	RF	Various	
2	Universal RTS Interface II	Somfy	1810872	RF/RS232		
3	DB9 to RJ45 Adapter **(RS232)**	Somfy	9015028	RS-232	DB-9 Female X RJ45 Female	
4	DB9 to RJ45 Adapter	ELAN	HA-CB-307	RS-232	DB-9 Male X RJ45 Female	
5	Cat5 Cable Assy.	Installer	N/A	RS-232	RJ-45 Male X RJ-45 Male	Must terminate all 8 conductors
6	g! Controller	ELAN	Various (e.g. HC12)	IP	RJ-45 Female	Use RS-232 Com Port

ALTERNATIVE WIRING

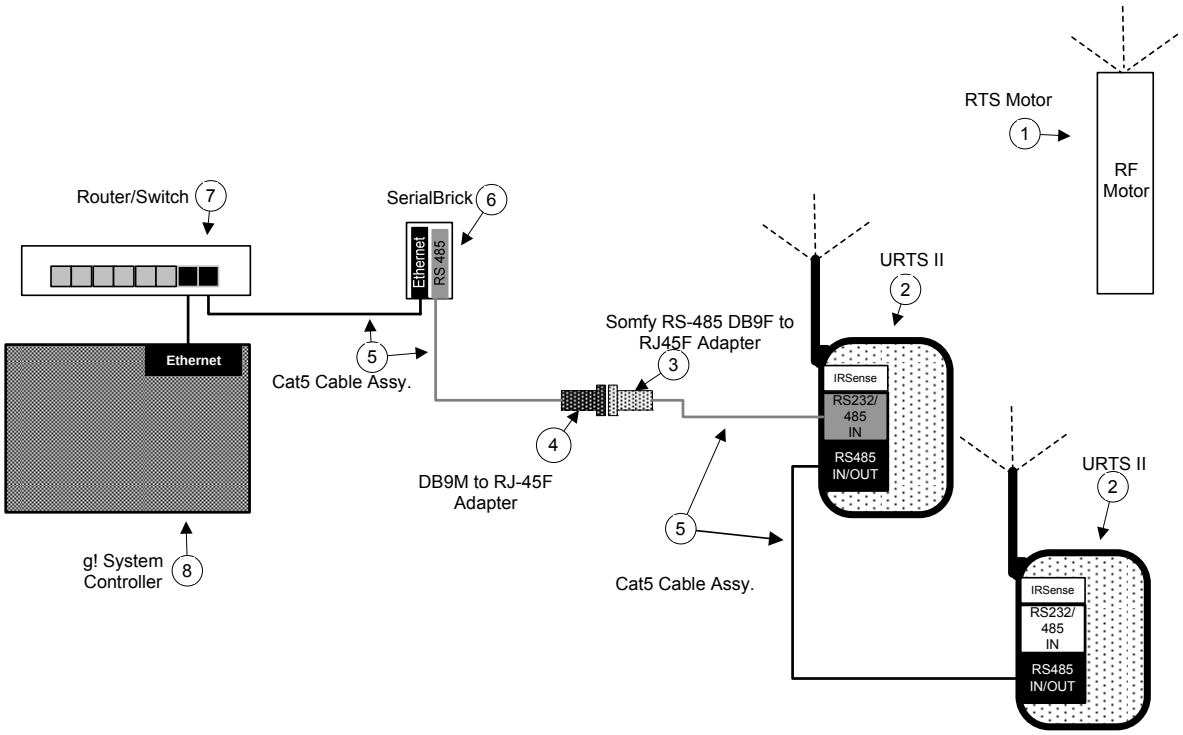
It is possible to wire a custom pinned Cat-5 cable **instead** of using Somfy's RJ45 to DB9 adapter to convert the pin out. In this setup, pin one end of a Cat-5 568B Standard to connect to **g!**, and re-pin the Somfy end as indicated below:

Somfy End		**g! End (568B Std)**
3	**White/Blue**	**5**
6	**Green**	**6**
7 or 8	**Blue**	**4**
Other Pins	**Not Used**	**Other Pins**

(568B Standard Colors Listed)

Note: In this configuration, 3 & 4 are not required from the materials list above.

