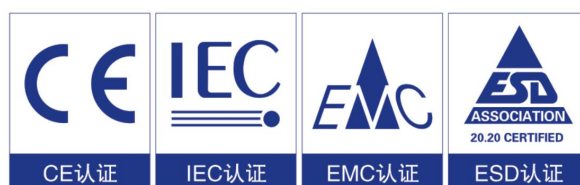


N180

Web Guide Controller



User Guide



Solemnly declare

First of all, sincerely thank the masses of customers for choosing products of ARISE Technology (Chongqing) Co., LTD. In order to give full play to the performance of this equipment, please read this operation instruction before use. Please keep this manual in designated place, so that it's easier review immediately when necessary. This manual is suitable for quick application but the omission is inevitable. Please contact us if there are unclear parts, errors and omissions. In terms of the application consequence of this manual, we don't take responsibility for something irrelevant. Please understand. Thank you!

Safety instructions

In order to use this product safely, again, before installation and use, please read this manual specifically. Be careful about safety, use this product properly, and obey all the rules in this manual. This web guide is electromechanical device controlled by CPU and used to correct the deviation of coil, so we have to strictly follow the relevant provisions, law and appliance standards of electromechanical equipment, for handling, installation, operation and maintenance.

Do enough preparation before starting the web guide, including installation, wiring, trial operation, etc. In addition, there should be regular maintenance of equipment, to ensure that the equipment can run normally and extend the machine's usage life.

1、 Installation:



Warning

- ★ Installation must be processed under power off protection to avoid electric shock.
- ★ Don't let the equipment fall or hit the equipment fiercely.
- ★ Don't place heavy items upon the equipment or use equipment as foot block, to avoid the damage or malfunction of equipment and injury of person.
- ★ Don't put the electrical conductive stuff such as screw、 metal scrap and combustible into equipment's inside, to avoid damage or malfunction of equipment caused by short circuit fault or fire disaster.
- ★ Please use the equipment in the environment required by the instruction, to avoid accident like electric shock, fire disaster、 breakdown etc.
- ★ Please install the wiring according to instruction, if it's insufficient to install, accident will happen.
- ★ This equipment is not designed for anti-explosion. Please do not use it in conditions which ask for anti-explosion.

2、 Wiring:



Warning

- ★ Let the professional wireman to do the wiring work with the instruction, to avoid accidents.
- ★ Please execute D(the original third) grounding, to avoid electric shock.
- ★ Don't destroy, stretch extremely tight, under pressure of heavy items and squeeze the connection wire, to avoid electric shock.
- ★ Don't connect the terminal of wire improperly, to avoid electric shock.
- ★ Please connect the power line with assigned voltage. If it's wrong connection, it will cause fire disaster、 equipment damage and breakdown.

Chapter 1. Product Introduction

N180 is a cost-effective web guide controller, which is specially used to track the edge of the material. It is suitable for automatic control of material rewinding, unwinding, and intermediate guidance. The N180 uses ultrasonic or infrared sensor to detect signals to calculate the deviation of the material, and according to the result, the stepping motor is driven to correct the offset material.

Main functions and characteristics

Item	N180	Other product
CPU	32 digit CPU (FPGA+ARM)	C51/PIC/AVR, 8 digit CPU
Frequency	168MHz	8MHz
Motor Driving	Advanced FPGA drive motor	MOS tube drives DC brushed motor
Reactive Time	0.05ms	>2MS
Screen	TFT screen with 260000 colors	Digital tube / ordinary monochrome screen / no screen

Motor Speed Regulation	PID dynamic programming algorithm	Potentiometer adjustment analog circuit processing Or ordinary PID control
Sensor interface	Single/dual photoelectric eye analog、 Ultrasonic sensor analog、 CCD sensor analog、 Can also be connected to two switching signals	Dedicated analog sensor Can't connect the switch sensor
Anti-interference	adopts metal shell, stronger anti-interference	Plastic shell, general anti-interference
Commutation	Electronic commutation	Resistance-capacitance commutation or carbon brush commutation
Reliability	high	general
Maintenance cost	Maintenance-free	The replacement of resistor-capacitor or carbon brush

Chapter 2. Installation environment and wiring

2.1 Installation environment

environment	condition
temperature	0°C-40°C(non frozen)
humidity	Below 80%RH(non condensing)
environment	☆ Indoor(avoid direct sunlight). ☆ No corrosive、flammable gas、oil contamination and dusty place. ☆ Good ventilation.
addition	Avoid installing in places with a lot of vibration. Leave a certain amount of space for the equipment under the condition of sufficient installation space to ensure good heat dissipation.

