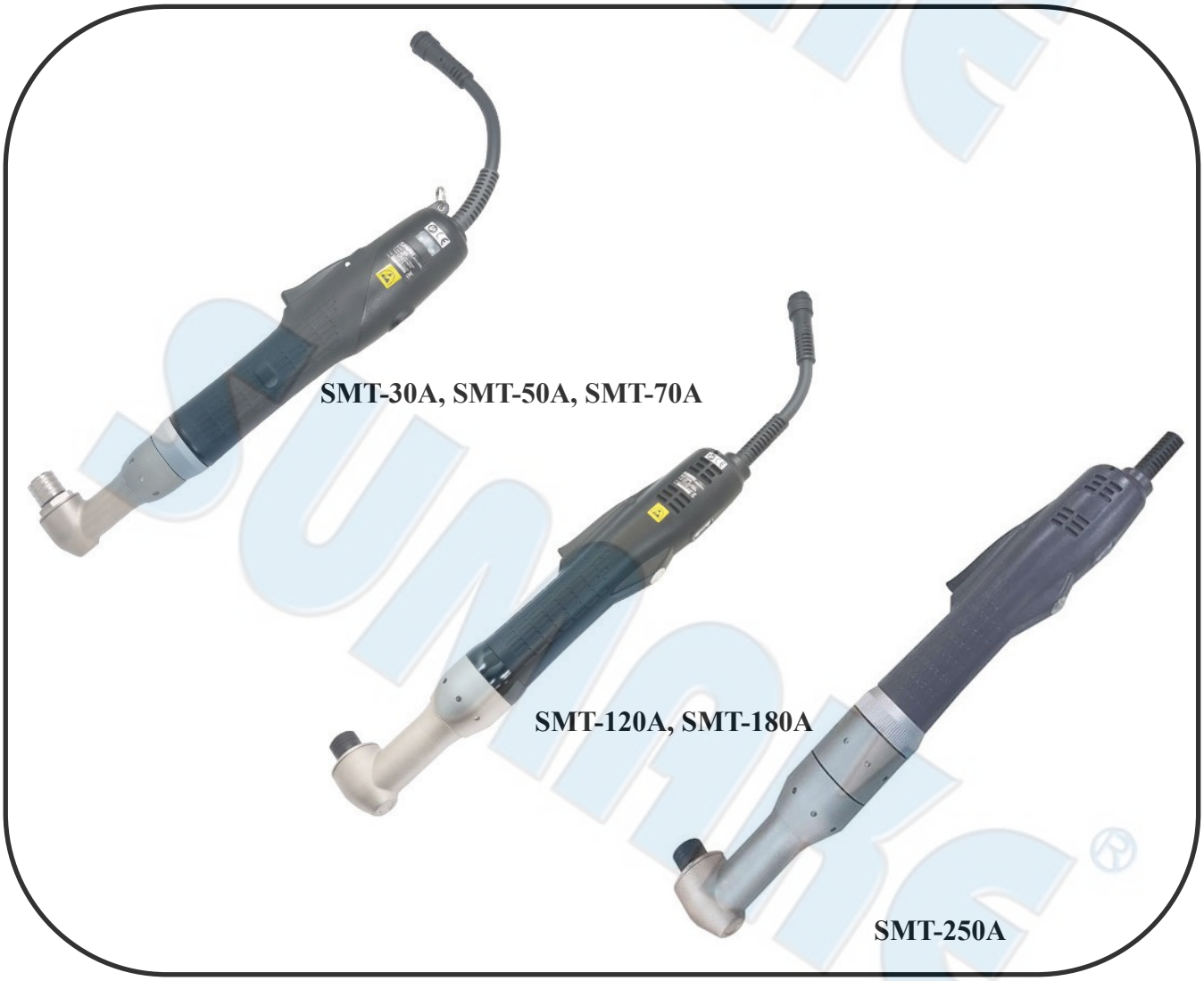
SUMAKE®

Professional & Industrial

OPERATION AND MAINTENANCE MANUAL

ITEM NO.: SMT-30A, SMT-50A, SMT-70A SMT-120A, SMT-180A, SMT-250A

TRANSDUCERIZED DC ANGLE DC40V BRUSHLESS ELECTRIC SCREWDRIVER



SMT-30A, SMT-50A, SMT-70A

SMT-120A, SMT-180A

SMT-250A

SMT-30(50)(70)(120)(180)(250)A-I-2402D-K2

SUMAKE

※Specification

MODEL		SMT-30A	SMT-50A	SMT-70A
Input Voltage (DC)		DC40V		
Power Consumption		90W		
Torque	(N.m)	0.6-3	1-5	1.4-7
	(kgf.cm)	6.11-30.59	10.2-51.00	14.27-71.39
	(Lbf.in)	5.31-26.55	8.85-44.25	12.39-61.96
Repeatable Torque Accuracy		+/- 3sigma / AVG., 7.5%		
Unloaded Rotation Speed (r/min) Can be set and adjusted		120-1100	80-800	50-450
Working Time		1s ON / 3s OFF		
Weight (g)		1150		
Length (mm)		330		
Power Controller		SMT-C1		
Software		N-DAS		
		EAA-AMS		
Bit Type		B9.5	W 3/8"sq	B9.5	W 3/8"sq	B9.5	W 3/8"sq
		B HEX 6.35mm 9.5 6.35 W Square Drive 3/8"					

* 1N.m=10.2Kgf.cm 1N.m=8.85Lbf.in

∗Accessories