Wiring Diagram 2A: Connect Multiple Somfy URTSI II for RS-485 control via a SerialBrick



Bill Of Materials

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	Motor	Somfy	Various	RF	Various	
2	Universal RTS Interface II	Somfy	1810872	RF/RS232		
3	DB9 to RJ45 Adapter **(RS485)**	Somfy	9015029	RS-485	DB-9 Female X RJ45 Female	
4	DB9 to RJ45 Adapter	ELAN	HA-CB-307	RS-485	DB-9 Male X RJ45 Female	
5	Cat5 Cable Assy.	Installer	N/A	RS-485	RJ-45 Male X RJ-45 Male	Must terminate all 8 conductors
6	SerialBrick	ELAN	HW-EB-100	IP/RS485/RS232	RJ-45 Female	Use RS-485 Port
7	Network Switch/Router etc	Various	Various	IP	RJ-45 Female	
8	g! Controller	ELAN	Various (e.g. HC12)	IP	RJ-45 Female	

Alternative Wiring

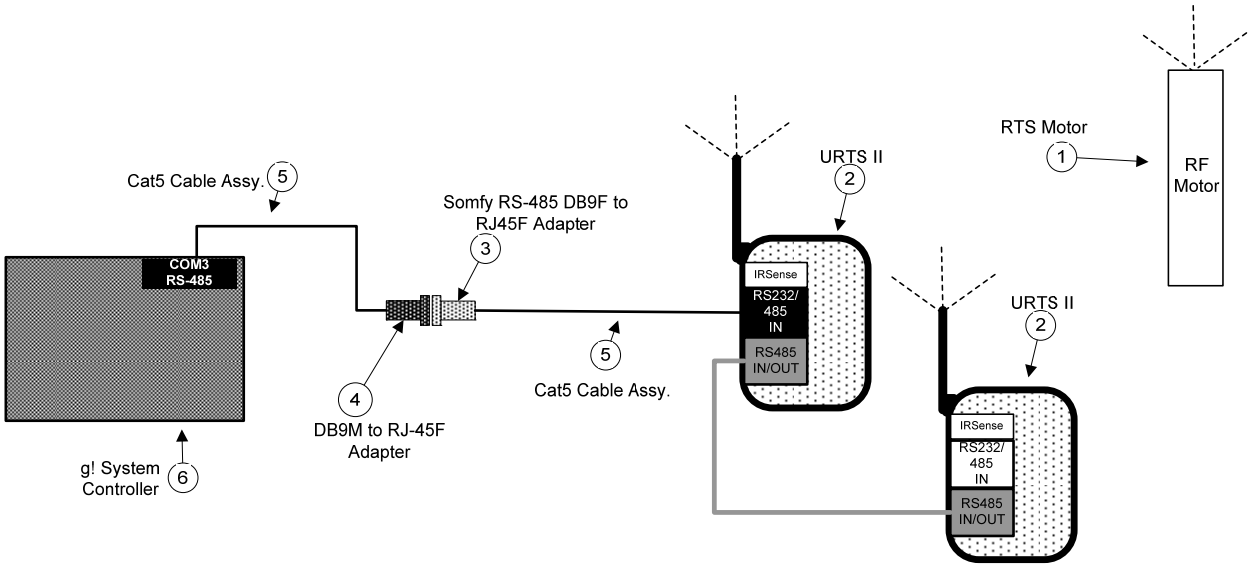
It is possible to wire a custom pinned Cat-5 cable **instead** of using Somfy's RJ45 to DB9 adapter to convert the pin out. In this setup, pin one end of a Cat-5 568B Standard to connect to **g!**, and re-pin the Somfy end as indicated below:

Somfy End		**g! End (568B Std)**
1	**White/Orange**	**1**
2	**Green**	**6**
7or 8	**Blue**	**4**
Other Pins	**Not Used**	**Other Pins**

(568B Standard Colors Listed)

Note: In this configuration, 3 & 4 are not required from the materials list above.

