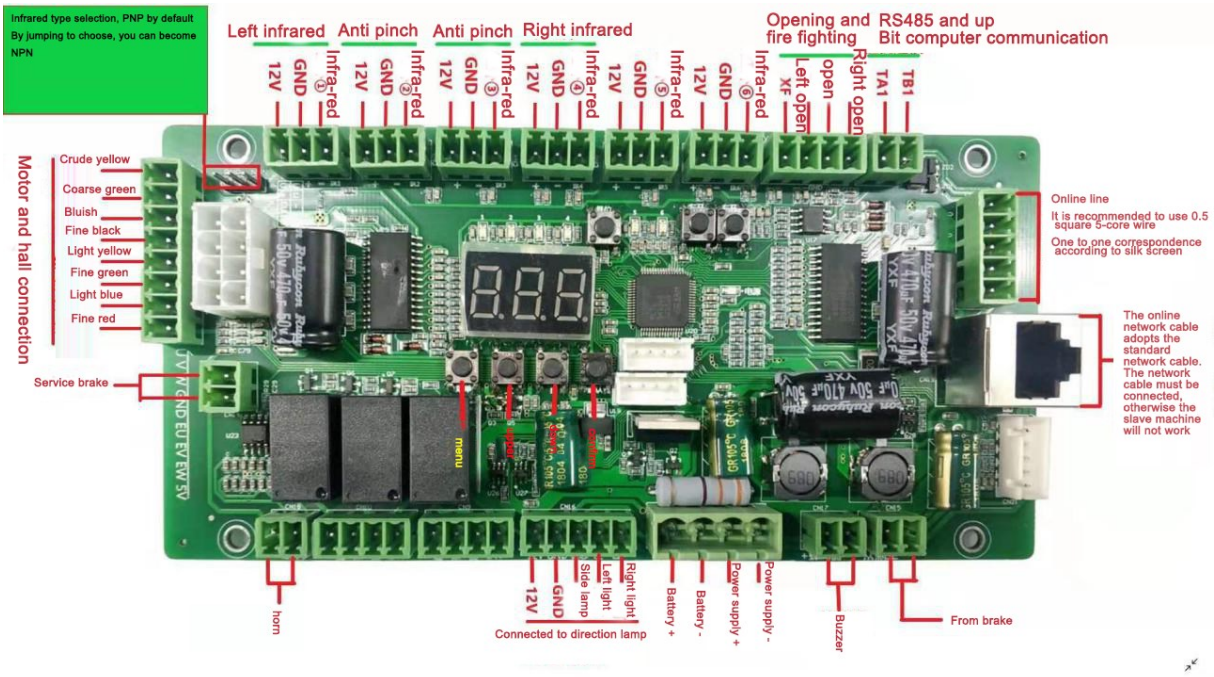
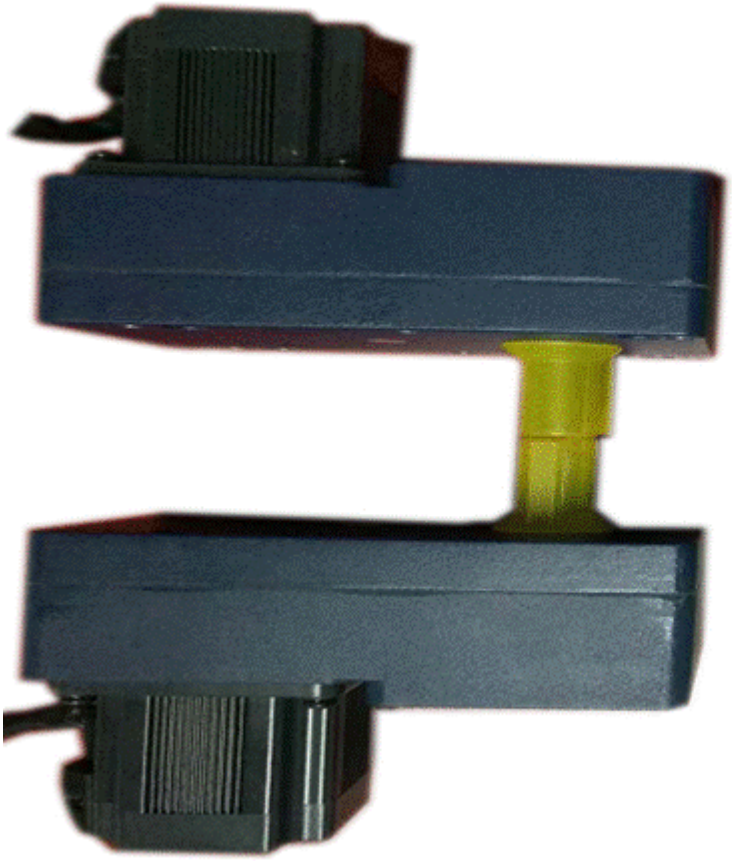
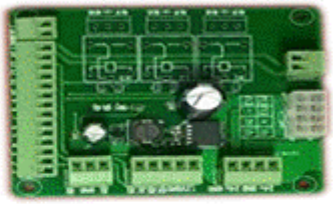
Instruction of ge-x2 integrated brushless servo control system







1 Functional features

1: It has the function of fault self check and alarm prompt, which is convenient for user's maintenance and use.

