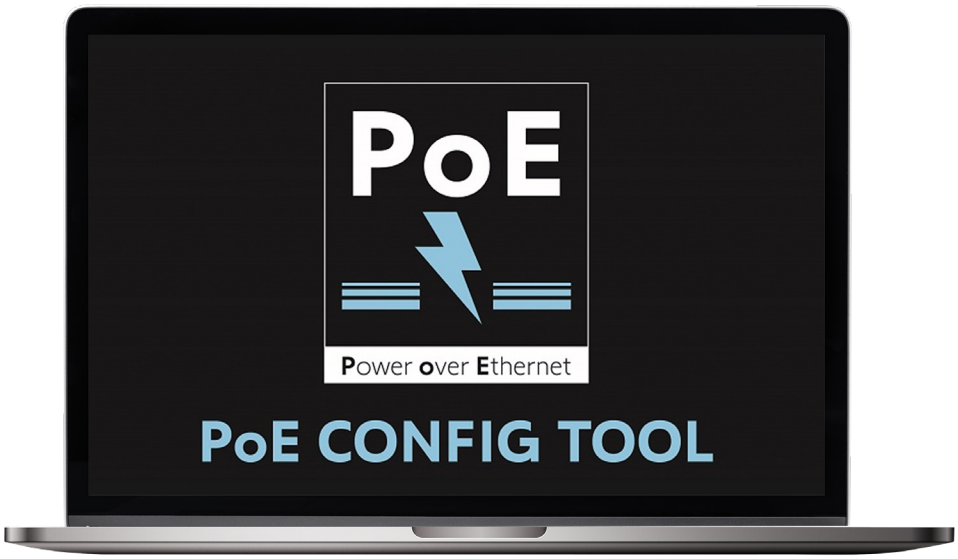
PROGRAMMING GUIDE

POWER OVER ETHERNET(PoE) MOTOR CONFIG TOOL



PROGRAMMING GUIDE

SOMFY PoE MOTOR CONFIG TOOL

VERSION 1.0 | AUGUST 2023 | Prepared by PROJECT SERVICES

TABLE OF CONTENTS

I. INTRODUCTION

Who is this Guide for?

This guide is aimed at providing support and guidance to installers for setting and programming multiple Power over Ethernet (PoE) motors following installation of motors on projects.

What does this Guide contain?

The sections of this guide contain walkthroughs and methods of programming multiple Power over Ethernet (PoE) motors using the Somfy PoE Config Tool.

This guide discusses the programming of motors with the Somfy PoE Configuration Software.

For questions or assistance please contact technical support:
(800) 22-SOMFY (76639)
technicalsupport_us@somfy.com

How should this Guide be used?

This guide is intended to be used as a reference manual.

II. OVERVIEW

The Power over Ethernet (PoE) Motor is a low-voltage powered distribution and network-connected motor that utilizes PoE technology power and control from industry-common network switches.

This motor supports both Somfy Synergy™ API and CoAP Digital Building API protocols and is compatible with Power over Ethernet Network Switches IEEE 802.3at (PoE+) Type2 (30W) or higher.

PoE motor system quantity is based on managing the number of devices on the subnet(s) available, unless specific network configurations are in place and managed by an IT Administrator.

REQUIREMENTS

SOFTWARE

- Windows 7 or 10 PC (firewalls may need to be disabled or have settings adjusted while using)
- Somfy PoE Config Tool
  - When possible, install as Administrator – Download the latest version at: www.somfypro.com/services-support/software
    - *When prompted, continue to install Bonjour to achieve expected operation*
- Optimized computer screen resolution for the software should be adjusted to 1920x1080 or 1366x768
  NOTE: Use the Control key and scroll on your mouse to zoom in and out of the software
- Root certificate during software installation

HARDWARE

Recommended minimum cabling and connectors:

- CAT-5e SF/UTP (Shielded & Foiled Unshielded Twisted Pair) cable or higher
  Required for high electrostatic discharge (ESD) applications (Ex: Dual-roll, zebra shades, and similar shading)
- TIA-568B RJ45 Connectors - Shielded RJ45 female coupler (#9028957) included with the PoE motors
- Network Router DHCP Server
- Power over Ethernet Network Switch IEEE 802.3at (PoE+) Type2 (30W) or higher
- Sonesse® 30 PoE Motor #1241147

CONNECTIONS & INDICATORS

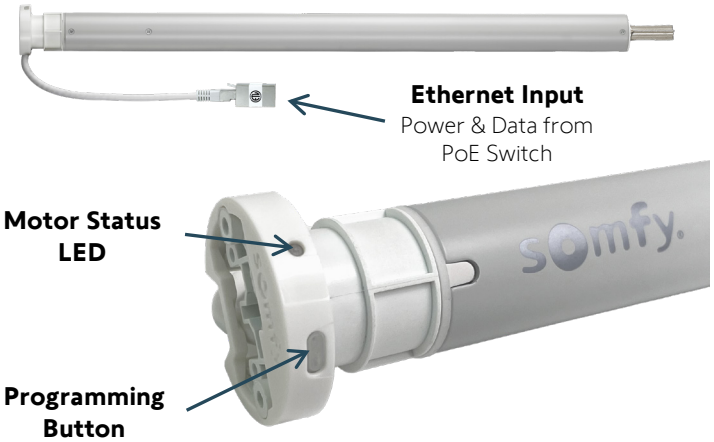
LED BEHAVIOR:

GREEN
SOLID ON (2 seconds) – POWER UP
BLINKING – BUS COMMUNICATION

AMBER
SOLID ON – MOTOR LIMITS NOT SET
BLINKS TWICE – PUSH IP ADDRESS TO THE NETWORK

RED
SOLID ON – OBSTACLE DETECTED
BLINKING – THERMAL PROTECTION
BLINKS TWICE – DRIVE IS OUT OF LIMITS
FAST BLINKING – NOT CONNECTED TO THE NETWORK, NO IP ADDRESS

OFF
LIMITS ARE SET, MOTOR AT IDLE



PROGRAMMING BUTTON FUNCTIONALITY	
TYPE OF PRESS	**OPERATION FROM PROGRAMMING BUTTON**
Short Press (< 2 seconds)	Sequential control of the motor UP/STOP/DOWN/STOP
Hold for first Jog	Send a DHCP request
Hold for second Jog	Force IP assignment method to DHCP
Hold for third Jog	Reset to factory mode

III. INSTALLATION

POWER

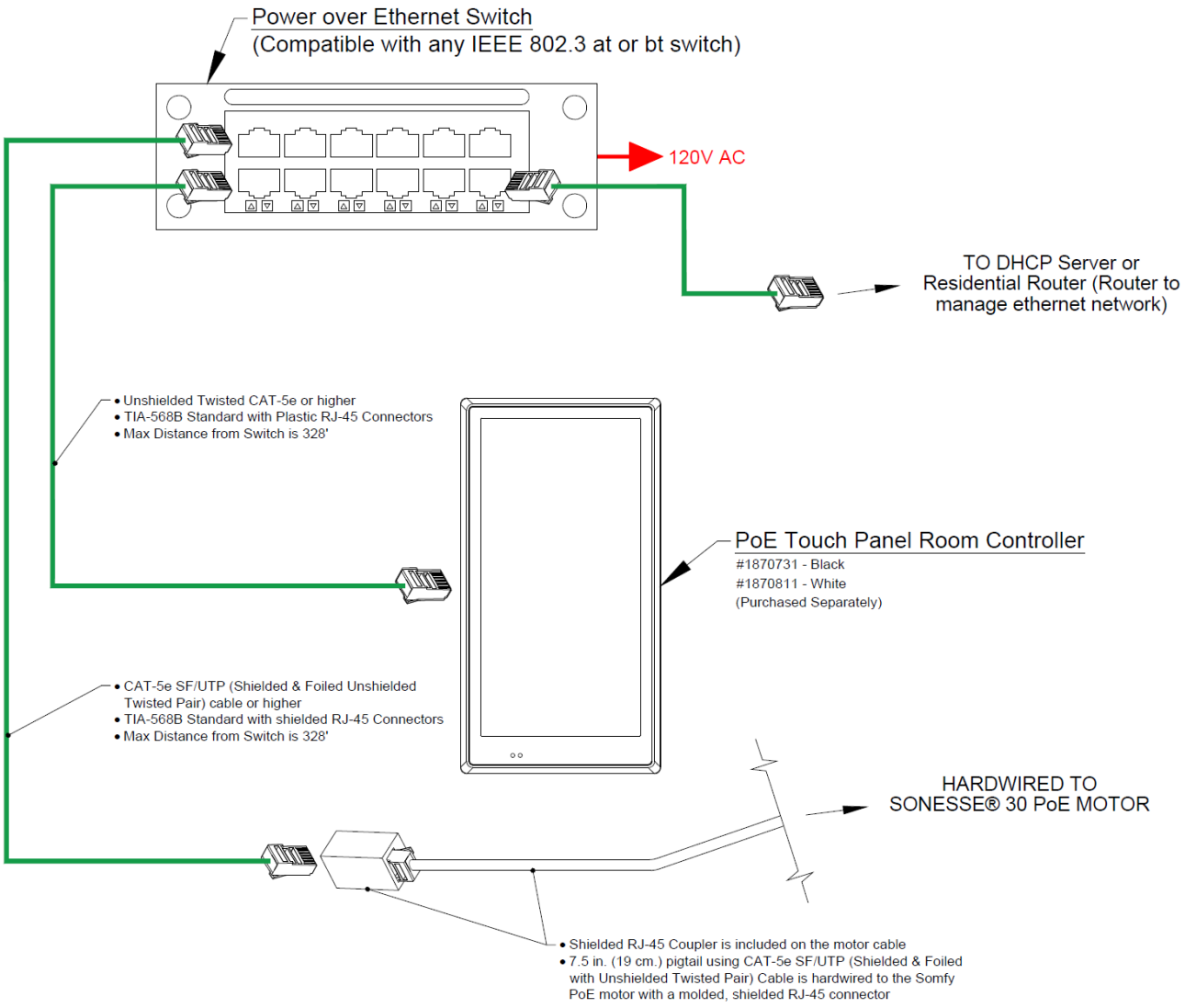
The PoE Motor receives power through the Power over Ethernet Switch.
Cables routed through a metal wall must be protected and insulated by sleeving or sheathing.

