PROGRAMMING GUIDE

Somfy Digital Network RS485

Control4®

TO

DIGITAL MOTOR INTERFACE (DMI)

somfy®

PROGRAMMING GUIDE

CONTROL4 TO DIGITAL MOTOR INTERFACE (DMI)

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I. OVERVIEW

The Control4 to Digital Motor Interface (DMI) receives and sends bi-directional commands and feedback connected between Somfy wired SDN RS485 motors and a Control4 Zigbee system as a wireless end node. It receives Control4 Zigbee transmissions and converts them to motor control commands for Somfy's line of line voltage (AC) and low voltage (DC) SDN RS485 motors.

SYSTEM REQUIREMENTS

SDN Motor limits must be set prior to installing Digital Motor Interface

NOTE: Refer to the respective motor instructions on how to set the limits

All connections must be properly made according to the wiring diagrams on the product instructions

Fully commissioned Control4 system

Control4 Composer Software OS 2.9.0 or higher

Somfy Control4 to Digital Motor Interface driver

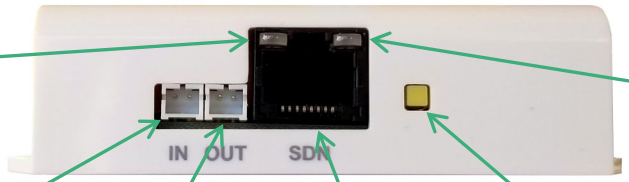
CONNECTIONS & INDICATORS

LED BEHAVIOR: (LEFT)

OFF
NO POWER TO DEVICE

GREEN
POWER TO DEVICE

Each DMI is limited to one SDN RS485 motor connection



LED BEHAVIOR: (RIGHT)

ORANGE > GREEN (Solid>Flashing)
SDN MOTOR ACTIVITY

GREEN (Flashing)
NO MOTOR FEEDBACK

ORANGE (Flashing)
INCLUSION MODE

ORANGE (Solid)
CONNECTED TO ZIGBEE NETWORK

Power Input
Input port for 24V DC power from power supply

Power Output
Output port for 24V DC power to motor

SDN Port
Connect to motor or Data & Power Cable

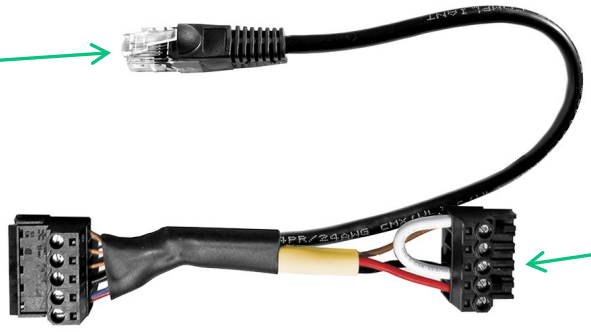
Push Button
Leaving the Zigbee network, restart identify & manual operation

During power-up, the RIGHT LED will flash indicating the firmware version. Refer to product instructions for more detail.

MOTOR ADAPTOR CABLE

When installing the Digital Motor Interface (DMI) with DC motors, the Data & Power Adaptor Cable (Ref # 9027112, sold separately) is required for proper installation. Using the DMI with AC SDN RS485 motors requires the Somfy Grey Motor Data Cables (sold separately).

Control4 Digital Motor Interface Connection
Connect to SDN Port on the Digital Motor Interface



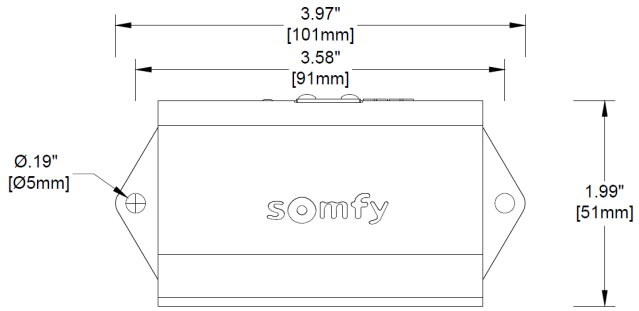
Digital Motor Connection
Connect to SDN RS485 Digital Motor Cable(s)

Power Supply Connection
Connect to the power supply to provide power

II. INSTALLATION

MOUNTING

The Control4 to Digital Motor Interface utilizes mounting tabs with screw holes for installation.



