PROGRAMMING GUIDE

Somfy Digital Network RS485

SOMFY POWER OVER ETHERNET

somfy Building happiness

Programming Guide

Somfy Power over Ethernet Gateway

November 2018 | Prepared by Project Services

Contents

1. Overview

The Power over Ethernet Gateway is a low-voltage power distribution and network-connected module that utilizes PoE technology to power and control the Somfy® 24V RS485 motors.

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

SYSTEM REQUIREMENTS

PC running Windows 7 or higher - firewall must be disabled while using

CONNECTIONS

PARTS NEEDED

- Power over Ethernet Switch (Must support IEEE 802.3bt & LLDP)
  - Cisco Catalyst CDB-8U Switch with Cisco Power Supply: CDB-MNT-FLEX-C14 (Non-Plenum) *or* CDB-MNT-FLEX-DIR (Plenum)
  - Cisco Catalyst 3850 Switch with Cisco Power Supplies: C3KX-PWR-715WAC *and* C3KX-PWR-1100WAC
- Unshielded Twisted CAT-5e or higher TIA-568B with Plastic RJ-45 Connectors
  - PowerWise 1G 4PPoE Indoor/Outdoor Cable recommended
- SDN Power over Ethernet Gateway #1860326
- Gateway to Motor Adaptor
  - PoE Gateway to Motor Adaptor #9025010 (Purchased Separately)
  - PoE Gateway to Motor & Keypad Adaptor #9025011 (Purchased Separately) *and* animeo IP DecoFlex Digital Keypad (Purchased Separately)
- SDN Low-voltage Motor Cable [Liberty Cable (Non-Plenum #9020126) (Plenum #9020127)]
- Non-Printed Female Weidmuller Connector #9025113 (Purchased Separately)
- Motor & Motor Cable (most included with Motor)

optional accessories:

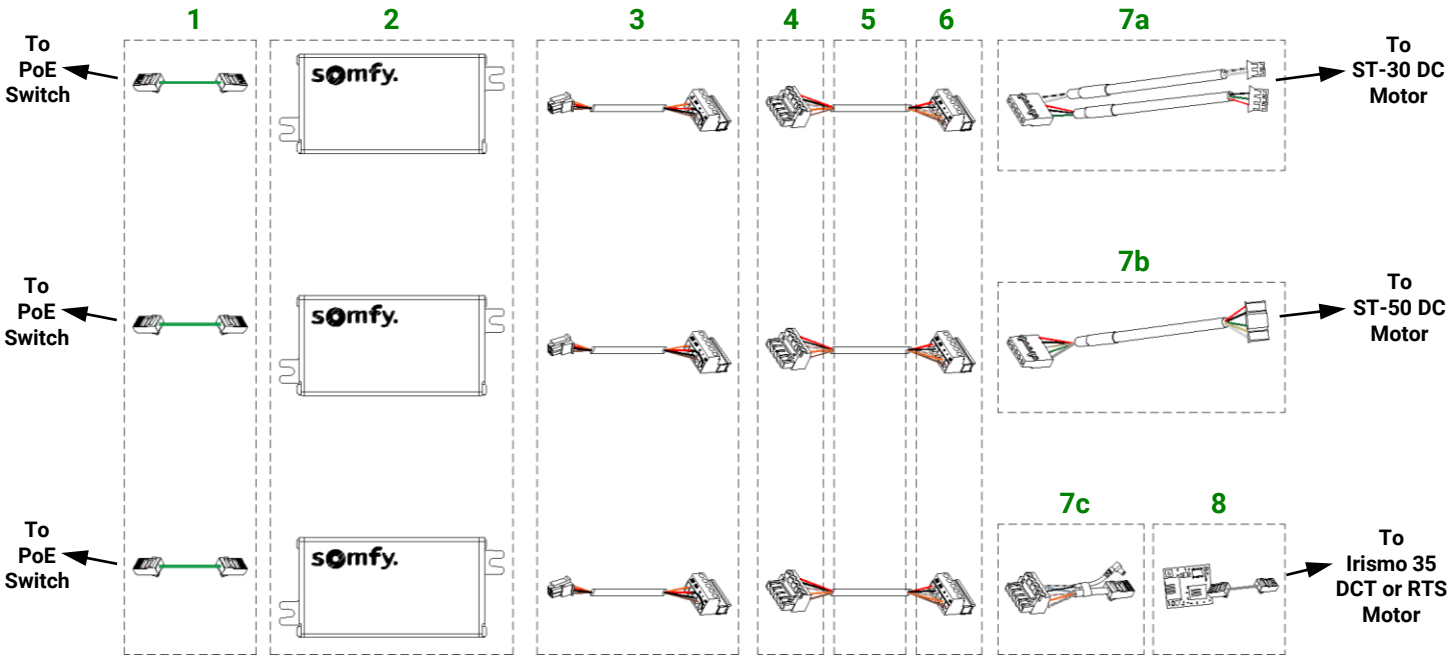
- Motor Daisy Chain Adaptor for PoE Gateway #9020451 (Purchased Separately)
- Non-Printed Female Weidmuller Connector #9025113 (Purchased Separately)

