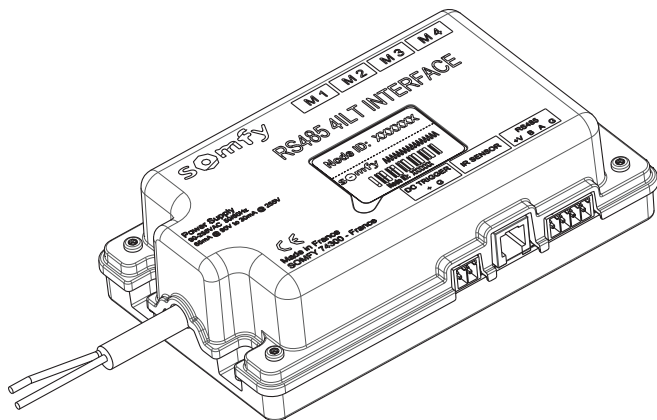


RS485 4ILT INTERFACE

Installation and Operating guide



SAFETY AND IMPORTANT INFORMATION

- This Somfy product must be installed by a professional motorisation and home automation 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

The Digital 4 ILT Interface is a motor controller for multi ratio motorized projection screens designed to be integrated into the projection screen cases.

It can control up to 4 SOMFY ILT motors.

It can be interfaced with universal infra red remote controls, a RS485 data line or a video-projector through a trigger.

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.

INSTALLATION

WIRING

Motor wiring

1) 4xILT plugs (plug directly the ILT motor to the RJ9 plug).

Controls wiring

1) Trigger (For videoprojector)

- + : 5 → 30V
- G : Ground

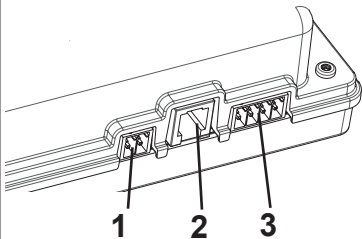
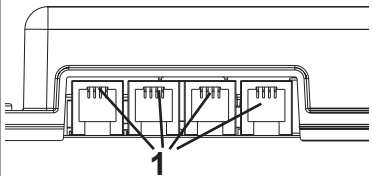
2) IR (Use a Somfy IR sensor)

3) RS485:

- +V: Not connected
- B: RS 485 B
- A: RS 485 A
- G: Ground

Power wiring

Connect the interface to a standard AC power source (After each connection with a power source, wait 5s for the initialisation of the interface with the motors).



COMMISSIONING

Commissioning must be performed with a Somfy 8 channels IR remote control prior to any use.

ILT motors will not react to any control as long as they are not set.

To set ILT motors, please refer to MOTOR SETTING.

ILT motors may have been already set prior to this installation by the means of a dedicated setting tool by the manufacturer.

If more than one motor only is connected to the interface, you need to set each motor separately before setting the different formats.

By default, all motors connected to the interface will react together to any operation.

To select a motor, please refer to : MOTOR SELECTION

MOTOR SELECTION

Use the 1→8 or 5→8 button to select one of the motors. The selected motor will acknowledge by doing a small jog.

- 1) The 1→8 button to select the previous motor.
- 2) The 5→8 button to select the next motor.
- 3) The 1→4 button to select all the motors connected to the interface.

Once a motor is selected, you can control it individually.

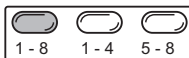
After 2 min without any operation, all motors will react again to any operation.

MOTOR SETTING

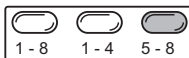
A) SETTING MODE

To enter in setting mode, press the prog button of the remote control until the screen jogs.

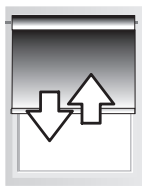
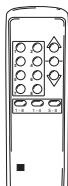
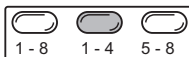
1



2



3



B) ADJUSTING THE END LIMITS

B1) UP end limit

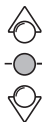
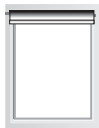
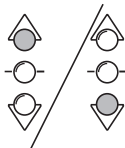
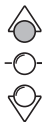
Press the UP button until the motor jogs.