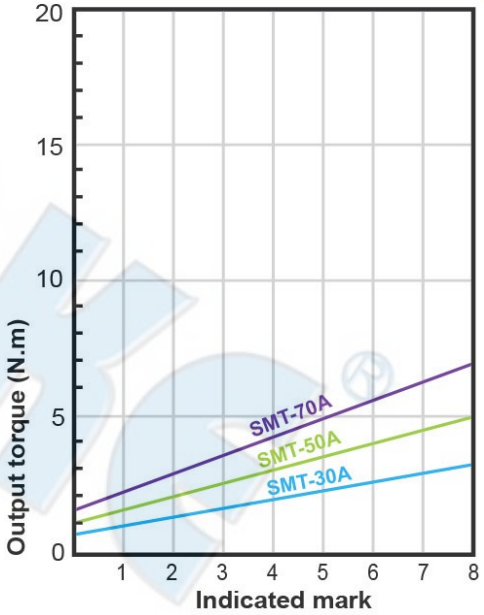
1. BIT Type：

No. 00 · · · Bit use in dia 1.3~1.8mm screw
No. 0 · · · · Bit use in dia 1.8~2.0mm screw
No. 1 · · · · Bit use in dia 2.0~2.6mm screw
No. 2 · · · · Bit use in dia 3.0~4.0mm screw

2. SMT-30A with BIT 2# 2 Pcs.
SMT-50A with BIT 2# 2 Pcs.
SMT-70A with BIT 2# & 3# 1 Pcs. Each

SMT-30(50)(70)A W Type Not attached Socket

Torque Curve



※Specification

MODEL		SMT-120A		SMT-180A		SMT-250A	
Input Voltage (DC)		DC40V					
Power Consumption		90W					
Torque	(N.m)	2.4-12		3.6-18		5-25	
	(kgf.cm)	24.48-122.4		36.72-183.6		51-255	
	(Lbf.in)	21.24-106.21		31.86-159.32		44.26-221.28	
Repeatable Torque Accuracy		+/- 3sigma / AVG., 7.5%					
Unloaded Rotation Speed (r/min) Can be set and adjusted		80-750		40-470		30-300	
Working Time		1s ON / 3s OFF					
Weight (g)		2230				2810	
Length (mm)		393				439	
Power Controller		SMT-C1B					
Software		N-DAS					
		EAA-AMS					
Bit Type		B9.5	W 3/8"sq	B9.5	W 3/8"sq	B9.5	W 3/8"sq

