



PROGRAMMING GUIDE



SOMFY DIGITAL NETWORK™ POWER OVER ETHERNET (PoE) GATEWAY



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I. OVERVIEW

The Somfy Digital Network™ Power over Ethernet (PoE) Gateway is a low-voltage power distribution and network-connected module that utilizes PoE technology to power and control 24V DC RS485 Motors.

The device supports both Somfy Synergy™ API and CoAP Digital Building API compatible with Molex Transcend® Network Connected System.

REQUIREMENTS

SOFTWARE

- Somfy SDN PoE Gateway Application
 - When possible, install as Administrator — Download the latest version at: www.somfypro.com/services-support/software
- Windows 7 PC or higher (firewalls must be disabled while using)

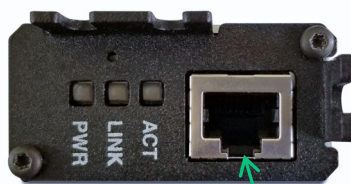
HARDWARE

- Unshielded Twisted CAT-5e or higher TIA-568B with Plastic RJ-45 Connectors
 - PowerWise™ 1G 4PPoE Indoor/Outdoor Cable recommended
- Power over Ethernet Switch (Must support LLDP & be a Cisco UPoE compliant device)
- SDN Power over Ethernet Gateway
 - Gateway #1860326
 - Gateway & Motor Adaptor Kit #1870445 (Includes Motor Adaptor #9025010)
- PoE Gateway to Motor Adaptor
 - PoE Gateway to Motor Adaptor #9025010 (Included with Gateway Kit)
 - PoE Gateway to Motor & Keypad Adaptor #9025011 (Not included with Gateway)
- SDN Low-voltage Motor Cable
 - Non-Plenum Rated US: #9020126 Canada: #9020452
 - Plenum Rated US: #9020127 Canada: #9020453
- SDN RS485 DC Motor with Data & Power Pigtail
 - Sonesse® 30 [ST-30] DC Motor Data & Power Pigtail #9020261 (Not included with Motor)
 - Sonesse® ULTRA 50 [ST-50] DC Motor Data & Power Pigtail #9020004 (Included with Motor)
 - DC Drapery Adaptor for PoE Gateway #9025012 (Included with Irismo Enclosure Kit #1870282)

OPTIONAL HARDWARE

- PoE Gateway Motor Daisy Chain Adaptor #9020451

CONNECTIONS & LEDs



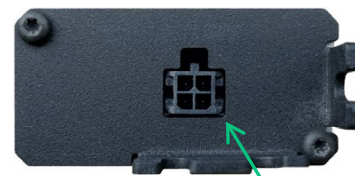
Ethernet Input
Power & Data from PoE Switch

LED BEHAVIOR:

ACT
Solid Green

LINK
Blinks Amber

POWER
Solid Green



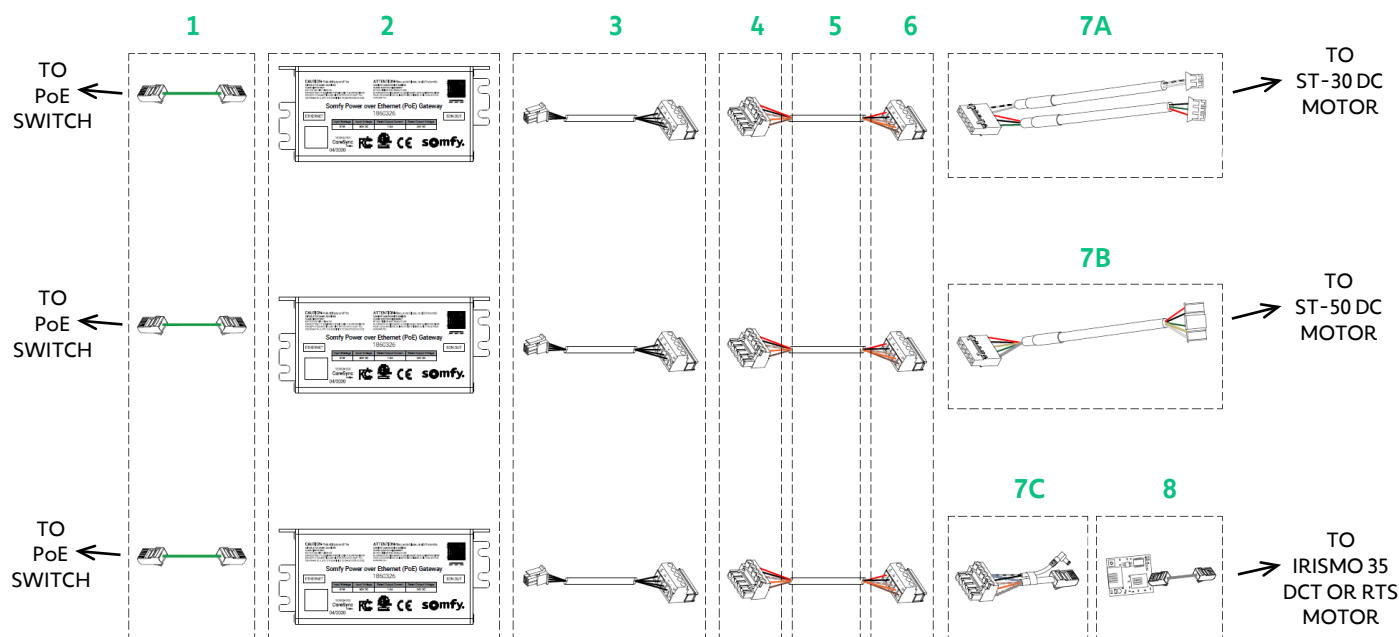
SDN Output
Power & Data to Motors

MOUNTING & POWER

Mount the Gateway on either wood or drywall.

Gateway must be isolated from possible earth or building electrical grounding, as well as from other Gateways.