POWER

This device is powered by a line voltage AC SDN RS485 motor or a 24V DC power supply.

There is a single RJ45 port on the DMI which provides the connection to the SDN motor or adaptor cable. The DMI is powered by a line voltage SDN RS485 motor using a Grey Motor Data Cable or low voltage power supplies including a plug-in transformer or power distribution enclosure kit.

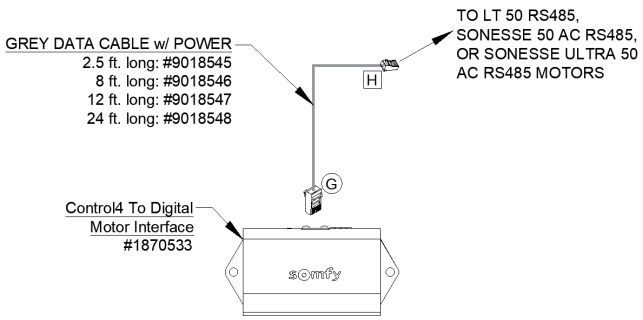
ELECTRICAL SPECIFICATION	
Voltage Input	Requires regulated 24V DC or AC SDN Motor power output
Voltage Output	Regulated 24V DC, passed through from the Input Voltage
Power Connectors	2 pin JST, 2 mm pitch (Same for input & output)
Power Consumption	50mA @ 24V DC

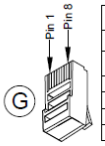
LINE VOLTAGE POWER SUPPLY OPTIONS	
AC RS485 TUBULAR MOTORS	**GLYDEA ULTRA WITH RS485 MODULE**
DMI is powered by the motor using Grey Motor Data Cable	DMI is powered by the low voltage power supply options below (Requires cable #9014794 for power input)
LOW VOLTAGE POWER SUPPLY OPTIONS	
TRANSFORMER OPTION	
24V DC 1.67A Wall Mount Power Supply #1822209	
	
POWER DISTRIBUTION ENCLOSURE KITS *Max. distance of 150ft. with 16 AWG wire*	

5 Motor #1870196	10 Motor #1870192	15 Motor #1870197	20 Motor #1870198
			

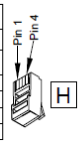
WIRING TO SYSTEM FOR OPERATION

WITH AC RS485 MOTOR



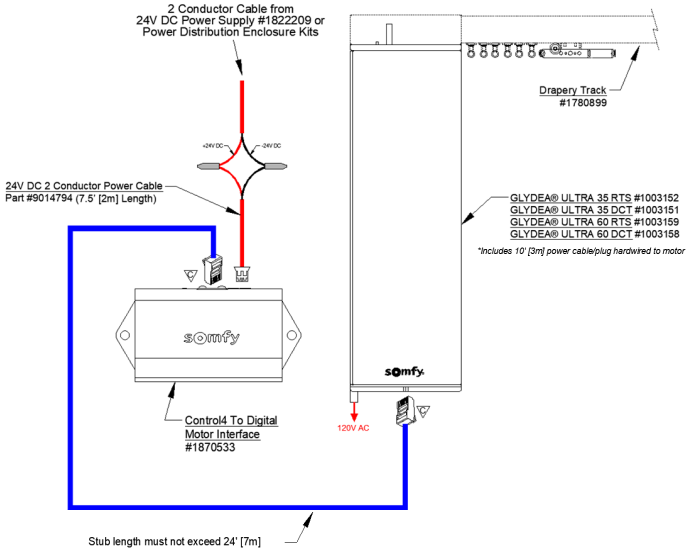


Grey Data Cable With Power Pinout			
4 Cond. 26AWG modular cable with RJ-45 and RJ-9			
Pin #	Color	Function	Pin #
1	Yellow	SDN RS485 (+)	1
2	Green	SDN RS485 (-)	2
4	Red	Power Out	3
8	Black	Ground	4



