SUMAKE®

Professional & Industrial

OPERATION AND MAINTENANCE MANUAL

ITEM NO.: ES-B18 series

BRUSHLESS FULL AUTO SHUT-OFF CORDLESS SCREWDRIVER

CAUTION!!

ES-B1809, ES-B1812H SERIES IS ADVANCEMENT IN HIGH TORQUE MOTORS DESIGN. TO BE MORE SAFTY, ASSEMBLE THE AUXILIARY HANDLE BEFORE OPERATION.

ES-B1803(3H)(5H)(6)(9)(12)-I-2307M-K2

SUMAKE

Specifications

MODEL		ES-B1803	ES-B1803H	ES-B1806	ES-B1805H	ES-B1809	ES-B1812
Input Voltage (DC)		DC 18V					
Torque -Hard Joint		1.0 ~ 3.5	1.0 ~ 3.5	2.0 ~ 6.0	2.0 ~ 5.0	3.0 ~ 9.0	6.0 ~ 12
Torque -Soft Joint		1.0 ~ 2.8	1.0 ~ 2.8	2.0 ~ 4.8	2.0 ~ 4.0	3.0 ~ 7.2	6.0 ~ 9.6
Torque accuracy (%)		Torque accuracy (%)					
Torque adjustment		Torque adjustment					
Unloaded Speed (r/min) ±10%	HI	1000	2000	1000	2000	1000	880
	LO	650	1300	650	1300	650	570
Screw size (mm)	Machine screw	4.0~5.0	4.0~5.0	4.0~5.0	4.0~5.0	5.0~6.0	≤6
Weight (Kg)		1.02kg (w/o battery)			1.16kg (w/o battery)		
Length (mm)		217mm x 197 mm LxH (w/o battery)			233mm x 196 mm LxH (w/o battery)		
Applicable auxiliary handle		EPC15001-2					
Applicable battery		BP1832L					
Applicable charger station		BC21L04					
Applicable Bit type		HEX 6.35mm					

Bits Code ~ B: Hex 6.35mm

Accessory ~ BIT

Before you use the Cordless Screwdriver for the first time, it is essential to read and understand the manual completely (including the spare parts view). The term "Cordless Screwdriver" in all of the warning listed below refers to your main operated appliance.

Icon Instructions

	1. Read instruction manual.
	2. Observe caution and safety notes.
	3. Recyclable.
	4. For indoor use only
	5. Do not expose to wet or rain conditions.
	6. Do not operate in an explosive atmosphere
	7. Do not disassemble
	8. Forbid to throw away.

Accessories

Item	Quantity	Unit
Manual	1	PCS
Guarantee Card	1	PCS
Torque Fixing Ring	1	PCS
Waist hook	1	PCS
Driver hook	1	PCS
Screw M3*0.5P*10LT	1	PCS
Socket Extension	1	PCS
BIT	2	PCS

WARNING ⚠

Read all instructions and make sure the appearance of the device has no damage before you use it. Failure to follow all instructions listed below may result in electric shock fire and/or serious injury.

1. Keep the working area nice and clean.
(a) Mess and dark areas may cause of accidents.
(b) Keep the device away from rain or moisture to decrease the risk of electric shock or short- circuiting occurred.

2. Be alert to workplace safety
(a) Use the device under a well lit and clean environment.
(b) Keep children and other people away unless the person has been assigned for the task to avoid the danger of injury.
(c) Do not play around while the tool is being used to avoid the danger of distractions.
(d) Do not work with the device in potentially explosive environments in which there are inflammable liquids, gases or dusts. Electrical power tools create sparks, which can ignite dusts or fumes.
(e) Do not use the device if you are tired or under the influence of drugs, alcohol or medication.

3. When the devices are not being used, store them in a safe place.

4. Use a suitable device for the job will be safer at work and have a better result.

5. Always use a screwdriver that is intended for the task you are undertaking. Do not overload or use it improperly such as drilling or tapping.

6. Dress properly. Do not wear loose clothing or jewels while operating the tool to avoid the danger of trapping.

7. Please hole the cordless screwdriver carefully before operating and avoid wrong operating method.

8. When using the electrical power tool, take into account the auxiliary handle or waist hook is advantage of working conditions. On the contrary, the purposes of the waist hook or driver hook is convenient to put the device away and easier to keep it out of reach of children.

9. Look after either the device or the battery carefully and have any damaged parts repaired by an authorized or qualified shop. Always keep the tool nice and clean; pay attention on the machine grease which might ruin the tool.

10. Disconnect the plug from the power source after the charger has been used.

11. Take apart the battery from the device when it is not being used.

12. Use only the accessories that are detailed in the operating instructions. The use of others which are not recommended in the operating instructions may affect the functioning of the device. It could lead to an increased risk of personal injury as well.

13. Remain alert at all times and watch what you are doing during proceeding. Before operation, always check every part is in good condition and move freely in order to function properly.

14. This device only applies for metal screw bits designated with their dimensions and their shape. Do not recommend to countersink or force of loading on any material such as plastic and wooden.

15. The device does not apply for elastic or tensile load with washer on.

16. To prevent parts in gearbox from damage, replace the grease at least once for every year.

17. It is necessary for the operators to read and follow up all the operating instructions in this manual. **SUMAKE** is not responsible for any personal injury that might cause of disobeying the safety advices.