2: It can be connected with the control signal or button or remote control output by any control equipment to realize the single and two-way control of traffic.

3: Automatic reset function: after 90 degrees of swing and detection of people and objects passing, i.e. automatic reset, or not passing in the specified time (delay and multi gear adjustable), the system will automatically cancel the right to pass and return to the initial position.

4: Light indication: high brightness traffic light status indication to guide traffic.

5: Fire input: it can be connected with fire alarm signal to realize constant power drop and normally open.

6: Alarm prompt function: in case of illegal passage or gate flushing, an alarm prompt will be given automatically.

7: Adjustable speed: the opening and closing speed of swing arm can be adjusted at multiple levels, and the user can set it according to the actual demand.

8: The new generation of industrial arm control system is equipped with multi-functional digital setting, encryption and reset functions.

9: Anti reverse function: in the process of resetting the swing arm, if an external force reverses the swing arm, the swing arm will automatically start the reverse thrust and give an alarm, and then it will automatically return to the zero position to resume traffic after the external force disappears.

10: Automatic protection function: when the external force prevents the swing arm from moving normally, and the external force is continuous, the system will automatically detect it for 20 seconds and then automatically protect it and enter the sleep state.When the next legal signal is input, the gate will automatically return to normal.

11: Multi level anti-collision buffer function: when illegally passing or flushing the gate, the gate lever buffers the corresponding angle and starts the instant reverse thrust, and starts the alarm, which greatly reduces the mechanical damage caused by frequent or continuous collision while realizing the humanized anti injury.

12: Unmanned duty: the power off swing arm is normally open automatically, and the power on reset automatically (blocking the passage).

2： Technical parameters:

The specific technical parameters are:		
Operating conditions	。Climate classification according to IEC 721-3-3 4K4H/4Z2/4Z3/4Z7/4B1/4C3/4S2/4M4 。temperature range	 - 20 to + 55 ° C
reliability details	。MCBF 。Traffic frequency 。MTTR 。Maximum rotation cycle per day	2 000 000 20- 60 / min 30minute 10000
Mechanical part	Total height	908
	Wing size wide high Maximum weight	 600 1100 8kg
	Opening angle	－95/0/+95
RA-12-M05 Drive equipment	Torque of tooth brake	120Nm
	Maximum impulse	5Nm
	Opening and closing time Double door Single door Controller: ETS 21 CC	 < 1 second >1 second
Electrical part	Power supply	24VDC,2A
	ETS 21 input	2
	ETS 21 output 。Relay: 1A 。Relay: 5A 。Transistor: 2A 。Transistor: 0,7a	 4 1 2 4

control	Can bus Dry node normally open signal 。enter 。Out	 >150ms 1 1
Door opening delay	Door opening delay 。By pulse (adjustable) 。Continuous signal	 1－60s
Controllability	。Single door use 。Master-slave mode two door combination	
Power transfer	。Door unlocked two way open	

drive	Low energy drive M05
Maximum kinetic energy	<1.6J
Maximum force	67N (outer edge of door leaf)
Driving torque	About 5nm
Locking	Gear gate Ra12
Locking torque	120nm minimum
Traffic frequency	30Person / minute
Drive design	Up to 3000000 switching cycles / year
Driving service life MCBF	300 million switching cycles minimum
Opening angle	-90° - +90°
control	ETS 21
Software	FCC
Power Supply	100-230V AC / 50 -60 Hz
Coupling load	120 VA
Control unit voltage	24 V DC
Interface	serial interface internal: control board internal can bus connection external: can be connected to 8 devices; each ETS 21 board 5 non pressure feedback; other feedback can be obtained through other ETS 21 IO

3： Commissioning instructions

Set operation definition and method:

Note: 1. Press and hold the OK key for a long time in standby mode to change the digital display into 3 horizontal bars, then press the up and down buttons for more than 3 times in total, and press the OK key to restore the factory settings.2. Since the control panel is one control two mode, the user shall use at least one 24V/Six point fivePower supply of more than ampere (when the output power of the power supply is not matched enough, the operation current overload will cause the power supply to start frequently, and the larger the output power of the power supply is, the stronger the motor resistance is).

FAQ: 1: if E-1 or E-2 appears in the nixie tube, it means that the motor type is wrong. L15 and L16 are adjusted to 1.2. If the door keeps opening and closing, please adjust d-23 to 0.3. If the two door switches are not synchronized, adjust the speed of D-11 host motor and slave host motor D-13 by adjusting the speed of D-11 host motor and slave host motor D-13.

