Controller

Product Introductions

APL-301B

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Table of Content

■Special Thanks to our customer

Thank you for choosing our light and powerful electric screwdrivers. To ensure the tool fully utilizes its maximum performance and extend its life, please read this manual before use.

-Table of Content-

■General Safety Warnings

WARNING : Read all safety warnings and all instructions.

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

■Work area safety

- Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

■Electrical safety

- Power tool plugs must match the outlet. Never modify the plug in any way. Unmodified plugs and matching outlets will reduce risk of electric shock.
- 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.
- Do not expose power tools to rain or wet conditions. Water entering a power tool/its adaptor will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply for its adaptor. Use of an RCD reduces the risk of electric shock.

■Personal safety

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a 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.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.
- Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- 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.

Read before use:

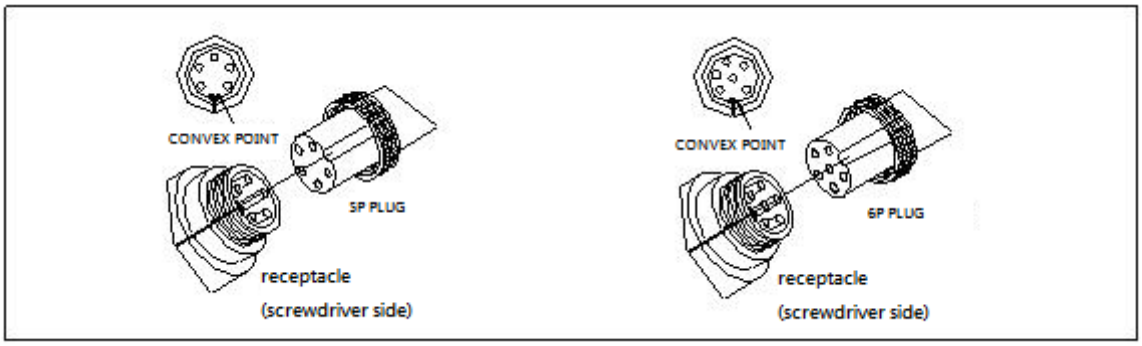
■Please read the following notices before use:

• Set-up Notice

−The controller should be used in dry place indoor without the presence of dust and iron grindings.
−The controller should be positioned on a stable surface to avoid falling caused by vibration.
−The controller should be kept away from high voltage sources and noise generating sources to avoid electromagnetic interference.
−No objects should be placed on the top of the controller. Keep its surrounding clear to allow heat dissipation.

• Caution during the operation:

−Please use the power supply with AC circuit where overload relay is included.
−The plug of the power cord is attached with ground pin, which must be connected to the socket equipped with ground circuit to avoid electric shock.
−The plug of the power cord must be tightly plugged into the socket.
−For plugging and withdrawing the connecting cord of the controller and the screwdriver, please hold the plug, do not pull the cable to avoid short circuit of the internal cable.
−It is directional when you plug the connecting cord into the driver or the controller's socket. You have to insert it in powerfully when align with guiding point in the socket; then twist it to fix it on the driver or the controller. Thus it will reduce the occurrence breakage of connecting cord due to drag. Use the knob to fix the cable with the controller. Please see the picture below:



−Please do not suddenly switch between forward and reverse when the electric screwdriver is in operation.
−Please use the electric screwdriver with under 80% of the rated maximum torque to avoid inaccurate clutch escape (The rate maximum torque may vary with the flexibility of the fastened object). If you need to use over 80% of the rated maximum torque, please be advised to use the screwdriver with higher torque.

• Safety notice

−If notice smog, smell anything unusual, or hear any unusual noise from the controller, please stop using to avoid any hazard. Turn off the power immediately and contact your nearest sales agent after no more smog is found.
−Keep the two-stage switch in OFF position when the controller is not in use. Pull out the plug from the power source socket when the controller is not in use for a longer period.
−Our controller is for ASA electric screwdriver use only. Do not use it with other tools to avoid any hazard.

■Declaration of Conformity CE

We (ASA Enterprise Corporation) declare under our sole responsibility that the products controller described under this manual are in conformity with the following Directives/ or standardization documents: Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.

