

## INSTRUCTION MANUAL

ITEM NO.: **EAA-SSBN6**  
**SLOW START CONTROL MODULE SUITABLE**  
**FOR ALL BRUSHLESS**  
**1.0**



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**Acknowledgements :**

EAA-SSBN6 is a trademark of SUMAKE Industrial Co., Ltd.

EA-BN is a series brushless screwdriver model with new control function of SUMAKE

SP-B32HL61T6, SP-B32HL61T/C6 is a power supply with 24/32 voltage for screwdriver of SUMAKE

SP-B32HL62T6, SP-B32HL62T/C6 is a power supply with 24/32 voltage for screwdriver of SUMAKE

SP-B40HL501T/C6, SP-B40HL801T/C6 is a power supply with 40 voltage for power torque screwdriver of SUMAKE

## 1. Introduction

### 1.1 Overview

The EAA-SSBN6 is an intelligent PLC-to-Screwdriver I/O control module containing built-in microprocessor. Screwdriver is remotely controlled through a simple set of command protocols issued in binary **format** and transmitted in RS-485 communication interface.

EAA-SSBN6 **provide** slow-start function to improve screw tightening **quality** under manual operation.

EAA-SSBN6 **provide** three digital output lines to output start, brake and reverse signals to external device. All output signals use MOSFET relay output to support mostly PLC interface.

EAA-SSBN6 is the best choice for **screwdrivers** apply to integrate with PLC in automatic applications.

### 1.2 Applications

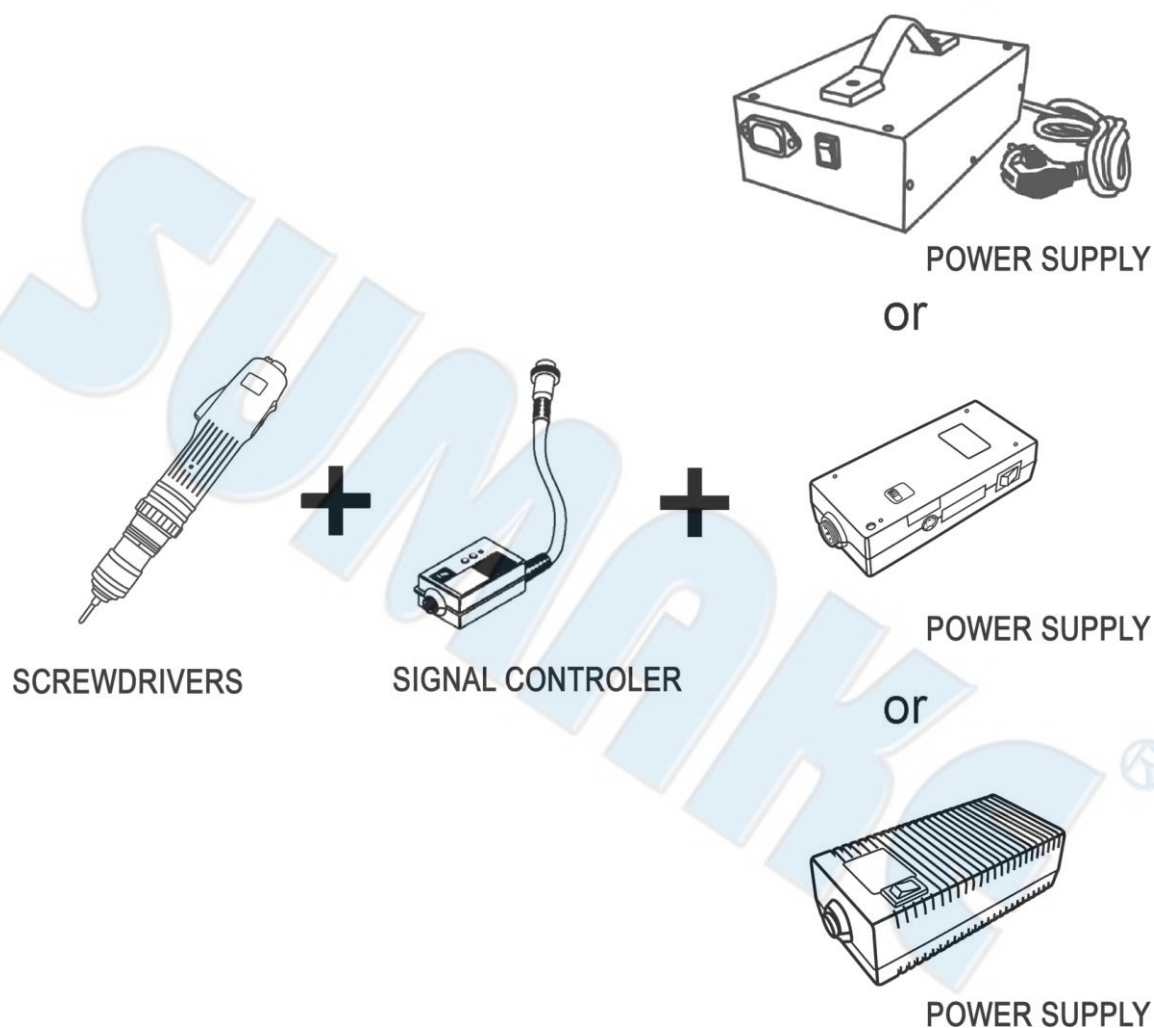
- Assembly quality control system
- Soft start control