Function of cordless protection

- Over electric current protection
- Thermal Protector
- Slow rotation protection
- Battery Identification
- Prevent from low power
- Stall protection
- Reverse control protection
- Sleeping mode

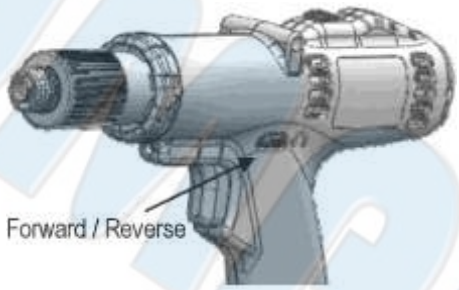
WARNING

Do not attempt to repair or disassemble this cordless screwdriver, the warranty will be considered void.

1. This rechargeable screwdriver maintenance Make sure to remove the battery pack before maintaining or repairing the device by a qualified technician.
2. Do not attempt to disassemble or reassemble the device at will which may result in poor performance or danger of injury, the warranty applies only to initial package.
3. Do not repair the device with other than genuine **SUMAKE** replacement parts may result in poor performance or danger of injury, the warranty will be considered void.
4. The temperature between 0℃~35℃ would be an ideal condition of carrying out the tasks on the device.

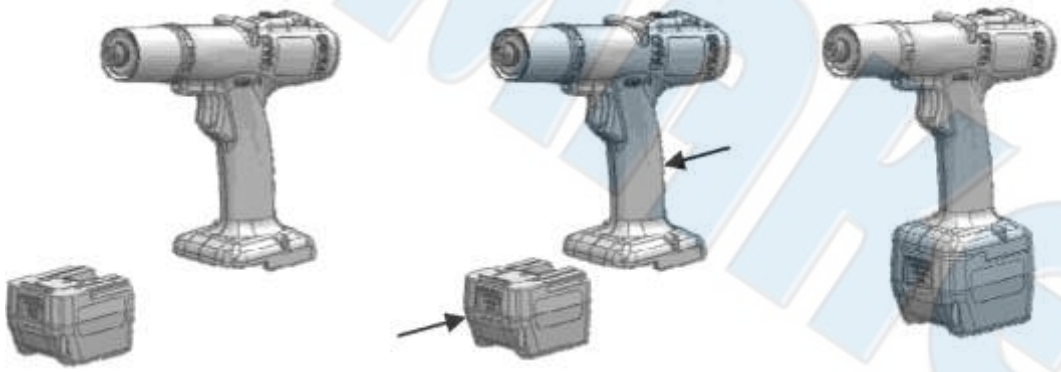
Operating instructions

1. Charge the battery in the charging station before first use to make sure operates at its highest capacity. To ensure operators against injuries, release the Forward/Reverse lever as arrow showing below into a center position to have trigger locked before start or disassemble the device.



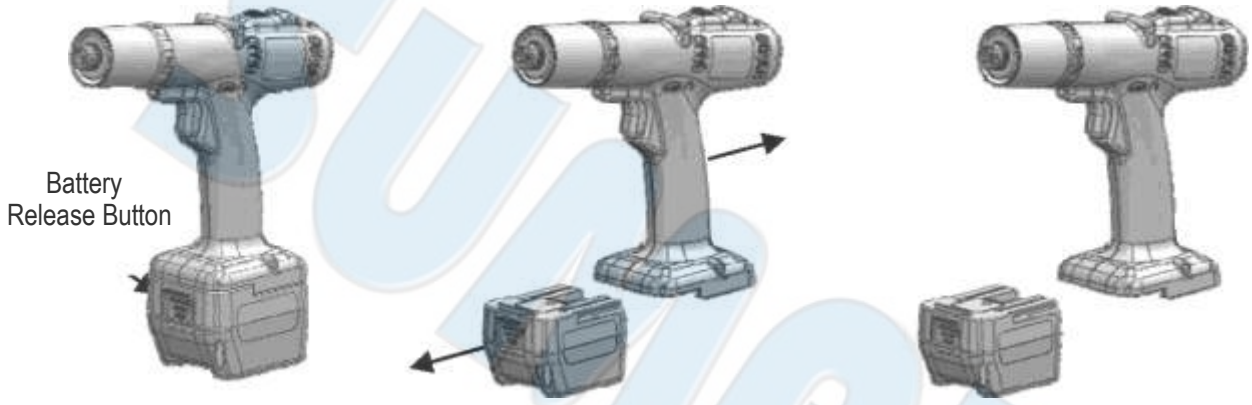
(a) Below illustration is showing the process of correct install & disassemble the rechargeable battery. The beep sound comes along with a flash while the screwdriver is supplied genuine battery installation. It could be operated once the battery has been identified.
(b) Too slow to install the battery may cause error identification so the beep sound and flash would be continuing. In order to function properly, re-assembling it as below process again.