With the UP or DOWN buttons, move the screen to the desired up limit.

If the direction of rotation is not correct, press the STOP button until the screen is stopped.

Press the prog button to confirm the limit until the motor jogs.

B1



B2) DOWN end limit

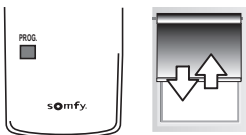
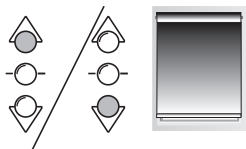
Press the DOWN button until the motor jogs.

With the UP or DOWN buttons, move the screen to the desired down limit.

If the direction of rotation is not correct, press the STOP button until the screen jogs.

Press the prog button to confirm the limit until the motor jogs.

B2



C) FORMAT SETTING

Buttons 1 to 8 will be used to set 1 to 8 formats.

By default, buttons 1 to 7 are not set, button 8 stands for the user Home Position (all the screens retracted).

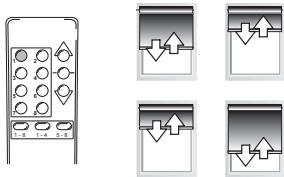
It can be changed by setting a new format or deleting this format.

To set a format, put one by one each screen to the desired position, then press the selected button (eg : button1) until all the screens jog.

During the adjustment of the screen, if you press and hold the UP or DOWN button, the screen moves step by step.

You can use this function for a better adjustment of the screen.

C



USE

With an IR remote control

By default, all motors connected to the interface will react together to any operation. To move individually a motor, please refer to MOTOR SELECTION.

A) UP, DOWN and STOP

1) To move the screen, press briefly the UP or DOWN button.

2) To stop the screen, press the STOP button.

B) READJUSTING THE END LIMIT(S)
You need to readjust both end limits.
Please refer to : ADJUSTING THE END LIMITS

C) CALL A FORMAT.

To call a format, press on the desired format button.

D) READJUSTING A FORMAT

Please refer to : FORMAT SETTING

E) DELETE A FORMAT.

Press the format button corresponding to the format to delete. The screens go to the memorized position.

Press the corresponding format button until all the screens jog. The format is deleted.

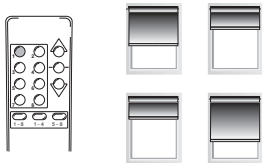
A1



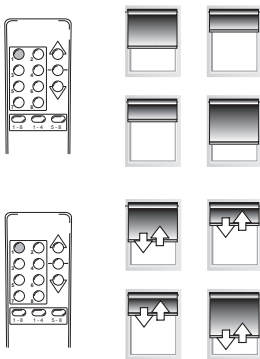
A2



C



E



With an universal IR remote control

- Please refer to the universal IR remote control instructions to learn the codes from a Somfy 8 channels remote control to the universal IR remote control.
- If there is no specific instructions, please contact your Somfy local retailer.

With a trigger input

- The trigger input allows to synchronize the motorized projection screen with a videoprojector (For videoprojector with DC12V output).
- When the videoprojector will be powered ON, the interface will put the projection screen in Format 1 position.
- When the videoprojector will be powered OFF, the interface will put the projection screen in Format 8 position.

With a RS485 data line

Overview

The following paragraph describes the SOMFY RS485 protocol, which is used to communicate with the DIGITAL 4 ILT INTERFACE.

The RS485 protocol supports bi-directional communication between a host and the interface.

The term «Host» refers to the device initiating communication with the interface, usually a computer-based system.

RS485 communication standard

All signals on the physical link between devices should comply with EIA/TIA-485-A standard.

Only half-duplex is implemented, so a standard 3-wires shielded cable is recommended.

