

# somfy®

## Programming Guide

Somfy Digital Network™ (SDN) Motor Configuration Software



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## Somfy Digital Network™ (SDN) Motor Configuration Software

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# I. Parts Needed

## Software:

- Somfy Digital Network™ (SDN) Motor Configuration Software

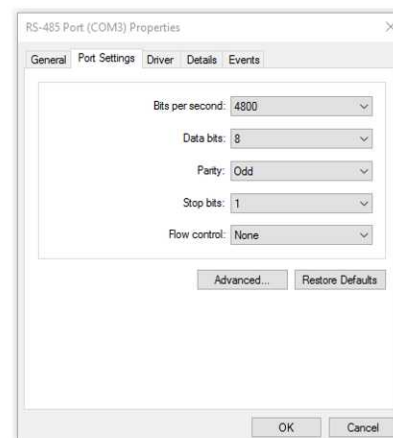
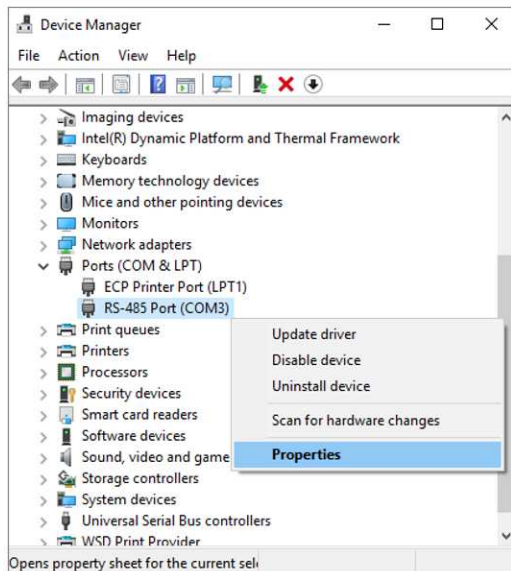
## Hardware:

- USB to RS-485 Converter for SDN (Somfy Part #9015260)
- Any SDN RS-485 motor (Somfy Part #1811252 or several other Part #s)
- Category 5 or higher patch cable terminated TIA 568B – Suitable length to connect PC to SDN Bus
- Laptop PC

# II. Software Installation

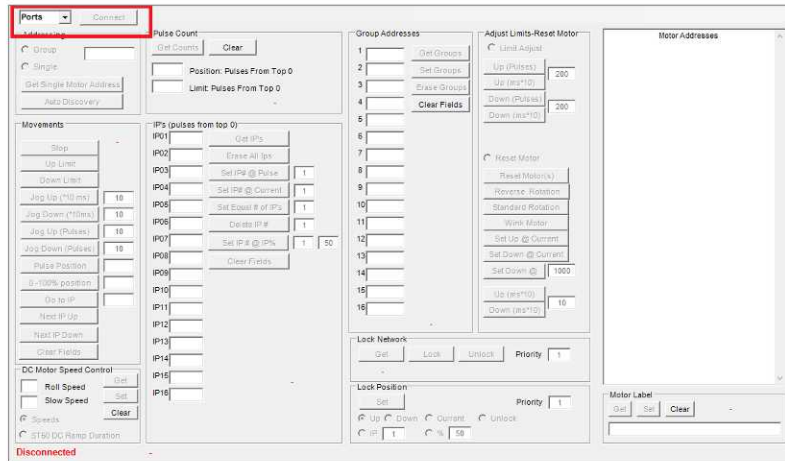
1. Download the latest SDN Keypad Configuration software. *\*When possible, install as administrator.*  
This can be downloaded from:  
<https://www.somfysystems.com/support/tools/configuration-tools-software>
2. Connect the USB to RS-485 converter to any USB port on your laptop.
3. Go to Windows Start menu and search for Device Manager and open the program.
4. Go to Ports and click to expand it.
5. Make note the COM Port number listed for the RS-485 port.  
**Note:** If RS-485 Port is not listed under "Ports", you must install the driver for the USB to RS-485 Converter.  
This can be downloaded from:  
[https://support.advantech-bb.com/download?product\\_model\\_name=BB-485USB9F-2W-LS#Driver](https://support.advantech-bb.com/download?product_model_name=BB-485USB9F-2W-LS#Driver)
6. Right click on the RS-485 Port and click Properties.
7. Click the tab for Port Settings and make sure that the settings are as follows:

