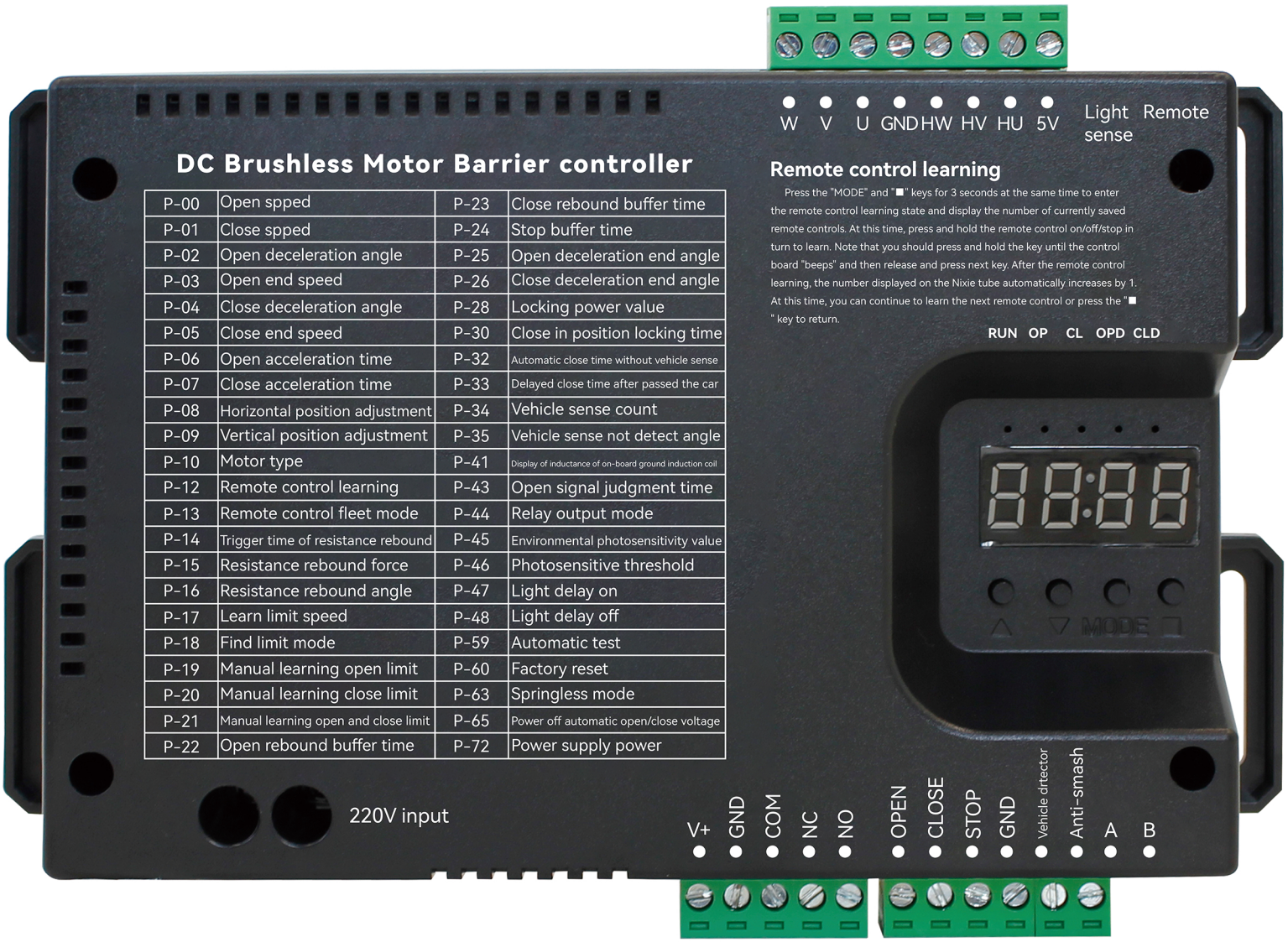
DC Brushless Barrier Gate Control Box

Manual



P-00	Open spped	P-23	Close rebound buffer time
P-01	Close spped	P-24	Stop buffer time
P-02	Open deceleration angle	P-25	Open deceleration end angle
P-03	Open end speed	P-26	Close deceleration end angle
P-04	Close deceleration angle	P-28	Locking power value
P-05	Close end speed	P-30	Close in position locking time
P-06	Open acceleration time	P-32	Automatic close time without vehicle sense
P-07	Close acceleration time	P-33	Delayed close time after passed the car
P-08	Horizontal position adjustment	P-34	Vehicle sense count
P-09	Vertical position adjustment	P-35	Vehicle sense not detect angle
P-10	Motor type	P-41	Display of inductance of on-board ground induction coil
P-12	Remote control learning	P-43	Open signal judgment time
P-13	Remote control fleet mode	P-44	Relay output mode
P-14	Trigger time of resistance rebound	P-45	Environmental photosensitivity value
P-15	Resistance rebound force	P-46	Photosensitive threshold
P-16	Resistance rebound angle	P-47	Light delay on
P-17	Learn limit speed	P-48	Light delay off
P-18	Find limit mode	P-59	Automatic test
P-19	Manual learning open limit	P-60	Factory reset
P-20	Manual learning close limit	P-63	Springless mode
P-21	Manual learning open and close limit	P-65	Power off automatic open/close voltage
P-22	Open rebound buffer time	P-72	Power supply power

Safety instructions for use

The following is about the proper use of the product, to prevent danger, to prevent damage to property, etc. Please read this manual carefully before using the equipment and strictly observe it when using it, and keep the manual properly after reading it.