BASIC WIRING FOR OPERATION

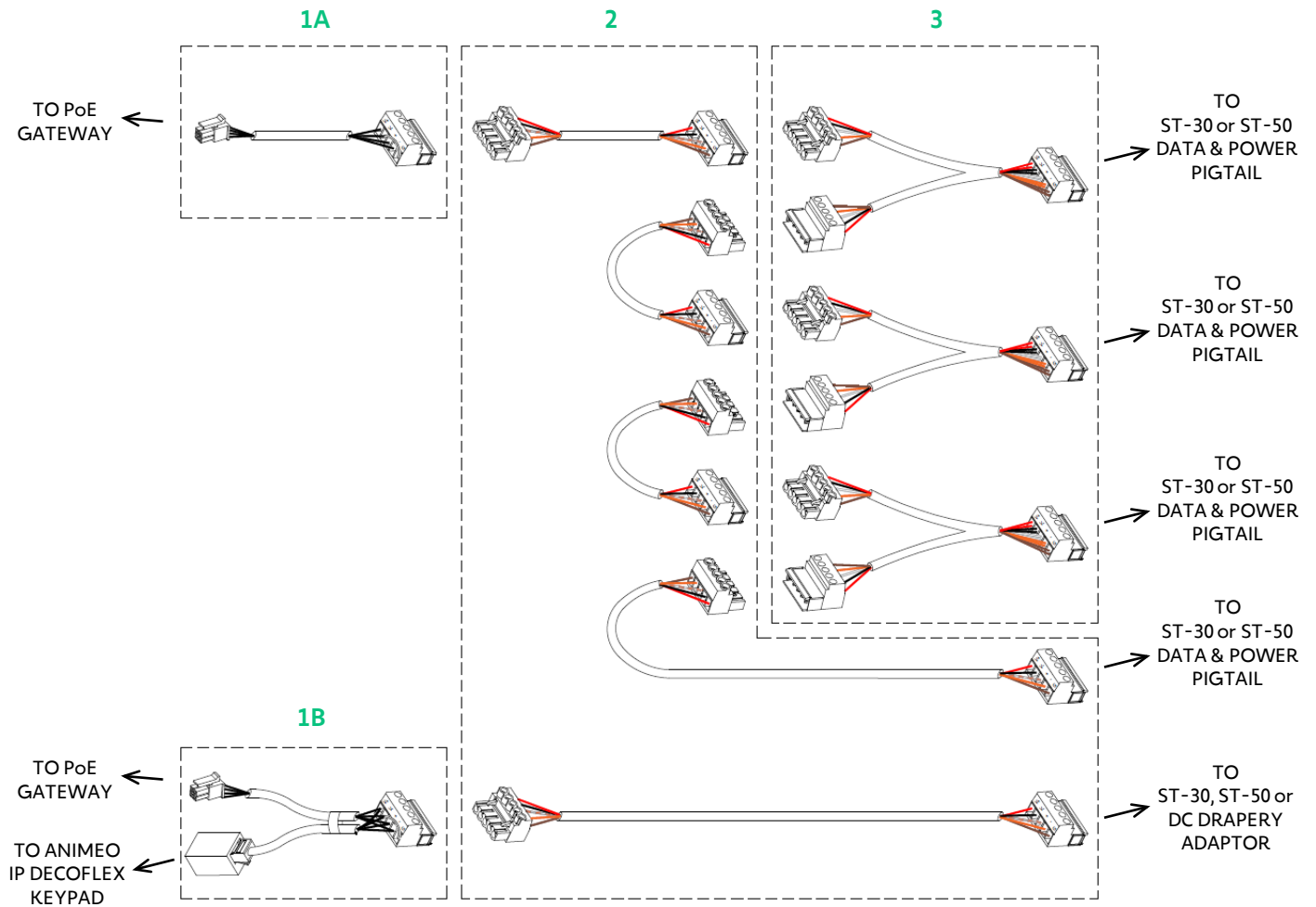


1. **NETWORK CABLE** Unshielded Twisted CAT-5e or higher TIA-568B with Plastic RJ-45 Connectors
2. **PoE GATEWAY** #1860326
3. **PoE GATEWAY TO MOTOR ADAPTOR** #9025010
4. **FEMALE WEIDMULLER CONNECTOR** #9025113
5. **SDN LOW-VOLTAGE MOTOR CABLE** Non-Plenum #9020126 or Plenum #9020127
6. **MALE WEIDMULLER CONNECTOR** #9020743 (Included with ST-30 & ST-50 Data & Power Pigtails)
7. **DC MOTOR DATA & POWER PIGTAIL**
 - A. **SONESSE 30 [ST-30] DC MOTOR DATA & POWER PIGTAIL** #9020261
 - B. **SONESSE ULTRA 50 [ST-50] DC MOTOR DATA & POWER PIGTAIL** #9020004
 - C. **DC DRAPERY ADAPTOR FOR PoE GATEWAY** #9025012
8. **RS485 MODULE FOR DRAPERY MOTORS**
 - **RS485 MODULE FOR DRAPERY MOTORS [MODULE]** #1811129
 - **SDN IRISMO 24V MINI DC ENCLOSURE KIT [MODULE, ADAPTOR & ENCLOSURE]** #1870282

NOTE: Visit www.somfysystems.com for advanced Wire Details with limitation, component and purchasing information.

OPTIONAL WIRING FOR OPERATION

Add a Keypad or daisy chain up to four Motors per PoE Gateway.



1. PoE GATEWAY MOTOR ADAPTOR

- A. PoE Gateway to Motor Adaptor #9025010
- B. PoE Gateway to Motor & Keypad Adaptor #9025011

2. SDN LOW-VOLTAGE MOTOR CABLE & WEIDMULLER CONNECTORS

3. PoE GATEWAY MOTOR DAISY CHAIN ADAPTOR* #9020451

** Irismo Motors are not compatible with the Daisy Chain Adaptor - Limit (1) Drapery Motor per PoE Gateway.*

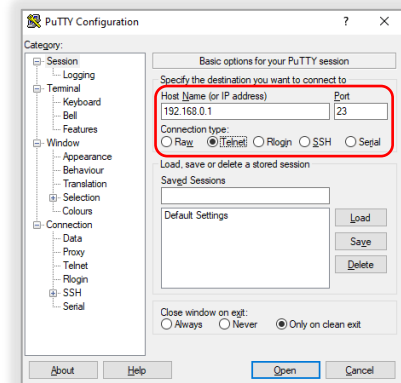
NOTE: Visit www.somfysystems.com for advanced Wire Details with limitation, component and purchasing information.

III. SET UP

CISCO SWITCH CONFIGURATION

NOTE: Cisco switch should be programmed by the Network Administrator. Contact Cisco for advanced support with switch configuration.