Insert Battery Steps



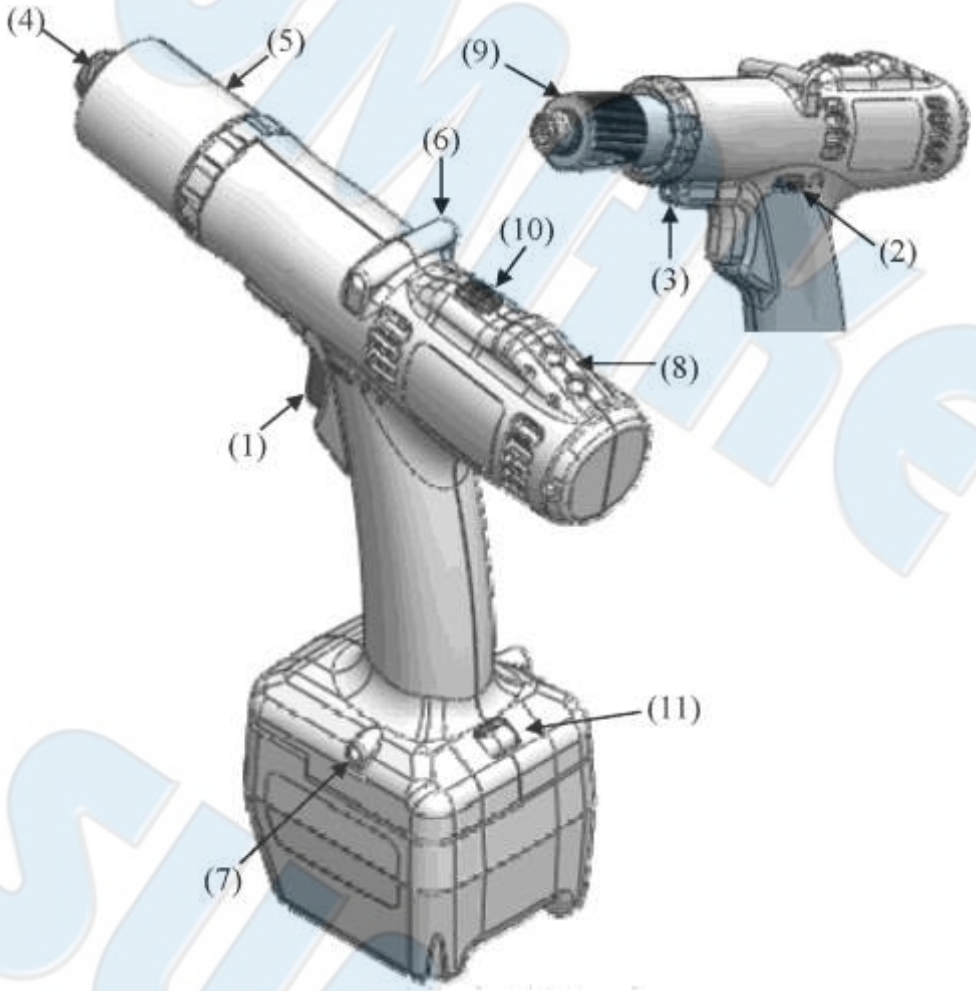
(1) Insert the rechargeable battery into the device follow by the arrow as showing.
(2) Assembled completely.

Remove Battery Steps



(1) Press the release button and take it out of the device	(2) Follow the arrow direction.	(3) Removed completely.

Function / Operating Introduction



Function Name Table

No.	Description	No.	Description
(1)	Trigger Switch	(7)	S waist hook
(2)	Forward/Reverse Lever	(8)	Indication light
(3)	LED Light	(9)	Torque wrench
(4)	Bit Sleeve	(10)	Speed adjustment
(5)	Torque Ring	(11)	Wrist strap hole
(6)	Driver Hook Hole		

Manual / Function

1.Full auto shut-off screwdriver

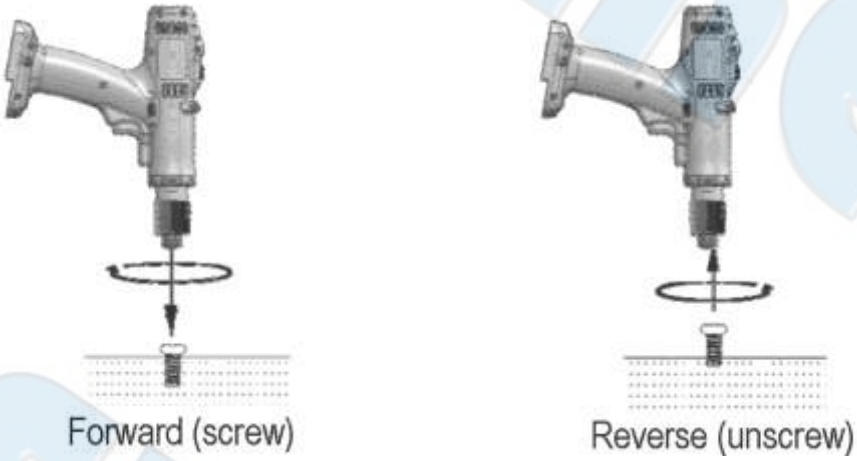
It stops automatically when the screw has been tightened up and reached the set-up torque level. The device will not cause damage of task since no continue running after screws are tightened.

(1) Trigger switch

The LED lights on when the trigger switch has been pressed about one-third down, and then the screwdriver starts functioning when the switch trigger has been pressed half way down; on the contrary, it stops when the screw has been tightened up or the trigger has been released.

(2) Forward / Reverse switch

When the switch turn to the right as arrow indicates, the screwdriver will be clock-wise screwing to tighten things up; Vice versa, left switch means to release the screw. As the diagram showing, always set the switch to neutral position when the screwdriver is not being used.