■Service

Have your controller serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the controller is maintained.

■Warranty

We offer one-year free repair service with this product. The warranty is valid for one year from the date of purchase entered on the Product Information Form. Please note that this warranty policy does not apply to the circumstances listed below and we will charge for repair or labor cost if necessary.

- Normal damage to the spare parts: switch control chip
- Improper use of the electric screwdriver may cause internal discontinuity between the two ends (3P-3P/5P-5P/6P-6P) of the connector cord.
- The unit was not plugged to designated power source.
- Improper use or attempt to repair unit by user.
- Out of the warranty period or the user cannot present the manual.

Product Information

■Feature

- Universal power source: It is suitable for any power source ranges between 100-240VAC 50/60Hz.
- Stepless control: output stepless control and constant voltage makes the assembly of light, thin, short, and small works more efficient and they are key features electron industry pursues after. The smaller the screw, the higher locking and tightening is required. With this function, it can satisfied the requirements of high precision and low inertia in both long and short screws fastening.
- Soft start: There is 0-1 sec. soft-start function inside the power supply. The speed of fastening will gradually change from slow to fast motion during the operation. This lowers the risk of screw shaking when fastening.
- The attached output terminal can be connected to an external controller for single control purpose.

■Specification

Item \ Model	APL-301B
Input Voltage (VAC)	100~240V 、 50/60Hz
Output Voltage (VDC)	25-30 V
Soft-start (sec)	0–1 sec
Output Voltage setting	Stepless
Output Pin	5pin
Internal Signal Output	Switch-on/Brake No-Voltage contact signal
External Signal Output	No-voltage switch-on Signal
No. of Screwdriver/power supply	1piece
Power (W)	90W
Applicable Electric Screwdriver models	ASA-8500/PS ASA-9000/PS
Dimension (mm)	270X130X66 mm
Weight (g)	1100 g
AC cable length (M)	1.8 M
Safety Standards	CB,CE,FCC,ROHS,REACH
Accessories	Small screwdriver、AC cable

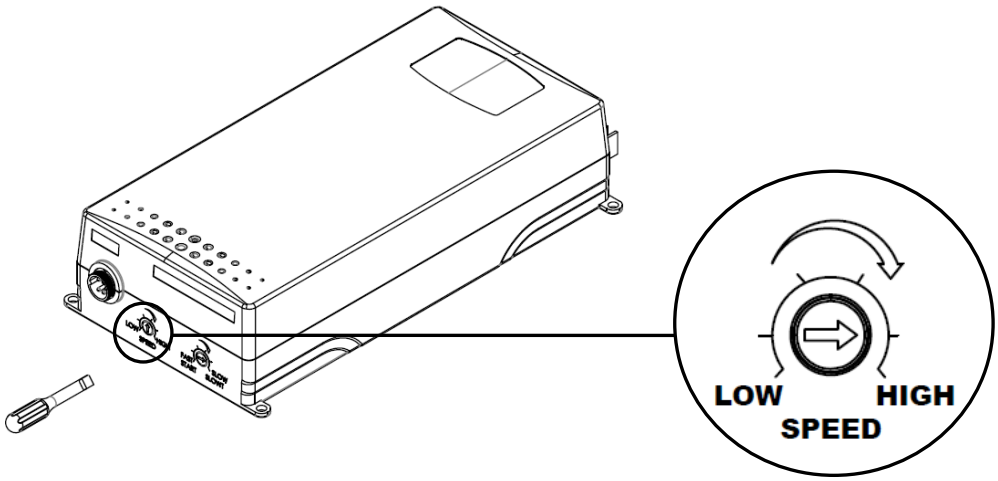
■Parts and functions

- **Speed setting**

  Turn the speed-setting screw through the hole on the side of the power supply with the small screw driver (standard accessory).

–Turn clockwise ↷ 0→10 on the scale to increase the speed.

–Turn counter-clockwise ↶ 10→0 on the scale to lower down the speed.

