



纠偏控制器说明书

(2021版)

控制器型号
AB6890

操作指南

本手册就本产品的各部位名称、注意事项、接线图，操作进行了说明，请在完全掌握设备知识和安装信息、注意事项后再使用。



技术服务及说明书下载

惠州市爱博智控设备有限公司
Huizhou Aibo Automatic Control Equipment CO.,LTD.
地址:广东省惠州市大亚湾西区响水北路11号
Address: No.11 Xiangshui North Road,Daya Bay West End,
Huizhou 516083 China
24小时技术服务热线:400 058 0028
E-mail:market@aiboauto.com
<http://www.aiboauto.com>

安全方面注意事项（使用之前请务必阅读）

设计应用注意事项  注意

- 因电子元器件特性,纠偏控制器存在一定的输出失控风险及误动作风险,可能会引发事故。请务必自纠偏控制器外部设置紧急停止回路、保护回路、防误动作机械互锁等回路。
- 纠偏控制器禁止与其他设备共用电源。非正确选用或没有按要求使用开关电源,可能会导致重大人身安全事故。
- 纠偏控制器后盖外壳不得跟机台设备外壳有电气连通。否则将有可能导致纠偏控制器损毁,冒烟、火灾等危险。
- 禁止对纠偏传感器线进行剪线、接延长线等操作。
- 请严格参照 接线图 配置外围部件及接线。
- 安装纠偏控制器时,控制器锁紧螺栓不得锁紧过度,使得控制器变形,这将有可能会导致控制器显示故障。

维修保养注意事项  注意

- 请勿触碰到端子。否则有触电的危险性,并有可能引起就只有动作。
- 进行清扫时,请务必在断开所有外部电源后方可操作。如果在通电的状态下进行操作,有触电的危险。
- 请勿擅自拆解、改造产品,否则有可能引起故障、误动作、火灾。
- 对接插件插拔时,请在断开电源之后再进行操作。否则有可能引起故障、误动作。
- 请勿在控制器附近进行会产生粉尘、铁屑等的作业,如打磨、切削等。否则有可能会因粉尘、铁屑 进入控制器,引起故障、误动作、火灾。

第一章：简易操作说明和日常维护

1、自动行程测量

正确安装设备，检查无误后通电，在手动状态下按手动 + 
左移键直到出现自动行程测量（大约5秒），执行器运行一个来回后在中间位置停止，提示自动行程测量成功，此位置为默认中心置。

注意：第一次安装、更换控制器或者执行器三种情况下都必须进行“自动行程测量”，系统才能正常工作。

2、传感器校准

在手动状态下，传感器检测区域内要求没有物料，按 传感器校准键，用被测物料全部挡住检测区域并停止5秒钟，然后把被测物料全部拿开，按 退出键自动保存，显示屏出现“校准成功”表示此次校准有效，如果出现“校准失败”，需再次校准。

注意：第一次安装，必须校准传感器，如果更换材料必须重新再校准。

3、检查纠偏方向

在手动状态下按 自动键进入自动状态，此时物料向传感器中心线移动表示方向正确，如果物料远离传感器中心线表示方向错误。纠偏方向错误，需要改动参数设定中的自动纠偏方向选择，如果参数原设定是“左”就改成“右”，是“右”就改成“左”，更改后按 退出键自动保存。

4、纠偏系统自动运行

在手动状态下按 回中键，确认摆动机构在设备的中心位置；要求物料在设备的中心位置附近，然后移动传感器，使传感器检测区域中心在物料的边缘上。此时按 进入自动状态，纠偏系统正常运行后启动生产设备开始工作。如果纠偏精度达不到要求，可以调整增益参数值。

日常维护要求

- 1、光电传感器感光处的玻璃需要每周清洁一次,使用柔软干净的布清洁,保证玻璃上没有污垢。
注意：禁止使用天那水、洗板水、抹机水等腐蚀性强的化学液体。
- 2、每月自动行程测量一次。操作方法手动+左移键同时按5秒，直到显示屏显示自动行程测量。

重要安装提示！

- 1、实施配线或拆卸配线时，必须先切断电源后再操作；
- 2、自配电源必须按控制器规格表中的说明进行选配；
- 3、传感器必须独立布线，周围5CM内禁止其它布线；
- 4、执行器布线的周围5CM内禁止大电流布线，如变频器动力线。