2. Installation

POWER & MOUNTING

The PoE Gateway receives power through the PoE Switch.
Mount the unit on either wood or drywall near the network switch.

BASIC WIRING FOR OPERATION

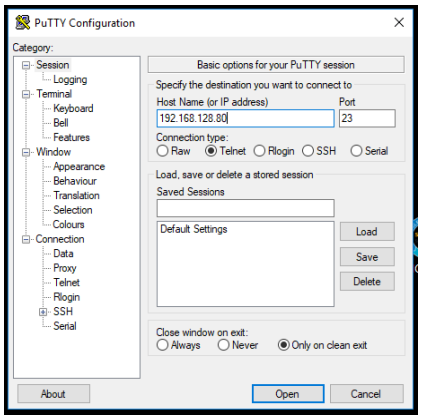


1. **NETWORK CABLE** [Purchased separate from PoE Gateway]
    - Unshielded Twisted CAT-5e or higher TIA-568B with Plastic RJ-45 Connectors
2. **PoE GATEWAY** [#1860326]
3. **PoE GATEWAY TO MOTOR ADAPTOR** [#9025010; Purchased separate from PoE Gateway]
4. **FEMALE WEIDMULLER CONNECTOR** [#9025113; Purchased separate from PoE Gateway]
5. **SDN LOW-VOLTAGE MOTOR CABLE** [Purchased separate from PoE Gateway]
    - Liberty Cable (Non-Plenum #9020126) (Plenum #9020127)
6. **MALE WEIDMULLER CONNECTOR** [Included with Motor Cable]
7. **MOTOR CABLE** [Purchased separate from PoE Gateway]
    a. ST-30 DC MOTOR CABLE [#9020261; Purchased separate from Motor]
    b. ST-50 DC MOTOR CABLE [#9020451; Included with Motor]
    c. DC DRAPERY MOTOR CABLE [#9025012; Purchased separate from Motor]
8. **RS485 DRAPERY MODULE** [#1811129; Purchased separate from Motor]

See www.SomfySystems.com for advanced Wire Details.

Cisco switch should be programmed by the network administrator.
Contact Cisco for advanced support.

1. Download PuTTY software @ https://www.putty.org/



2. Open the PuTTY Configuration
   a. Select the **Telent** radio button
   b. Under *Host Name for IP address*, enter the IP address of the Cisco Switch
      - NOTE: This should be obtained by the network administrator.
   c. Under *Port*, the value should be "23" – leave as is
   d. Once complete, click *Open*

3. In the PuTTY Terminal under User Access Verification –
   1. Type the Username of the switch, and hit enter [by default, the Username is "cisco"]
   2. Type the Password of the switch, and hit enter [by default, the Password is "cisco"]

```
User Access Verification

Username: cisco
Password:
Switch#
```