1. Download PuTTY software: <https://www.putty.org/>
2. Open the PuTTY Configuration software
 - a. SELECT the "Telnet" radio button
 - b. ENTER the IP address of the Cisco switch into the "Host Name (or IP address)" field
NOTE: IP address obtained by the Network Administrator
 - c. ENTER "23" into the "Port" field
 - d. SELECT Open



3. Follow the steps below in the PuTTY Terminal under User Access Verification
 - a. Type the switch Username [default Username: cisco], PRESS "Enter" key on keyboard
 - b. Type the switch Password [default Password: cisco], PRESS "Enter" key on keyboard (will not appear on screen)

```
User Access Verification
Username: cisco
Password:
Switch#
```

- c. Next to each of the following lines highlighted in BLACK, TYPE the exact text below in GREEN, then PRESS the "Enter" key on keyboard after each command to move to the next line:
 - Switch# **"config t"**
 - Switch (config) # **"coap proxy"**
 - Switch (config-coap-proxy) # **"stop"**
 - Switch (config-coap-proxy) # **"exit"**
 - Switch (config) # **"no coap proxy"**
 - Switch (config) # **"no ip igmp snooping"**
 - Switch (config) # **"exit"**
 -Continue..... Switch# **"wr"**
 -Wait to finish loading.....

```
Switch#wr
Building configuration...
[OK]
```

Cisco Switch Configuration is now complete

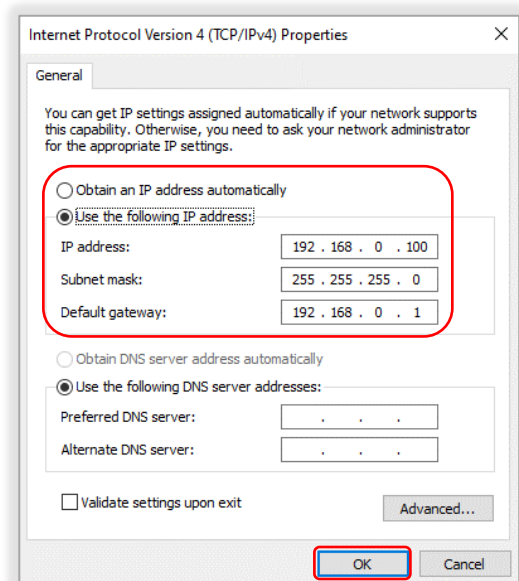
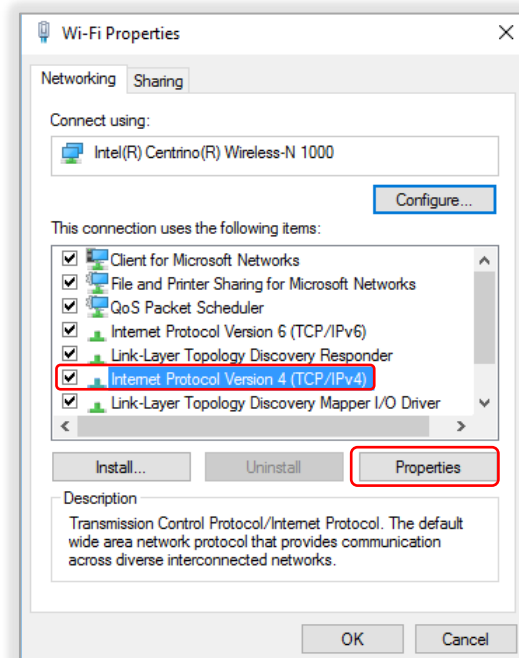
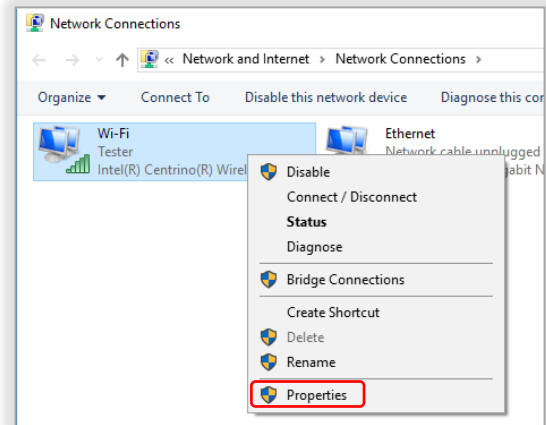
COMPUTER SETTINGS

NOTE: The commissioning computer, dedicated control server on-site or third-party control system may require setting a static IP address. Be advised that some routers may present a Gateway discovery issue when the Multicast Discovery device is set to a static IP. Coordinate with the Network Administrator for the appropriate network settings & requirements. Allowing dynamic IP addresses or setting MAC address reservations may resolve this issue.

If a static IP address is required, obtain the IP address from the Network Administrator.

1. Connect a CAT-5e cable to the computer ethernet port and network switch on the same network as the PoE Gateway (or connect over Wi-Fi on the same network)
2. Go to the "Network Connections" of the "Control Panel",
3. RIGHT-CLICK the appropriate network adapter
4. SELECT "Properties" from the drop-down menu
5. SELECT "Internet Protocol Version 4 (TCP/IPv4)", SELECT Properties
5. SELECT the "Use the following IP address" radio button
6. ENTER the addresses provided by the Network Administrator into the corresponding fields, SELECT "OK" on both open Properties windows
7. Upon completion of PoE Gateway commissioning and testing, repeat Step 4 to revert previous settings
 - SELECT the "Obtain an IP address automatically" radio button
 - SELECT "OK" on both open Properties windows

Computer Settings are now set for discovering PoE Gateways

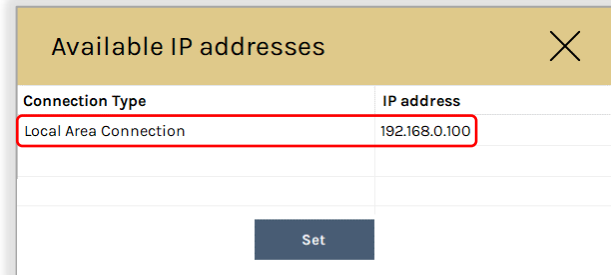


APPLICATION SETTINGS

NOTE: Coordinate with the Network Administrator to confirm the appropriate network settings & requirements.