智能纠偏系统的安装

1、控制器的安装

有嵌入式安装和台式安装两种方式，安装尺寸请参考样本或与技术人员联系。

2、传感器的安装

可以用微调支架安装或简易螺杆安装，安装尺寸请参考样本或与技术人员联系。

3、执行器的安装

安装时，执行器推杆必须与物料移动架保持水平，物料移动架中心位置必须和执行器中心位置保持一致，安装尺寸请参考样本或与技术人员联系。

第二章、控制器面板按键对比及功能说明



	自动按键		手动按键
	手动左移按键		手动右移按键
	传感器校准按键		回中按键
	设置键		退出按键
 + 	自动行程测量		
 +  + 	手动锁键/手动解锁		
 +  + 	自动锁键/自动解锁		
 + 	原点位置设定		

第三章、控制器插座说明



插座	功能	芯数	接线
电源 POWER	AB6800、AB6890 接直流24V电源	5芯	红蓝：正 黑黄：负
	AB6901配专用电源 (AB6808)	5芯	标准插头
左传感器 SENSOR L	接U型传感器	7芯	标准插头
右传感器 SENSOR R	接U型传感器	7芯	标准插头
电机 MOTOR	接执行器	10芯	标准插头
IO控制 IO CTRL	IO远程控制	9芯	9根输出，详见第六章

第四章、参数设定

1、参数设定步骤

步骤	操作方法
1	进入手动状态
2	在手动状态下按  进入参数设定界面
3	按  或  选择参数菜单
4	进入参数菜单后，按  参数值会闪烁，此时可以进行参数设定
5	按  或  调整参数值，调整后按  进入参数菜单，数值停止闪烁
6	如果还要调整其他参数，就重复执行3/4/5步，如果不需要调整其他参数，按  自动保存，此事参数设定完成进入手动状态

2、参数设定说明

序号	参数名称	参数值	出厂值	说明
1	自动纠偏方向选择	左、右	左	自动纠偏下移动方向错误时，把参数“左”改为“右”即可。
2	增益设定	1-100	20	增益值加大（减少）能提高（降低）物料的自动纠偏速度。
3	限位设定	1-100	5	改变执行器限位位置（一般情况下不需更改）。
4	手动左右移方向选择	左、右	左	手动左右移动方向错误时，把参数“左”改为“右”即可。
5	语言选择	中文 ENGLISH	中文	

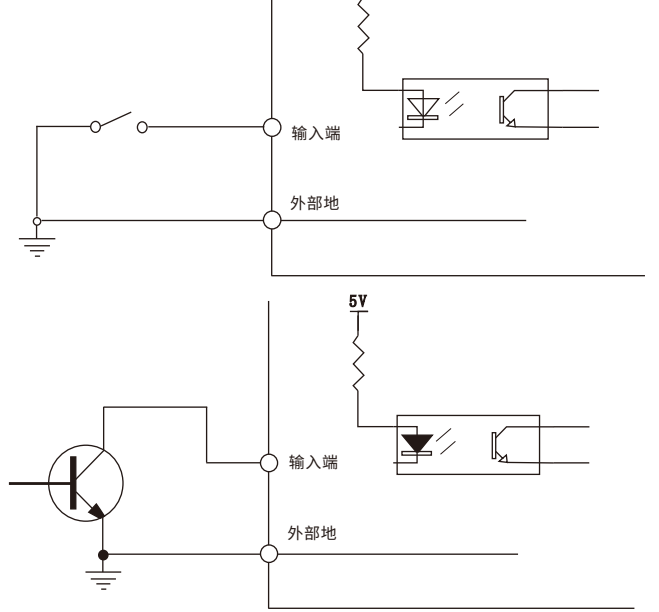
第五章、常见问题解决方案

序号	故障提示或现象	可能原因	修正方法
1	显示屏提示“欠压”	供电电压低于20V	检查供电电压
2	显示屏提示“检测输入电压”	供电电压低于18V	检查供电电压电压正常 请与爱博公司联系
3	显示屏提示“电机没接”	电机线插头没插好	检查电机接口
		电机或控制器坏	请与爱博公司联系
4	显示屏提示“传感器没接”	传感器接头没插好	检查传感器接口
5	自动状态下物料远离传感器中心线（执行器往一个方向移动）	传感器没校准	重新校准传感器
		纠偏方向反了	进入参数设定改方向
6	按左移和右移键提示“到位”	没有进行“自动行程测量”	重新进行“自动行程测量”

纠偏系统不能正常工作，没有以上故障提示，请按纠偏系统操作说明重新操作一遍，如不能解决或有特殊需求请与爱博公司联系，
免费电话4000 580 028。

第六章、IO控制说明

1、IO输入说明



支持开关或继电器输入支持集电极开路输入

红色：手/自动切换（闭合自动、断开手动）

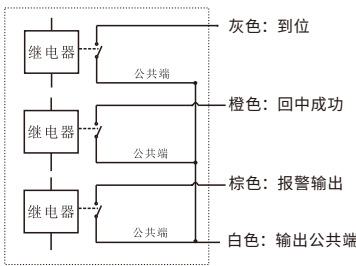
紫色：回中

蓝色：左移

粉色：右移

黑色：外部地(GND)

2、IO输出说明





Control System Specification (2021)

MODEL:
AB6890

Operation Guide

This manual describes the name, precautions, wiring diagram and operation of each part of the product. Please use it after fully mastering the equipment knowledge, installation information and precautions.