## 2. Installation Guideline :

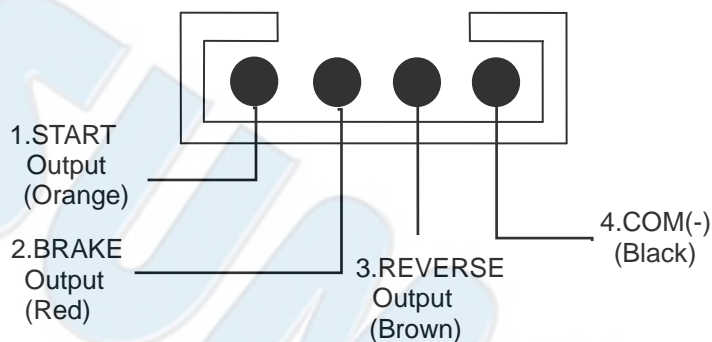
### 2.1 Assembly Description :

1. EAA-SSBN6 signal I/O control box support connect to both 32V and 40V power supply.  
32V (SP-B32HL61T6, SP-B32HL61T/C6, SP-B32HL62T6, SP-B32HL62T/C6)  
40V (SP-B40HL501T/C6, SP-B40HL801T/C6)
2. EAA-SSBN6 support all 24V, 32V and 40V voltage, it can apply to all SUMAKE EA-BN series screwdriver. (EA-BN2 / EA-BN4 / EA-BN6 / EA-BK7 / EA-BAK / EA-BAN / EA-BTN, EA-BTK6)
3. All SUMAKE EA-BN series brushless screwdrivers, EAA-SSBN6 and EA-BN Power supply are designed to use the same 6 Pin connector.
4. Please make sure to connect screwdriver with the suitable power supply model.
5. EAA-SSBN6 support another alternative SUMAKE standard anti EMI cable (3M) to connect to BN series screwdriver, it can reduce electromagnetic interference
6. Please connect EAA-SSBN6 to screwdriver then connect to power supply
7. EAA-SSBN6 is designed to operation only with the SUMAKE EA-BN series brushless screwdriver.

**(If connect to the old EA-B or EA-BC series brushless screwdriver, all function will not work correctly)**



## 2.2 Connector I/O wiring description :



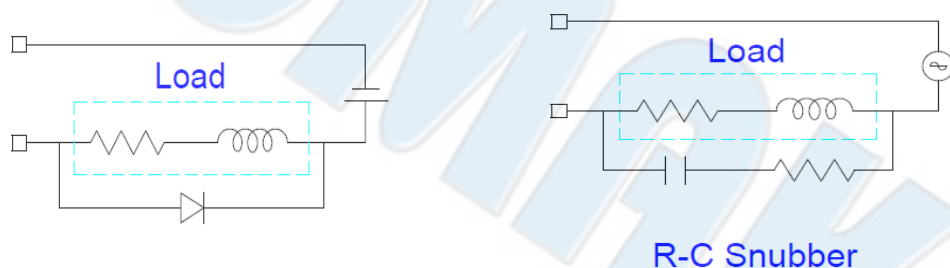
Please find the 14 Pin connector on top of the controller box and follow the input and output control functions wiring :