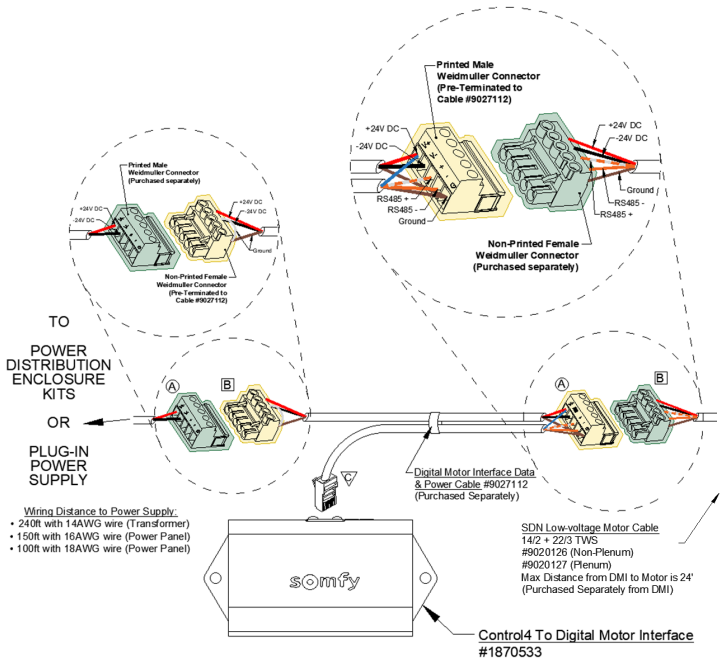
WITH GLYDEA ULTRA MOTOR

NOTE: Irismo™ 35 (Mini DC) is not supported



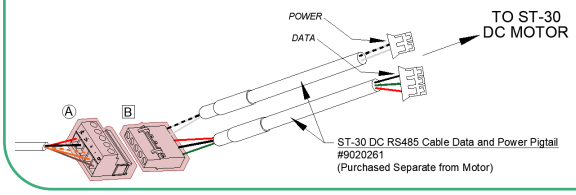
Module required for Motors:
RS485 (2-WAY) MODULE FOR GLYDEA® ULTRA MOTORS
#1870275

WITH DC RS485 MOTOR

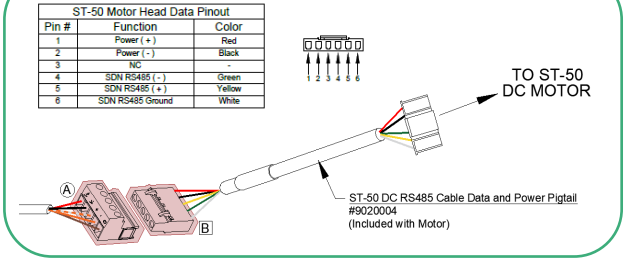


ST-30 Motor Head Power Pinout		
Pin #	Function	Color
1	Power (+)	White with Black Stripe
2	Power (-)	White

ST-30 Motor Head Data Pinout		
Pin #	Function	Color
1	SDN RS485 (-)	Black
2	SDN RS485 Ground	Green
3	SDN RS485 (+)	Red



ST-50 Motor Head Data Pinout		
Pin #	Function	Color
1	Power (+)	Red
2	Power (-)	Black
3	NC	-
4	SDN RS485 (-)	Green
5	SDN RS485 (+)	Yellow
6	SDN RS485 Ground	White



Male Printed Weidmuller Connector	DC Motor Port Wiring Pinout		Female Non-Printed Weidmuller Connector
	Male Pin #	Function	Female Pin #
A	1	Power (+)	5
	2	Power (-)	4
	3	SDN RS485 (+)	3
	4	SDN RS485 (-)	2
	5	SDN RS485 Ground	1

DC Motor Weidmuller Connector Color Code

Included with DC Motor Cable	Purchased Separately	Included with DMI Data & Power Cable