   3. Listed in the PuTTY Terminal are the following items in highlighted in **BLACK**.
      Next to each item, type the exact words in **GREEN**, and then hit enter to move on to the next:
      - **Switch#**, type "**config t**", and hit enter
      - **Switch (config) #**, type "**interface range Fa1/0/1-8**", and hit enter
      - **Switch (config-if-range) #**, type "**no storm-control multicast level 50.00**", and hit enter
      - **Switch (config-if-range) #**, type "**no storm-control unicast level 50.00**", and hit enter
      - **Switch (config-if-range) #**, type "**no storm-control broadcast level 50.00**", and hit enter
      - **Switch (config-if-range) #**, type "**end**", and hit enter
      - ……Continue…….. **Switch#**, type "**wr**", and hit enter
      - ……Wait to finish loading……

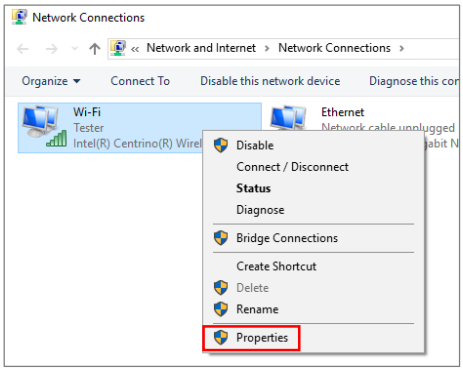
```
Switch#wr
Building configuration...
[OK]
```

      - ……Continue…….. **Switch#**, type "**config t**", and hit enter
      - **Switch (config) #**, type "**coap proxy**", and hit enter
      - **Switch (config-coap-proxy) #**, type "**stop**", and hit enter
      - **Switch (config-coap-proxy) #**, type "**exit**", and hit enter
      - **Switch (config) #**, type "**no coap proxy**", and hit enter
      - **Switch (config) #**, type "**exit**", and hit enter
      - ……Continue…….. **Switch#**, type "**wr**", and hit enter
      - ……Wait to finish loading……

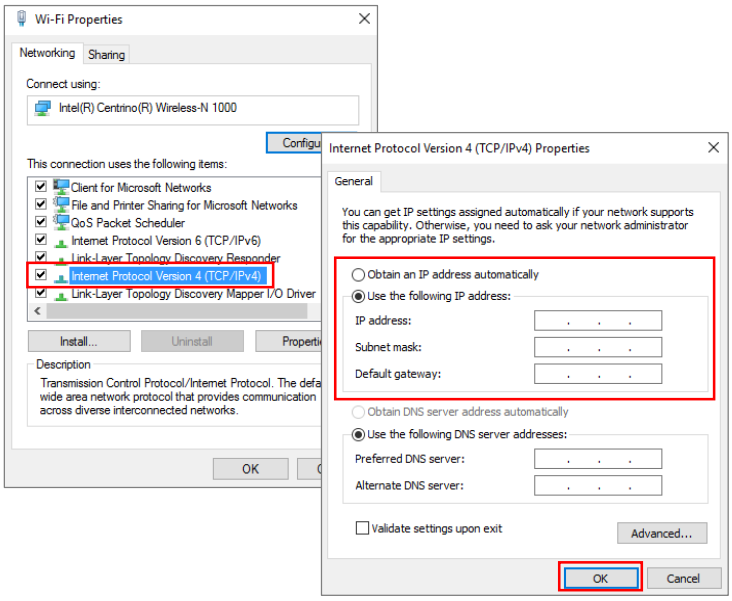
```
Switch#wr
Building configuration...
[OK]
```

      - Cisco Configuration is now complete.