1. When screwdriver is started, output signal to Pin 1 and COM(-) (Pin 4)
2. When screwdriver is braked, output signal to Pin 2 and COM(-) (Pin 4)
3. When screwdriver run reversed, output signal to Pin 3 and COM(-) (Pin 4)

## 2.3 Pin assignment description :

Pin No.	Function	I/O	Loop Interface
1	Start Output	Output	MOS Relay
2	Brake Output	Output	MOS Relay
3	Reverse Output	Output	MOS Relay
4	COM(-)	-	Common for output

## 2.4 Relay output wiring diagrams :



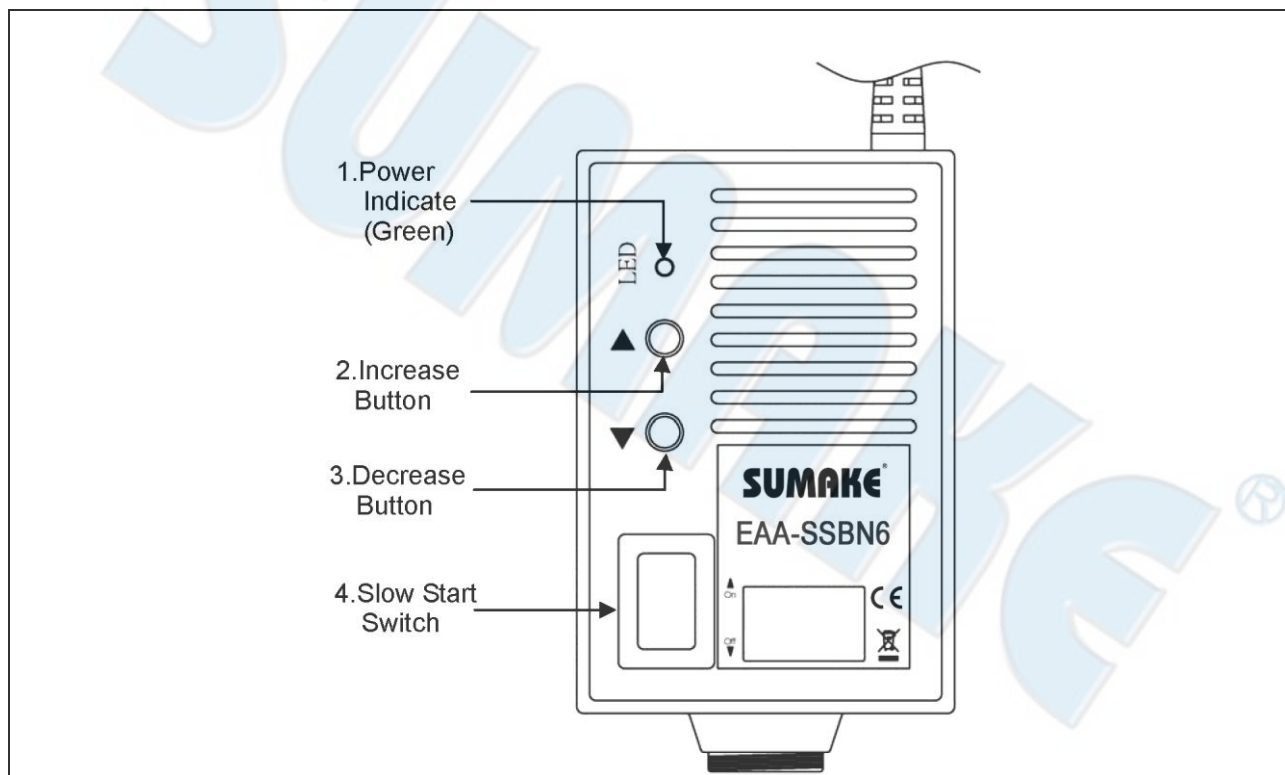
Regulate the spike voltage generated on the inductive load as follows :