In order to minimize electrostatic charging, end products should avoid:

- Fabric friction with other fabric like in some dual shade applications
- Hardware friction with fabric and other parts of the product such as fascia, cassette, and guide rails
- Excessive ESD caused by fabric friction in dual-roll and Zebra shade installations
- Multiple cycles of product travel without ample rest to dissipate ESD charging

POWER OVER ETHERNET(POE) STANDARDS				
IEEE EXTENSION	**TYPE**	**CLASS** (Power Source Equip.)	**POWER PER DEVICE (W)**	**SOMFY MOTORS**
IEEE 802.3at / PoE+	2	4	30	Sonesse® 30 PoE 1.5Nm

BASIC WIRING FOR OPERATION



USING MOTOR LABELS

Each Somfy PoE motor is supplied with four labels that include motor information to connect to motors. The label includes a four-digit PIN code for the motor and will be used in the PoE Config Tool to make a connection with the motor. These codes will be used for the life of the product.

DO NOT DISCARD THE MOTOR INFORMATION LABELS!

One of the motor information labels should remain on the body of the motor. The other three labels should be shipped in the packaging of the motorized product, or see below for recommended locations to use the labels.

Suggested locations for the Motor Information Labels:

- Finished motorized products:
  Examples:
  - Attached motor cable
  - Removeable shade hem bar
  - Motor cover
- Inside the valance of the motorized product
- Work order sheet used in project planning
- Product packaging used for shipping

Example above: On motor tube

Example above: Shade hem bar

Example above: On motor cable

IMPORTANT NOTE:

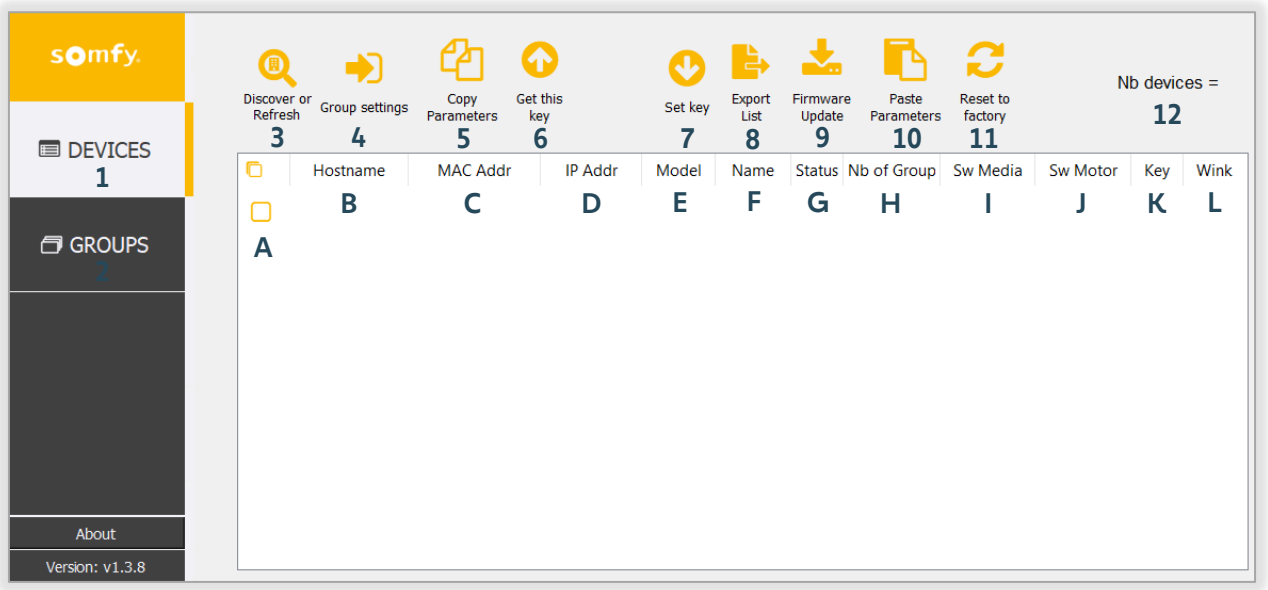
Gathering and organizing motor PIN codes and motor information from the included motor labels is very important in navigating through the PoE motor configuration software.

If the PoE Config Tool and the motor become disconnected, the login screen will display to enter the PIN code to reconnect to the motor.

IV. SET UP

USER INTERFACE

The PoE Config Tool is utilized to discover, configure, and operate multiple PoE motors, including managing groups for third-party integrations. This tool allows a direct login to each PoE motor. Refer to the below descriptions for navigating the PoE Config Tool user interface. Click on each area below to link to the related section of this guide.



1 - DEVICES: Select to display the list of discovered motors

2 - GROUPS: Select to manage motor groups

3 - Discover/Refresh: Select to discover motors or to refresh the devices list

4 - Group settings: Select to create motor groups

5 - Copy Parameters: Select to copy the parameters of one motor

6 - Get this key: Select to get the motor security key of the selected motor

7 - Set key: Select to set the motor security key of the selected motors

8 - Export List: Select to export the displayed motor list and security key

9 - Firmware Update: Select to update the selected motors

10 - Paste Parameters: Select to paste the copied parameters of one motor to another motor

11 - Reset to factory: Select to factory reset the selected motors

12 - Nb devices: Displays the number of discovered motors

A - Selection Box: Select/deselect all motors or select/deselect individual motors

B - Hostname: Displays the motor web host name

C - MAC Addr: Displays the motor MAC address

D - IP Addr: Displays the motor IP address

E - Model: Displays the motor model

F - Name: Displays the motor name

G - Status: Displays the motor end limits are set or not set

H - Nb of Group: Displays the number of assigned groups to the motor

I - Sw Media: Displays the media software version

J - Sw Motor: Displays the motor software version

K - Key: Displays the security key status red or green

L - Wink: Select to jog or identify a motor

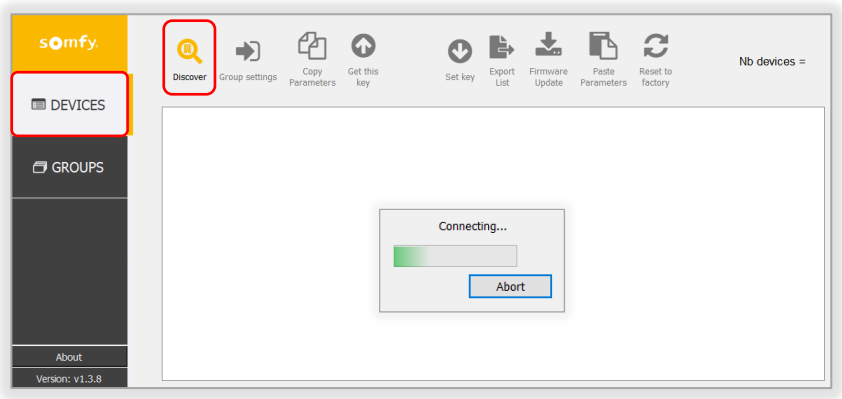
V. COMMISSIONING

MOTOR DISCOVERY

Coordinate with the Network Administrator for the appropriate network settings and requirements.
A MAC-based address reservation or a static IP address configuration is required.
Refer to the Advanced Settings section of this guide to set the IP address assign method. To discover PoE motors, follow the steps below:

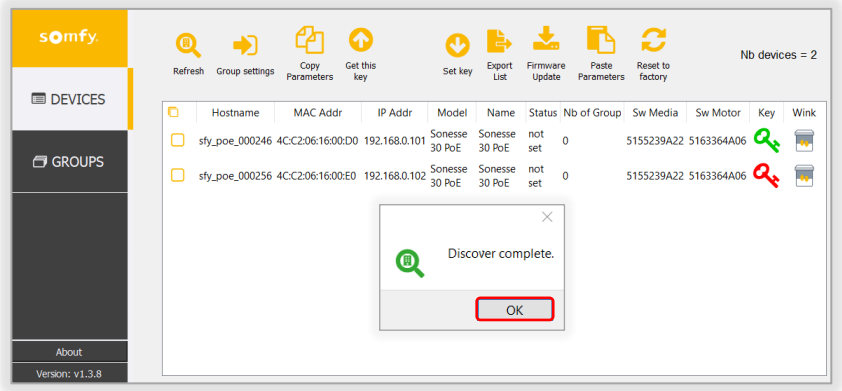
1. OPEN the PoE Config Tool
2. SELECT "DEVICES"
3. SELECT "Discover"

   Allow the discovery to complete or SELECT "Abort" to end the discovery process.



4. SELECT "OK" when the motor discovery is complete

   If additional motors are connected after the initial discovery, SELECT "Refresh" to update the devices list.



SET SECURITY KEY

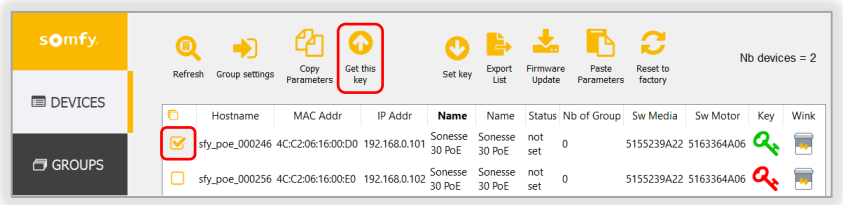
PoE motors have a certificate-based AES-128 encryption security key used to secure UDP communication. The PoE Config Tool automates the security key replication in all motors of the same project. To ensure all PoE motors have a matching security key, follow the steps below:

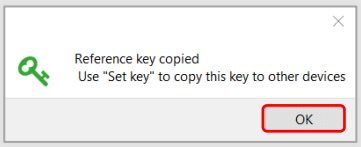
1. Follow the Motor Discovery section of this guide to discover PoE motors
2. SELECT any motor in the Devices list with a *GREEN* Key
3. SELECT "Get this key" to copy the key
4. SELECT "OK" once the reference key is copied
5. SELECT all other motors with a RED Key

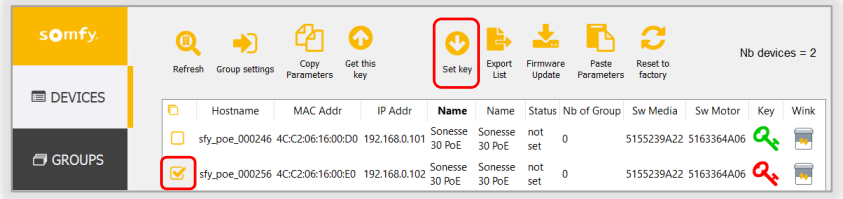
   Utilize the Select All selection box. It is not necessary to deselect the reference motor.
6. SELECT "Set key" to replicate this key to the selected motors
7. SELECT "OK" to confirm all keys are set

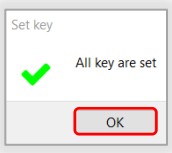
   All motors will display with a GREEN Key.

   SELECT "Refresh" to ensure all motors have updated in the Devices list.





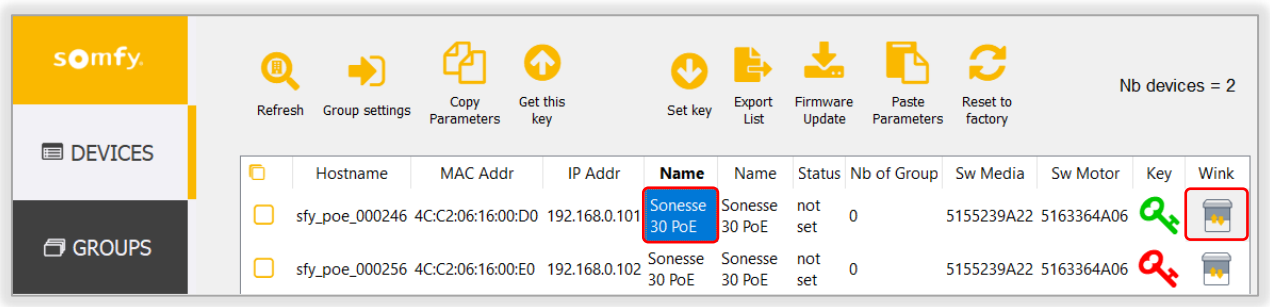




IDENTIFY & CONNECT

To identify and connect to a discovered PoE motor, follow the steps below:
If connected to a motor via the PoE Config Tool and the motor becomes disconnected due to a security timeout policy, the login screen will display to reconnect to the motor.

1. In the Devices list, SELECT the "Wink" icon to identify a motor
   The motor will jog once. A jog is a brief up and down motion of the motor.
2. DOUBLE-CLICK the motor to connect
   The PoE Config Tool will automatically login to the selected motor web interface.