Upon initial launch of the Somfy PoE Gateway Application, the "Available IP addresses" window will display

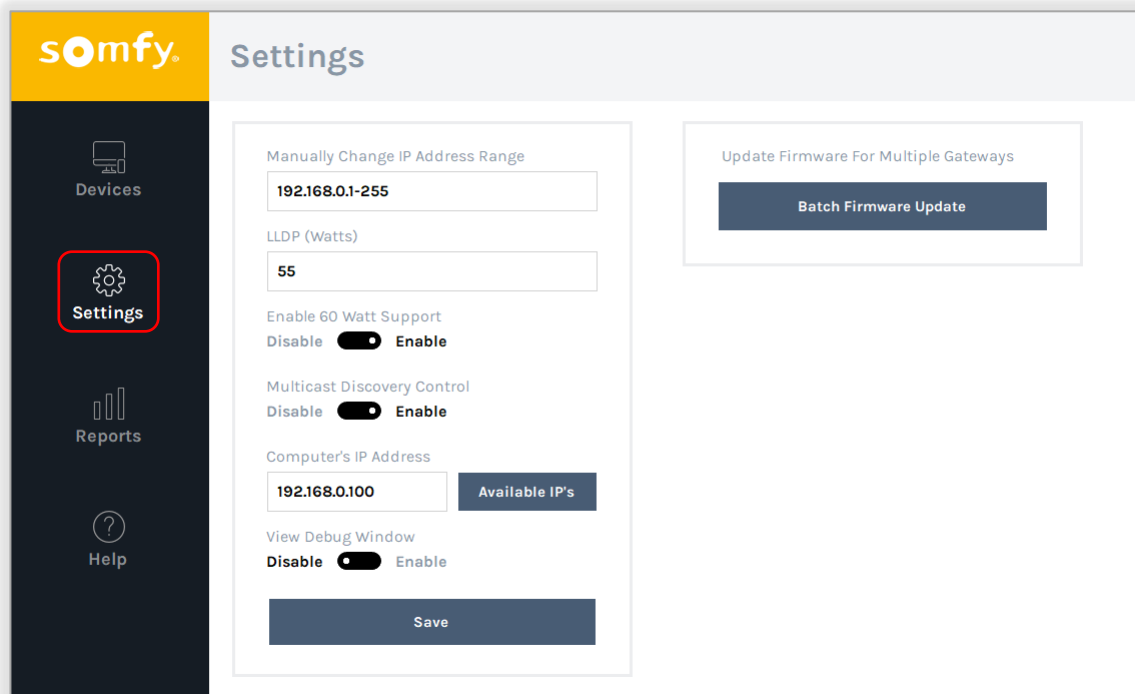
1. SELECT the applicable Ethernet or Wi-Fi "Connection Type" and "IP address" to discover all PoE Gateways on the same network
2. SELECT "Set"
3. SELECT "Settings" in the left pane



The "Available IP addresses" window is a small dialog box with a yellow header and a close button (X) in the top right corner. It contains a table with two columns: "Connection Type" and "IP address". The first row is highlighted with a red border and contains the text "Local Area Connection" and "192.168.0.100". Below the table is a "Set" button.

Connection Type	IP address
Local Area Connection	192.168.0.100

Set



The "Somfy Settings" page features a dark sidebar on the left with icons for "Devices", "Settings" (highlighted with a red box), "Reports", and "Help". The main content area is titled "Settings" and contains several configuration options:

- Manually Change IP Address Range:** A text input field containing "192.168.0.1-255".
- LLDP (Watts):** A text input field containing "55".
- Enable 60 Watt Support:** A toggle switch currently set to "Enable".
- Multicast Discovery Control:** A toggle switch currently set to "Enable".
- Computer's IP Address:** A text input field containing "192.168.0.100" and an "Available IP's" button.
- View Debug Window:** A toggle switch currently set to "Enable".
- Save:** A large blue button at the bottom.
- Update Firmware For Multiple Gateways:** A section with a "Batch Firmware Update" button.

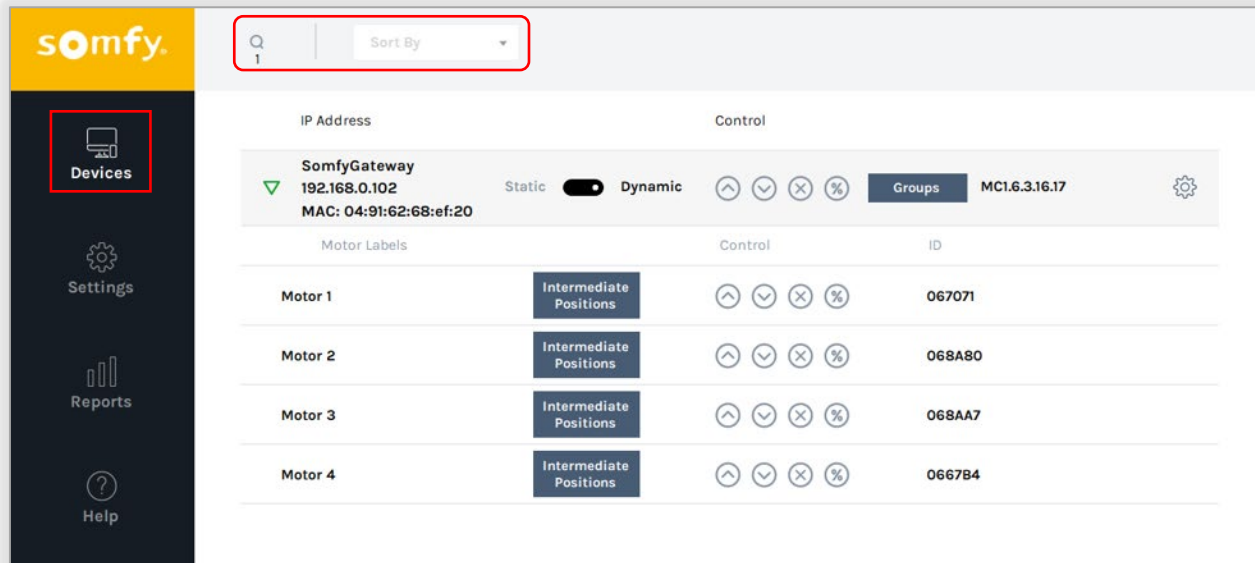
4. Modify the following Application Settings:
 - **Manually change the IP Address Range:** Search for Gateways in a specified IP range [ex:192.168.0.1-255]
 - **LLDP (Watts):** Only change if using a 100-Watt switch
 - **Enable 60 Watt Support:** TOGGLE to "Enable"
 - **Multicast Discovery Control:** TOGGLE to "Enable"
 - **Computer's IP Address:** Indicates the Multicast Discovery IP address of the commissioning computer and must be later assigned the control server on-site or third-party control system IP address to communicate with specific Gateways
 - **Available IP's:** Opens the Available IP addresses window (shown above)
 - **View Debug Window:** TOGGLE to "Enable" when requested by Somfy Support for diagnostics
 - **Batch Firmware Update:** Refer to APPENDIX A of this guide to perform Gateway firmware updates
5. SELECT "Save" to apply all settings.