※ MOS Relay output circuit max is DC +/-40V, +/-250mA



### 3. Operation Description :

#### 3.1 Panel setting description :

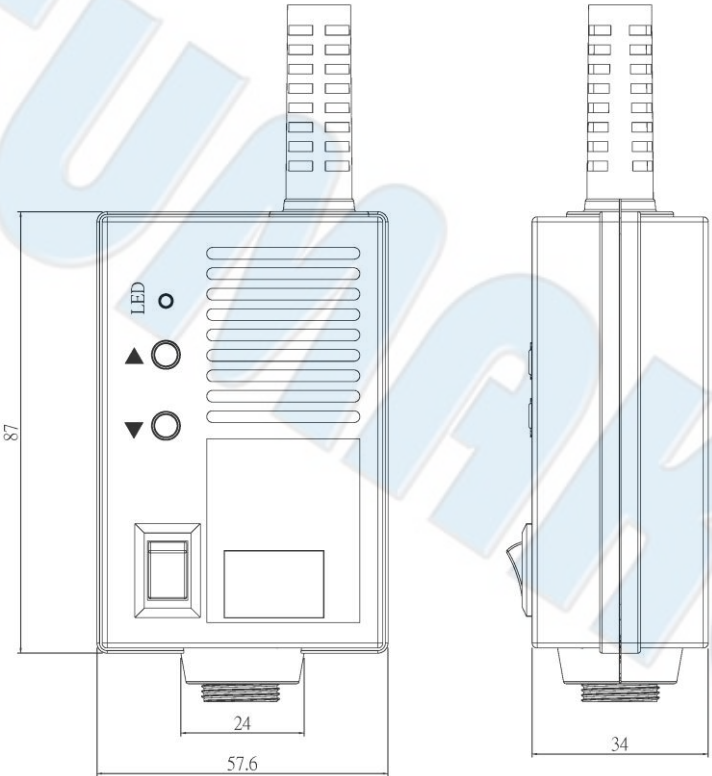


No.	Function	Description
1	Power / Comm. Error / Gate Enable LED (Green / Blink)	<ol style="list-style-type: none"> <li>1. Power on and connected display Green light on</li> <li>2. When disconnect or loss communication with screwdriver , display Green light and blink every 0.5 sec.</li> </ol>
2	▲(UP)	<ol style="list-style-type: none"> <li>1. Press▲ button for 6 sec to reset to factory default values (RC:0.0 , SP:L0)</li> </ol>
3	▲(UP) + ▼(DOWN)	<ol style="list-style-type: none"> <li>1. Press both ▲and ▼ button for 2 Sec to enter setting mode, LED display [RC].</li> <li>2. Press both button for 1 Sec to change to set next function.</li> <li>3. LED display [RC]-[SP]-- Exit.</li> <li>4. Screwdriver control will be disabled and the power light will flash each 5 Sec between setting mode.</li> <li>5. Use ▲or▼button to change the setting value RC : Slow start time 0.0 ~ 9.9 Sec. SP : Slow start speed level L0 ~ L9</li> </ol>
4	Slow Start Switch	<ol style="list-style-type: none"> <li>1. Toggle this switch to disable or enable [RC] [SP] function, LED display will turn off when function is disabled.</li> <li>2. If function is enabled, LED will display [NO] , [L1] ~[L9] depends on the setting status.</li> </ol>