- Bits per second: 4800
- Data Bits: 8
- Parity: Odd
- Stop Bits: 1
- Flow Control: None



8. Open the Somfy Digital Network™ (SDN) Keypad Configuration Software from the Desktop icon or Windows Start menu.
9. At the top left of the window, select the COM port that you noted from the Device Manager and click on the “Connect” button. You are now connected to the COM port.
 

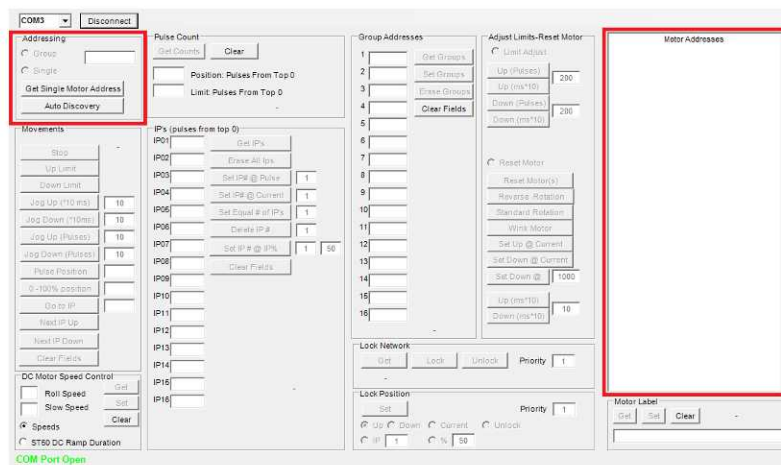
*Note: If there is no COM ports listed in the dropdown box, close the software and make sure the USB cable is connected, and then reopen the software. If there still is no COM port listed, reinstall the driver for the USB to RS485 adapter. Be sure the Motor Config is the only software running on your computer.*



### III. Explanation of User Interface

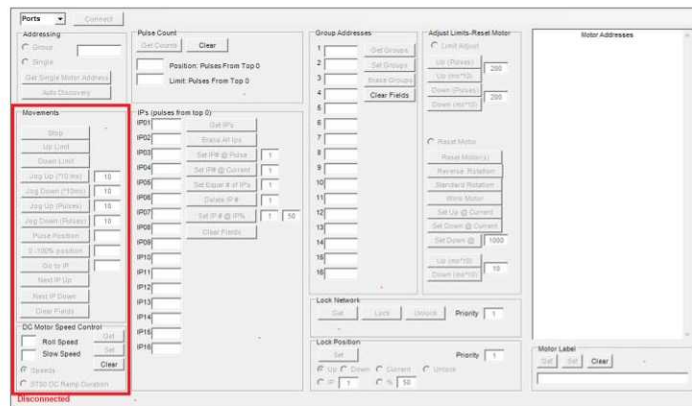
#### Addressing Section:

- *Group radio button* – Is selected when you want to communicate with a group address that is entered in the field to the right
- *Single radio button* – Is selected when you want to communicate with a single motor address that is entered in the field to the right.
- *Get Single Motor Address* – Used to get a motor address when connected to only one motor.
- *Auto Discovery* – Searches the entire SDN network and lists all found device addresses in the Motor Addresses window on the right side.