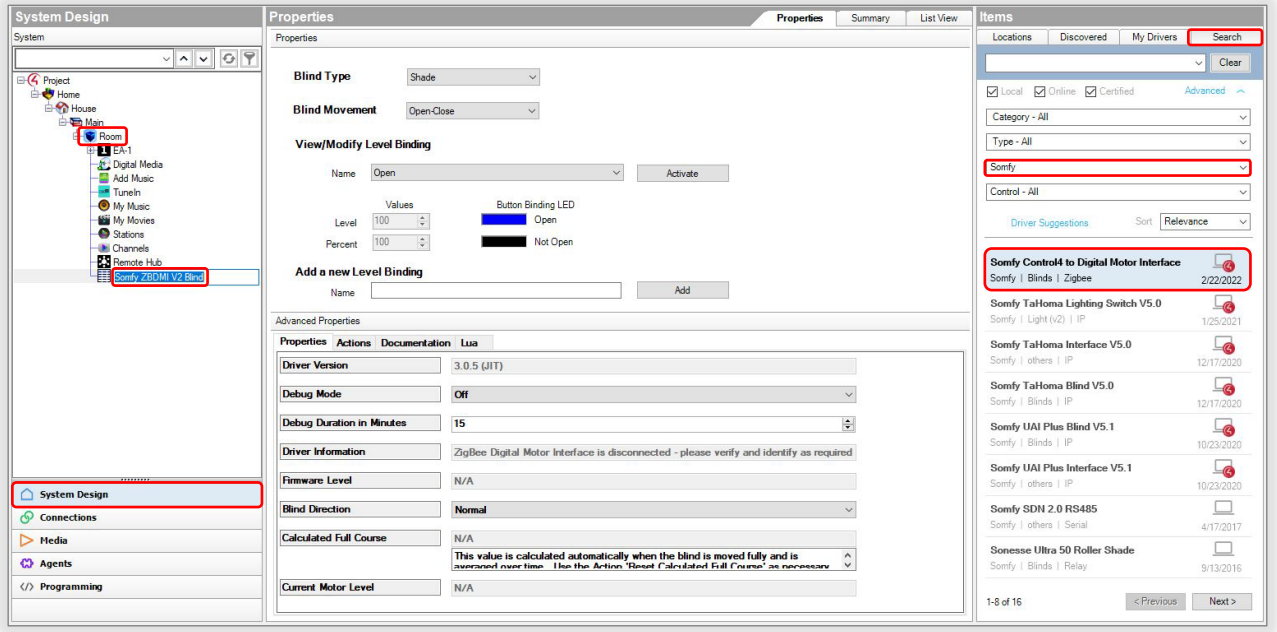
SDN Bus Wiring Pinout		
CAT-5e or higher TIA-568B standard with RJ-45		
Pin #	Color	Function
1	Orange White	SDN RS485 (+)
2	Orange	SDN RS485 (-)
3	Green White	Reserved
4	Blue	Power 24v DC
5	Blue White	Power 24v DC
6	Green	Reserved
7	Brown White	SDN RS485 Ground
8	Brown	SDN RS485 Ground

III. SET UP

ADD BLIND DEVICE TO PROJECT

Prior to Control4 programming, confirm that the DMI Push Button properly operates the individually connected SDN motor.
Reference the Somfy Control4 to Digital Motor Interface driver details located in the device Documentation tab.
A Somfy Control4 to Digital Motor Interface driver is required for each DMI installed.