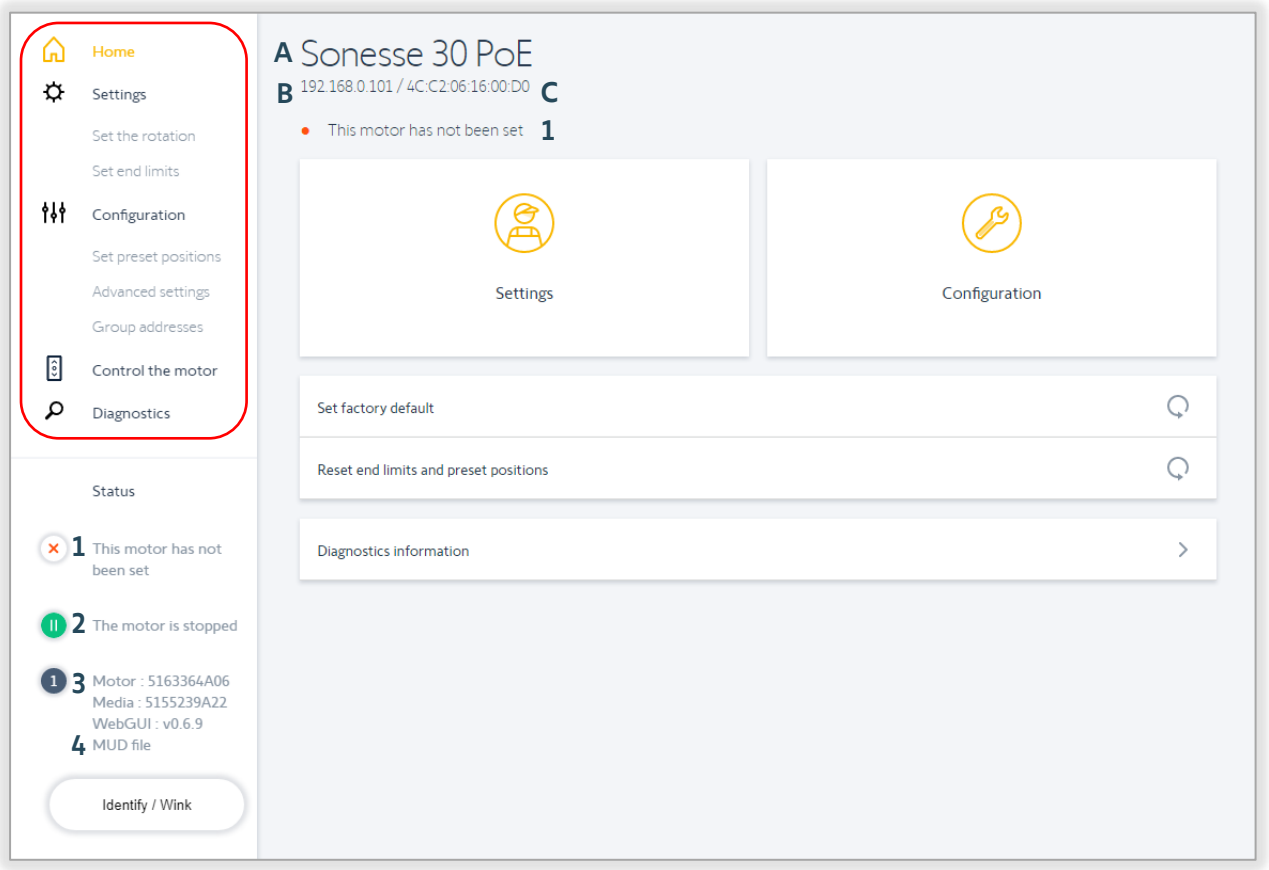


If prompted "Warning: No Key," close and re-open the POE Config Software and perform another discovery to allow re-connecting to the motors.

MOTOR SETTINGS & CONFIGURATION

Refer to the below descriptions for navigating the PoE Config Tool user interface for an individual motor.

Starting with "Settings," continue down the process tree to configure the motor
SELECT "Home" to return to the Home screen or SELECT "Back" to return to a previous screen.



Motor Details

- **A** - **Motor Name**: Identifies name entered for the motor
- **B** - **IP Address**: IP address specific to each motor once connected to the network
- **C** - **MAC Address**: MAC address specific to each motor

Status - Per Motor

- **1** - **Limit Setting**: Displays if motor limits are set or not set
- **2** - **Movement**: Indicates if the motor is running or stopped
- **3** - **Motor Information**: Includes motor firmware version, software version, and WebGUI version
- **4** - **MUD file**: A Manufacturer Usage Description (MUD) file is available for each motor to be used for advanced network security installations

  NOTE: Check with the IT Administrator to find out if a MUD file can be used in their configuration.

  To download the MUD file, SELECT "MUD file" and navigate to the downloaded file's location.

If the PoE Config Tool and the motor become disconnected, the login screen will display to enter the PIN code to reconnect to the motor.

Refer to the Appendix to Factory Reset a motor, to Reset end limits and preset positions, or to view the Diagnostics information of a motor.

Settings - Set the Rotation

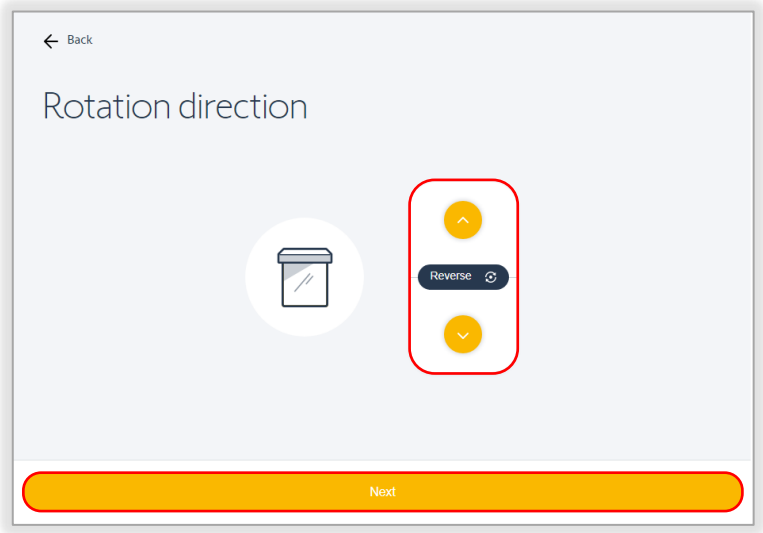
1. SELECT "Set the rotation"
2. PRESS & HOLD the UP or DOWN button to move the motor until the button is released

   OR

   PRESS & RELEASE the UP or DOWN button to move the motor in small increments
3. SELECT "Reverse" if the motor rotation direction needs to be reversed

   The motor will jog once to confirm the reverse direction.

   A jog is a brief up and down motion of the motor.
4. SELECT "Next" to continue



Settings - Set End Limits

1. SELECT which limit to set first, "Upper limit" or "Lower limit"
   Upper limit is set first in this example.
2. PRESS & HOLD the UP or DOWN button to move the motor in the direction of the upper limit

   OR

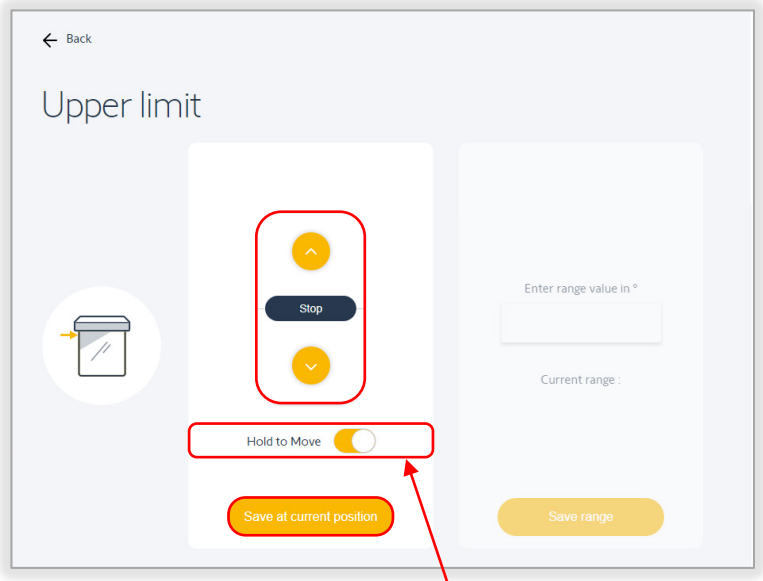
   DISABLE "Hold to Move"

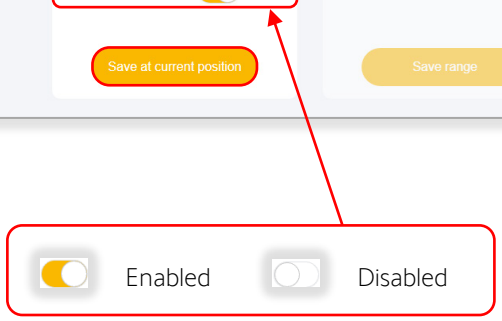
   With Hold to Move disabled, the motor will continue moving in the selected direction. Unlike Press & Hold, this mode requires pressing the Stop button to stop motor movements.

   The motor will not stop automatically when Hold to Move is disabled.

   Take caution when disabling Hold to Move to prevent damage to the product.
3. PRESS the UP or DOWN button to move the motor in the direction of the upper limit
4. PRESS the STOP button prior to the desired upper limit
5. ENABLE "Hold to Move," then PRESS & RELEASE the UP or DOWN button to move the motor in small increments until the desired upper limit is reached
6. SELECT "Save at current position" to continue

   The motor will jog once to confirm the upper limit is set.





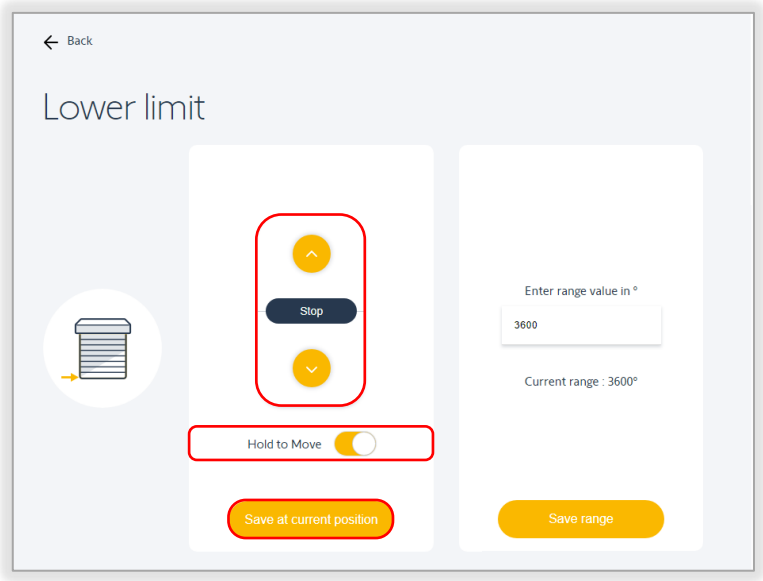
Select the toggle button to enable or disable.
This preference is enabled by default.