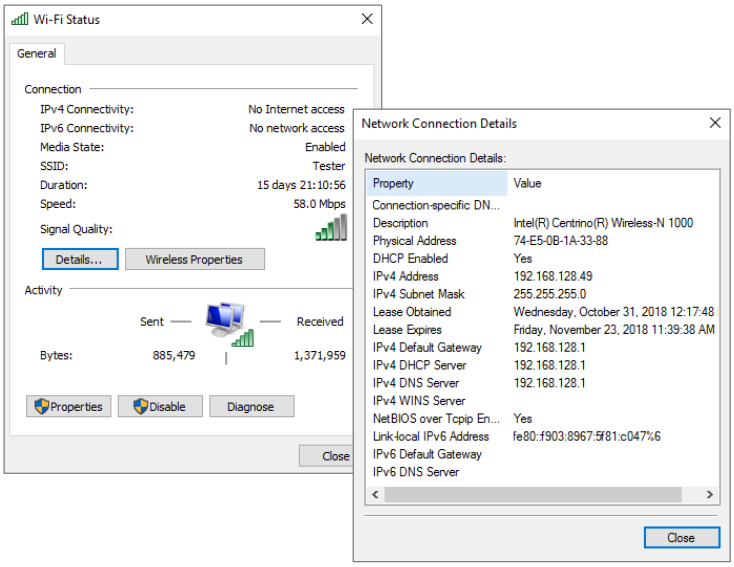
1. Connect CAT-5e cable to your computer's Ethernet port and to an Ethernet port that is on the same network as the PoE Gateway that you want to connect to. (You can also connect over WiFi)
2. Go to the Network and Sharing Center and open *Change Adapter Settings*.



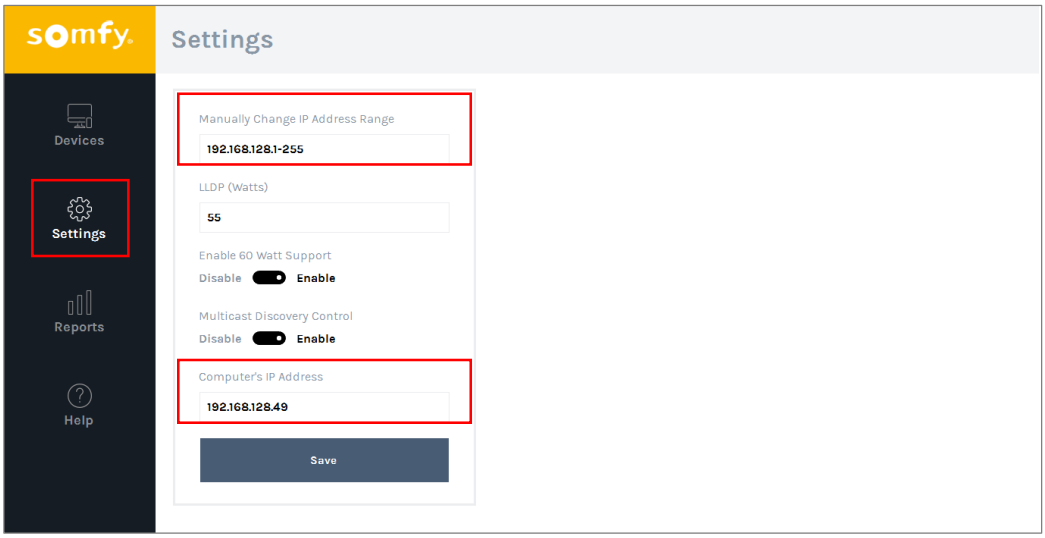
3. Right click the adapter you are using, and then open the *Properties* option.
4. Select the **Internet Protocol Version 4 (TCP/IPv4)** option, and then open the *Properties* button.
5. Select your IP setting –
   - If the network is providing IP addresses automatically, select **Obtain an IP address automatically**.
   - If the network administrator on-site has provided you with the IP address, select **Use the following IP address**, and then enter the information you were given.
6. Once complete, click *OK* on the two open Properties screens and return to the *Change Adaptor Settings* screen.



7. Right click the adapter you are using, and then open the *Status* option.
8. Get your computer's current IP address –
   - Click the *Details* button, and then make note of your computers current IP address to be entered later in the application.