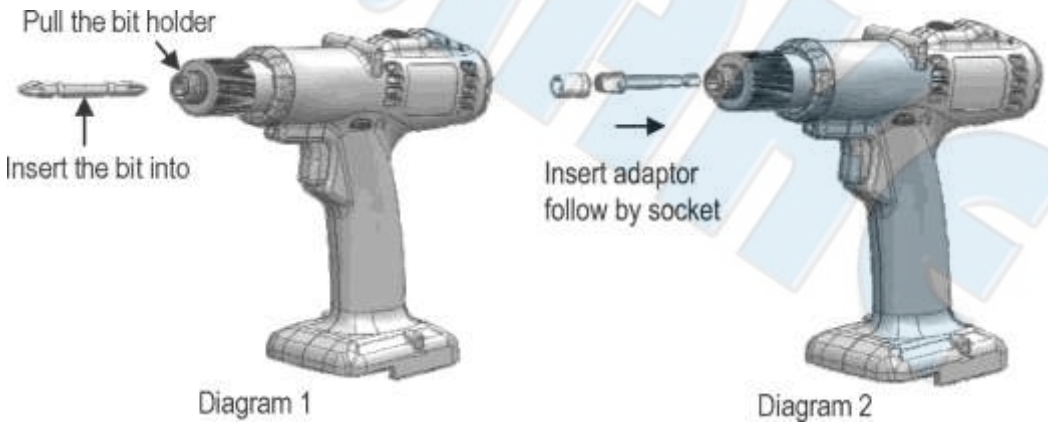


(3) LED light

While press the trigger, the LED lights up automatically to assist the job to be done; on the contrary, it will be off once the trigger has been released.

(4) Bit Sleeve

Switch the screw bit and compatibility, pull the head of the type B screwdriver, and install the bit according to the diagram below, after installing the bit please also install the W type cap and push it in following the arrow indicated on the diagram below on diagram #2.



(5) Torque ring

(a) Torque Fixing Ring: To prevent torque to be adjusted, fixed upside-underside housing and clutch.

(b) Coupler: Fixed upside-underside housing and clutch.

(6) Driver Hook

It is convenient that the production lines are able to have spring balancers work together with the tools to be more efficiently.

(7) Waist hook

The waist hook allows users to carry the device easily by attaching it to their work belt.

(8) Functional light and the status indicator

Whenever the remaining power in the rechargeable battery is fewer than 20%, the tool is still alive but with red flash lights on. Once the remaining power is towards 10% or even fewer it may result in poor performance with the continuing red lights on.

LED and Buzzer	Reached adjustment torque	NG
LED Display	Green light on-off	Red light on-off
Buzzer	1 short alarm	1 long alarm

Low Battery LED Display & Buzzer	Capacity 20%↓(17.5V)	Capacity 10%↓(17V)
LED Display	Red light flicks	Red light turn on (Out of battery)
Buzzer	Non-stop B Short Buzzer	2 Short & 1 Long Buzzer
Screwdriver Action	Rotating	No Action

(9) Torque Adjustment Ring

turning torque adjust ring clock wise. 0 printed on the torque adjust ring indicates the minimum torque for setting and 8 for the maximum torque setting. Do not turn torque adjust ring lower than 0 or higher than 8 to avoid torque adjust ring getting stuck with clutch.

(10) Hi/Lo Switch

When the rotating speed needs to be changed, set up the switch to Hi for the fastest rotation, and set up the switch to Lo for slowest rotation. It's possible that the uncompleted shut-off occurs when the switch is setup to Lo and the presetting torque is more than 50% of torque range. Please refer to the following table.

Lo Switch Shut-off	ES-B1803	ES-B1803H	ES-B1805H	ES-B1806	ES-B1809	ES-B1812
Normal	2.3N m↓	2.3N m↓	3.3N m↓	3.9N m↓	5.9N m↓	7.8N m↓
Unusual	2.3N m↑	2.3N m↑	3.3N m↑	3.9N m↑	5.9N m↑	7.8N m↑

(11) Hole for wrist band

Enable to install the wrist band which is more convenient and safer for users.

2.Auxiliary handle

For easier use of the screwdriver, there is a handle for assisting purpose.

⚠ Warning, this power screwdriver delivers high torque, please install the handle before doing work in order to avoid danger. We are not responsible for any damage or injury caused by using this product without handle.

Other Cautions

1. The best condition of using the tool is under 8 hours a day, do not over loaded.
2. Do not attempt to repair or disassemble this cordless screwdriver without authorization. Always have the device serviced by assigned factory or qualified person in order to have the warranty effective continually.
3. **SUMAKE** is not responsible for any poor performance or damage caused by customers own modification of the tool.
4. It is necessary for the management to have individual operators read and follow up all instructions in this manual. Do not attempt to repair or disassemble this cordless screwdriver themselves.
5. Chemicals, Acetone, Benzene, Alcohol, Thinner, Ketone, trichloroethylene, etc shall not be in contact with the surface of the screwdriver in order to prevent chemical damage.
6. Please follow instruction carefully and do not drop or shock the screwdriver.
7. This is an external torque adjustment screwdriver, 0 on the torque adjust ring stands for minimum torque and 8 for maximum torque. The rated operation time is 1 second / 3 seconds (ON / OFF). Appropriate fastening frequency is 15 fasteners in each minute. Overrunning may damage motor due to overheat. Proper amount of screwdriver resting is recommended to prevent motor overheating.
8. Not allow to turn the Hi/Lo switch during operation in order to cause system malt-function.
9. The device will not be able to function again once the OK/NG indicator/signal is not turn off yet.
10. When adjusting the torque, for safety purpose should stop the screwdriver completely and set the switch to neutral position. It could prevent the user from turning the tool on accidentally.