1.Adjustment and prevention method of movement with clutch: change D-6 to 1d-8 to 2D-9 to 4d-10d-12 to 15, if the concentricity of movement is required to be good, otherwise the door will open and close continuously. If you want to be fast, please use 24v10a switching power supply, D19 to 300,

Wing gate debugging instructions: the motor needs to be adjusted from

1: D-4 to 1

2: D-5 to 1

3: D-10 to 90 D-12 to 90

4: D-19 to 230.

If the zero position of wing gate is not in the open position, d-16 to 1

Menu number	meaning	Default	set range
L-1	Opening time of entrance and exit (unit: s)	6	0-30
L-2	Gate working mode: 0: swipe card on the left and right 1: swipe card on the left and right 2: swipe card on the right and left 3: left and right infrared	0	0-3
L-3	Delayed closing time (unit: s)	0.2	0.1--10
L-4	Left traffic voice	1	0-18
L-5	Right traffic voice	15	0-18
L-6	Infrared stack time (in seconds)	3	0-30

L-7	Direction of power off and opening	0	0For: left open 1 for: right open
L-8	Alarm voice	0	0Representative: illegal entry, please swipe the card 13 representative: didi sound
L-9	Access memory function configuration	0	0Representative: without memory function 1 representative: with memory function
L-10	Infrared anti pinch action	0	0Representative: without memory function 1 representative: with memory function
L-11	Infrared quantity	0	0Representative: 4 1 representative: 6
L-12	Voice Volume	15	0Min 15 Max
L-13	Voice test		Press OK to exit
L-14	Aging test		Press OK to enter and press menu to exit
L-15	Brand selection of main motor: change E-1 to 1 in main board	0	0On behalf of CUHK motor 1 on behalf of: Taibang, Lianyi
L-16	From the motor brand selection: the main board appears e -: 2 changed to 1	0	0Representative: cuhk motor 1 representative: Taibang, Lianyi
L-17	Selection of reverse closing	0	0Representative: do not close gate 1 representative: close gate
L-18	Two color lamp three color lamp control selection	0	0Representative: two color lamp 1 representative: three color lamp
L-19			
D-1	Zero setting	If the door is not aligned, the loose shaft of the motor will swing to the desired closing position	
D-2	Left door opening position setting	Enter the rear left opening gate, then loosen the motor shaft and swing it to the desired opening position	
D-3	Right door opening position setting	Enter the rear right opening gate, and then the motor loosens the shaft and swings to the desired opening position	
D-4	Opening and closing speed setting	3	1 Fastest 10 slowest
D-5	Gate mode	0	0 Swing gate 1 wing gate
D-6	Is there a clutch	0	0 None 1 yes

D-7	Rebound mode	0	0: bounce back and continue to drive after hitting the person 1: pause and continue to drive after hitting the person
D-8	Strength of confrontation	10	1-20The larger the value is, the larger the value is, the smaller the value is, the smaller the resistance is
D-9	Reset time	0	0-40
D-10	Buffer strength of main door closing	50	1-100The larger the value is, the greater the strength is
D-11	Motor speed of main engine	65	1-100The larger the value, the faster the motor speed, the smaller the value, the slower the motor speed
D-12	Buffer strength of main door closing	50	1-100The larger the value is, the greater the strength is
D-13	Slave motor speed	65	1-100The larger the value, the faster the motor speed, the smaller the value, the slower the motor speed
D-14	Power supply	6	1--10
D-15	Power on zero finding speed	5	1-10The larger the value is, the faster the zero is, the smaller the value is, and the slower the zero is
D-16	Zero position direction of wing gate	0	0/1If the wing gate position is wrong, adjust it to 1
D-17	Physical anti pinch sensitivity	75	1-99The higher the value is, the less sensitive the physical anti pinch is, and the less the value is, the more sensitive the anti pinch is
D-18	Physical anti pinch current time	10	1-99The higher the value is, the less sensitive the physical anti pinch is, and the less the value is, the more sensitive the anti pinch is
D-19	Acceleration current	160	The larger the value is, the faster the starting speed of the motor is, and the smaller the value is, the slower the starting speed of the motor is
D-20	Acceleration current time	10	The larger the value is, the faster the motor start time is, and the smaller the value is, the slower the motor start time is
D-21	Clutch angle	15	The larger the value is, the larger the suction angle is, and the smaller the value is, the smaller the suction angle is
D-22	Duty cycle of clutch regulation	10	

D-23	Physical anti pinch reaction time	0	The slower the speed, the greater the value
D-24	Locked rotor zero sensitivity	2	The larger the value, the longer the locked rotor, the smaller the value, the shorter the locked rotor
D-25	Duration of current protection	2	The larger the value is, the longer the protection duration is, and the smaller the value is, the shorter the protection duration is
D-26	Counter force of slave	13	1-20The larger the value is, the larger the value is, the smaller the value is, the smaller the resistance is
D-27	Deceleration stroke	8	The larger the value, the earlier the deceleration