7. PRESS & HOLD the UP or DOWN button to move the motor in the direction of the lower limit

   OR

   DISABLE "Hold to Move"

8. PRESS the UP or DOWN button to move the motor in the direction of the lower limit
9. PRESS the STOP button prior to the desired lower limit
10. ENABLE "Hold to Move," then PRESS & RELEASE the UP or DOWN button to move the motor in small increments until the desired lower limit is reached
11. SELECT "Save at current position" to continue



The motor will jog once to confirm the lower limit is set.

Once upper and lower limits are set, the Current range will display. Example: 3600°. This value represents the total range of movement between the upper and lower limits.

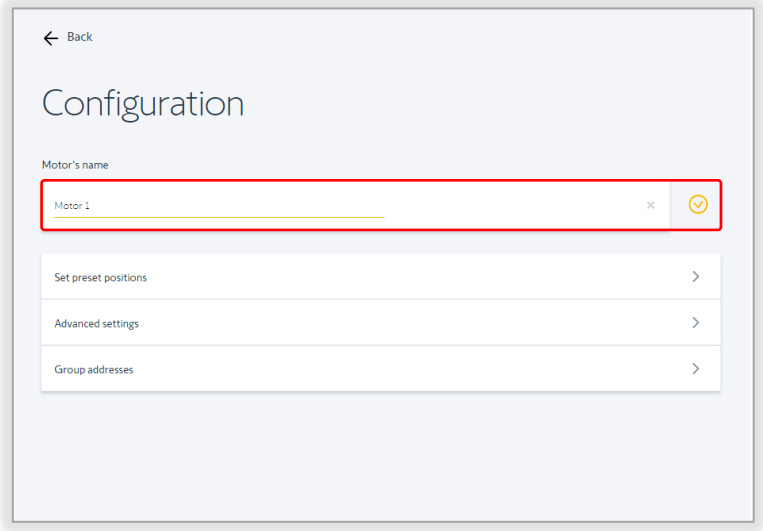
If setting motor limits to a known range, after setting either the upper or lower limit, enter a range value, then SELECT "Save range".

The motor will jog once to confirm the range is set.

Refer to the Control the Motor section of this guide to test operation of the motor.

Configuration – Name the Motor

1. SELECT "Configuration"
2. SELECT the Motor's name field
3. ENTER the motor name
   Example: Motor 1
4. SELECT the Check Mark icon to save the name



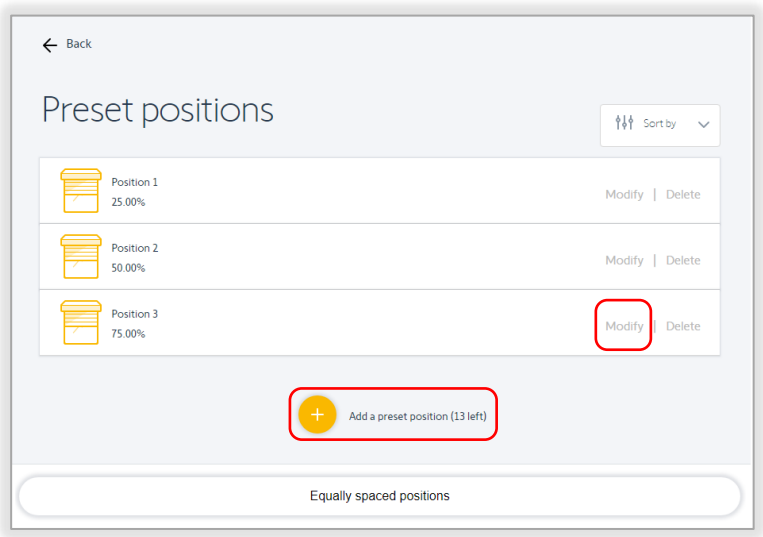
Configuration - Set Preset Positions

PoE motors have 16 available preset positions from 0 to 100%. To set preset positions, follow the steps below:

1. SELECT "Configuration"
2. SELECT "Set preset positions"
3. SELECT "Modify" to modify a saved position

   OR

   SELECT "Add a preset position" to add a manual position



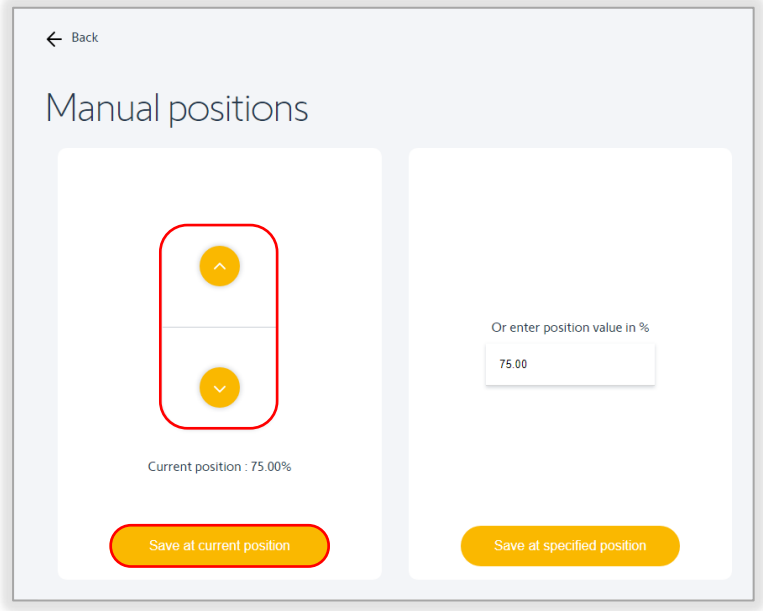
4. PRESS & HOLD the UP or DOWN button to move the motor to the desired position

   OR

   ENTER the position value in %
   Example: Position 3 = 75.00%
5. SELECT "Save at current/specified position"

   SELECT "Delete" to delete unwanted positions.

   SELECT the "Sort by" dropdown to display the positions by the position index or opening.



To record automatic positions, SELECT "Equally spaced positions."

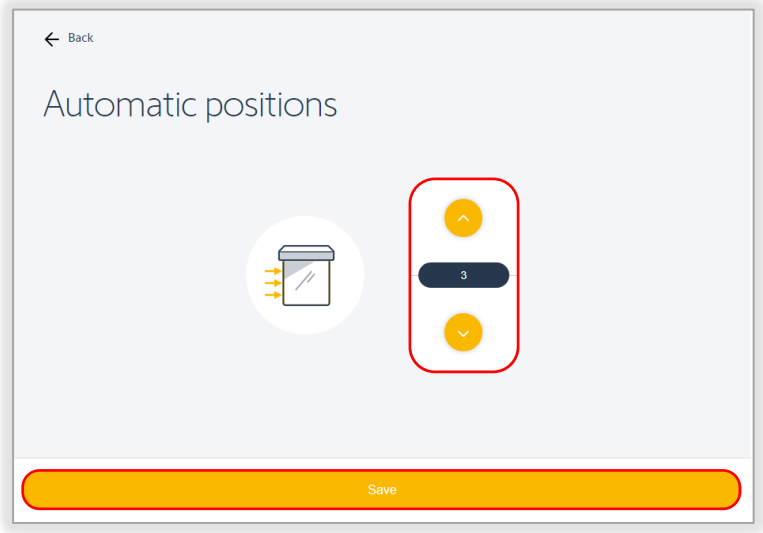
If generating preset positions automatically, this will delete any positions that were set manually.

SELECT "Yes, generate" to continue.

PRESS the UP or DOWN arrows to select the quantity of positions. Example: 3

SELECT "Save."

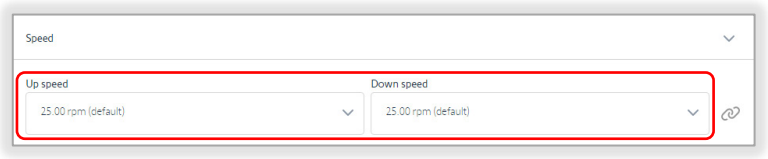
Refer to the Control the Motor section of this guide to test operation of the motor.