Application Settings are now set for discovering PoE Gateways and programming motors

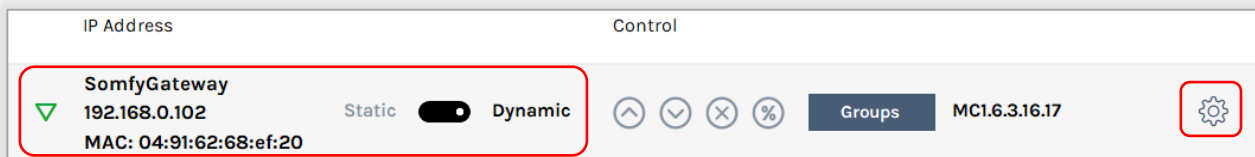
IV. COMMISSIONING

GATEWAY DISCOVERY

1. SELECT the Magnifying Glass icon at the top of the Devices page to start discovery
 - The quantity of Gateways discovered will display
 - Gateways with motors connected will appear first in the list, followed by Gateways without motors connected
2. SELECT the "Sort By" drop-down to filter discovered Gateways by IP Address, Gateway Name or Gateways with motors connected



GATEWAY CONFIGURATION



1. SELECT the Green Triangle icon to collapse or expand details of each Gateway discovered
 - The triangle color indicates Gateway connection status: GREEN = online, RED = offline
2. Edit the "SomfyGateway" name field to identify each individual Gateway
3. Each Gateway will display an IP Address and MAC Address – TOGGLE the "Static/Dynamic" button to set the Gateway to a static or dynamic IP address
4. SELECT the "Gateway Control" buttons to control all motors connected to the PoE Gateway
Refer to the Motor Control section of this guide for more information
5. SELECT "Groups" to assign motors to groups
Refer to the Motor Group Assignment section of this guide for more information
 - The numbers to the right of the Groups button indicate the Gateway firmware version
6. SELECT the Gear icon to set individual Gateway settings, which includes the following options:
 - **Remove** – Removes Gateway from the current Devices page (Gateway will reappear in next Search if connected)
 - **Restart** – Power cycles the Gateway
 - **Wink** – Jogs all tubular motors connected to the Gateway with a short up/down movement
 - **Control Grouped Motors** – Opens the Control Grouped Motors window to move specific groups of Motors
Refer to the Motor Control section of this guide for more information
 - **Upgrade Firmware** – Refer to APPENDIX A of this guide to perform Gateway firmware updates

MOTOR CONFIGURATION

NOTE: Prior to configuring motors with the PoE Gateway, motor end limits must be set.

Intermediate Positions previously set with SDN Motor Configuration Software or RS485 Setting Tool are supported.

- The Motor Labels field displays Motors (1-4) on this Gateway — SELECT a motor from the column to edit the name to identify each individual motor.
 - ID indicates the factory Node ID assigned to each individual motor — This unique ID cannot change
- SELECT "Intermediate Positions" to open the "Intermediate Position Settings" window

Motor Labels		Control	ID
Motor 1	Intermediate Positions	⬆ ⬇ ⓧ %	067071
Motor 2	Intermediate Positions	⬆ ⬇ ⓧ %	068A80
Motor 3	Intermediate Positions	⬆ ⬇ ⓧ %	068AA7
Motor 4	Intermediate Positions	⬆ ⬇ ⓧ %	0667B4

Setting Intermediate Positions

- Use the Motor Controls to execute motor movements:
 - Up arrow moves the individual motor to the upper limit
 - Down arrow moves the individual motor to the lower limit
 - X stops the individual motor from moving
 - % moves the individual motor to a specified percent or Intermediate Position
- Program up to 16 positions between 0 and 100%:
 - Get retrieves all recorded Intermediate Positions
 - Set records the current motor position to a selected slot
 - Goto moves motor to selected Intermediate Position
 - Erase removes an individual recorded Intermediate Position
 - Erase All removes all recorded Intermediate Positions
- Test the programmed Intermediate Positions:
 - SELECT "Position" radio button (1-16)
 - SELECT "Goto" to move the motor to the selected Intermediate Position
 - OR
 - SELECT the Percent icon
 - SELECT the "Intermediate Position" radio button
 - From the drop-down, SELECT a desired Intermediate Position (1-16)
 - SELECT "Start" to move the motor to the selected Intermediate Position

Intermediate Position Settings

Motor Controls

⬆ ⬇ ⓧ %

Get Set Goto Erase Erase All

Position	Pulse	Percent	Position	Pulse	Percent
<input type="radio"/> 1	300	25	<input type="radio"/> 9	None	None
<input type="radio"/> 2	600	50	<input type="radio"/> 10	None	None
<input checked="" type="radio"/> 3	900	75	<input type="radio"/> 11	None	None
<input type="radio"/> 4	None	None	<input type="radio"/> 12	None	None
<input type="radio"/> 5	None	None	<input type="radio"/> 13	None	None
<input type="radio"/> 6	None	None	<input type="radio"/> 14	None	None
<input type="radio"/> 7	None	None	<input type="radio"/> 15	None	None
<input type="radio"/> 8	None	None	<input type="radio"/> 16	None	None

Motor: Motor 1

☐ Go To Position(%)