11. During operation, the switch has been changed accidentally that the device will enable its self-protecting mode which is power off. Re-start the tool when this happen.

12. Each operational torque setting, using time and frequency may result in different level of wear and tear, at higher torque setting and use extensively could accelerate the wearing down of tool. After one month, the torque is getting reduce gradually at the rate of 2~3% or 3~5 %(max torque). The longer use of the device, torque reduction will become stable and the users could measure the torque by a tester on a regular time schedule to check if the torque power still meets the criteria.

13. ES-B1803, ES-B1803H, ES-B1806, are tested by our torque meter TM-250A.

14. Our system is controlled by has been assessed and certified as meeting the requirement of ISO 6789.

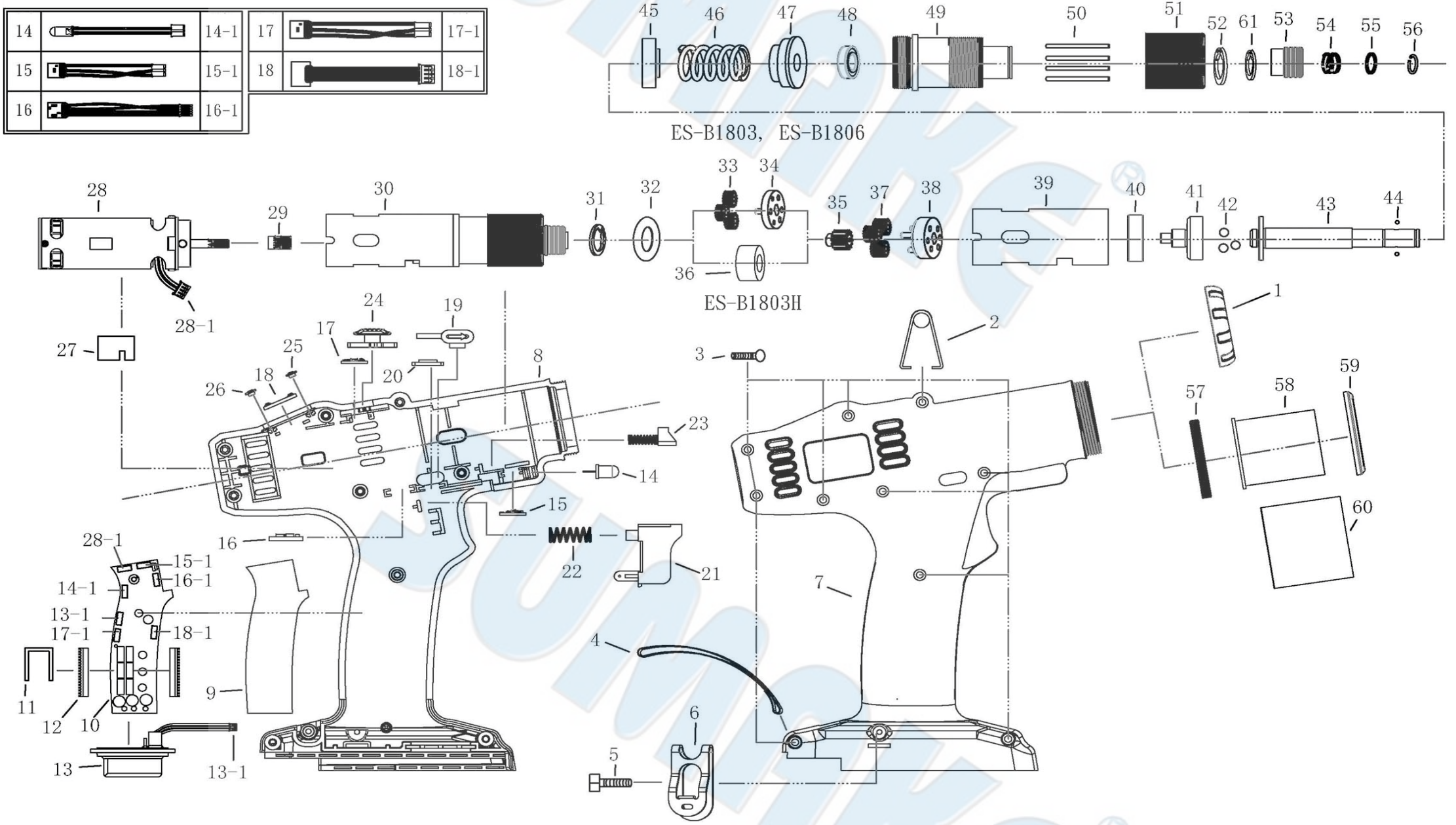
Description of Battery and Charger

1. **SUMAKE** BP1832Lof batteries as options to fit in the device; you may consult with local agent based on your task requirement.
2. The use of other than genuine **SUMAKE** batteries or screwdrivers can't be active due to the build-in protection system enforce no charging.

Our company reserves the right to modify the product without prior notice.