Wiring Diagram 2B: Connect Multiple Somfy URTSI II for RS-485 control with a MultiBrick



Bill Of Materials

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	Motor	Somfy	Various	RF	Various	
2	Universal RTS Interface II	Somfy	1810872	RF/RS232		
3	DB9 to RJ45 Adapter **(RS485)**	Somfy	9015029	RS-485	DB-9 Female X RJ45 Female	
4	DB9 to RJ45 Adapter	ELAN	HA-CB-307	RS-485	DB-9 Male X RJ45 Female	
5	Cat5 Cable Assy.	Installer	N/A	RS-232	RJ-45 Male X RJ-45 Male	Must terminate all 8 conductors
6	g! Controller	ELAN	Various (e.g. HC12)	IP/RS485/RS232	RJ-45 Female	Use Com 3 - RS-485 Port

Alternative Wiring

It is possible to wire a custom pinned Cat-5 cable **instead** of using Somfy's RJ45 to DB9 adapter to convert the pin out. In this setup, pin one end of a Cat-5 568B Standard to connect to **g!**, and re-pin the Somfy end as indicated below:

Somfy End		g! End (568B Std)
1	White/Orange	1
2	Green	6
7 or 8	Blue	4
Other Pins	Not Used	Other Pins

(568B Standard Colors Listed)

Note: In this configuration, 3 & 4 are not required from the materials list above.

SOMFY PROGRAMMING DETAILS

This section covers some details that are important to keep in mind when integrating the URTSI II system with **g!**. Full programming details for particular Somfy equipment can be found in Somfy documentation.

In general, Somfy URTSI II systems use different “transmitters” or “channels” to control individual motors. During the motor setup process, you assign a transmitter (RF remote control) to the motor. This is necessary to program the motor’s top and bottom positions, in addition to the motor’s intermediate position.

When the basic motor setup is complete, you can then assign ADDITIONAL transmitters to the motor.

The URTSI II is one such additional transmitter. In other words, you must assign the URTSI II to each motor as an additional transmitter to control that motor from the **g!** system.

The URTSI II has 16 channels that you can use when you assign it as an additional transmitter to a particular motor. As explained in the Somfy instructions, when you assign the URTSI II to a motor, you select which channel to use with the rotary dial on the front of the unit. For this reason, it is recommended to only power up the current motor and URTSI II you are programming.

Also keep in mind that you can assign more than one channel to a motor.

System Example:

Consider a room with three motors, each with its own wireless handheld RF remote. Once the shades are installed, use the remote for each motor to set the upper and lower limits and the intermediate position, as explained in the motor programming guide.

Then, assign the URTSI II as an additional transmitter for the first motor, using channel 1. Similarly, assign channel 2 to motor 2, and channel 3 to motor 3. This allows you to move the shades up and down independently of each other from the **g!** interface; in other words, when an “up” command is sent on channel 1, only shade 1 will move.

Finally, assign the URTSI II as an additional transmitter for all three motors, using channel 4. This allows you to control all shades at once. In other words, when “up” command is sent on channel 4, all three motors will move.

In this example, motor 1 has three transmitters assigned to it: the RF handheld remote, channel 1 on the URTSI II, and channel 4 on the URTSI II.

Address Settings:

Once you have completed associating the desired motors with channels on your URTSI II’s, ensure you set the rotary switch to correct address for external control. In a standalone configuration controlled via RS-232, the switch should always be set to **1**. If using multiple URTSI II’s, set each unit to a unique address for proper control starting with 1 and working your way up to 16.