### 3.2 LED Display in setting mode and error code description :

Symbol	Definition	Description
RC	Set Slow Start Time	<ol style="list-style-type: none"> <li>1. Press ▲+ ▼ for 2 Sec, LED will display [RC]</li> <li>2. Use ▲ or ▼ to increase or decrease slow start time value from 0.0 to 9.9 sec</li> </ol>
SP	Set Slow Start Speed Level	<ol style="list-style-type: none"> <li>1. Press ▲+▼ for 1 sec after set [RC], LED will display [SP]</li> <li>2. Use ▲or▼ to increase or decrease slow start speed level from L0 (100%, Disable) or L1 to L9 (30%~90%)</li> </ol>
L1~L9	Slow Start Speed Level	<ol style="list-style-type: none"> <li>1. When [SP] set to [L1] ~ [L9], indicate the slow start speed level.</li> </ol>
NO	No Slow Start Function	<ol style="list-style-type: none"> <li>1. When [SP] set to [L0] , disable slow start function</li> </ol>
E3	Under Voltage Protection	<ol style="list-style-type: none"> <li>1. Screwdriver will stop when the operation voltage is lower.</li> <li>2. LED will display [E3] to indicate Over voltage protection.</li> <li>3. Screwdriver will disable 10 sec then automaic recovery</li> </ol>
E4	Over Temp. Protection	<ol style="list-style-type: none"> <li>1. Screwdriver will stop when the operation temperature is higher.</li> <li>2. LED will display [E4] to indicate Over temperature protection.</li> <li>3. Screwdriver will disable 10 sec then automaic recovery</li> </ol>
E5	Stall Protection	<ol style="list-style-type: none"> <li>1. Screwdriver will stop when motor is abnormal stalled after start.</li> <li>2. LED will display [E5] to indicate stall protection.</li> <li>3. Screwdriver will disable 10 sec then automaic recovery</li> </ol>
E7	Push plate Error	<ol style="list-style-type: none"> <li>1. Screwdriver will stop when push plate change between motor running.</li> <li>2. LED will display [E7] to indicate abnormal operation.</li> <li>3. Switch push plate back to recovery</li> </ol>
E8	Brake Error	<ol style="list-style-type: none"> <li>1. Screwdriver will stop when the abnormal brake signal appeared before start.</li> <li>2. LED will display [E8] to indicate abnormal brake error.</li> <li>3. Check and fix the brake mechanism to recovery</li> </ol>
E9	Memory Error	<ol style="list-style-type: none"> <li>1. Screwdriver will stop when the internal flash memory fail.</li> <li>2. LED will display [E9] to indicate internal flash memory error.</li> <li>3. Screwdriver will disable 10 sec then automaic recovery</li> </ol>

**4. Techical Diagram :**





# EU Declaration of Conformity (DOC)

We: **SUMAKE INDUSTRIAL CO., LTD.**

**4F, No. 351, Yangguang St., Neihu District, Taipei City, Taiwan**

declare in sole responsibility that the equipment

Equipment : **SLOW START CONTROL MODULE SUITABLE**

Model/ Serial No. : **EAA-SSBN6**

The object of the declaration described above is in conformity with the relevant union harmonization legislation:

- Electromagnetic Compatibility 2014/30/EU
- RoHS 2015/863

The following harmonised standards and technical specifications have been applied:

- EN 61326-1:2013  
( EN 55011:2009+A1:2010 Group I Class B,  
EN 61000-3-2:2014, EN 61000-3-3:2013,  
IEC 61000-4-2 Edition 2.0 2008-12, IEC 61000-4-3 Edition 3.2 2010-04,  
IEC 61000-4-4 Edition 3.0 2012-04, IEC 61000-4-5 Edition 2.0 2005-11,  
IEC 61000-4-6 Edition 3.0 2008-10, IEC 61000-4-8 Edition 2.0 2009-09,  
IEC 61000-4-11 Edition 2.0 2004-03 )