Configuration - Advanced Settings - Speed

PoE motors have up and down speed settings that are adjustable by .25 rpm increments. To adjust the up and down speeds, follow the steps below:

1. SELECT "Configuration"
2. SELECT "Advanced settings"
3. SELECT "Speed"
   Examples: 25.00 rpm (default)



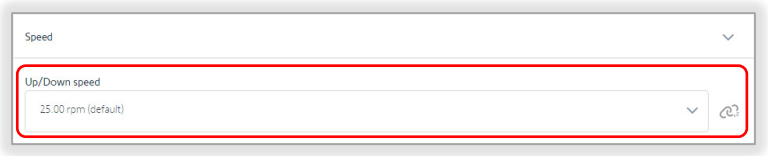
4. SELECT the "Up speed" dropdown to select the desired running up speed

   SELECT the "Down speed" dropdown to select the desired running down speed

   OR

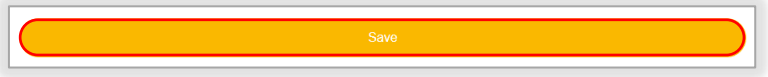
   SELECT the Link icon to set both up and down speeds to be the same

   SELECT the "Up/Down speed" dropdown to select the desired speed



   To reset the speed settings to default, SELECT the individual speeds labeled "default" in the dropdown or SELECT "Reset speeds and ramps to factory default" to reset all speed and soft start - soft stop settings.

5. SELECT "Save" to save all advanced settings

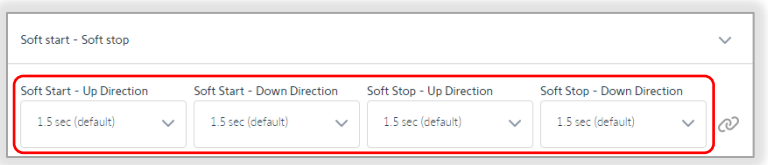


   Refer to the Control the Motor section of this guide to test operation of the motor.

Configuration - Advanced Settings - Soft start - Soft stop

PoE motors have soft start and soft stop settings that are adjustable by .1 second increments. To adjust the soft start and soft stop durations, follow the steps below:

1. SELECT "Configuration"
2. SELECT "Advanced settings"
3. SELECT "Soft start - Soft stop"
   Examples: 1.5 sec (default)

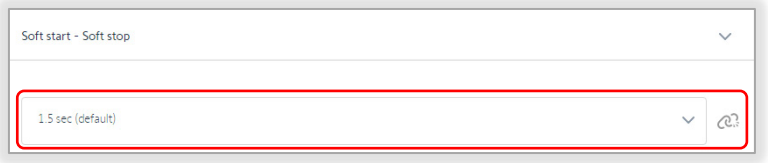


4. SELECT the "Soft Start - Up Direction" dropdown to select the desired ramp duration
5. SELECT the "Soft Start - Down Direction" dropdown to select the desired ramp duration
6. SELECT the "Soft Stop - Up Direction" dropdown to select the desired ramp duration
7. SELECT the "Soft Stop - Down Direction" dropdown to select the desired ramp duration

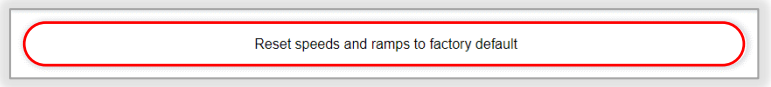
   OR

   SELECT the Link icon to ensure all soft start and soft stop ramp durations are the same

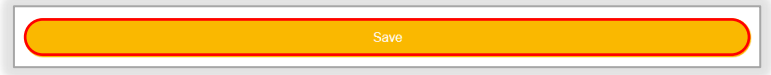
   SELECT the "Stop start - Soft stop" dropdown to select the desired ramp duration



To reset the Soft start - Soft stop settings to default, SELECT the individual ramp durations labeled "default" in the dropdown or SELECT "Reset speeds and ramps to factory default" to reset all speed and soft start - soft stop settings.



8. SELECT "Save" to save all advanced settings



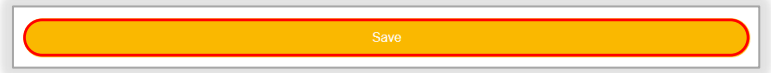
Refer to the Control the Motor section of this guide to test operation of the motor.

Configuration - Advanced Settings - LED Feedback

PoE motors have a status LED indicating various motor conditions and feedback. The motor status LED is enabled by default. Refer to the Connections & Indicators section of this guide for a description of the LED behavior. To enable or disable the motor status LED, follow the steps below:

1. SELECT "Configuration"
2. SELECT "Advanced settings"
3. SELECT the toggle button to enable or disable the motor status LED

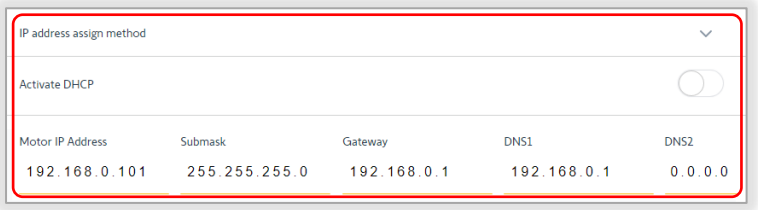
4. SELECT "Save" to save all advanced settings



Configuration - Advanced Settings - IP Address Assign Method

A DHCP Server is required to dynamically assign an IP address to the PoE motor. Coordinate with the Network Administrator for the appropriate network settings and requirements. A MAC-based address reservation or a static IP address configuration is required for third-party integrations. The MAC address is displayed on the PoE motor home screen. DHCP is enabled by default. To configure a static IP address, follow the steps below:

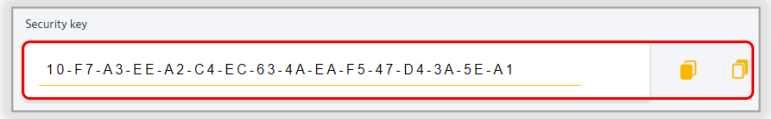
1. SELECT "Configuration"
2. SELECT "Advanced settings"
3. SELECT "IP address assign method"
4. SELECT the toggle button to disable DHCP
5. ENTER the appropriate network addresses
6. SELECT "Save" to save all advanced settings



Configuration - Advanced Settings - Security key

PoE motors have a certificate-based AES-128 encryption security key used to secure UDP communication. The PoE Config Tool automates the security key replication in all motors of the same project. Refer to the Set Security Key section to set all security keys of a project.
To copy or paste a security key individually, follow the steps below:

1. SELECT "Configuration"
2. SELECT "Advanced settings"



3. SELECT the Copy icon to copy a security key of a connected motor to paste to another motor

OR

SELECT the Paste icon to paste a copied security key of another motor to the connected motor

4. SELECT "Save" to save all advanced settings

Configuration - Group Addresses

PoE motors can be assigned to 16 group addresses. Group addresses are friendly names associated to a Group #. If adding multiple motors to the same group, ensure the group names are identical for each motor. Group names are case sensitive and have a 24-character limit. Refer to the Group Settings section of this guide to manage groups for an entire PoE motor project. To add or edit group addresses for an individual motor, follow the steps below:

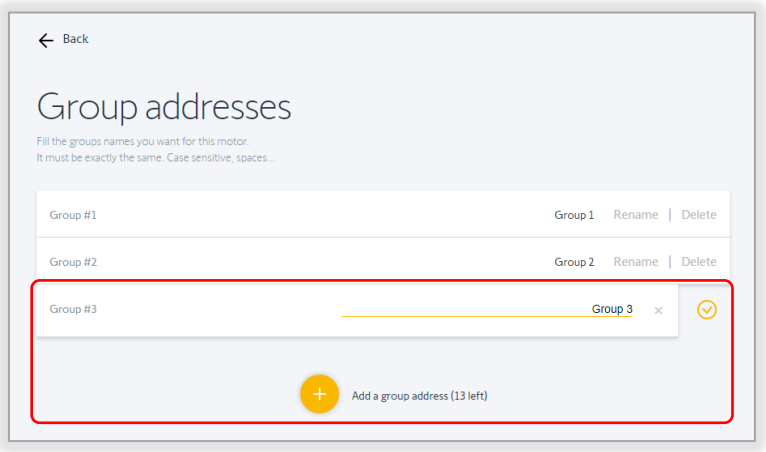
1. SELECT "Configuration"
2. SELECT "Group addresses"
3. SELECT "Click here to name group" for Group #1

   OR

   SELECT "Add a group address"
   The next available Group # will be added.

   SELECT "Rename" to edit the group name
   Example: Group 3
4. SELECT the checkmark to save the name

   Select "Delete" to delete a group address.



Refer to the Group Control section of this guide to test operation of a group.