☐ Intermediate Position

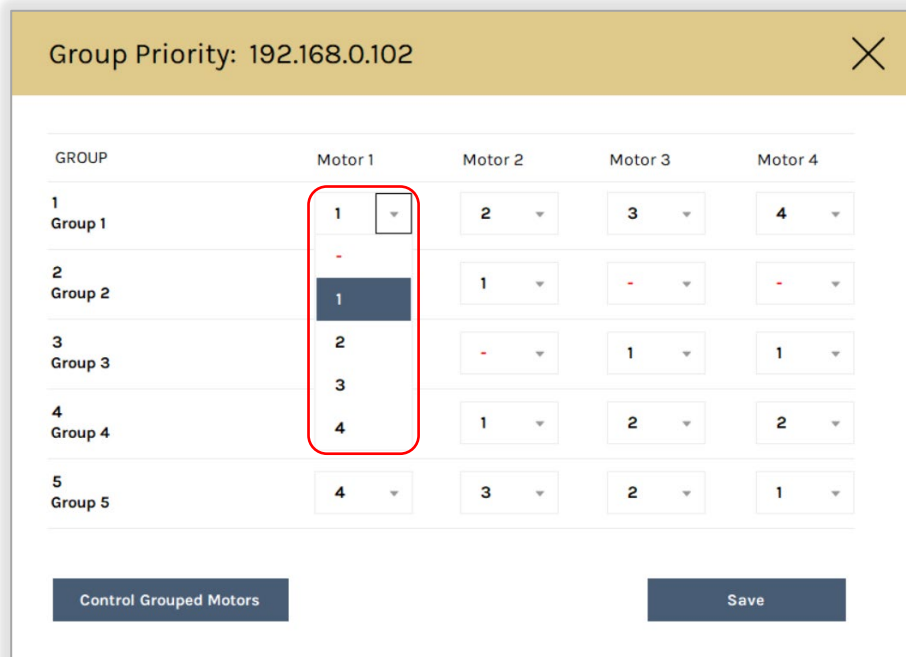
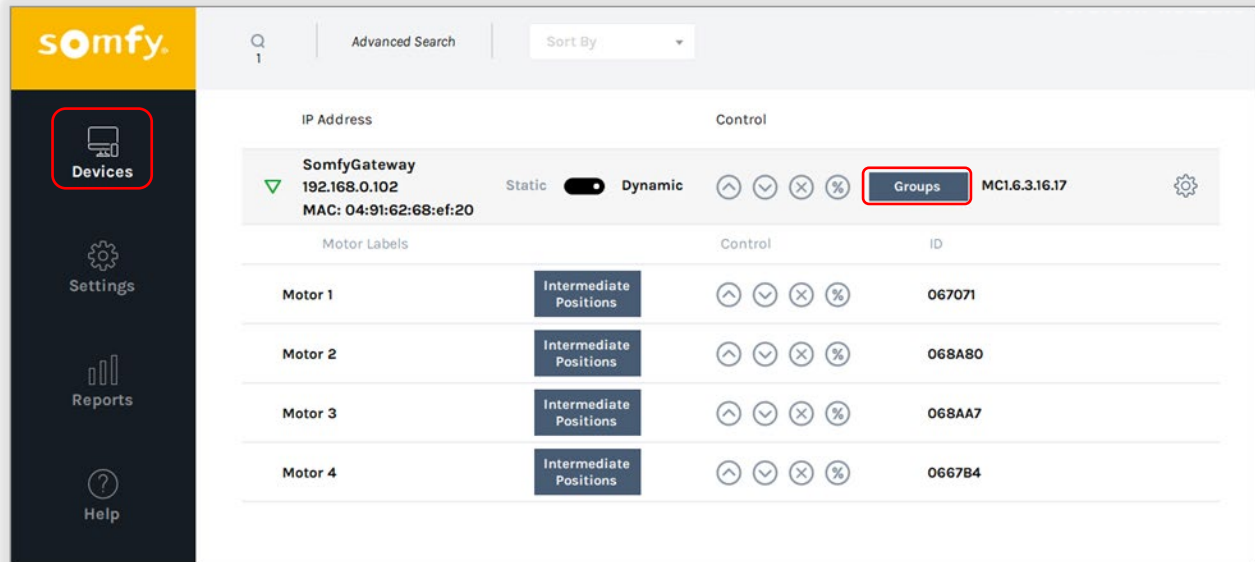
3

Start Stop

MOTOR GROUP ASSIGNMENT

NOTE: Each PoE Gateway has a maximum of 5 Groups and allows up to 16 Motor Group assignments.

1. SELECT "Groups" on the Devices page to open the Group Priority window



2. The Group field displays Groups (1-5) for this Gateway – SELECT a Group from the column and edit the name to identify each individual Group
3. The Motor Label of each connected motor is displayed as programmed and in order listed on the Devices page – SELECT a Priority(1-4) from the drop-down to assign motors to a group
 - In the example above, Group 1 will move Motor 1 first, Motor 2 second, Motor 3 third and Motor 4 last
 - A red dash will unassign the motor from a group

NOTE: The PoE Gateway allocates power to motors allowing (2) Sonesse 30 RS485 Motors to operate at a time and only (1) Sonesse ULTRA 50 DC RS485 or (1) Irisimo 35 Mini DC to operate at a time

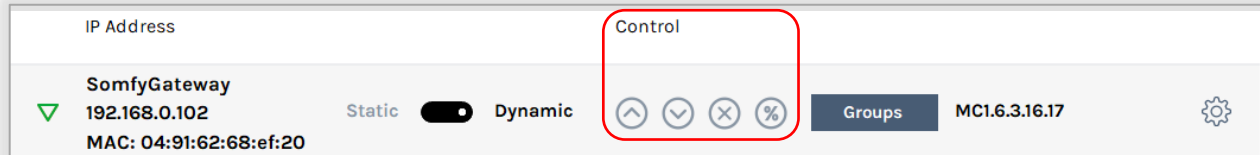
4. SELECT "Save" to set all priorities.