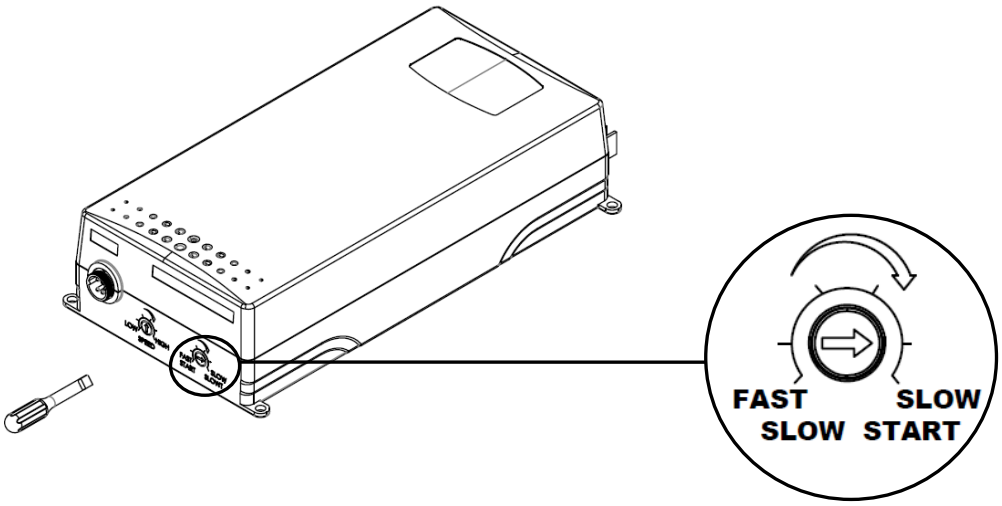


- **Soft-start setting**

  Change the two-stage switch on the side of the power supply by hand.

–Switch to SLOW mode 0 → 1 sec. The speed gradually increases from slow to constant faster speed.

–Switch to FAST mode 0 → 0 sec. Constant speed without change.



Operation

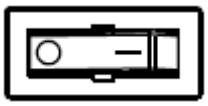
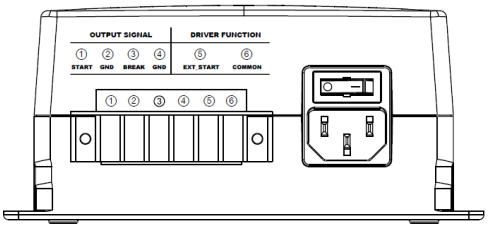
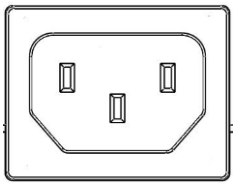
- **Power setting and AC input socket (C13 specification)**

–The input voltage of our power supply is ranged between 100-240VAC, 50/60 Hz. Please make sure you use the correct voltage to avoid any damage to the power supply.

–Connect one side of the cable to the AC power socket and the other side to the AC input socket (C13 specification).

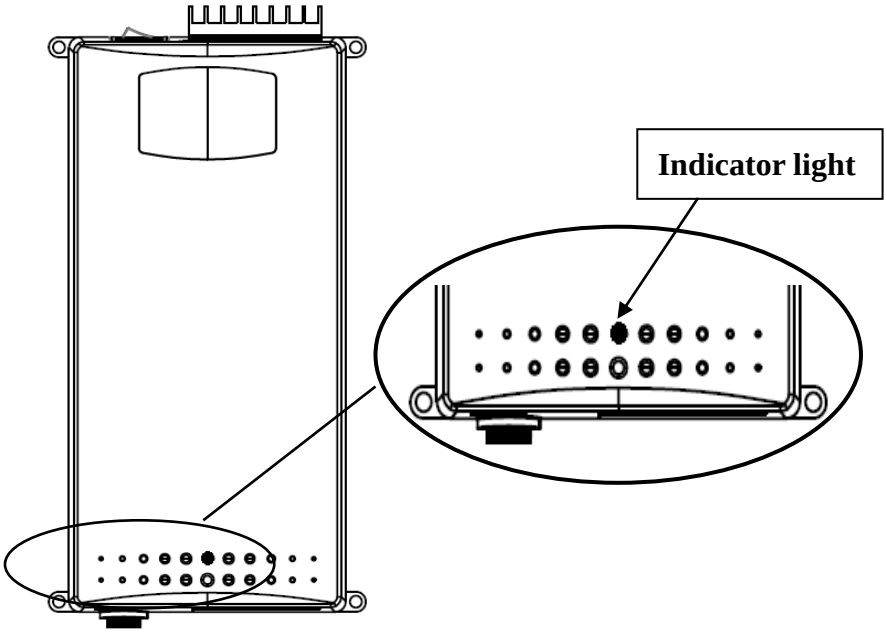
–Change the two-stage switch on the side of the power supply by hand.