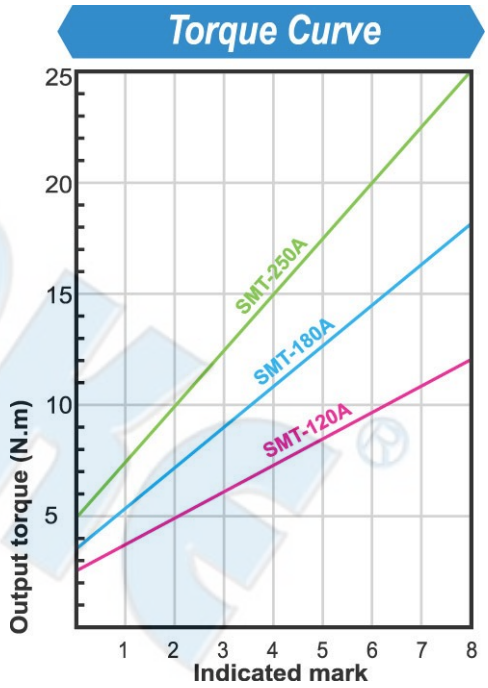
* 1N.m=10.2Kgf.cm 1N.m=8.85Lbf.in

∗Accessories

1. BIT Type：
   - No. 00 · · · Bit use in dia 1.3~1.8mm screw
   - No. 0 · · · · Bit use in dia 1.8~2.0mm screw
   - No. 1 · · · · Bit use in dia 2.0~2.6mm screw
   - No. 2 · · · · Bit use in dia 3.0~4.0mm screw

2. SMT-120A with BIT 3# 2 Pcs.
   SMT-180A with BIT 3# 2 Pcs.
   SMT-250A with BIT 3# 2 Pcs.

SMT-120(180)(250)A W Type Not attached Socket



NOTICE

Metal Assembly sensor screwdriver are designed for installing threaded fasteners in light industrial and appliance manufacturing applications.
SUMAKE is not responsible for customer modification of tools for applications on which SUMAKE was not consulted.

WARNING

Important safety information enclosed.
Read all these instructions before placing tool in service or operation this tool and save these instructions. It is the responsibility of the employer to place the information in this manual into the hands of the operator. Failure to observe the following warnings could result in injury. When using electric tools, Basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following:

Important Safety Rules

WARNING! Read all instructions Failure to follow all instructions listed below may result in electric shock fire and/or serious injury. The term "power tool" in all of the warning listed below refer to your mains operated (corded) power tool or battery operated (cordless) power tool.

SAVE THIS INSTRUCTIONS

1) Electrical Safety

a) **Keep work area clean and well lit.** Cluttered and dark areas invite accidents.

b) **Do not operate power tools in explosive atmosphere, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust of fumes.

c) **Keep children, and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) Electrical Safety

a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools**. Unmodified plugs and matching outlets will reduce risk of electric shock.

b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

c) **Don't expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

d) **Do not abuse the cord. Never use the cord to carry, pull or unplug the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of cord suitable for outdoor use reduces the risk of electric shock.

3) Personal Safety

a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use power tool while you are tired or under the influence of drugs, alcohol, or medication.**
A moment of inattention while operating power tools may result in serious personal injury.

b) **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
Rubber gloves and non-skid footwear are recommended when working outdoors.

c) **Avoid accidentally starting the sensor screwdriver.** Pay attention to that the voltage used is suitable for this model.
Before plugging in the power plug of the sensor screwdriver, first make sure that the switch is off .

d) **Remove any adjusting keys or wrench before turning the power tool on.**
A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.

e) **Do not overreach. Keep proper footing and balance at all times.**
This enables better control of the power tool in unexpected situations.

f) **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.

g) **Secure work.** Use clamps or a vice to hold the work. It is safer than using your hand and frees both hands to operate the tool.

h) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust related hazards.

i) **Use a safety device.** Wear protective earmuffs to reduce personal injury.

4) Power tool Use and Care

a) **Do not force the power tool. Use the correct power tool for your application.**
The correct power tool will do the job better and safer at the rate for which it was designed.

b) **Do not use power tool if switch does not turn it on or off.**
Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

c) **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

d) **Store idle power tools out of reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.**
Power tools are dangerous in the hands of untrained users.
Do not let visitors touch the tool or extension cord. All visitors should be kept away from work area.

e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.**

Many accidents are cause by poorly maintained power tools.

Inspect extension cords periodically and replace, if damaged.

f) **Keep cutting tools sharp and clean**,

Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) **Use the power tools, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.**

Use of the power tool for operations different from intended could result in a hazardous situation.

5) SERVICE

a) Have your power tool serviced by qualified repair person using only identical replacement parts, this will ensure that the safety of the power tool is maintained.

Additional information shall be provided.

a) Instruction for putting into use.

1. Setting-up or fixing power tool in a stable position as appropriate for power tools which can be mounted on a support.
2. Assembly
3. Connection to power supply, cable, fuse, socket type and earthing requirements.
4. Illustrated description of functions.
5. Limitations on ambient conditions.
6. List of contents.

b) Operating Instructions.