MOTOR CONTROL

GATEWAY CONTROL OF MOTORS:

Use the Gateway Control icon buttons to control all motors connected to the PoE Gateway in order of Motor Node ID:

- Up arrow moves all connected motors to the upper limit
- Down arrow moves all connected motors to the lower limit
- X stops all connected motors from moving
- % moves all connected motors to a specified position

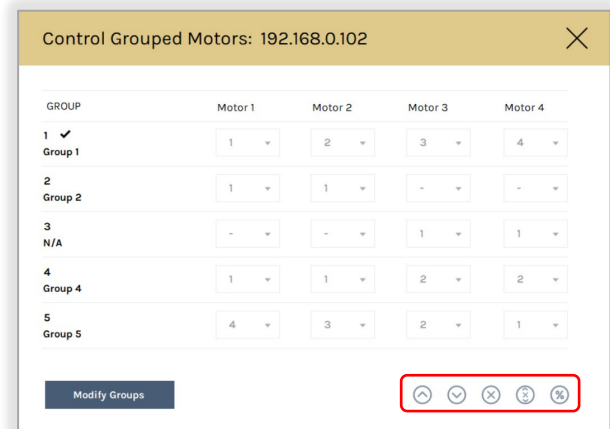


NOTE: By default, all connected motors are assigned to this group and motors will move in order of Motor Node ID. The PoE Gateway allocates power to motors allowing (2) Sonesse 30 RS485 Motors to operate at a time and only (1) Sonesse ULTRA 50 DC RS485 Motor or (1) Irisimo 35 Mini DC Motor to operate at a time.

GROUP CONTROL OF MOTORS:

1. SELECT the Gear icon or "Groups" in the Devices window
2. SELECT Control Grouped Motors
3. SELECT a Group(1-5)
4. Use the Group Control icon buttons at the bottom of the window to control the Group:

- Up arrow moves the grouped motors to the upper limit in order of priority
- Down arrow moves the grouped motors to the lower limit in order of priority
- X stops all moving motors from moving (remaining motors do not move)
- Stop and Align stops motors that are in motion then moves (aligns) remaining motors to that position in order of priority
- % moves the grouped motors to a specified percent or Intermediate Position in order of priority

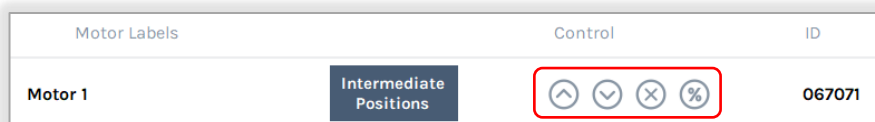


NOTE: Use Control Grouped Motors for testing motor movements; do not save changes unless modifying Groups.

INDIVIDUAL CONTROL OF MOTORS:

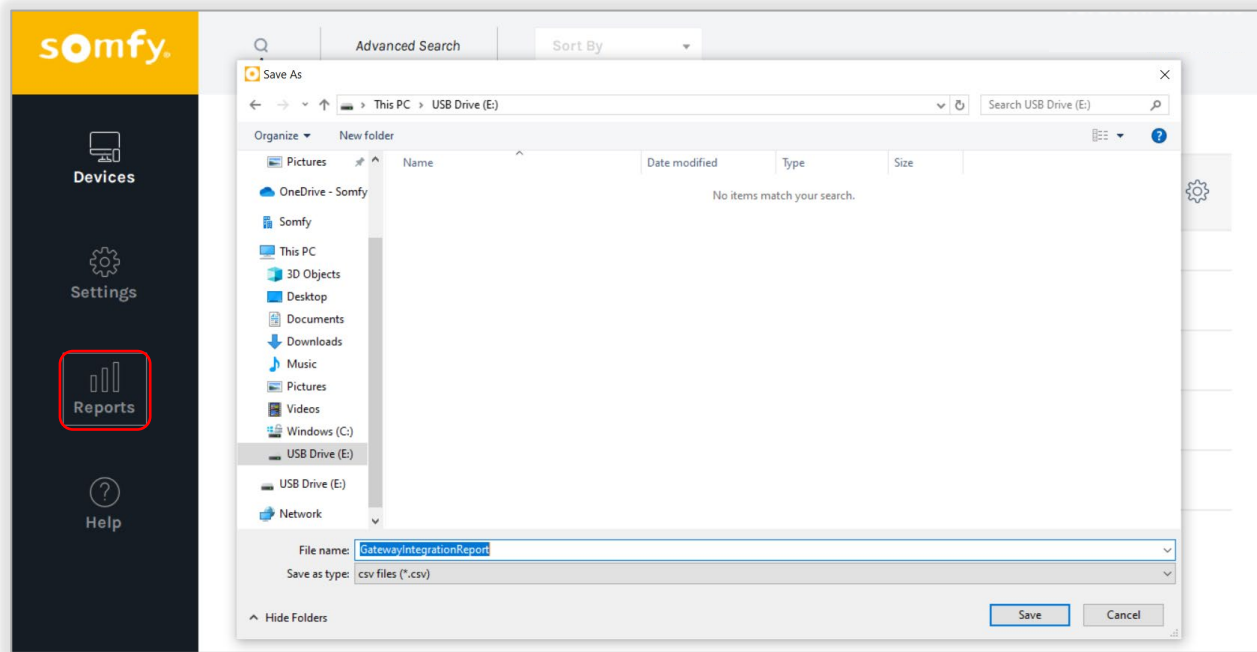
Use the Motor Control icon buttons to control an individual Motor:

- Up arrow moves the Motor to the upper limit
- Down arrow moves the Motor to the lower limit
- X stops the Motor from moving
- % moves the Motor to a specified percent or Intermediate Position



REPORTS & HELP

SELECT "Reports" to generate a Gateway Integration Report of all discovered PoE Gateways.



The Gateway Integration Report (.csv) documents all details necessary for third-party integration. Each Gateway will be listed in order by IP address, and the motors will be listed in the same order shown in the software. Use Microsoft Excel for customized sorting.

The screenshot shows the GatewayIntegrationReport - Excel spreadsheet. The spreadsheet has columns for IP Address, Label, Type, Serial Number, Protocol, Firmware Version, Mac Address, Server IP Address, Node Address, and Groups. The data is organized into rows, with the first row containing the header information and subsequent rows containing specific data for each gateway and its associated motors.