- "—" mode, the power supply will be switched on.
- "◯" mode, the power supply will be switched off.

Two-stage Switch	Back of the Power Supply	AC input socket
		

- **Indicator Light**

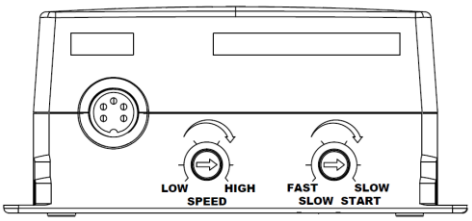
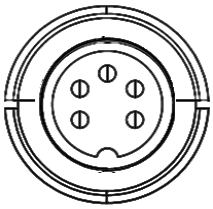
Item \ Model		APL-301B
Green light	Switch-on	◎
	After switch on, flash orange light three times, then turn to green light	
	Brakes	
No light	No DC voltage output	◎
	heating protection (temperature set at 75~85 ℃)	◎
	short circuit protection	◎
Flashing green light	Over circuit protection	◎
	Over power protection	◎
Red light	Brakes	◎



・Output (DC) Plug

－Provide power to the electric screwdriver.

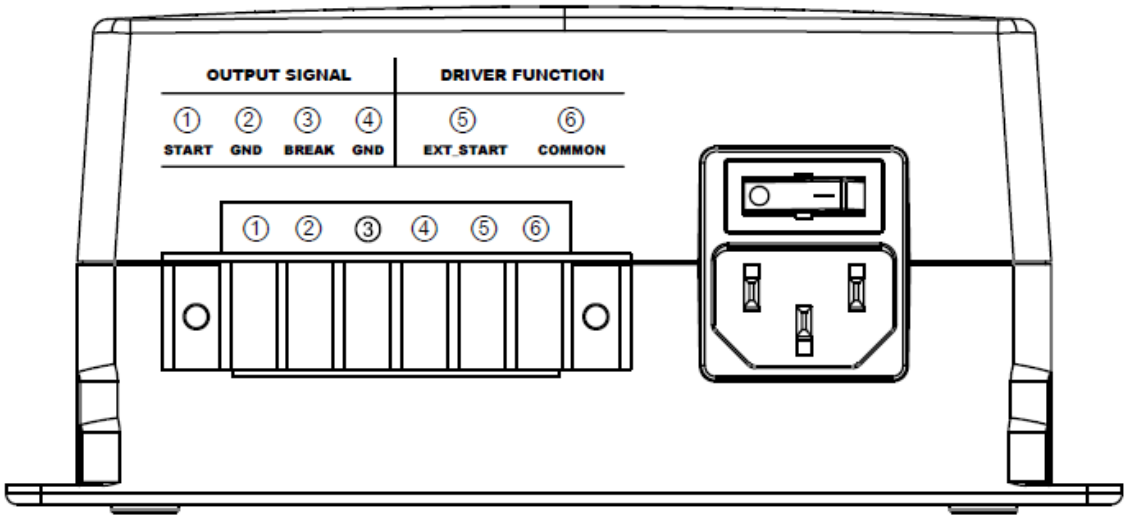
－Plug specification

Front of the Power Supply	5P plug
	

・OUTPUT: Signal output terminal

-①、②: Switch on signal output，when the screwdriver switched on, will export DC24Vvoltage.

-③、④: Shut-off signal output; when the screwdriver reached its set torque and stopped, no-voltage (DC24V) will be exported.