Keep in mind that the Rotary Dial positions are numbered 1-9 for 1-9, and then follow with A=10, B=11, C=12, D=13, E=14, F=15, and 0=16.

g! CONFIGURATION DETAILS

Shades are configured in the **g!** system as lighting devices. Follow the typical steps to add a Communication Device, and then add a Somfy URTSI II, as listed in the table below.

Next, add individual URTSI II as lighting devices. Add one URTSI II for **each channel** that is being used on the URTSI II. As explained above, you can have more than one motor assigned to a channel, but only add one Somfy unit for that channel.

The user interface for shades is created by creating a Virtual Keypad or by creating a Custom Tab.

If you build a virtual keypad, use the Somfy units to access the shades.

If you use a custom tab, then add either a Shade 3 Button or a Shade Preset control:

- The Shade Preset allows you to position the shade at the top, bottom and the preset, but will not allow momentary control of the shade. The Shade Preset provides feedback, showing when the shade is up, down or at the preset.
- The Shade 3 Button allows you to position the shade at the top, bottom and the preset, and it also allows you momentary control of the shade. The Shade 3 Button does not provide feedback indicating the shade's current position.
- Button (Toggle) or Light Toggle Control can be used to toggle between Full Open and Full Close.
- Button (Momentary) can be used with Event Maps for strict momentary control of shades.

In the tables, the following items appear:

- o "<Select>" Select the desired item from the list (or drop-down) in the Configurator.
- o "<User Defined>", etc. Type in the desired name for the item.

Single Unit controlled via RS-232

Devices	Variable Name	Setting	Comments
Communication Devices	**Name**	<User Defined> (Default: **New Device**)	Elan Recommends you change the default name to **Somfy URTS II** or similar.
	Type	**Serial Port**	
	Communication Type	**Standard Connection**	
	Location	<User Defined> (Not Required)	
	COM Port	<Select>	
Lighting Interfaces	**Name**	<User Defined>	
	Device Type	**Somfy Universal RTS II RS232 Interface**	
	Location	<User Defined> (Not Required)	
	COM Device	<Select> (Default: **New Device**)	
Lighting Devices	**Name**	<User Defined>	
<Individual Shade Motors>	**Device Type**	**Somfy URTS II Unit**	See Note 1
	Location	<User Defined> (Not Required)	
	URTS II Address	1	Single RTS II controlled via RS232 must always be set to address 1
	Channel	<Select> (1-16)	

Multiple units controlled via RS-485

Devices	Variable Name	Setting	Comments
Communication Devices	**Name**	<User Defined> (Default: **New Device**)	Elan Recommends you change the default name to **Somfy URTS II** or similar.
	Type	**Serial Port**	
	Communication Type	**Standard Connection**	
	Location	<User Defined> (Not Required)	
	COM Port	<Select>	
Lighting Interfaces	**Name**	<User Defined>	
	Device Type	**Somfy Universal RTS II RS485 Interface**	
	Location	<User Defined> (Not Required)	
	COM Device	<Select> (Default: **New Device**)	
Lighting Devices	**Name**	<User Defined>	
<Individual Shade Motors>	**Device Type**	**Somfy URTS II Unit**	See Note 1
	Location	<User Defined> (Not Required)	
	URTS II Address	<Select> (1-16)	
	Channel	<Select> (1-16)	

Notes:

1. Add one Somfy Unit for each address (1-16) in use. If you have more than one motor assigned to a channel, only add one Somfy Unit.

COMMON MISTAKES

1. Incorrect address setup. After programming individual motors on the channels of the URTSI II, ensure you set the rotary dial to the correct address.
2. Setting the Rotary dial to a position other than **1** for RS-232 control. The dial must be set to **1** when controlling via RS-232.
3. Trying to control multiple URTSI II's with an RS-232 connection. You must use RS-485 to control multiple URTSI II's.