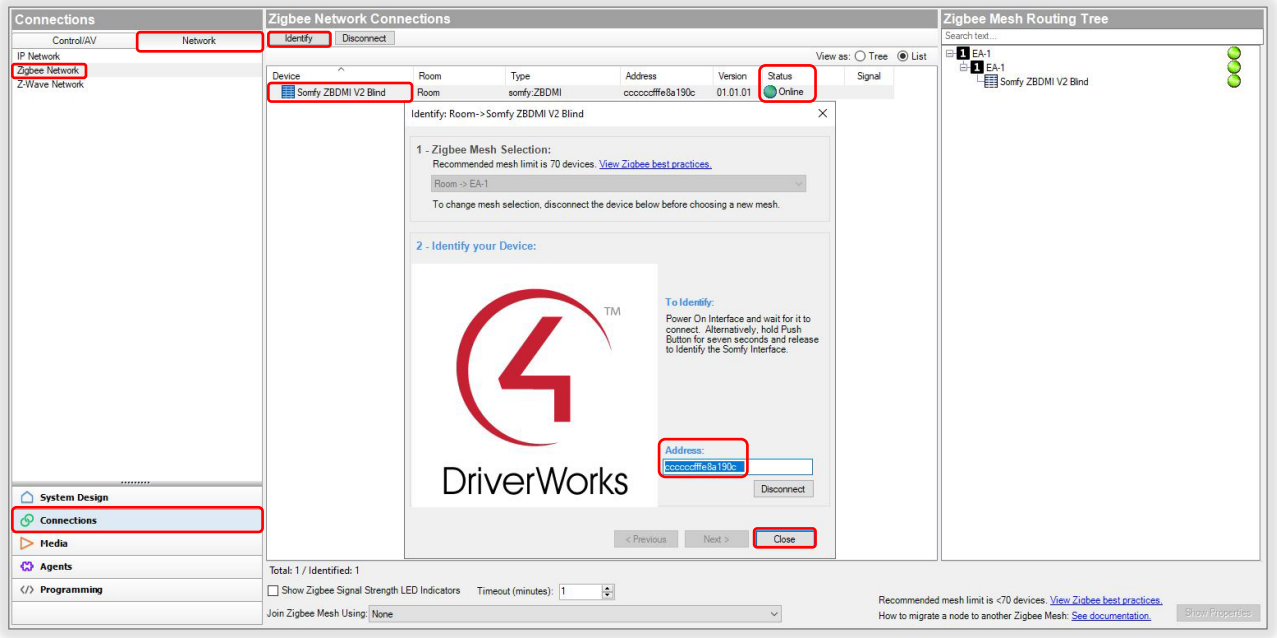
1) In the Composer System Design view Project tree, SELECT a Room in which a device is to be added
2) In the Items pane, SELECT the "Search" tab
3) In the Manufacturer dropdown list, SELECT "Somfy"
4) SELECT the "Somfy Control4 to Digital Motor Interface" certified driver
5) DOUBLE- or RIGHT-CLICK the driver to "Add to Project"
6) RENAME the device to the associated location or name of blind



IDENTIFY DEVICE

Reference the Somfy Control4 to Digital Motor Interface driver details located in the device Documentation tab.
A Somfy Control4 to Digital Motor Interface driver is required for each DMI installed.

1) The Control4 to DMI is automatically in Identify mode upon power up. For systems with multiple units, it is recommended to power up and identify the units one at a time.
2) In the Composer Connections view Network tab, SELECT "Zigbee Network"
3) In the Zigbee Network Connections Device list, SELECT the DMI to be identified
4) SELECT "Identify"
5) PRESS & HOLD the Push Button on the DMI for seven seconds
6) Once the Address field populates the node address, SELECT "Close"
7) CONFIRM the device Status displays "Online"