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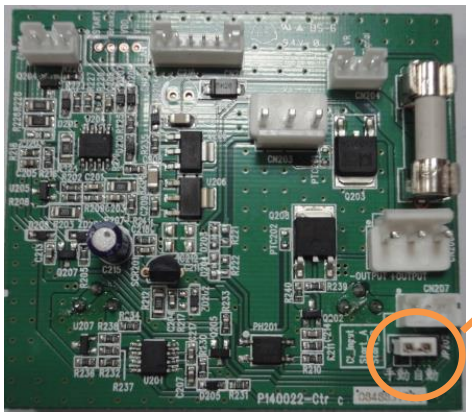
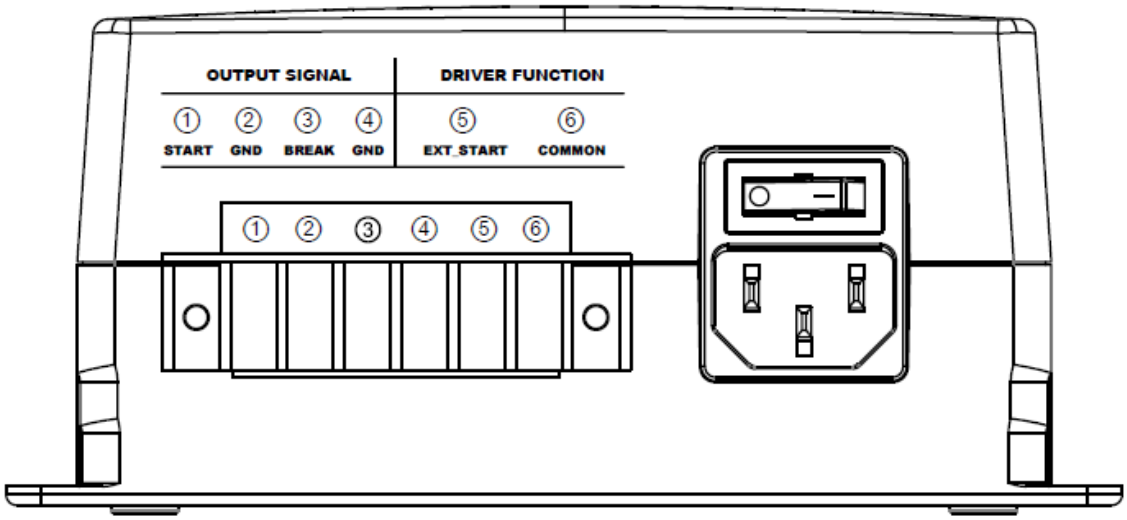
・**DRIVER FUNCTION：External controller use terminal**

-⑤、⑥:Automation switch-on signal: Please do the jumper cable connection on the control board (picture 1) from manual to automation (picture2), which enable external controller to conduct the electric screwdrivers.

