Serial No：_____

Operation Manual of **ASA** AM Series Digitalized Management System for screw fastening

☐ **A Word of Thanks to Our Customers**

Thank you for choosing lightweight and powerful electric screwdrivers. In order to insure maximum performance and product life, please read this manual before using your screwdriver and power supply.

☐ **Feature**

☐ Universal power source function: Be suitable for 100-240VAC any power source.

☐ Stepless control function: The electronic technology industry pursues thinness, lightness, shortness and smallness as the main stream in the future; the smaller screw, the higher locking and tightening requirements; both long and short screws can be locked and meet the requirements of high precision and low inertia at the same time.

☐ **Specifications**

Model No.	Screwing Manager (Standard Type)			
	AM-30	AM-45	AM-65	AM-85
Counting Range of Accumulative Screwing	1~60000			
Range of Setting Number of Unit Screwing	1~99			
Setting Range of Number of Screwing Time Sample	1~99			
Range of Number of Memory/Calling-out of setting	/			
Setting Range of Screwing Time Sampling	0.1~9.9 seconds			
Setting Range of Screwing Time Error Value	± 1~99%			
Judgment	Sound of OK and green LED light on/Sound of NG and red LED light on			
Signal Output Mode	PLC output			
Input Voltage	100~240 VAC			
Output Voltage/Plug Needle Number	20~30 VDC (5P)	20~35 VDC (5P)	20~30 VDC (5P)	20~30 VDC (6P)
Power(Including Electric Screw Driver)	75W	75W	60W	75W
Applicable Model	BS-2000 BS-3000 BS-4000/F BS-6000 BS-6500	ASA-2000 ASA-3000 ASA-4000 ASA-4500 ASA-5000M	ASA-S2000M -S2500M ASA-2000M -3000M -4000M -5600M ASA-7000 ASA-8000	ASA-6000 -6500 -6800 -7500 -8500 -9000
Dimension	152(L) x 83(W) x 60(H) mm			
Weight	0.6 kg			

☐**Matters to be aware of：**

☐The power supply should be plugged in a power source with leakage and overload protection.

☐The power supply should be used in places with room temperature, normal humidity level and without the presence of dust and iron grindings.

☐The power supply should be positioned on a stable surface so that it will not fall to the ground due to vibrations.

☐The power supply should be used in places away from high voltage sources and noise generating sources so as to avoid electromagnetic interference.

☐No objects should be placed on top of the power supply. Also, no objects should be placed in the immediate vicinity of the power supply so that it may dissipate heat effectively.

☐ **Before use, read the following:**

☐ Please do not exchange the use mutually.

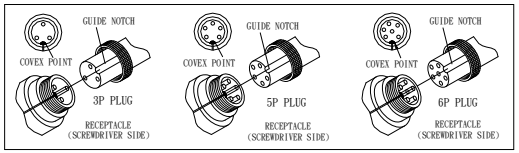
☐ The plug of the power cord is attached with ground pin, which must be connected to the outlet equipped with ground circuit to avoid electric shock.

☐ The plug of the power cord must be tightly plugged into the outlet.

☐ For plugging and withdrawing the connecting cord of power supply and screwdriver, please hold the plug, do not pull the cable to avoid short circuit of the internal cable.

☐ The internal connecting wire of the plug at the output end of the unit is specially used for electric screw driver, which shall not be used for other purpose.
5P-5P/6P-6P: needle NO: 1 is "-"potential and NO: 4 is "+" potential.

☐ When plug the connecting cord into the driver or the power supply socket, for it has direction, so insert it in powerfully when align with guiding point in the socket; then twist it to fix it on driver or power supply. Thus it will reduce the occurrence breakage of connecting cord due to drag.



☐ Please operate the electric screwdriver under 70% of the rated maximum torque to avoid the clutch can not escape correctly (The rate maximum torque may vary with the flexibility of the locked object).

☐ If the unit is not used for long time, please draw out the plug from the outlet and keep it carefully and clearly.

☐ Troubleshooting

If the screwdriver does not work properly, check the list below. If you cannot solve the problem do not open the unit. Contact one of our authorized agents as soon as possible.

☐ The screwdriver is out of operation:

- Inspect whether the plug of the power cord is correctly and tightly plugged into the designated power source.
- Inspect whether has 30, 35VDC or designated output voltage between 5P-5P/6P-6P needle NO: 1"-" potential and NO: 4"+" potential.
- Inspect whether has short circuit between any 2pin at the plug of 5P-5P/6P-6P connecting cord; if yes, please replace with new cord or plug, especially for the plug at the screwdriver side.
- Inspect the relay of the break circuit, whether the contact point is fused and can not be separated (NO→NC). Inspecting method: lightly vibrate the unit for 2-3 times; if there is a voice of "ka", it means the contact point of the relay is separated; then operate the screwdriver, if the screwdriver back to normal, please replace a new relay (this should be operated by technician).