2.2 Basic wiring

电机 MOTOR				限位开关 LIMIT SWITCH			外部控制 A/M		传感器 SENSOR					电源 DC24V			
A+	A-	B+	B-	12V	COM	左 限位	中 限位	右 限位	自 动	COM	信号二	信号一	模 拟 量	COM	12V	24V	0V

The wire is connected before leaving the factory, and it can work normally by plugging in the corresponding plug directly. Under normal circumstances, do not remove the wire. If the wire needs to be lengthened, please record the wire sequence

Note: Be careful not to connect the limit switch wire and the sensor wire in reverse, otherwise it will not work properly

Power connection: "24V" is connected to "+V" on the switching power supply, and "0V" is connected to the switching power supply "-V". The "ground" terminal is grounded to the enclosure. Switching power supply L and N are connected to AC 220V. The power supply must be well grounded.

Sensor wiring: The switch sensor used in this system is compatible with single switch and double switch. "12V" and "COM" are connected to the positive and power ground of the sensor respectively, and "signal one" and "signal two" are connected to the two switch values of the sensor respectively. At the output end, if the sensor has only one switch signal output, it should be connected to "signal one" and the "0-5V" interface is used as the analog input end.

External control wiring: short-circuit "external-automatic" and "COM" to achieve external control automatic correction and manual correction.

Limit switch connection: "12V" and "COM" are power output positive and ground respectively, "middle limit" is the input end of the actuator's middle limit switch, "left limit" and "right limit" refer to the actuator. Two different direction limit values, different motor actuators may be different; in manual correction mode, let the actuator run in one direction, and then short-circuit "left limit" and

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"COM" or "right limit" and "COM" ", if the actuator stops, the short-circuited terminal is the upper limit input terminal in the corresponding direction, and the other end is the limit input terminal in the opposite direction.

Motor wiring: connect the "+" and "-" of phase A and B of the motor to "A+", "A-", "B+", and "B-".