ES-B1803(3H)(6)

BRUSHLESS FULL AUTO SHUT-OFF CORDLESS SCREWDRIVER



ES-B1803(3H)(6)
BRUSHLESS FULL AUTO SHUT-OFF CORDLESS SCREWDRIVER

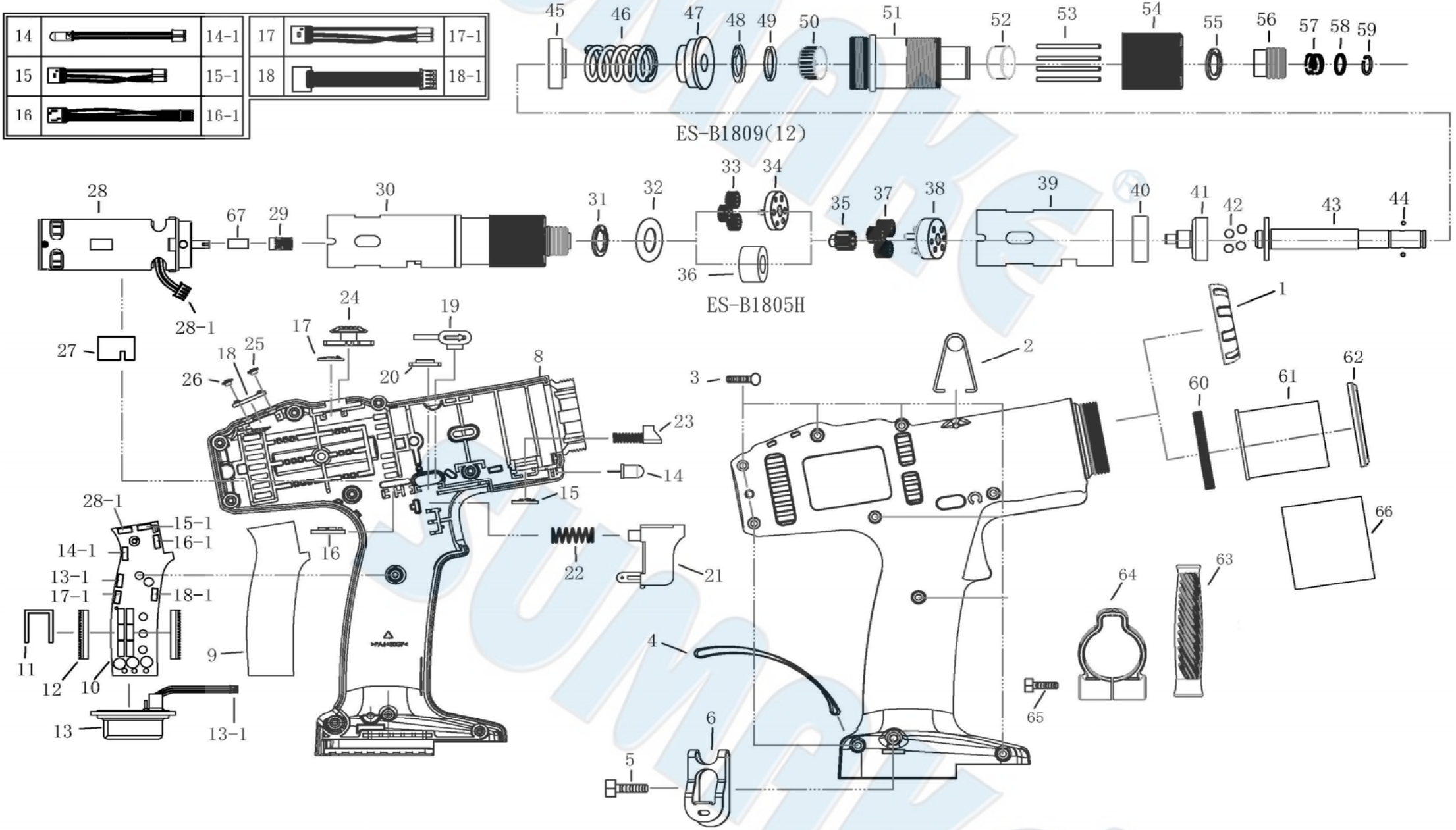
PARTS LIST

No.	Parts No.	Description	Q'ty
1	EPCD91037	Coupler	1
2	EPCJ20012	Suspension Hook	1
3	EPCH20527	Screw	9
4	EPR481874	Wrist Band	1
5	EPCH20525	Screw	1
6	EPCJ20014	Waist Hook	1
7	EPCAB00005	Housing-Upside	1
8	EPCBB00005	Housing-Underside	1
9	EPW10200	Insulating Washer 30x102x0.2	1
10	EPEG31518-4	P.C.B.	1
11	EPW50109-3	Clamp	1
12	EPE32205	Heat Sink	2
13	EPEG31504-3	Power Module	1
14	EPN15017-1	Led Light	1
15	EPEG31440	Brake P.C.B.	1
16	EPEG31439-3	F/R Switching Element Pcb	1
17	EPEG31440	Speed Adjustment P.C.B.	1
18	EPEG31438-1	Indication Light P.C.B.	1
19	EPCI50218-6	Forward/Reverse Lever For ES-B1806	1
	EPCI50218-7	Forward/Reverse Lever For ES-B1803	1
	EPCI50218-8	Forward/Reverse Lever For ES-B1803H	1
20	EPE63231-1	Forward/Reverse Spring	1
21	EPCC70015-1	Trigger Switch	1
22	EPCK28033	Trigger Spring	1
23	EPCI50217-1	Brake Lever	1
24	EPCI50216	Hi-Lo Switch	1
25	EPC50220-1	Led Light Cover (Limpid)	1
26	EPC50220-2	Led Light Cover (Orange)	1
27	EPW10200-3	Insulating Washer 30x30x0.2	1
28	EPMO00005	Motor Assembly For ES-B1806 ES-B1803	1
	EPMO00006	Motor Assembly For ES-B1803H	1
29	EPM11317	Gear ES-B1806 For ES-B1803	1
30	EPGZPTA6000-1B	Gear Housing For ES-B1806 Hex. 6.35mm (Opt.)	1
	EPGZPTA6000-2B	Gear Housing For ES-B1806 Hex. 6.35-B9.5mm	1
	EPGZPTA3501-1B	Gear Housing For ES-B1803 Hex. 6.35mm (Opt.)	1
	EPGZPTA3501-2B	Gear Housing For ES-B1803 Hex. 6.35-B9.5mm	1
	EPGZPTA3500-1BF	Gear Housing For ES-B1803H Hex. 6.35mm (Opt.)	1