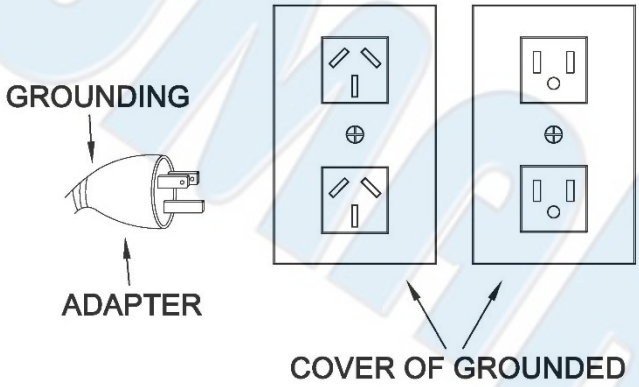
1. Setting and testing.
2. Tool changing.
3. Clamping of work.
4. Limits on size of work piece.
5. General instructions for use.

c) Maintenance and servicing.

1. Regular cleaning, maintenance, and lubrication.
2. Servicing by manufacturer or agent, list of addresses.
3. List of user-replaceable parts.
4. Special tools which may be required.

Grounding Instructions

1、This tool should be grounded while in use to protect the operator from electric shock. NOTICE! To ensure the grounding result, the grounding conductor of the power cord must be well connected with the grounding terminal of power facility. This tool is equipped with grounding conductors. The Green (or Green and Yellow) conductor in the Power Cord is the grounding wire. Never connect Green (or Green and Yellow) to a live terminal. The grounding wires in this tool can not only earth the electric leakage safely, but also can eliminate ESD-the electrostatic that tool occurred while in use.

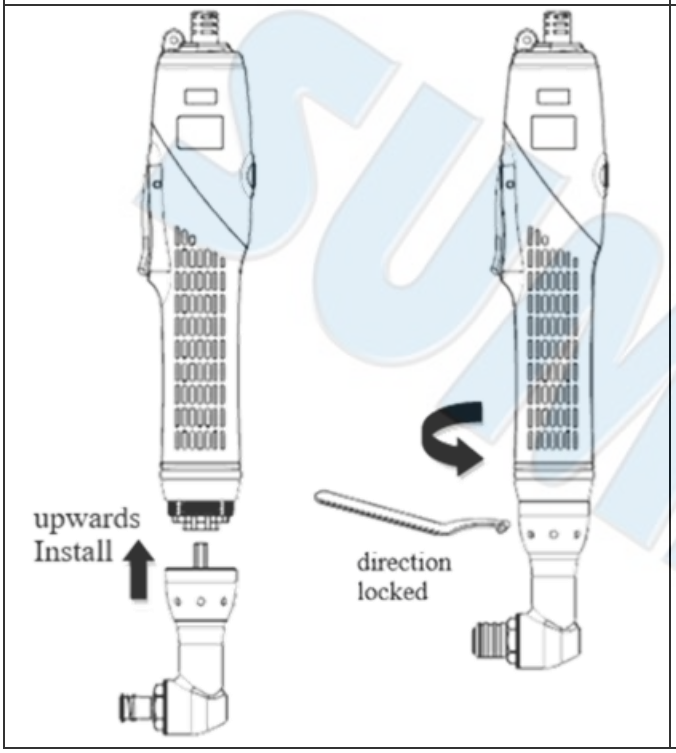
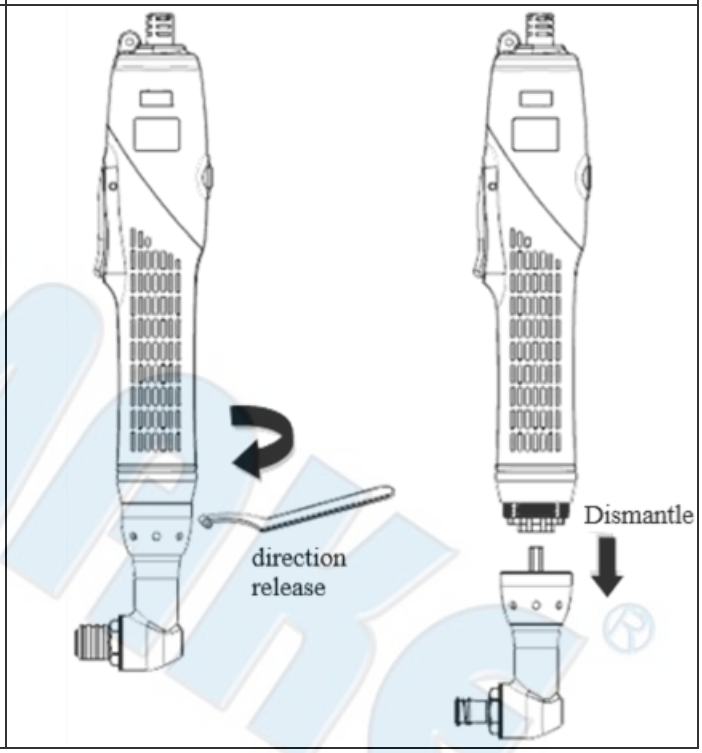