MODIFY APPLICATION SETTINGS

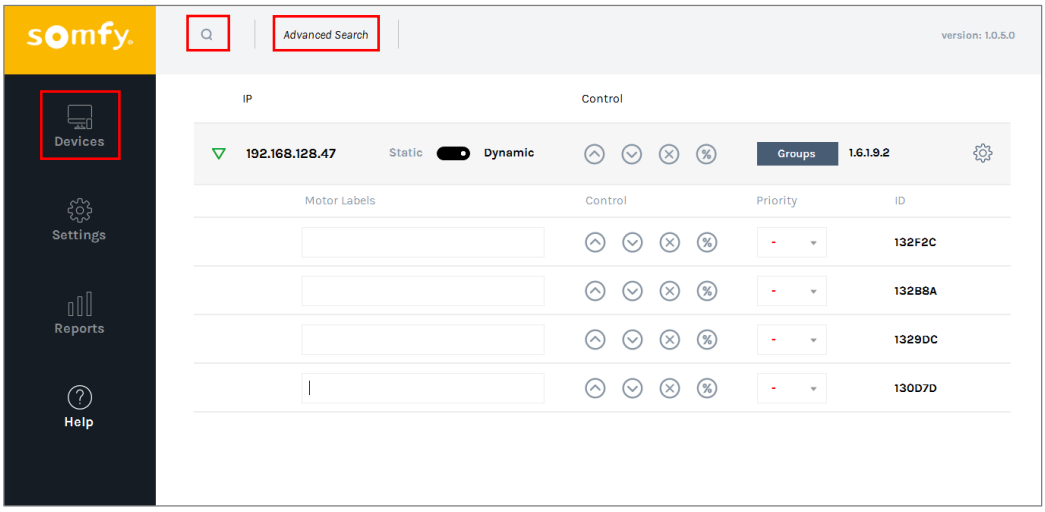


1. Open the Somfy PoE Gateway Application
2. From the left hand menu, open the *Settings* section
    - **Manually change the IP Address Range:** Search for Gateways in a specified IP range [IE:192.168.128.1-255]
    - **LLDP (Watts):** Should only be changed if you are using a 100 Watt switch.
    - **Enable 60 Watt Support:** Always set to *Enabled*
    - **Multicast Discovery Control:** Always set to *Enabled*
    - **Computer's IP Address:** Indicates your computer's IP address
3. Verify that the computer's IP address you noted earlier is the same as listed under "Computer's IP Address"
4. Click the *Save* button to complete

All preparation is complete

You are now ready to being programming the Motors on your PoE Gateway

SEARCHING FOR PoE GATEWAYS



SEARCH

Click the magnifying glass button that the top of the Devices page.

This will list all of the PoE Gateways found on the network.

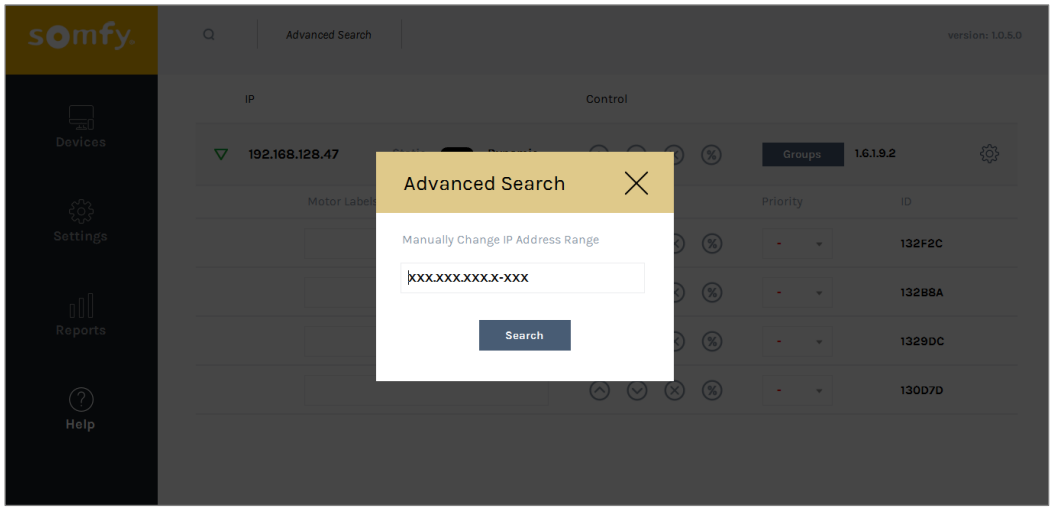
All of the PoE Gateways with Motors connected will appear first on the list, followed by any without Motors.