Picture 1



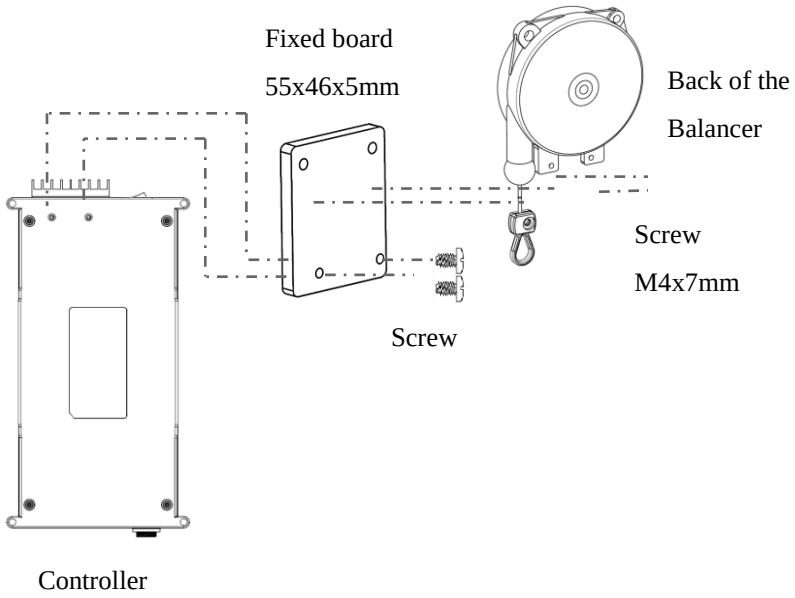
Picture 2

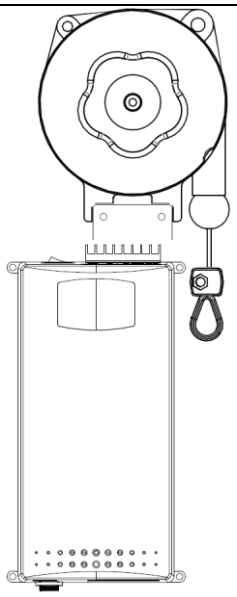


Operation

- **Screw hole for the assembly of the power supply and the balancer**

–There are screw holes at the bottom of the power supply which you can combine the power supply with our SB-series balancer (optional accessory) and the fixed board.
Please follow the instruction below:





■Troubleshooting

If the screwdriver does not work properly, follow the check-list below to examine your screwdriver. If none of the following points apply to the problems you encountered, do not open the unit and contact your local sales agent immediately for further guidance.

- **The screwdriver is out of operation**

– Please check whether the power plug is correctly and tightly plugged into the designated power source.

– Please check whether there is designated DC voltage between 5P-5P or 6P-6P terminal block needle NO: 1“-” potential, NO. 4“+” potential

– Caution: If the screwdriver is 6-pin output in design, needle No. 3 and needle NO. 5 should be conductive. After you turn on the relay inside the screwdriver, you are able to measure the output voltage.

– Please check whether the connection wire plug of 3P-3P, 5P-5P, and 6P-6P is broken. If yes, please replace it with a new connection wire or a new plug. (This problem usually occurs to the plug which connects to the screwdriver.)

– The power supply is designed with electric braking system. If you notice this problem, please contact your sales agent.