CONTROL THE MOTOR

Ensure the motor end limits and preset positions are set. Refer to the below descriptions for controlling a PoE motor.

SELECT "Control the motor"

1 - **Up**: Moves the motor to the upper limit

2 - **Stop**: Stops the motor if moving

3 - **Down**: Moves the motor to the lower limit

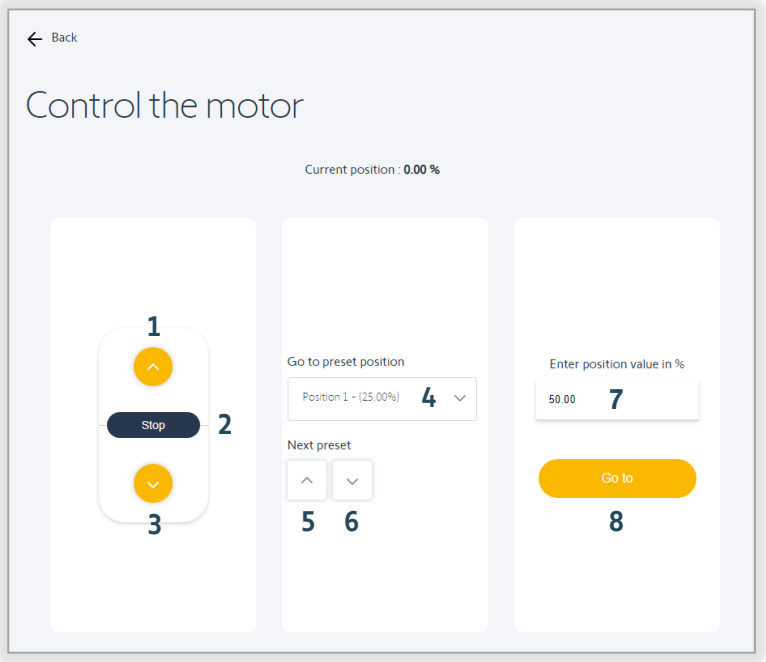
4 - **Go to preset position (1-16)**: Moves the motor to the desired preset % per the selected Position # in the dropdown

5 - **Next preset up**: Moves the motor to the next preset position up

6 - **Next preset down**: Moves the motor to the next preset position down

7 - **Enter position value in % (0-100)**: Moves the motor to the percent value entered (0 = Open, 100 = Closed)

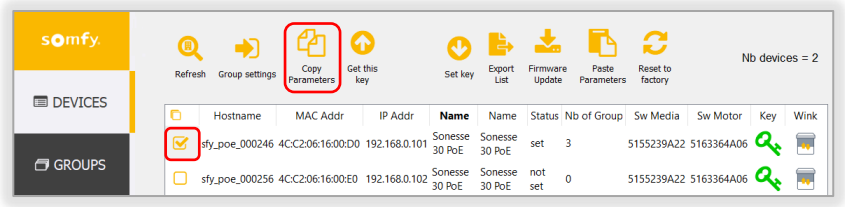
8 - **Go to**: Moves the motor to the above position value



COPY & PASTE PARAMETERS

The Copy and Paste Parameters function is used to copy parameters of a motor to other motors in a project. If all end products are identical, ensure the upper limits have the same starting position and the rotation direction are correct. After parameters are duplicated to a motor, specific parameters may need adjustment. To copy and paste the parameters of one PoE motor to another motor, follow the steps below:

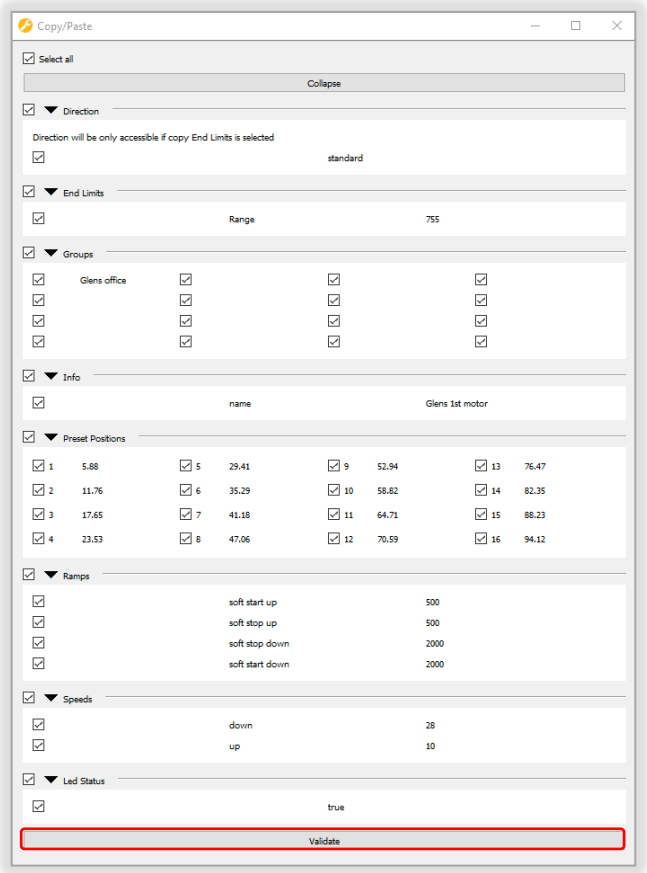
1. Refer to the Motor Discovery section of this guide to discover PoE motors
2. SELECT the reference motor to copy parameters from



3. SELECT the parameters to copy

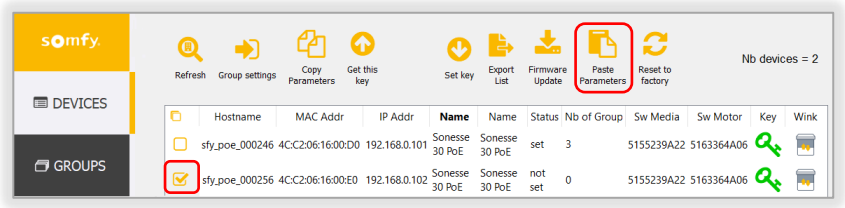
   SELECT "Select all" to select all or SELECT specific parameters. SELECT "Expand" to view all parameters. It is not necessary to deselect the reference motor.

4. SELECT "Validate" to confirm the selected parameters



5. If copying limits, be sure all motors are at the desired up limit position, then SELECT "Yes" to confirm the current position of the motor will be considered as the new upper limit
6. SELECT "OK" when complete

   SELECT "Refresh" to ensure all motors have updated in the Devices list.



GROUP SETTINGS

PoE motors can be assigned to 16 group addresses. Group addresses are friendly names associated to a Group #. If adding multiple motors to the same group, ensure the group names are identical for each motor. Group names are case sensitive and have a 24-character limit.
To Manage PoE motor groups, follow the steps below:

1. Refer to the Motor Discovery section of this guide to discover PoE motors
2. SELECT "Group settings"
3. SELECT the following actions to manage groups:

   Use the Filter field to search for specific motors to display.

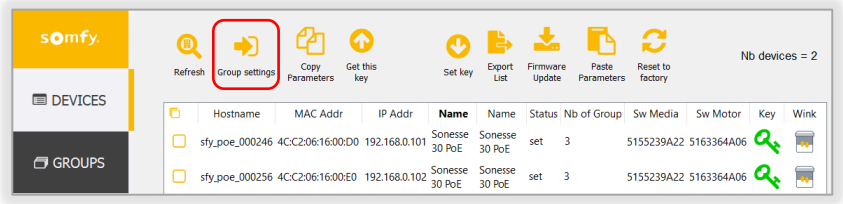
   SELECT "New group" to create a new group.

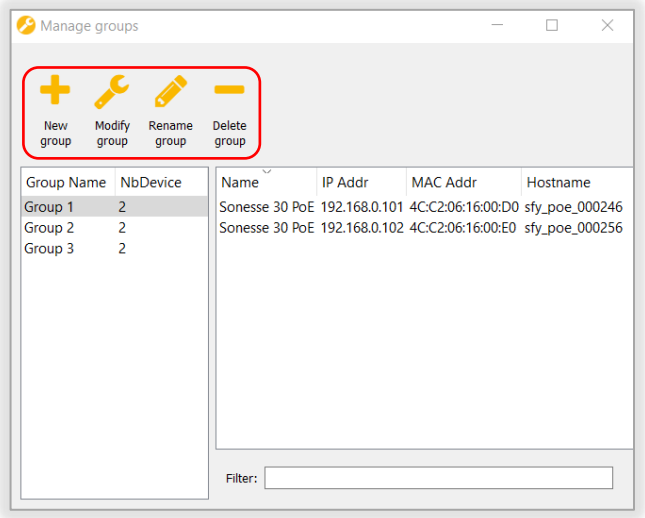
   SELECT "Modify group" to assign selected motors to a group.