## Movements Section:

- o *Stop* – Stops the motor when it is moving.
- o *Up Limit* – Takes the motor to its upper limit.
- o *Down Limit* – Takes the motor to its lower limit.
- o *Jog Up (\*10ms)* – Moves the motor up by 10 milliseconds times the number entered in the box next to it.
- o *Jog Down (\*10ms)* – Moves the motor down by 10 milliseconds times the number entered in the box next to it.
- o *Jog Up (Pulses)* – Moves the motor up by the number of pulses specified in the box next to it
- o *Jog Down (Pulses)* – Moves the motor down by the number of pulses specified in the box next to it
- o *Pulse Position* – Moves the motor to the specified pulse count entered in the box next to it.
- o *0-100% Position* – Moves the motor to the specified percentage that is entered in the box next to it.
- o *Go to IP* – Moves the motor to the specified IP entered in the box next to it (If motor has IPs set).
- o *Next IP Up* – Moves the motor up to the next IP if available (If motor has IPs set).
- o *Next IP Down* – Moves the motor down to the next IP if available (If motor has IPs set).
- o *Clear Fields* – Clears all fields in the Movements section.



## DC Motor Speed Control Section:

- o *Roll Speed* – Shows the main roll speed.
- o *Slow Speed* – Shows the Start and stopping speed.
- o *Get* – Gets the current speed setting of the motor.
- o *Set* – Sets the speed to the motor.
- o *Clear* – Clears the windows, but does NOT clean the motor settings.





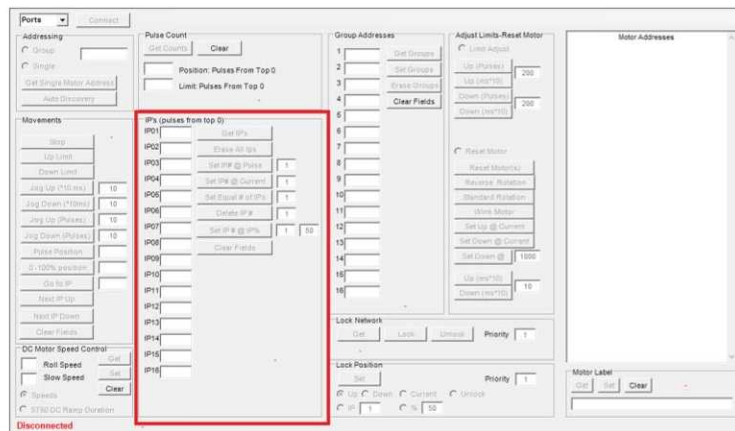
## Pulse Count Section:

- *Get Counts* – Gets the same motor’s current pulse counts.
- *Clear* – Clears the pulse counts on the screen, but does NOT clear anything in the motor.



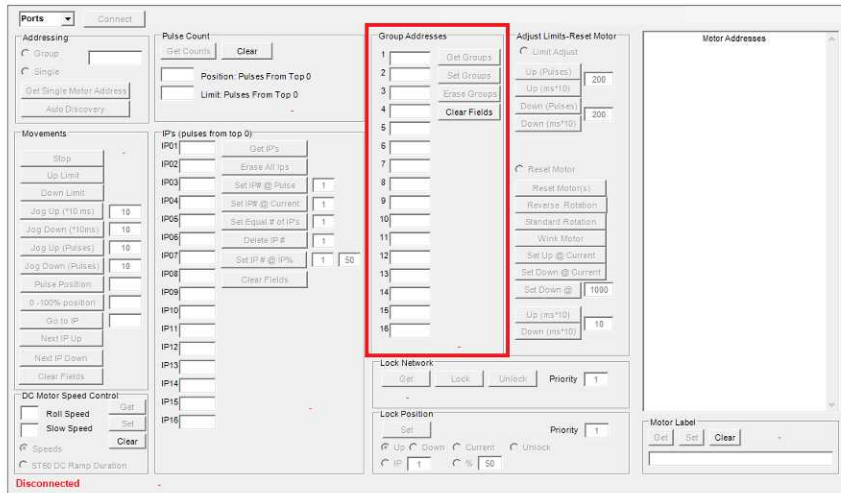
## Get IP Addresses Section:

- *Get IP's* – Will poll the motor and display any IP that are set in it.
- *Erase All IP's* – Deletes any IP in motor. Will NOT erase upper and lower limits.
- *Set IP's @ Pulse* – Sets an IP to the specific pulse count that you enter in the IP box.
- *Set IP @ Current* – Sets an IP at the current position of the motor.
- *Set Equal # of IP's* – Takes the total pulse count from top to bottom and sets an equal pulse count for the amount of IPs that you specify below in the "IP #" box.
- *Delete IP #* – Deletes the IP that is specified in the "IP #" box below.
- *Set IP # @ IP%* – Sets the specified IP to the specified % entered in the IP# & IP% boxes above.
- *Clear Fields* – Clears all IP fields in the section, but does NOT delete anything from the motor.