ADVANCED SEARCH

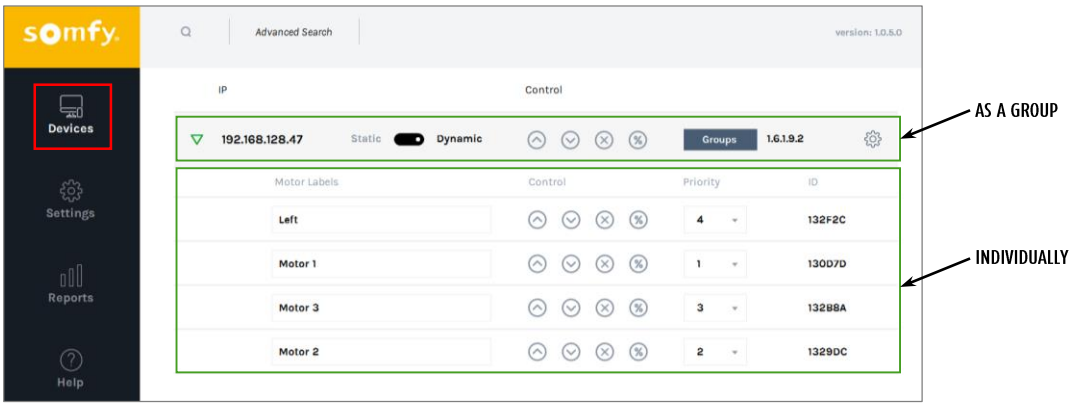
Click the *Advanced Search* button that the top of the Devices page.

This will allow you to change the IP range that it searches.

This button allows for quick access in changing the IP range it searches.



CONTROLLING THE MOTORS



CONTROLLING THE MOTORS AS A GROUP

The *triangle* button will allow you to shrink or expand the details of each PoE Gateway found on the network.
The color of the triangle indicates the communication status with the software: RED = offline, GREEN = online

Next is the IP address of each PoE Gateway found on the network

The *Static/Dynamic* button allows you to switch the individual PoE Gateway between Static and Dynamic IP addressing

The main *Control* buttons will allow you to control *all motors* connected to the Gateway:

- Up arrow will send all Motors on this Gateway to the upper limit
- Down arrow will send all Motors on this Gateway to the lower limit
- X will stop the Motors from moving.
- % will send all Motors on this Gateway to a specified position

The *Groups* button will open a grouping window, allowing you to group the motors. (see VI. Grouping Motors)

The numbers after *Groups* indicate the firmware version of the PoE Gateway

The *Gear* button will open the Options tab:

- Remove will remove the Gateway from the current screen, but it will reappear the next time you search
- Reset will power cycle the Gateway
- Wink will jog all Motors on that Gateway with a short up/down movement
- Control Grouped Motors will allow you to move specific groups of Motors
- Upgrade Firmware will update the firmware on the PoE Gateway (you will need to have the new firmware file on your PC before upgrade)