	EPGZPTA3500-2BF	Gear Housing For ES-B1803H Hex. 6.35-B9.5mm	1

No.	Parts No.	Description	Q'ty
31	EPGI21191	Iron Washer	1
32	EPGK21181	"C" Ring	1
33	EPGH92238	Planet Gear For ES-B1806, ES-B1803	3
34	EPGG21514	Gear Seat For ES-B1806, ES-B1803	1
35	EPG20112	Central Gear For ES-B1806, ES-B1803	1
36	EPG21304-1	Washer (High Sped) For ES-B1803H	1
37	EPGH92238-1	Planet Gear For ES-B1806, ES-B1803	3
	EPGH92239	Planet Gear For ES-B1803H Hex. 6.35mm	3
38	EPGG92281	Gear Seat For ES-B1806, ES-B1803	1
	EPGG21515	Gear Seat For ES-B1803H Hex. 6.35mm	1
39	EPGA81103	Gear Case	1
40	EPGN21251	Bearing	1
41	EPGC90308	Cam	1
42	EPGP30361	Steel Balls 5mm	3
43	EPGD91413	Shaft For Hex. 6.35mm Type (Opt.)	1
	EPGD91413-2	Shaft For Hex. 6.35-B9.5mm Type	1
44	EPGP21291B	Steel Balls 2.5mm	2
45	EPGF90328	Waring Plate	1
46	EPGE92401	Waring Spring For ES-B1806	1
	EPGE92402	Waring Spring For ES-B1803	1
	EPGE92405	Waring Spring For ES-B1803H	1
47	EPGY21321	Waring Spring Base	1
48	EPGN30434	Bearing	1
49	EPG20210	Clutch Case	1
50	EPGL21371	Torque Adjust Pin	4
51	EPGM21381	Torque Adjust Ring	1
52	EPGS21391	"C" Ring	1
53	EPGJ21352	Bit Sleeve	1
54	EPGO21346	Bit Spring	1
55	EPG21435	Washer	1
56	EPGQ21361	"C"Ring	1
57	EPKC-16A-2	Torque Fixing Ring	1
58	EPKC-16A-1	Torque Fixing Adapter Ring	1
59	EPKC-16A-3	Torque Fixing Ring Cover	1
60	EPPE02003-3N	Slip Resistant Soft Cover (Blue)	1
	EPPE02003-4N	Slip Resistant Soft Cover (Yellow)	1
	EPPE02003-5N	Slip Resistant Soft Cover (Red)	1
61	EPGK20231B	"C"Ring	1

ES-B1805H(9)(12)

BRUSHLESS FULL AUTO SHUT-OFF CORDLESS SCREWDRIVER



ES-B1805H(9)(12)