☐ The screwdriver keeps rotating:

- Inspect the relay of the break circuit, whether the contact point is fused and can not be separated (NO→NC). Inspecting method is same as above item.

☐ The screwdriver can not stop automatically when the clutch shut off at preset torque:

- Inspect the relay of the break circuit, whether the contact point is fused and can not be separated (NC→NO). Inspecting method is same as above item.

☐Warranty

We provide a one-year free repair service warranty with this product. The warranty is good for one year from the date of purchase entered on the Product Information Form. The retailer's stamp must appear on the form to confirm the date. However, the following circumstances we will charge the user for any parts and labor cost associated with repairs.

☐For repair involving normal wear to parts including carbon brushes, bits, power cord, connecting cord and the exterior surface parts.

☐ Improper use of the electric screwdriver may cause a discontinuity between the two ends ("5P" to "5P" or "6P" to "6P") of the connector cord.

☐ The unit was not plugged to designated power source.

☐ If there was inappropriate use or attempt to repair unit by user.

☐ Out of the guarantee or if the user can not present the manual with seller's stamp.

Retailer's Stamp	

◎Specifications and design may be changed without notice for improvement(A-0)

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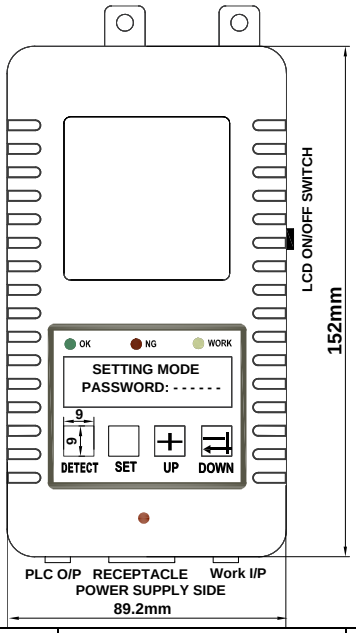

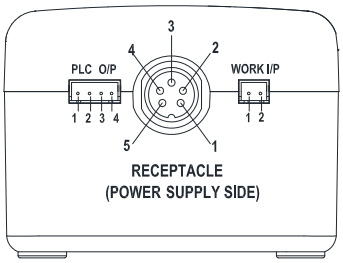

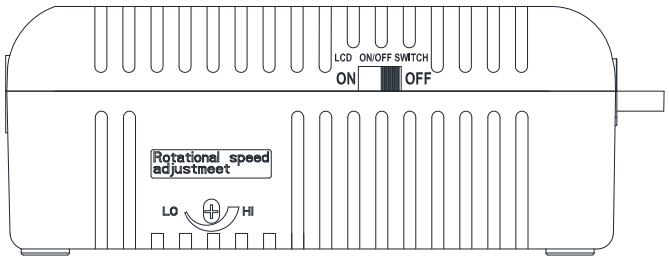

Screen	Screen Indication	Discription and Function of Each Display Screen
1.	+ OK： 0/1 + NG： 0/1	In the screw tightening operation, the first display screen indicates the accumulation numbers of OK and NG of screw tightening for the finished product
2.	STD：0.00 s +10% DET：0.00 s -10%	In the screw tightening operation, the second display indicates the set standard screw tightened time, tolerance and actual screw tightening time.
3.	SETTING MODE PASSWORD：+ + - - SET DET	After entering the mold setting screen, it permits to perform 10 tasks, such as sampling time, memory and save or to call out a specified program.
4.	1-1 OK CNT DIR +	Selecting the statistics of total qualified tightened screws (work pieces) (increment/decrement) Press + to illustrate the positive statistics, press − to illustrate the inverted statistics, press SET to confirm and shift to the next display screen.
5.	1-2 SET +OK CNT 60000 (when 1-1 was set "+")	In Item 12 above, when + is pressed, the total qualified tightened screws statistics is set in the incremental mode. When the total reaches the set quantity, it activates an alarm (long sound) to notify the operator. The maximum is 60000 screws. Press + to increment, press − to decrement, press SET to confirm and shift to the next display screen.
	1-2 SET -OK CNT 60000 (when 1-1 was set "—")	In Item 12 above, when − is pressed, the total qualified tightened screws statistics is set in the decremented mode. When it comes to zero, it activates an alarm (long sound) to notify the operator. The maximum is 60000 screws. Press + to increment, press − to decrement, press SET to confirm and shift to the next display screen.
6.	2-1 SAMPLE VALUE 10	Setting screw tightening time for number of sampling in the new work piece (the maximum sampling number is 99 pieces.) Press + to increment, press − to decrement, press SET to confirm and shift to the next display screen.
7.	2-2 SAMPLE 0/10 0.0 0sec OK:+ /-	Display the actual screw tightening time for sampling and total of sampling Press + or − to confirm and shift to the next display screen. If not finished the setting will according to the last setting to de the standard.
8.	2-3 ADJ STD TMR 0.00sec	Compensate the sample screw tightened average time , the maximum is 9.99 sec. Press + to increment time, press − to decrement time, press SET to confirm and shift to the next display screen.
9.	3-1 RANGE RATE +10%	Setting up the upper limit of ratio for sampling screw tightened average time, the maximum permits increment ratio is up to 99%. Press + to increment, press − to decrement, press SET to confirm and shift to the next display screen.
10.	3-2 RANGE RATE −10%	Setting up the lower limit of ratio for sampling screw tightened average time, the maximum permits decrement ratio is down to 1%. Press + to increment, press − to decrement, press SET to confirm and shift to the next display screen.
11.	4-1 ADJ PASS CNT 0	In case that the work piece is of poor quality, there is no way to complete the screw tightening operation, but it allows a forced release. The maximum forced release is 60000 units
12	5-1 PIECE TOTAL 0	Display the total quantity of finished screw tightening.
13	6-1 ADJ VOLUME SMALL	Setting up the volume, there is large, middle, small three stages. Press + or − to adjust the volume, press SET to confirm and shift to the next display screen.