Name and Signature/Position



Mike Su – Managing Director

Date and Place

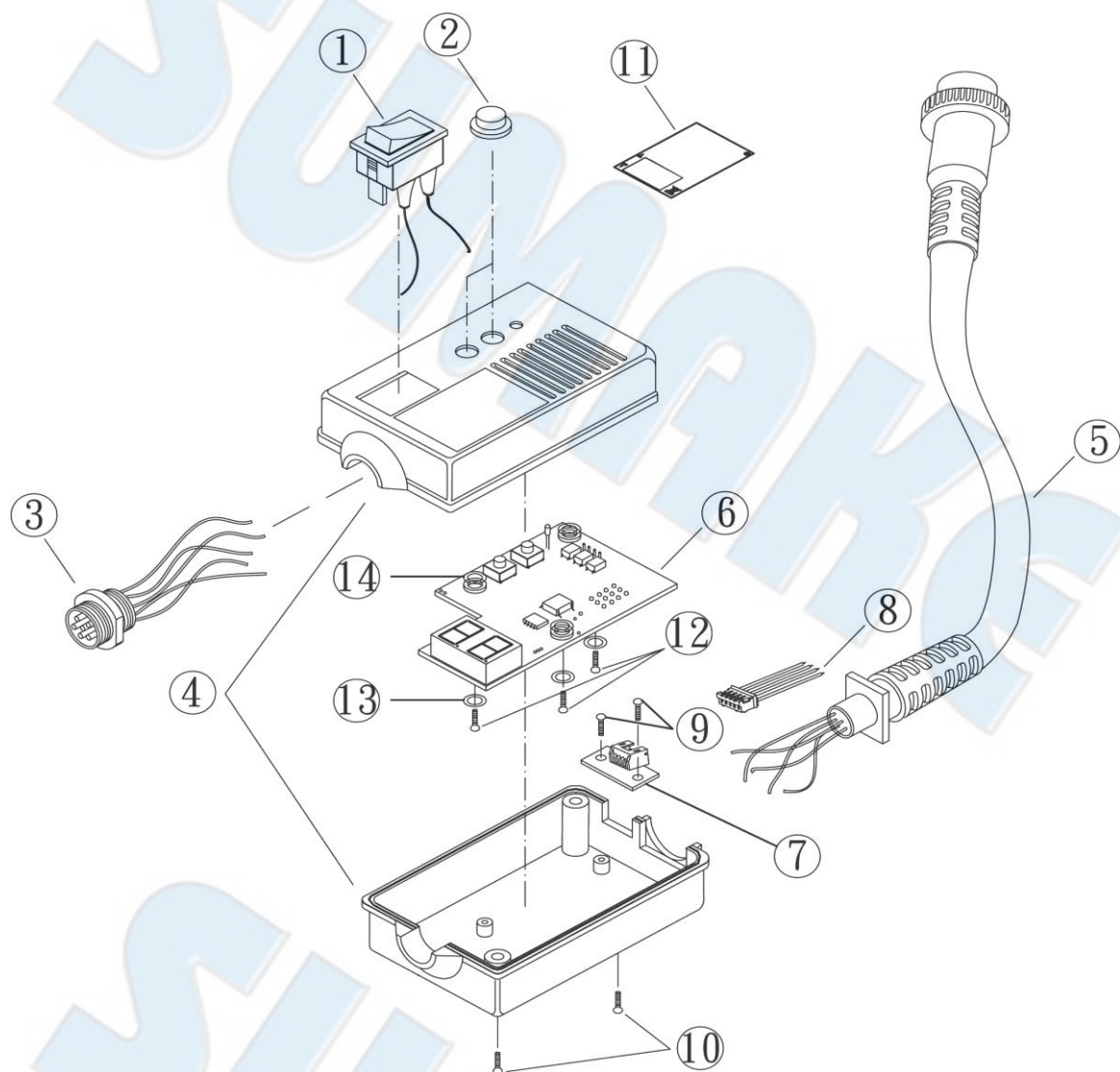
2025/4/9

Taipei, Taiwan

EAA-SSBN6-D-2504B-K2

# EAA-SSBN6

## SLOW START CONTROL MODULE SUITABLE FOR ALL BRUSHLESS



### PARTS LIST

No.	Parts No.	Description	Q'ty
1	EPHC10004-2	Slow Start Switch	1
2	EPH10205	Button	2
3	EPPZ50165-3	Connector (6pin)	1
4	EPEC30006-7-ESD	Case (A Pair)	1
5	EPAA50001-83N	Cord Assembly (6Pin)	1
6	EPEF50106-1	P.C.B.	1
7	EPEG50107	4P Connector	1
8	EPP11019-1	4P Connector Wlre	1
9	EPCH20102-5	Screw (M3x6)	2
10	EPCH90152-1F	Screw (M3x12)	2
11		Sticker	1
12	EPCH20161-3	Screw M3x8	3
13	EPP11020-5	Washer	3
14	EPP11020-5	Washer	3



**NOTE**

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