BRUSHLESS FULL AUTO SHUT-OFF CORDLESS SCREWDRIVER

PARTS LIST

No.	Parts No.	Description	Q'ty
1	EPCD91038	Coupler	1
2	EPCJ20012	Suspension Hook	1
3	EPCH20527	Screw	9
4	EPR481874	Wrist Band	1
5	EPCH20525	Screw	1
6	EPCJ20014	Waist Hook	1
7	EPCAB00006	Housing-Upside	1
8	EPCBB00006	Housing-Underside	1
9	EPW10200	Insulating Washer 30x102x0.2	1
10	EPEG31518-5	P.C.B.	1
11	EPW50109-3	Clamp	1
12	EPE32205	Heat Sink	2
13	EPEG31504-3	Power Module	1
14	EPN15017-1	Led Light	1
15	EPEG31440	Brake P.C.B.	1
16	EPEG31439-3	F/R Switching Element P.C.B.	1
17	EPEG31440	Speed Adjustment P.C.B.	1
18	EPEG31438-1	Indication Light P.C.B.	1
19	EPCI50218-6	Forward/Reverse Lever For ES-B1812	1
	EPCI50218-7	Forward/Reverse Lever For ES-B1809	1
	EPCI50218-8	Forward/Reverse Lever For ES-B1805H	1
20	EPE63231-1	Forward/Reverse Spring	1
21	EPCC70015-1	Trigger Switch	1
22	EPCK28033	Trigger Spring	1
23	EPCI50217-2	Brake Lever	1
24	EPCI50216	Hi-Lo Switch	1
25	EPC50220-1	Led Light Cover (Limpid)	1
26	EPC50220-2	Led Light Cover (Orange)	1
27	EPW10200-3	Insulating Washer 30x30x0.2	1
28	EPMO00008	Motor Assembly For ES-B1812	1
	EPMO00003	Motor Assembly For ES-B1809	1
	EPMO00007	Motor Assembly For ES-B1805H	1
29	EPM11337	Gear For ES-B1812	1
	EPM11336	Gear For ES-B1809	1
	EPM11338	Gear For ES-B1805H	1
30	EPGZPTA12001-1B	Gear Housing For ES-B1812 Hex. 6.35mm (Opt.)	1
	EPGZPTA12001-2B	Gear Housing For ES-B1812 Hex. 6.35-B9.5mm	1
	EPGZPTA9000-1B	Gear Housing For ES-B1809 Hex. 6.35mm (Opt.)	1
	EPGZPTA9000-2B	Gear Housing For ES-B1809 Hex. 6.35-B9.5mm	1
	EPGZPTA5001-1BF	Gear Housing For ES-B1805H Hex. 6.35mm (Opt.)	1
	EPGZPTA5001-2BF	Gear Housing For ES-B1805H Hex. 6.35-B9.5mm	1
31	EPGI21191	Iron Washer	1
32	EPGK21181	"C" Ring	1
33	EPGH92249	Planet Gear For ES-B1812	3

No.	Parts No.	Description	Q'ty
33	EPGH92247	Planet Gear For ES-B1809	3
34	EPGG92280-2	Gear Seat For ES-B1812	1
	EPGG92278-1	Gear Seat For ES-B1809	1
35	EPG20120	Central Gear For ES-B1812, ES-B1809	1
36	EPG21307	Washer (High Sped) For ES-B1805H	1
37	EPGH92249-1	Planet Gear For ES-B1812, ES-B1809	3
	EPGH92248	Planet Gear For ES-B1805H	3
38	EPGG92280-1	Gear Seat For ES-B1812, ES-B1809	1
	EPGG92277-2	Gear Seat For ES-B1805H	1
39	EPGA81102	Gear Case	1
40	EPGN30439-1	Bearing	1
41	EPGC90307	Cam	1
42	EPGP30361	Steel Balls 5mm	4
43	EPGD91412	Shaft For Hex. 6.35mm Type (Opt.)	1
	EPGD91412-2	Shaft For Hex. 6.35-B9.5mm Type	1
44	EPGP28330	Steel Balls 3.5mm	2
45	EPGF90329	Waring Plate	1
46	EPGE92407-1	Waring Spring For ES-B1812	1
	EPGE92404-3	Waring Spring For ES-B1809	1
	EPGE92406	Waring Spring For ES-B1805H	1
47	EPGY21321	Waring Spring Base	1
48	EPGK20236	"C" Ring	1
49	EPGV90333	Washer	1
50	EPGN30446	Retainer	1
51	EPGB30447	Clutch Case	1
52	EPG21303	Washer	1
53	EPGL21371	Torque Adjust Pin	4
54	EPGM30497	Torque Adjust Ring	1
55	EPGS21391	"C" Ring	1
56	EPGJ21353	Bit Sleeve	1
57	EPGO21342	Bit Spring	1
58	EPG21436	Washer	1
59	EPGQ21362	"C"Ring	1
60	EPKC-17A-2	Torque Fixing Ring	1
61	EPKC-17A-1	Torque Fixing Adapter Ring	1
62	EPKC-17A-3	Torque Fixing Ring Cover	1
63	EPC15001	Auxiliary Handle For ES-B1812 ES-B1809	1
64	EPC15003-2	Auxiliary Handle Base For ES-B1812 ES-B1809	1
65	EPCH30195	Screw For ES-B1812 ES-B1809	1
66	EPPE02003-3N	Slip Resistant Soft Cover (Blue)	1
	EPPE02003-4N	Slip Resistant Soft Cover (Yellow)	1
	EPPE02003-5N	Slip Resistant Soft Cover (Red)	1
67	EPM20103	Gear Coupler For ES-B1812, ES-B1809	1

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： BRUSHLESS FULL AUTO SHUT-OFF CORDLESS SCREWDRIVER

Model/ Serial No.： ES-B1803, ES-B1803H, ES-B1805H, ES-B1806, ES-B1809, ES-B1812

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

- **Machinery Directive 2006/42/EC**
- **Electromagnetic Compatibility 2014/30/EU**
- **RoHS 2011/65/EU**

The following harmonised standards and technical specifications have been applied:

- **EN 62841-1:2015/AC:2015**
- **EN 62841-2-2:2014/AC:2015**
- **EN IEC 55014-1:2021**
- **EN IEC 55014-2:2021**

  AZ/NZS CISPR 14.1:2021

Data:

Noise level:	Sound pressure level: Load: 84.6 dB(A)
	Sound power level: load: 95.8 dB(A)
	Uncertainty K= 3dB
Vibration level:	No Load: 6.21 m/s²
	Uncertainty K= 1.5 m/s²

Name and Signature/Position

Mike Su – Managing Director

Date and Place

2023/10/16

Taipei, Taiwan