WARNING !

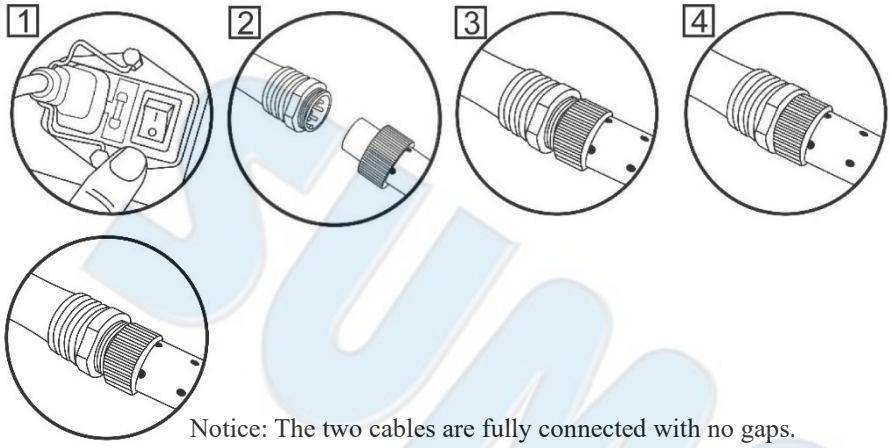
DO NOT OPERATE THIS TOOL WITHOUT PROTECTIVE EARTH CONNECTED

Operations Cautions

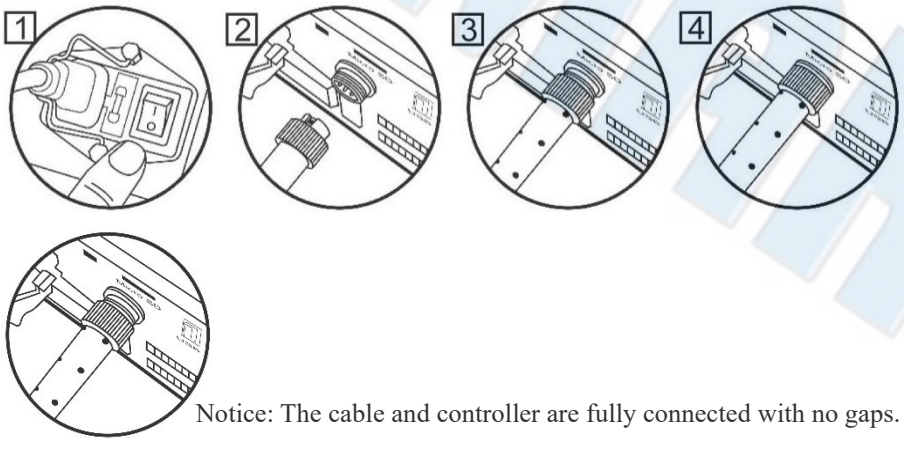
1) Do not allow chemicals such as acetone, benzene, thinner, trichloroethylene ketone, or other similar chemicals to come in contact with the sensor screwdriver housing as damage will result.
2) Use the sensor screwdriver carefully, do not drop or be impacted, it is best to use a balancer to lift it, and set it on the auxiliary arm for operation.
3) Loading and unloading the sensor driver head: Simply pull down the screwdriver head cap with your fingertips to freely attach or detach the sensor screwdriver head, release the finger to return the screwdriver head cap to fix the sensor screwdriver head. Note: Make sure to turn off the power switch and remove the power plug from the socket when installing and removing the sensor driver.
4) Do not drop or abuse the sensor screwdriver.
5) Connect the power cord to a power outlet.
   CAUTION: Danger of electric shock due to wet power cord plug or hands.
6) Do not use this screwdriver for tightening wood screws. This is “Metal Assembly sensor screwdriver.”
7) The control settings of the sensor screwdriver can be set by the SMT-C1 controller. Please refer to the SMT-C1 operation manual for setting adjustment.
8) The sensor screwdriver operation can be set to the press-plate start/down-press start/pull-screw start…etc. by SMT-C1 controller. Please refer to SMT-C1 operation manual.
9) Operation frequency: Over frequently using makes the motor overheated and damage to screwdriver. Enough heat-dissipation is good for screwdriver. Please refer to the Working Time from the Technical Specification sheet.
10) Whenever the sensor screwdriver is not used, turn off the power for the controller or unplug the power cord.
11) Don't touch switch during operating for keeping system from wrong judgement.
12) Please use the designated connection cable for SMT-C1.
13) Install/Removal 90˚angle head Steps