## Group Addresses Section:

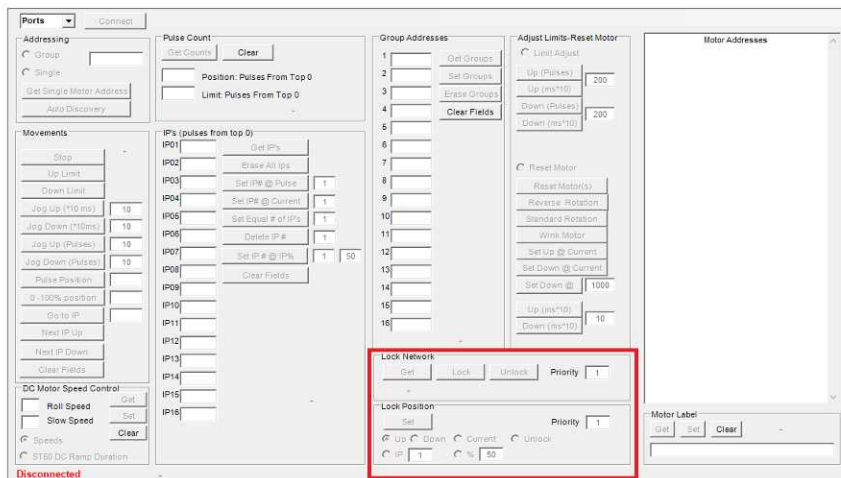
- o *Get Groups* – Shows all of the groups that this motor belongs to.
- o *Set Groups* – Allows you to assign groups to this motor.
- o *Erase Groups* – Erases all groups assigned to this motor.
- o *Clear Fields* – Clears all fields in the Group Addresses area.
- o 1-16 boxes display what groups are programmed to the motors. You can enter any hexadecimal group names in these boxes and then press the “Set Groups” button to program it in to the motor.



## Lock Section:

- o Lock Network – *Get* – Shows if the motor is locked and at what priority value.
- o Lock Network – *Lock* – Lets you lock the motor off the network at the priority value that is in the box to the right.
- o Lock Network – *Unlock* – Lets you unlock the motor from the network using a value equal to or greater than what the motor is locked with.
- o Lock Position – *Set* – Lets you lock the motor from moving until it is unlocked with a priority value that is equal to or greater than what it is locked with.

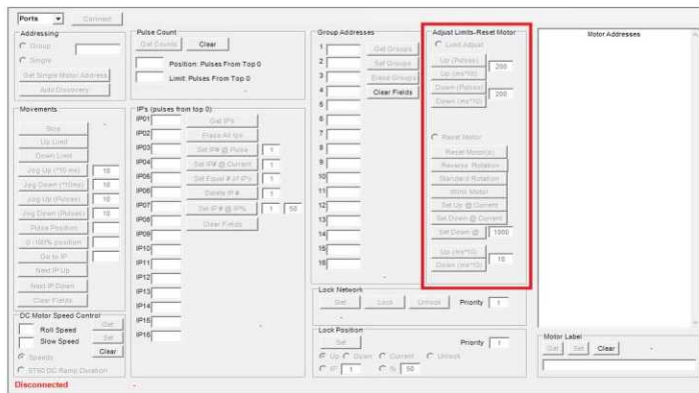
\*NOTE: When locked at a priority, it can only be unlocked with a priority equal to or greater than the lock priority. 1 is the lowest and 255 is the highest.



## Adjust Limits Section:

To use this section you must first click the "Limit Adjust" or "Reset Motor" and click "OK" to the pop-up windows warning you that you are about to enable the limit adjust mode or reset the entire motor.