   SELECT "Rename group" to edit the name of a group.

   SELECT "Delete group" to delete a group, which will also delete the motors assigned to this group.

   SELECT "Refresh" to ensure all motors have updated in the Devices list.

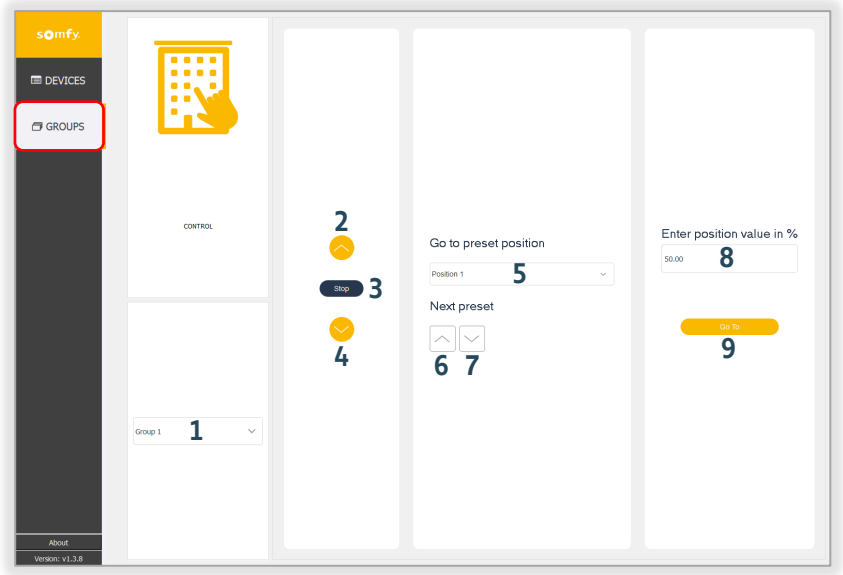




GROUP CONTROL

Ensure the motor end limits and preset positions are set. Group addresses must be assigned to motors prior to controlling a group. Refer to the below descriptions for controlling PoE motor groups.

SELECT "Groups"



1 - **Group selector**: Choose the desired group to operate in the dropdown

2 - **Up**: Moves the group to the upper limit

3 - **Stop**: Stops the group if moving

4 - **Down**: Moves the group to the lower limit

5 - **Go to preset position (1-16)**: Moves the group to the desired preset % selected from the Position # dropdown

6 - **Next preset up**: Moves the group to the next preset position up

7 - **Next preset down**: Moves the group to the next preset position down

8 - **Enter position value in % (0-100)**: Enter a desired percent value to move the group to (0 = Open, 100 = Closed)

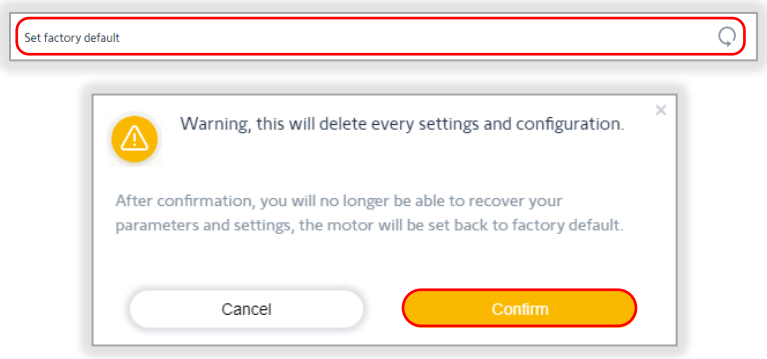
9 - **Go to**: Moves the group to the above position value

APPENDIX

[APPENDIX A] SET FACTORY DEFAULT

The Set factory default function will remove all saved motor parameters and settings, as well as remove the replicated security key. To factory default a motor, follow the steps below:

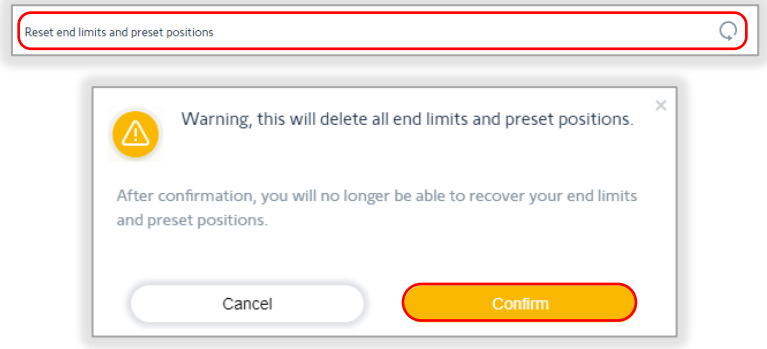
1. SELECT "Home" when connected to a motor
2. SELECT "Set factory default"
   Warning, this will delete the motor settings and configuration.
3. SELECT "Confirm" at the warning prompt
   The motor will jog once to confirm the factory default is complete.
   The motor status will display: "This motor has not been set"



[APPENDIX B] RESET END LIMITS AND PRESET POSITIONS

The Reset end limits and preset positions function will remove the motor end limits and saved preset positions. All other motor parameters and settings will remain. To reset the motor end limits and preset positions, follow the steps below:

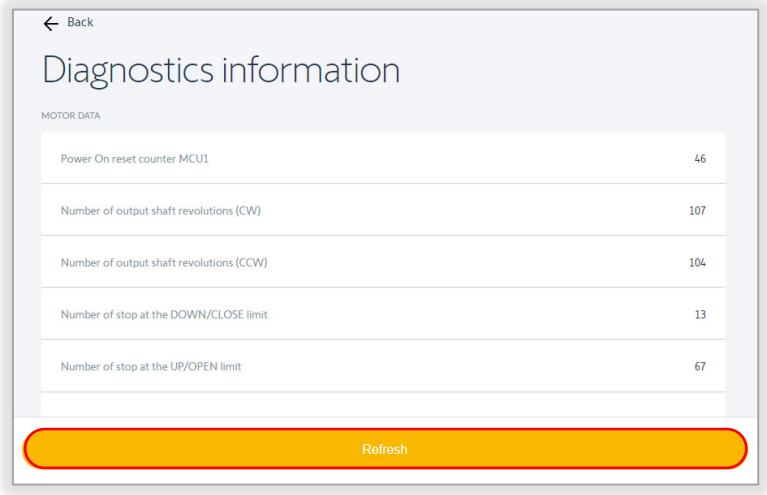
1. SELECT "Home" when connected to a motor
2. SELECT "Reset end limits and preset positions"
   Warning, this will delete the motor end limits and preset positions.
3. SELECT "Confirm" at the warning prompt
   The motor status will display: "This motor has not been set"



[APPENDIX C] DIAGNOSTICS INFORMATION

The Diagnostics information page only displays the motor data and network data. There are no motor parameters or settings to modify. This information is useful to identify specific motor or network activity. To view the Diagnostics information, follow the steps below:

1. SELECT "Home" when connected to a motor
2. SELECT "Diagnostics information"
   SELECT "Refresh" to update the motor data.



FOR QUESTIONS OR ASSISTANCE PLEASE CONTACT TECHNICAL SUPPORT:
(800) 22-SOMFY (76639)
technicalsupport_us@somfy.com

Make the move

About Somfy®

For over 50 years, Somfy has been pioneering innovative motorization and automated solutions for window coverings and exterior shading products. With comfort, ease of use, security, and sustainability in mind, our seamless and connected solutions are designed to help people make the move to living spaces impactful for humans and with a reduced impact on nature.

A BRAND OF SOMFY GROUP

Somfy Systems, Inc.
T: (800) 22-SOMFY
www.somfypro.com

New Jersey
121 Herrod Blvd.
Dayton, NJ 08810
T: (609) 395-1300
F: (609) 395-1776

Florida
1200 SW 35th Ave.
Boynton Beach, FL 33426
T: (561) 995-0335
F: (561) 995-7502

California
15301 Barranca Pkwy.
Irvine, CA 92618-2201
T: (949) 727-3510
F: (949) 727-3775

Somfy ULC
T: (800) 66-SOMFY
www.somfypro.ca

Canada
6411 Edwards Blvd.
Mississauga, ON L5T 2P7
T: (905) 564-6446
F: (905) 238-1491