CONTROLLING THE MOTORS INDIVIDUALLY

The *Motor Labels* section is where you can rename each of the Motors

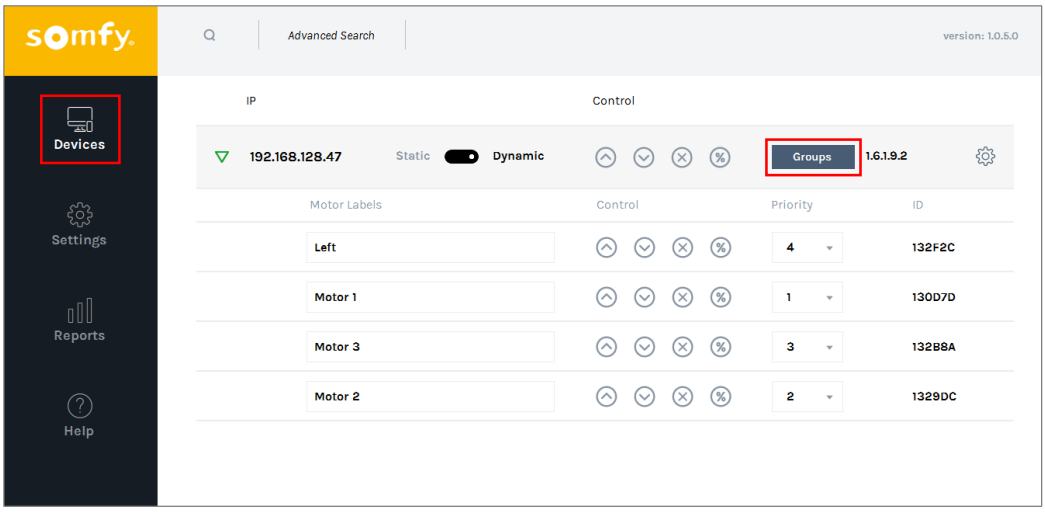
The secondary *Control* buttons are just like the main Control buttons, except each row will allow you to control *one Motor individually*:

- Up arrow will send the individual Motor to the upper limit
- Down arrow will send the individual Motor to the lower limit
- X will stop the individual Motor from moving
- % will send the individual Motor to a specified position

The *Priority* section indicates which Motor you want to move first, second, third, or fourth in the group

The *ID* section indicates the factory ID given to each individual Motor - this number can not change

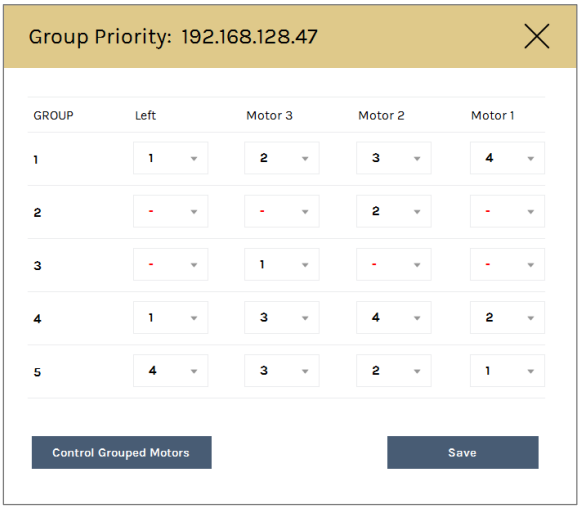
GROUPING THE MOTORS



- Click on the *Groups* button on the Devices page to open the **Group Priority** window
- Down the left side are the group numbers for this Gateway
- Across the top are the Motor names on this Gateway
- Use the drop-downs to assign a motor's priority to a group

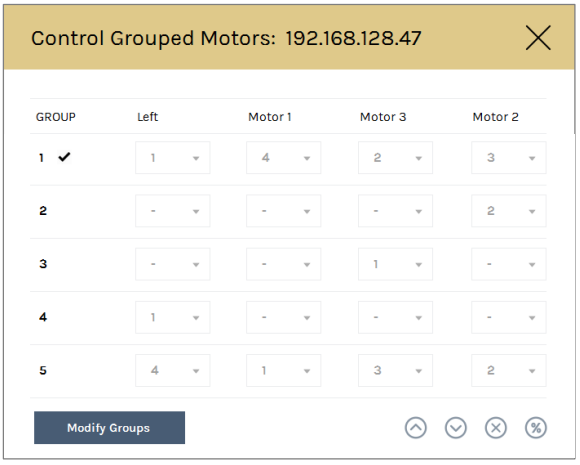
  NOTE: In the example above, Group 4 will move "Motor Left" first, "Motor 1" second, Motor 3" third, and Motor 2" last.