Install	Removal
	

Connect SMT screwdriver and cable



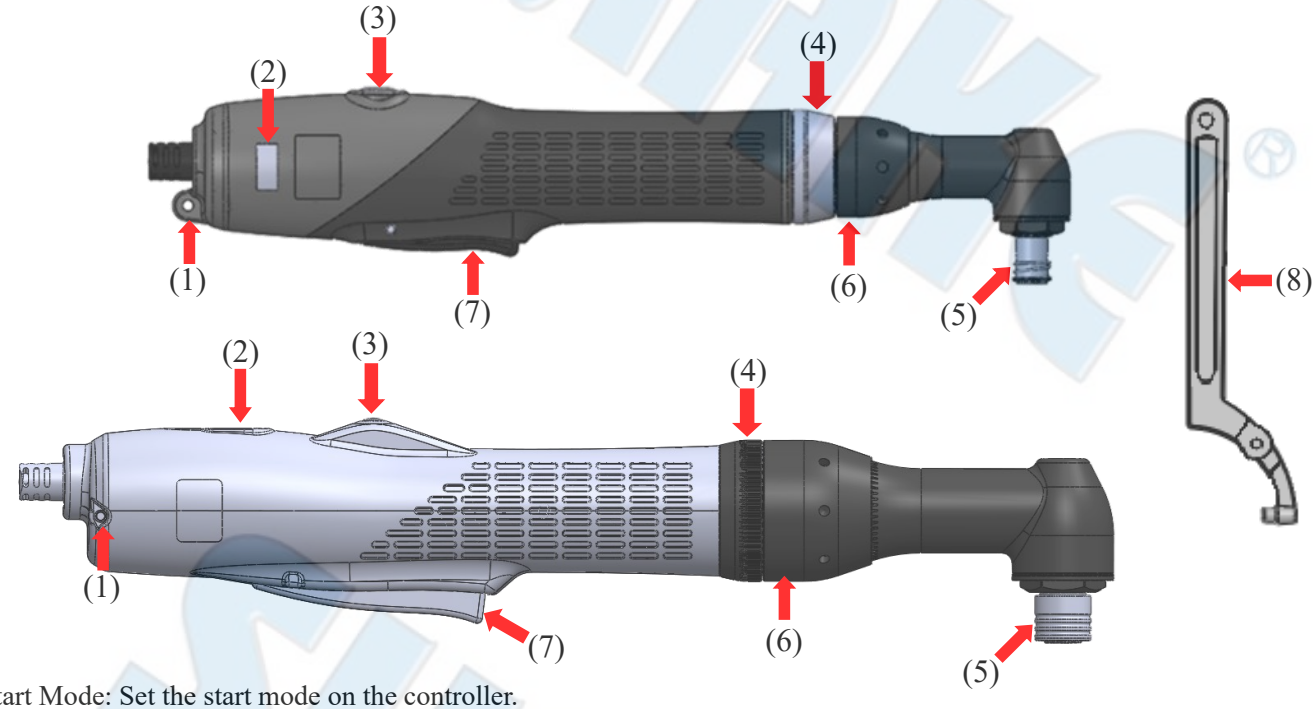
Notice: The two cables are fully connected with no gaps.