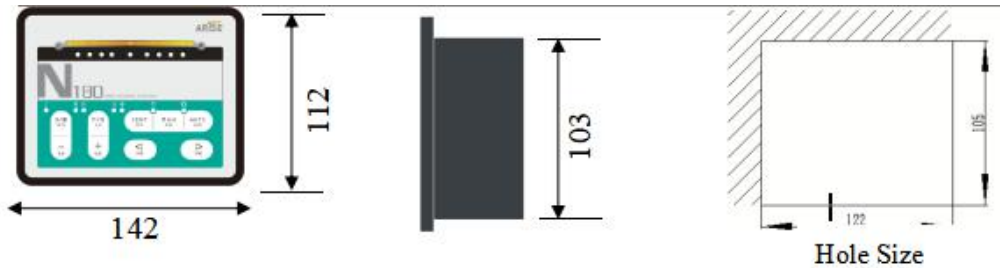


Chapter 3. Specification and installation size

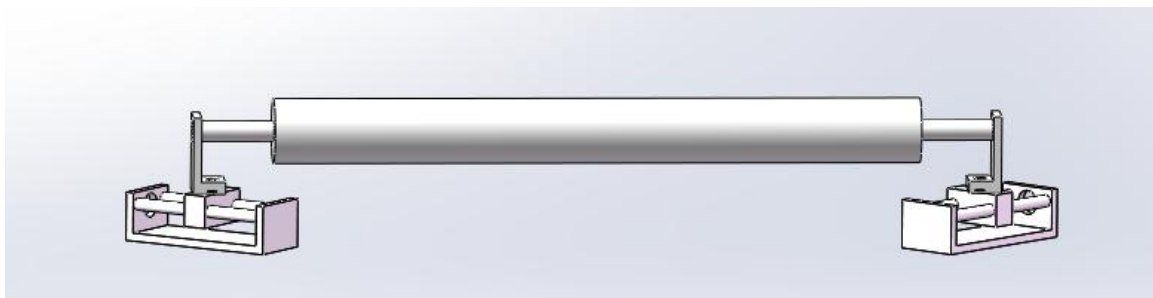
3.1 Standard specification

Item		Specification
Power supply	Working power input	DC24V, electric current \geq 4A(Recommended 150W)
	Working power output	DC12V, for sensor and limit switch, output current \leq 2A
	Motor drive output	Output control 0~24V , used to control stepper motor, electric current is determined by driver specification