Remarks:

1. Method to delete the mold code
   (1) Turn the power switch of LCD to OFF position
   (2) Press and hold + − simultaneously, turn on the power switch for 3 seconds, when the LCD displays and a "buzz" sound is heard, release hands, all mold codes are hereby deleted.

2. Lock function: Press + to lock up the input from the control, but not influence the output. This way would prevent losing the authenticity of parameters interfered by improper operation of screwdriver.

3. Classification of alarm sound and the lamp signal:
   Completing screw tightening operation on one single work piece, three buzzes. Lamp signal OK(green LED) light and the lamp signal NG(red LED) go out.
   Skid thread or abnormal tightening on one single work piece, five short buzzes. Lamp signal NG(red LED) light and the lamp signal OK(green LED) go out.
   Failure to tighten but force release is required. One long buzz continues until the ↵ is pressed.
   The screw tightening mission is completed, three buzzes. Lamp signal OK(green LED) light and the lamp signal NG(red LED) go out.

4. Signal output: PLC output transmits the tightened OK screws signal(pin no.1,2),tightened OK total screw signal(pin no.1,4)and tightened NG screws signal(pin no.1,3) no contact voltage signal.

5. Disposition of abnormal display: When it displays gabbles and irregularities, turn off the power and turn it on again, it will resume normal operation.

6. WORK I/P Connection: When lining with the production line, the 2P connector A connects with pin 1 and pin 2 linking to the roller switch.

Operation Method

1. Connect 5P or 6P cable between the screwdriver and the controller.
2. Plug up the power supply
3. Turn on the power switch.
4. The display screen (1) will appear after 3 seconds
5. Press SET to enter password setting screen (3)
6. Key in the password + + − − SET DETECTOR to enter another display screen (4). If password keyed in is wrong, it automatically returns to the display screen (3). The procedures illustrated in the display screens (4) through(5) are for parameters setting,
7. The display screen (6) is to set the sample screw number. Press SET to enter the display screen (7).
8. The display screen (7) shows the process of tightening screw operation. While the tightened torque reaches the set torque, the screwdriver stops turning, the screen display the measured time obtained for tightening the screw and ask you to confirm whether the time value is effective or not. If it is effective, you press + or − to acknowledge. When the screws as specified in screen (6) are completed, it skips to the next display screen (8).
9. The procedures illustrated in the display screens (8) through (13) are for parameters setting, please refer to the "Description and Function of Each Display Screen." After every setting, press SET to shift to the next display screen.
10. If it requires resetting, please repeat the procedures stated in Sections 6 – 10.
11. If it requires no setting at all, press DETECTOR to leave the setting mode and return to screen (1), press DETECTOR once more to enter the work screen (2).
12. Work function

12-1: Linking with the production line
For monitoring purpose, plug the connector A (open type, optional) into the socket WORK I/P on the back and link the roller switch for transmitting the sensed position signal to the controller and the WORK indication lamp will light on the control panel. When the work piece arrives at the lock position, if the screw tighting operation fails to fulfill the set parameters (such as tightened torque, depth and quantity), the machine will activate an alarm to notify the operator.
In the event that the work piece has not now to achieve the set parameter, the operator is in the position to press ↵ to make a force release and the eliminate the alarm, rendering the machine in readiness. The forced release quantity will be display on the screen (11) for easy management.

12-2: Used as an Independent Work Station
the 2P connector A connects with pin 1 and pin 2 linking to the roller switch., and the WORK indication lamp will light; it implies the monitoring function is on.

13. Upon completion of setting, simply operate the electric screwdriver to perform the screw tightening operation; the machine will carry out the counting and quality assurance.