Notice: The cable and controller are fully connected with no gaps.

Function / Operating Introduction

Number	Product Name	Description Use
(1)	Hanging Hole	Hanging hole is available, to hang the screwdriver
(2)	Signal Light	Display OK light, NG light, screw removal starts and stop signal
(3)	Button Switch	Switch rotation direction CW/CCW
(4)	Front Lock Ring	Lock stationary gearbox and housing
(5)	Headgear	Load/unload and fixing the screwdriver bits
(6)	fixing ring	Fixing ring is for connecting right angle attachment to screwdriver.
(7)	Trigger switch:	press the trigger switch the screwdriver starts; on the contrary, it stops when the screw has been tightened up or the trigger has been released.
(8)	Hook wrench	A tool is for attaching and detaching right angle attachment.



1). Start Mode: Set the start mode on the controller.
(1). Independent press-plate mode

2). Signal light

	OK Light		NO Light

3). Button Switch: Turn on and off the setting for screw removal, there will be no OK or NG signal action when screw removal is in action.
It is recommended to set the direction on the controller first, before setting screw removal, which includes CW and CCW. Please refer to the following table for 9-level torque and speed setting. The torque to remove screw should be larger than that to fasten screw. For detailed controller setting, please refer to SMT-C1 controller operating manual.

Controller: Program setting Direction	Screwdriver light signal (action)	Controller setting Edit work order setting Screw removal setting	Screwdriver light signal (action)
CW	Forward	CW	Forward
CCW	Backward	CCW	Backward
CCW	Backward	CW	Forward
CW	Forward	CCW	Backward

4). Attaching / detaching bit and bit type
Pull down the holder clamp by fingertip, and it will be unlocked. Thus, the bit can be freely attached and detached (Single finger notion type) select such a bit whose shank is equal to the size shown below.

5). Press-plate Start.
pressed down sensor screwdriver starts functioning when the switch trigger has been pressed down; on the contrary, it stops when the screw has been tightened up or the trigger has been released.

Servicing

Maintenance and Inspection:

1. The screwdriver must be operated in top condition, one day working hour must be not more than eight hours. cording to operating frequency and torque loaded, we suggest adding lubricating oils in clutch per 3-6 months, and kindly contact with distributor when product's maintenance.
2. Please note don't let the motor get over heated, Please refer to the Working Time from the Technical Specification sheet.
3. The frequency use of this electric sensor screwdriver is over than eight hours a day, still it needs periodically testing and treatment.
4. Inspect tool cords periodically and if damaged, have them repaired by an authorized service facility. Inspect extension cords periodically and replace if damaged.
5. Do not remove any labels. Replace any damaged label.
6. To adjust the torque on this sensor screwdriver. Proceed as follows : Stop the sensor driver first and adjust it with the SMT-C1 controller.

CAUTION

1. The use of other than genuine SUMAKE replacement parts may Result in decreased tool performance and increased maintenance and may invalidate all warranties.
2. All repairs and maintenance of this tool and its word must be performed by an authorized service center.
3. SUMAKE is not responsible for customer modification of tools for applications on which SUMAKE was not consulted.
4. Repairs should be made only by authorized, trained personnel. Consult your nearest SUMAKE authorized service center.
5. It is the responsibility of the employer to place the information in this manual into the hands of the operator.

DO NOT ATTEMPT TO REPAIR THIS ELECTRIC SCREWDRIVER

CAUTION

SAVE THESE INSTRUCTIONS DO NOT DESTROY

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

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： **ELECTRIC SCREWDRIVER**

Model/ Serial No.： **SMT-10SI, SMT-30SI, SMT-30I, SMT-50I, SMT-70I, SMT-120I, SMT-180I, SMT-250I, SMT-30A, SMT-50A, SMT-70A, SMT-120A, SMT-180A, SMT-250A**

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 61000-3-2:2019+A1:2021**
- **EN 61000-3-3:2013+A1:2019**
- **EN IEC 55014-2:2021**

Data:

Noise level:	Sound pressure level: No Load: 66.6 dB(A) Sound power level: No Load: 76.6 dB(A) Uncertainty K= 3dB
Vibration level:	No Load: 0.6974 m/s² Uncertainty K= 1.5 m/s²

Name and Signature/Position

Mike Su – Managing Director

Date and Place

2023/7/1

Taipei, Taiwan

NOTE

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