- *Up (Pulses)* – Moves the motor up by the number of pulses specified in the box next to it.
- *Up (ms\*10)* – Moves the motor up by the number of milliseconds specified in the box next to it times 10.
- *Down (Pulses)* – Moves the motor down by the number of pulses specified in the box next to it.
- *Down (ms\*10)* – Moves the motor down by the number of milliseconds specified in the box next to it times 10.
- *Reset Motor(s)* – Resets all the limits that are set on the motor.
- *Reverse Rotation* – Sets the motor to run in the reverse direction.
- *Standard Rotation* – Sets the motor to run in the standard direction.
- *Wink Motor* – Jogs the motor up and down.
- *Set Up @ Current* – Sets the upper limit to the current position that the motor is in.
- *Set Down @ Current* – Sets the down limit to the current position that the motor is in.
- *Set Down @* – Sets the down limit at the pulse count entered in the box next to it.
- *Up (ms\*10)* – If the motor has no limits set, this button will allow you to move the motor up by the number of milliseconds specified in the box next to it, times 10.
- *Down (ms\*10)* – If the motor has no limits set, this button will allow you to move the motor down by the number of milliseconds specified in the box next to it, times 10.



## Motor Label Section:

- *Get* – Will get the motor name assigned to the motor if available.
- *Set* – Sets the motor name to the name entered in the box below.
- *Clear* – Clears the Label box below, but does not clear the label in motor.





## IV. Programming & Troubleshooting Examples

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### Programming an AC Motor for Basic Functions

1. Connect the USB to RS485 adapter to the computer's USB port.
2. Connect a CAT5 or higher cable to the RS485 adapter and to the Data Pass through port on the Bus Power supply, or to a device port on the SDN system.
3. Open Somfy Digital Network™ Motor Configuration Software.
4. Click the dropdown and select the correct COM port and click Connect.
5. If you do not know the motor ID, use the Auto Discover button to get a list of all motors on the network.
6. Enter the motor ID that you want to program in to the box under the Addressing field.
7. Click the Single radio button.
8. Enter desired group IDs, that you want this motor to belong to, in to the 1-16 boxes under the Group addresses field.
9. Click the Set Groups button.
10. Under the IP's field, in the box to the right of the Set IP# @ IP%, enter the number 1 in the first box and 25 in the second box.
11. Click the Set IP# @ IP% button.
12. Under the IP's field, in the box to the right of the Set IP# @ IP%, enter the number 2 in the first box and 50 in the second box.
13. Click the Set IP# @ IP% button.
14. Under the IP's field, in the box to the right of the Set IP# @ IP%, enter the number 3 in the first box and 75 in the second box.
15. Click the Set IP# @ IP% button.

### Testing the Programmed AC Motors

1. Under the Addressing field enter in a group address that you just programmed in the motor.
2. Click the Group radio button.
3. Use the buttons below the Movements field to send the motor to it's upper limit, lower limit, and IP1, IP2, & IP3

# Diagnostic Report Function

Follow the steps below to enter the diagnostic reporting section in the program.  
These values may be needed during troubleshooting.

1. Connect to a single motor.
2. Type "diag" in the Motor Label box.
3. In the Get IP Addresses Section you will see three buttons; *ST30 RS485*, *LSU RS485 (AC)* and *ST50 DC RS485*. In the Group Addresses Section you will see:
  - o *Movements* – The number of movements the motor has had.
  - o *Revs* – The number of complete turns the motor has done.
  - o *Thermal* – Should always be 0, unless the motor thermals out.
  - o *Post Ther* – Temperature after the motor thermals out.
  - o *Obstacle* – The number of obstacles the motor has had.
  - o *Post Obst* – Should always match the same number as *Movements*, but then restarts after an *Obstacle* occurs.
  - o *Power Up* – The number of times power has been reapplied to the motor.
  - o *Reset* – The number of times the motor has reset.
  - o *Enc Errors* – Should always be 0, unless something is physically wrong with the motor.
4. Click the Get Single Motor Address button.
5. Once it populates the motor address, click on the ST30 RS485, LSU RS485 (AC), or ST50 DC RS485.
6. The values will populate in boxes 8-16 in the Group Address section.