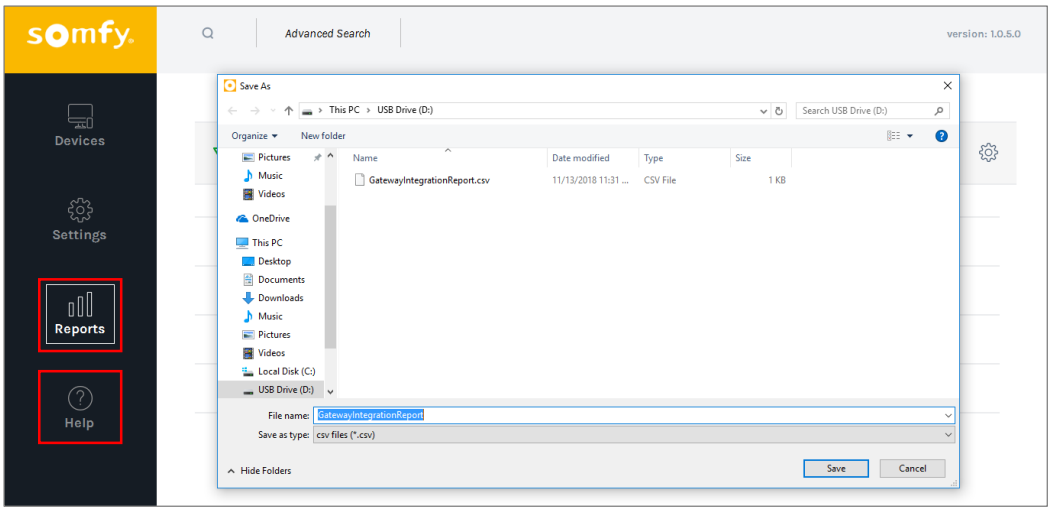
- Click the *Save* button to save changes



- Click the *Control Grouped Motors* button to open the **Control Grouped Motors** window
- Click the group you want to control and use the buttons at the bottom of the window to make the the Motors go Up, Down, Stop or send them to a percentage
- *Control Grouped Motors* is a testing area, so there is no need to save changes

  NOTE: There is a maximum of 5 groups per Gateway

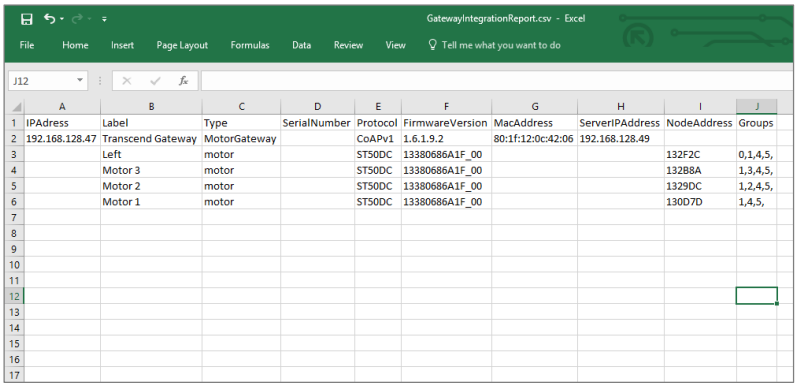




GENERATE REPORTS

From the left hand menu, open the *Reports* section.

This will generate a .CSV file with an integration report for all of the Gateways.



	A	B	C	D	E	F	G	H	I	J
1	IPAdress	Label	Type	SerialNumber	Protocol	FirmwareVersion	MacAddress	ServerIPAddress	NodeAddress	Groups
2	192.168.128.47	Transcend Gateway	MotorGateway		CoAPv1	1.6.1.9.2	80:1f:12:0c:42:06	192.168.128.49		
3		Left	motor		ST50DC	13380686A1F_00			132F2C	0,1,4,5,
4		Motor 3	motor		ST50DC	13380686A1F_00			132B8A	1,3,4,5,
5		Motor 2	motor		ST50DC	13380686A1F_00			1329DC	1,2,4,5,
6		Motor 1	motor		ST50DC	13380686A1F_00			130D7D	1,4,5,
7										
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17										

HELP

From the left hand menu, open the *Help* section.

This will open a PDF of this Programming Guide to support your on-site programming or navigation questions.

For questions or assistance please contact Technical Support at:

Phone U.S. 1-877-437-6639

Email: TechnicalSupport_us@Somfy.com

Website: WWW.SomfySystems.com

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