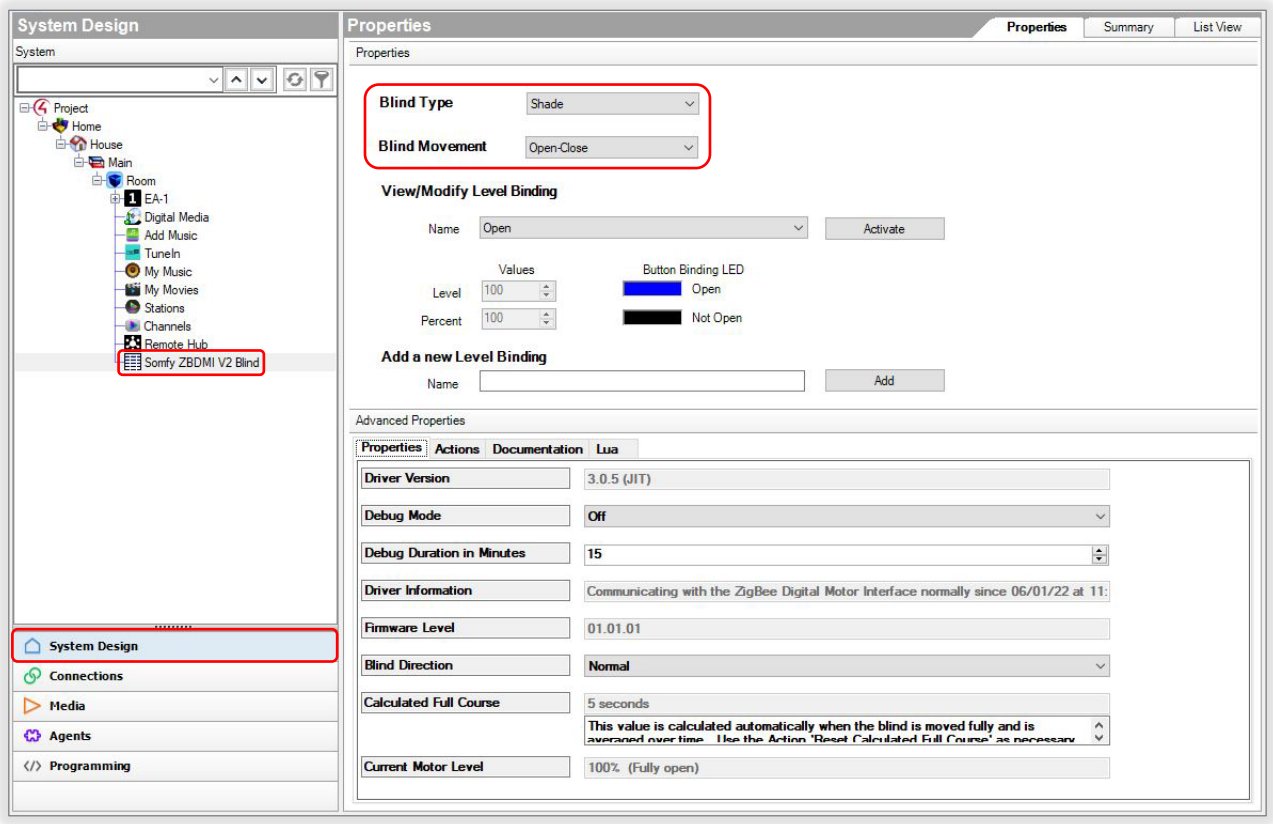


SET BLIND DEVICE PROPERTIES

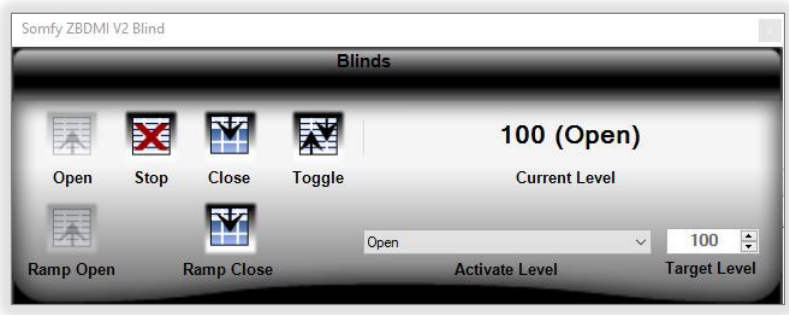
Reference the Somfy Control4 to Digital Motor Interface driver details located in the device Documentation tab.

1) In the Composer System Design view, Project tree, SELECT the DMI to be setup
2) In the Properties tab, SELECT the appropriate Blind Type for the product in the dropdown
3) SELECT the appropriate Blind Movement for the product in the dropdown

In the View/Modify Level Binding, set Control4 keypad button properties and connect the driver button links in Control & AV Connections. When complete, Refresh Navigators.



4) DOUBLE-CLICK the DMI to test each button operation



If the SDN motor operates in the opposite direction, SELECT "Reversed" in the Blind Direction dropdown.

See Appendix A of this guide for a list of Digital Motor Interface available commands and actions.

APPENDIX

[APPENDIX A] AVAILABLE COMMANDS & ACTIONS

DIGITAL MOTOR INTERFACE COMMANDS	
Close	Moves blind to the fully closed position
Open	Moves blind to the fully open position
Stop	Stops blind when moving
Toggle	Sequence controls blind close-stop-open
Target Level	Moves blind to a percent openness (0-100)

SOMFY® is the leading global manufacturer of strong, quiet motors with electronic and app controls for interior window coverings and exterior solar protections. Over 270 million users worldwide enjoy the more than 170 million motors produced by Somfy. During the past 50 years, Somfy engineers have designed products for both the commercial and residential markets to motorize window coverings such as interior shades, wood blinds, draperies, awnings, rolling shutters, exterior solar screens and projection screens. Somfy motorization systems are easily integrated with security, HVAC and lighting systems providing total home or building automation.

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