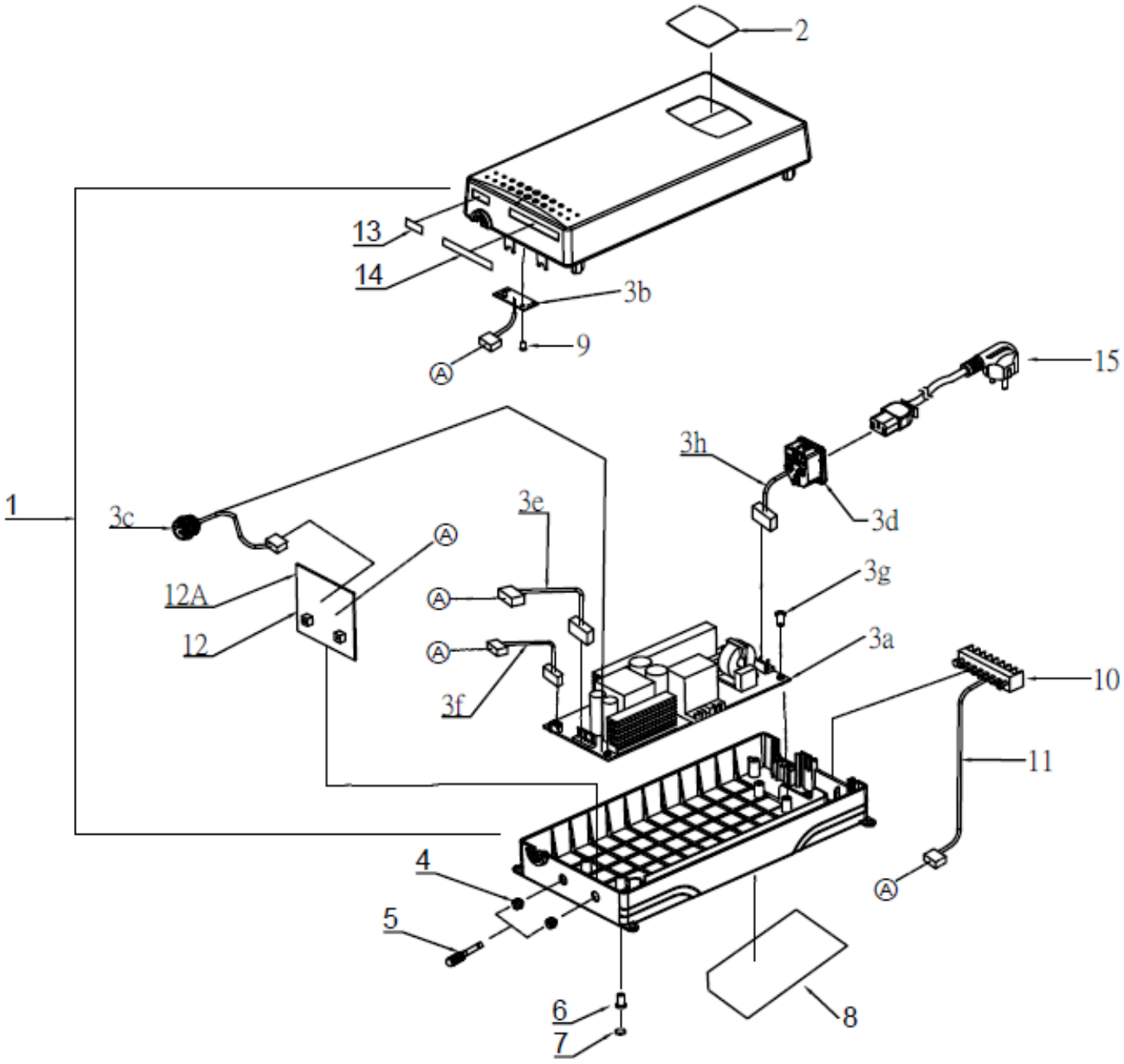
- **The screwdriver keeps rotating**

–The power supply is designed with electric braking system. If you notice this problem, please contact your sales agent.

- **The screwdriver does not stop automatically when the clutch shut off at preset torque**

–The power supply is designed with electric braking system. If you notice this problem, please contact your sales agent.

Assembly Drawing/Parts List



No.	PART NO.	ITEM	DESCRIPTION	AVAILABLE MODEL
1	6Z2075	PLASTIC HOUSING		APL-301B
	6Z2076	PLASTIC HOUSING		
2		MODEL LABEL		
3	2A2924	PCB SUB ASS'Y		
3a	2A2924-MP	PCB SUB ASS'Y		
3b	2A2924-LP	LED PCB SUB ASS'Y		
3c	2A8018	PLASTIC PLUG ASS'Y	5P	
3d	2A7091	AC INLET INCLUID SWITCH		
3e	2L2100	LEADING WIRE FOR CONTROL BOARD	3P-5P TERMINAL BLOCK	
3f	2L2101	LEADING WIRE FOR VR	3P-3P TERMINAL BLOCK	
3g	8T2086	SCREW	M3.0*L:10	
4	6R3016	ADJUSTMENT BUTTON		
5	6R3017	PLASTIC SCREWDRIVER		
6	8T2072	SCREW	M2.6*L:20	
7	6B3020	FOOT	Ø6.5*3.0	
8		SAFETY LABEL		
9	8T2083	SCREW		
10	2Y6100	TERMINAL BLOCK	6P	
11	2L2102	LEADING WIRE FOR OUTPUT SIGNAL		
12	2A2924-CP	CONTROL PCB SUB ASS'Y		
12a	2F1040	FUSE		
13	7L2013	ASA LOGO LABEL		
14	7L2014	ADDRESS LABEL		
15	2W1020	AC CABLE	PSE TYPE	
	2W1024	AC CABLE	USA TYPE	
	2W1064	AC CABLE	EUROPE TYPE	
	2W1043	AC CABLE	U.K. TYPE	
	2W1186	AC CABLE	U.K. WITH FUSE TYPE	
	2W1054	AC CABLE	ASUTRALIA TYPE	
	2W1142	AC CABLE	AUSTRALIA TYPE-FOR 3C TYPE	
	2W1075	AC CABLE	BIG SOUTH AFRACIA TYPE	
	2W1074	AC CABLE	SMALL SOUTH AFRACIA TYPE	
	2W1245	AC CABLE	BRASIL TYPE	

Enjoying in Technique of Assemblies

Retailer's Stamp		Attention! The generic or unsuitable parts might seriously affect the power supply's lifespan, please purchase the parts from original manufacturer to secure your rights.