Manual download

Huizhou Aibo Automatic Control Equipment CO.,LTD.
Address: No.11 Xiangshui North Road,Daya Bay West End,
Huizhou 516083 China
400 058 0028

E-mail:market@aiboauto.com
<http://www.aiboauto.com>

Safety precautions (please read before use)

Design and application considerations



Due to the characteristics of electronic components, the deviation correction controller has a certain risk of out of control output and misoperation, which may lead to accidents. Please be sure to set emergency stop circuit, protection circuit, anti misoperation mechanical interlock and other circuits outside the deviation correction controller.

- The deviation correction controller is prohibited from sharing power with other equipment. Incorrect selection or failure to use switching power supply as required may lead to major personal safety accidents.
- The back cover shell of the deviation correction controller shall not be electrically connected with the machine equipment shell. Otherwise, it may cause damage to the deviation correction controller, smoke, fire and other hazards.
- It is forbidden to cut or extend the deviation correction sensor line.
- Please configure peripheral components and wiring in strict accordance with the wiring diagram.
- When installing the deviation correction controller, the locking bolt of the controller shall not be locked too much, resulting in the deformation of the controller, which may lead to the display failure of the controller.

Precautions for maintenance



- Do not touch the terminals. Otherwise, there is a risk of electric shock, and only action may be caused.
- When cleaning, be sure to disconnect all external power before operation. There is a risk of electric shock if the operation is carried out under the energized state.
- Do not disassemble or transform the product without authorization, otherwise it may cause failure, misoperation and fire.
- When plugging in and out the docking plug-in, please disconnect the power supply before operation. Otherwise, it may cause failure and misoperation.
- Do not carry out operations that will produce dust and iron filings near the controller, such as grinding, cutting, etc. Otherwise, dust and iron filings may enter the controller, causing failure, misoperation and fire.

Chapter 1: Easy instruction of operation and maintenance

1、Automatic range measure

After installation of our product, turn on the power, then press the the buttons and together (for about 5 seconds) untill the screen shows ‘AUTO RANGE MEASUR’ . The actuator makes one round trip and stops at the center position. The screen should show ‘success’ . This position is the default center position.

Note: this step must be done under the first mounting, sensor change and actuator change

2、Calibration of the sensor

While in manual mode, make sure there is nothing in the detection zone of the sensor. Press the button , the screen should show ‘sensor calibrate’ . Use the material to completely cover the detection zone of sensor at least 5 seconds, then remove the material completely. 5 seconds later, press the to save the calibrated status.. The screen should show ‘success’ . Or else, you have to do it again.

Note: this calibration step must be done after installation or when the materail changed

3、To confirm the direction of the actuator in auto mode.

While in manual mode, Press the ‘auto’ button to enter auto mode. While in auto mode, put the material in the sensor to confirm the direction of the actuator. If the moving direction is found to be away from the central, the auto direction parameter has to be changed , change from left to right or from right to left. The press to save

4、Automatic operation

While in manual mode, press To make sure the moving frame is at the center of the equipment. And the material is at the center of the moving frame. Then move the sensor to the edge of the material. Now press The system should enter automatic mode. If the results of the guiding are not satisfactory, the gain can be adjusted (increase or decrease) until the system works optimally.

Maintenance

1, The glass of the sensor should be cleaned once a week about. With the soft material and keep the glass clean.

NOTE: Prohibit use of chemical liquid. Such as banana oil.

2, The Automatic range measure should be done once a month at least. Follow the step above.

NOTE!

1, The power should be shut down before the wire is connected well or dismantled well.

2, The DC power supplier should follow the instruction of the controller.

3, The wire of sensor should not be disturbed by others. In principle, the other wire should be 5cm away.

4, Around the wire of actuator, the high current wire is prohibited too. 5cm is the limited distance for this too.

Installation of the system and easy state

1、Controller

The two mounting mode including flush version and desktop version. The mounting dimension could be found on the catalogue.

2、Sensor

We offer the bracket for you to select. And the screw bolt is easy for the mounting.