	A	B	C	D	E	F	G	H	I	J
1	IPAddress	Label	Type	SerialNumber	Protocol	FirmwareVersion	MacAddress	ServerIPAddress	NodeAddress	Groups
2	192.168.0.102	SomfyGateway	MotorGateway		CoAPv1	MC1.6.3.16.17	04:91:62:68:ef:20	192.168.0.100		
3		Motor 1	motor	067071	ST30	9519693E00_09			067071	1,2,4,5
4		Motor 2	motor	068a80	ST30	9519693E00_09			068A80	1,2,4,5
5		Motor 3	motor	068aa7	ST30	9519693E00_09			068AA7	1,3,4,5
6		Motor 4	motor	0667b4	ST30	9519693E00_09			0667B4	1,3,4,5
7										
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SELECT "Help" to view this Programming Guide for on-site programming support or navigation questions.

APPENDIX

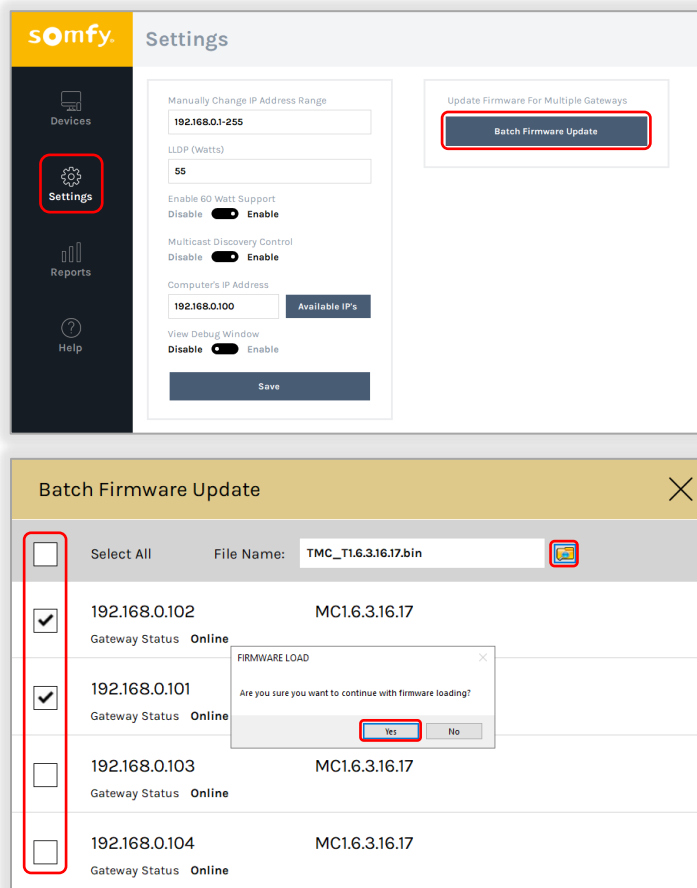
[APPENDIX A] FIRMWARE UPDATE

NOTE: There are 2 methods to perform Gateway firmware updates: a batch firmware update or individual firmware update. Both methods require a wired network connection.

Go to <https://www.somfypro.com/services-support/software> to download the latest Somfy PoE Gateway firmware, then save and extract the .bin file to a known folder location

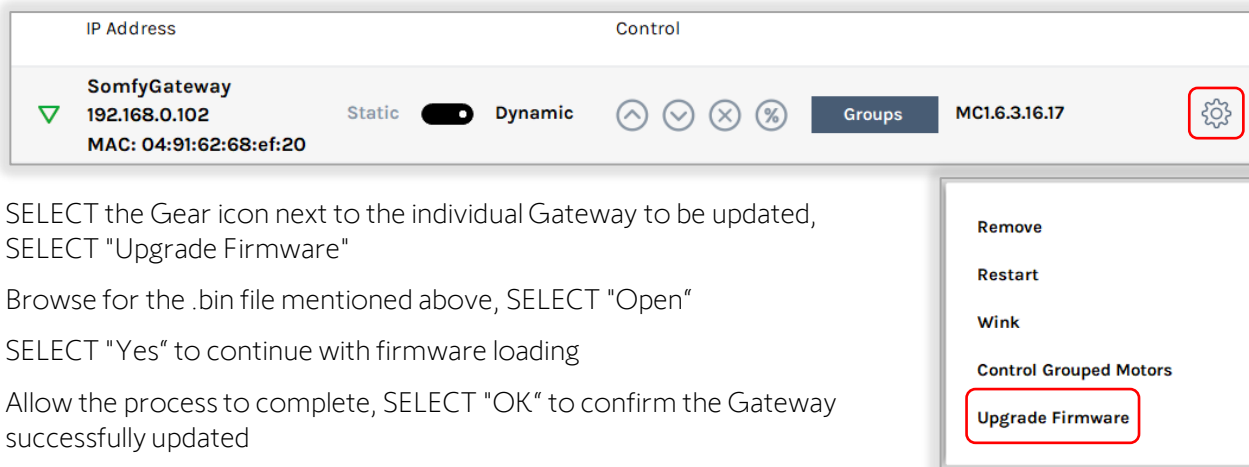
BATCH FIRMWARE UPDATE:

1. In the left pane of the Somfy PoE Gateway Application, SELECT "Settings"
2. To Update Firmware for Multiple Gateways, SELECT "Batch Firmware Update" button
3. CHECK "Select All" or Individual Gateways to be updated
4. Browse for the .bin file mentioned above, SELECT "Open"
5. SELECT "Yes" to continue with firmware loading
6. Allow the process to complete, SELECT "OK" to confirm Gateways have successfully updated



INDIVIDUAL GATEWAY FIRMWARE UPDATE:

1. SELECT the Gear icon next to the individual Gateway to be updated, SELECT "Upgrade Firmware"
2. Browse for the .bin file mentioned above, SELECT "Open"
3. SELECT "Yes" to continue with firmware loading
4. Allow the process to complete, SELECT "OK" to confirm the Gateway successfully updated



ABOUT SOMFY

SOMFY® has been improving everyday life for more than 270 million people by designing and manufacturing intelligent motorization solutions for interior window coverings and exterior solar protections. Somfy innovates to automate and connect shades, blinds, draperies, awnings, rolling shutters, exterior screens & pergolas for commercial and residential buildings in 58 countries across the globe. With 170+ million motors produced over the last half century, Somfy is committed to creating reliable and sustainable solutions that promote the best way of living and well-being for all.

FOR QUESTIONS OR ASSISTANCE PLEASE CONTACT TECHNICAL SUPPORT:

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