3.2 Appearance and controller installation size



Single guide roller split correction installation method

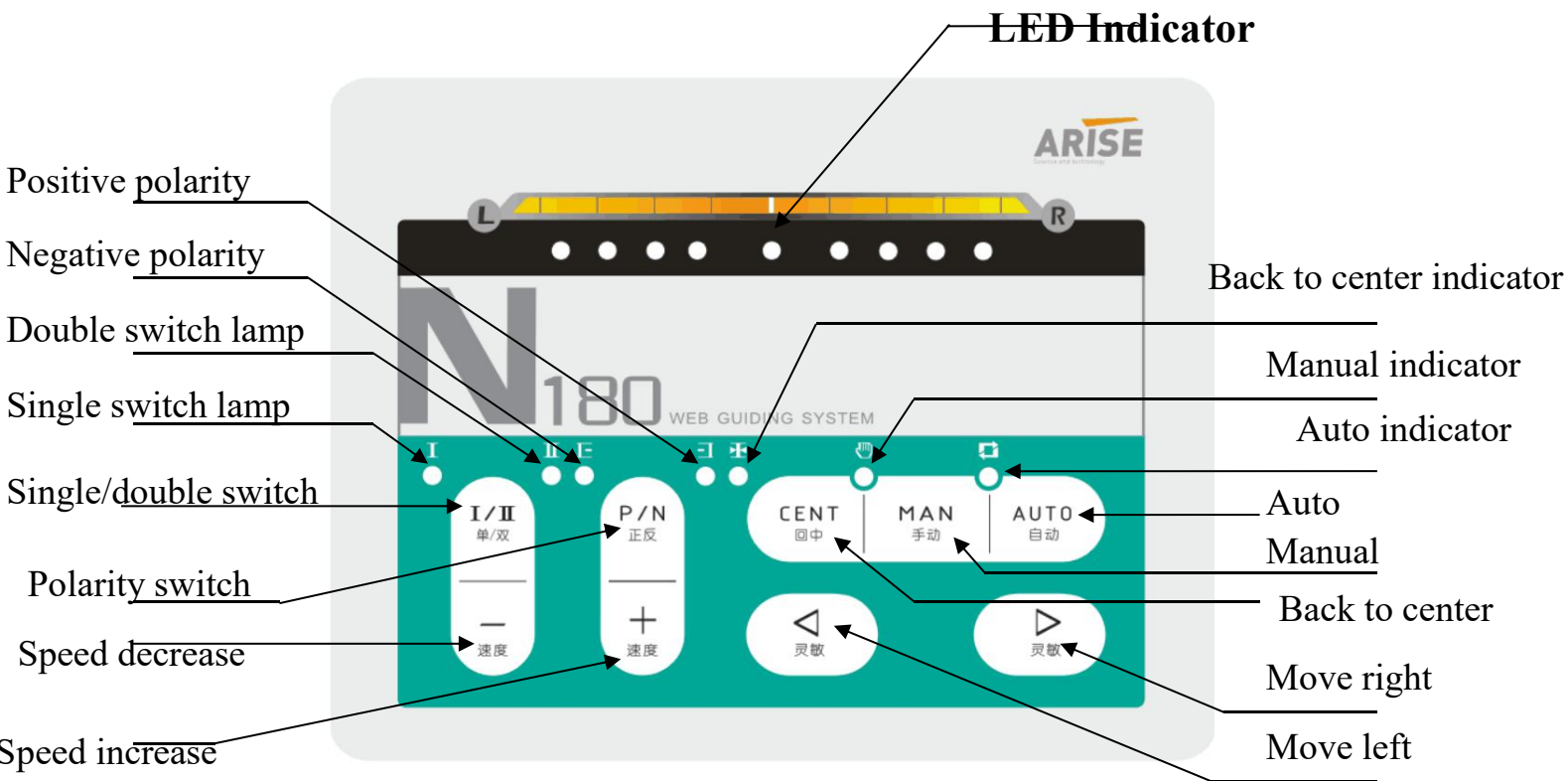


Note: The single guide roller split correction frame is mainly used to correct the offset material at the exit of the oven, and the direction of the eight-character direction outside the installation method is the discharge direction.



Note: The grounding label on the rear housing of the controller must be well grounded.

Chapter 4. Operation interface and parameter setting



1 Back to center/manual/auto indicator:

Into the back to center/manual/auto mode, the indicator light is on.



CENT/MAN/AUTO button: enter back to center/manual/automatic mode.



Speed increase button: increase motor speed in auto mode.



Speed decrease button: decrease motor speed in auto mode.



Right button: increase sensitivity in auto mode. Inching control of motor in manual

mode.



6

Left button: decrease sensitivity in auto mode. Inching control of motor in manual mode.



7

I/II button: single or double switching value signal.



8

P/N button: polarity switch.

Appendix Common faults and Solutions

1. There is no response after power-on, and all indicators are off

Check whether the DC24V output of the power supply is normal, check whether the power cord is intact, whether the power plug is in good contact, and whether the wiring is correct, and then plug it in again.

2. The actuator cannot be limited

- ① Check whether the wiring is correct, whether the joint is in good contact, and plug it in again
- ② Check whether the limit switch is damaged, the red light on the switch will be on when the limit switch is in place
- ③ Adjust the position of the limit switch and check whether the position of the limit switch exceeds the maximum stroke of the actuator
- ④ Check whether the left and right limit switches are connected reversely, and try to exchange the two limit switches.

3. The actuator does not work

- ① Check whether the sensor wiring is correct. For a single switch sensor, it should be connected to "signal one",
- ② Check whether the coupling or synchronization wheel is loose, and whether the belt is broken
- ③ Separate the actuator from the frame, and check whether the mechanical part is stuck or the thrust of the selected driver is insufficient.
- ④ Judging whether the motor is normal: remove the A+A-B+B- plug of the motor, and use a multimeter to measure the resistance of the A+ and A- coils in several ohms. The same is true for B+ and B-, and there is infinity between A and B phases.

4. The driver can work manually, and only move in one direction automatically

- ① Cover the sensor with material to see if it can be reversed. If possible, switch the polarity and it will be normal
- ② Check whether the sensor wire is loose or broken.
- ③ If the above methods have been tried, it still looks the same. If the sensor hardware is faulty, only send it to the manufacturer for repair.
- ④ The drive jitter is too large. Processing method: Reduce the speed and sensitivity in

the automatic state, and switch the sensor mode to the II mode.

⑤ The manual direction is reversed: you can reverse the A+ and A- lines, and at the same time reverse the left and right limit lines.

5. Rectifying roller frame swings back and forth greatly or the response is not sensitive

Check if the roller frame is installed correctly (please refer to the roller frame installation diagram) whether the material is slipping on the roller, you can increase the tension or increase the friction of the roller; the sensitivity and speed are OK Adjust it; the sensor can be as close as possible to the swing roller; check whether there is a gap between the drive and the mechanical part.

6. The device host works normally when it is not started, and does not work after it is started

① In the manual state to cover the sensor, can the indicator light on the controller flash left and right?

② Check if there is a high-power interference source near the controller and sensor, isolate and test again

③ The ground wire of the equipment and this product is well connected

④ Check whether the sensor cable and driver cable are wound together with the high-power motor cable, please separate test

⑤ Check whether the cable has rubber crushed or poor contact

⑥ Check whether the switching power supply V- and PE are short-circuited

7. Material static electricity is particularly large

Round the sensor and controller separately, and the sensor is stuck in the middle of the material as much as possible, and it is better to add static elimination equipment

Note: if the above plan is not resolved, please contact our after-sales service center