3、Actuator

The horizontal of pushrod and the moving frame is important in this processing. The other key-point is making sure that the central of the pushrod and the moving frame at the same place.

Chapter 2:Control panel



	AUTO		MANUAL
	LEFT		RIGHT
	SENSOR CALIBRATE		RETURN CENTER
	PARAMETER SETTING		ESC
+	AUTO POSE DETECT		
+ +	MANUAL LOCK/UNLOCK		
+ +	AUTO LOCK/UNLOCK		
+	CENTER SETTING		

Chapter 3:Control Socket Description



CONNECTOR	DESCRPTION	POLE	REMARK
POWER	AB6800、AB6890 with DC24V	5P	Red/blue: + Black/yellow: -
	Ab6901with special power station (AB6808)	5P	Standard connector
SENSOR L	SENSOR	7P	Standard connector
SENSOR R	SENSOR	7P	Standard connector
MOTOR	ACTUATOR	10P	Standard connector
IO CTRL	IO REMOTE CONTROL	9P	For the detail consult t he engineer

Chapter 4:Parameter setting

1、The steps of parameter setting

SRCN	OPERATION
1	Press button MANUAL
2	Press to set the parameter
3	Press or to change the interface.
4	When there show 'PARAMETER SETTING' press to set the parameter, the character display will flash.
5	Press or to choose the desired parameter. then press to finish.The character display will stop flashing.
6	Repeat steps 3 and 4 to adjust other parameters, or else press again to exit.

2、Explanation of the parameter

NO.	NAME	Parameter Range	Original setting	Description
1	Auto direction	Left, Right	Left	If you have the wrong direction, change the left to right
2	Gain setting	1-100	20	Adjust the auto moving speed The gain can change the start speed.It can also change the guiding speed Gain is a key parameter. For optimal guiding results, gain may need to be adjusted iteratively.
3	Limit setting	1-100	5	Change the limited position of actuator
4	Manual direction choose	Left, Right	Left	Change the manual move direction Change this parameter when the actuator moves in the wrong direction in manual mode.
5	language	中文 ENGLISH	English	

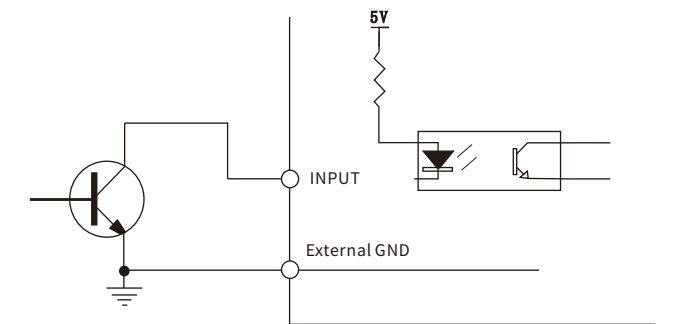
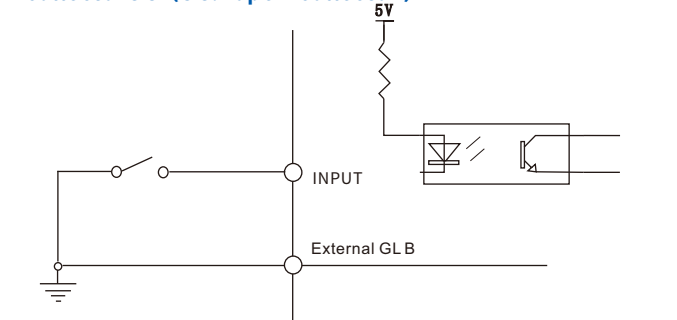
Chapter 5:Trouble remove

NO.	HINT	REASON	WAY TO SETTLE
1	Low Voltage	The voltage is lower than 20V	Check the power supply
2	Voltage test	The voltage is lower than 18V	Check the power supply 请与爱博公司联系
3	No motor	Not connect well	Check the interface of motor
		Malfunction of motor	Contact with Aibo Auto
4	No sensor	Not connect well	Check the interface of sensor
5	Material move to one side without the detect	Without the Calibration of the sensor	Repeat the calibration of the sensor
		Direction wrong	Change the direction setting
6	“LIMIT” when press the Left or Right	Without Automatic position detection	Repeat Automatic position detection

If you have another question please contact with engineer at mainland 400058-0028

Chapter6:IO control

1、IO input: support switch or relay(fig 1),support collectorOC (OC: open-collector)



Red: manual/auto switch
Purple: back central
Blue: move left
Pink: move right
Black: external earth (GND)

2、IO Output:relay out see the fig below