Each character is coded as follow :

Character coding		
Baud Rate	4800	+/-1%
Start bit	Logical Level 0	
Data bits	8	Less significant bit transmitted first
Parity	Odd	
Stop bit	Logical Level 1	

Warning : Data bits shall be inverted

Message Format

Byte Number	Name	Value	Description
0	MSG	See Message Table	Refer to 'MSG' column in the table below for a list of available messages.
1	LEN		Refer to 'LEN' column to have the correct value depending on message.
2	Reserved	Always 04h	The indicated values allow simple point to point communication. Refer to your Somfy local retailer for advanced network communications.
3 - 5	Reserved	Always 00h 00h 00h	
6 - 8	Reserved	Always FFh FFh FFh	
...	DATA	See Message Table	Information on DATA fields can be found in the table : - Length of DATA part (in byte count) - Type of every DATA fields - Available values for each DATA fields
Byte n-1	CHECKSUM	$\overline{\text{Byte 0} + \dots + \text{Byte (n-2)}}$	CHECKSUM is one's complement of sum of bytes 0 to byte (n-2)
Byte n			If CHECKSUM not correct, message is ignored.

Messages table

Command Type	Command Description	Message Name (MSG)	LEN	DATA Length	DATA Type	Message Name (MSG)
Setting	Save current motor positions as a format	SET_FORMAT (90h)	0Ch	1	8-bits	1 to 7 = User Format 8 = Home Format
	Erase format definition	RESET_FORMAT (91h)	0Ch	1	8-bits	
Control	Move or stop one motor	SET_SCREEN_POSITION (98h)	0Dh	2	8-bits	0 = All motors 1 to 4 = Motor output M1 to M4
	Recall a pre-defined format	GOTO_FORMAT (80h)	0Ch	1	8-bits	1 = Move UP 2 = Move DOWN 3 = STOP
Status	Read information on one motor The device will answer with POST_SCREEN_STATUS	GET_SCREEN_STATUS (88h)	0Ch	1	8-bits	1 to 7 = User Format 8 = Home Format
	Give information on one motor This is an answer to a GET_SCREEN_STATUS message	POST_SCREEN_STATUS (A8h)	11h	6	8-bits	0 = All motors 1 to 4 = Motor output M1 to M4
					8-bits	1 to 4 = Motor output M1 to M4
					16-bits	0 = No motor detected on output 1 = Communication with motor OK
				16-bits	In pulses from top position Range of movement in pulses	

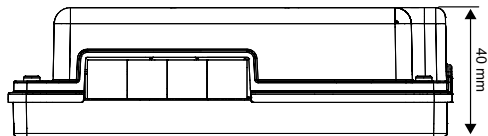
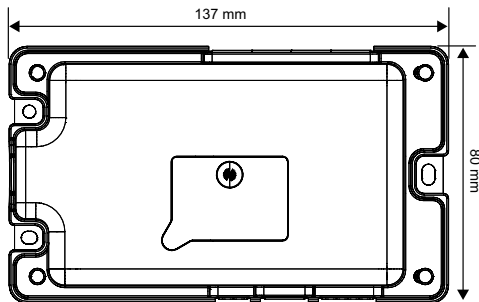
Warning: All 16-bits values are LSBF

Example

Messages	Data	Checksum on actual data
GOTO_FORMAT(1)	Raw data 80 0C 04 00 00 00 FF FF FF 01 Actual Data 7F F3 FB FF FF FF 00 00 00 FE	06 68
SET_SCREEN_POSITION (1, 3)	Raw Data 98 0D 04 00 00 00 FF FF FF 01 03 Actual Data 67 F2 FB FF FF FF 00 00 00 FE FC	07 4B

TECHNICAL DATA

Voltage	90V → 255V
Frequency	50Hz → 60Hz
Operating temperature	0°C / 60 °C
Protection rating	IP20
Max number of motors	4
Control	IR / RS485
Trigger Input	0V → 30V



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