Environmental requirements for use

1.Please transport, use and store the equipment within the permitted humidity and temperature ranges!
2.Do not allow any liquids to flow into the device.
3.Install the equipment in a well-ventilated area and do not block the ventilation openings of the equipment.
4.Do not subject the device to heavy pressure, severe vibration or immersion.
5.Pack the equipment in the factory packaging or in materials of equivalent quality when transporting it.
6.It is recommended that the grounding hole on the equipment be grounded to improve equipment reliability.

Operation and Maintenance Requirements

1.Do not disassemble this equipment privately.
2.Please use the parts or accessories specified by the manufacturer and have them installed and maintained by professional service personnel.
3.The matching pole is not allowed to be lengthened or cut off, and it is not allowed to privately add weight to the pole.

Product Features

Safety: 24V DC power supply, to protect personal safety.
Energy saving: static power is less than 2 watts, can be connected to the maximum power of 200W motor; speed adjustable: the speed of the pole up and down independently adjustable.
Smooth working: Multi-stage speed design, make the working state performance, smooth.
Quiet: working noise is less than 50db.
Multi-protection: motor over-current, overload, short circuit protection, motor failure protection, power reverse connection protection.
Support external remote control input.
Support various parameters can be set.
Support photosensitive switching on the light of advertising gate.
Support windproof, anti-freezing, anti-rust and other functions.
Support various relay output modes.

Specification

Power supply	DC 24V earth 10% 7.5A
Motor power	maximum 200W
Static power	<2W
Open/close speed	1%-100% can be adjust
Operating ambient temperature	-25°C~65°C
Operating ambient humidity	30% ~ 80% (no condensation)

Function Catalogue

P-00 Open arm speed
P01 Close arm speed
P-02 Open arm deceleration angle
P-03 Open arm end speed
P-04 Downswing Deceleration Angle
P-05 Downswing End Speed
P-06 Take-off acceleration time
P-07 Downswing Acceleration Time
P-08 Horizontal Position Trim
P-09 Vertical position fine adjustment
P-10 Motor Type
P-11 Remote control learning method
P-12 Remote control learning
P-13 Remote control fleet mode
P-14 Trigger time for rebound
P-15 Rebound force
P-16 Bounce angle
P-17 Learn Limit Speed
P-18 Find Limit Mode
P-19 Manually Learning Upper Limit
P-20 Manually Learning Lower Limits
P-21 Manually Learning Upper and Lower Limits
P-22 Take-up lever rebound buffer time
P-23 Down Lever Bounce Buffer Time
P-24 Stop buffer time
P-25 Starting bar deceleration end angle
P-26 End angle of deceleration of falling bar
P-27 Anti-smashing function
P-28 Locking power
P-29 Open position locking time
P-30 Locking time in closed position
P-31 Reverse Locking Turns
P-32 No ground sensing auto drop time
P-33 Passing delay time
P-34 Loop detector count

P-35 Loop detector non-detection angle
P-36 Loop detector trigger buzzer frequency
P-37 Loop detector signal trigger judgement time
P-38 Loop detector signal validity judgement time
P-39 /
P-40 /
P-41 /
P-42 Priority for open arm
P-43 Lever Start Signal Judgement Time
P-44 Relay Output Mode
P-45 Field environment Light Sensitive Value
P-46 Light Sensitive Value
P-47 lamplight Delay On
P-48 lamplight Delay Off
P-49 Ambient Temperature
P-50 Antifreeze Temperature Smell Value
P-51 Antifreeze Lift Angle
P-52 Antifreeze Lift Time Interval
P-53 Rustproof opening angle
P-54 Rustproof Lift Interval
P-55 Setting 485 baud rate
P-56 Setting 485 address
P-57 Controller master-slave mode
P-58 Number of times to close the gate automatically after manual lever up
P-59 Automatic test
P-60 Restore Default Settings
P-61 Parameter Backup
P-62 On-board Ground Sense Abnormal Auto Reset
P-63 Adaptive mode
P-64 Timeout for gate start/fall
P-65 Power failure auto start/stop voltage
P-66 Brake recoil voltage warning value
P-67 Digital display of drive voltage and drive current
P-68 Trigger the ground-sensitive gate to pause when the pole is dropped.
P-69 Power failure automatic operation function
P-70 Customised parameter setting
P-71 Over-current protection value
P-72 Power supply power
P-73 Automatic speed of pole drop without ground sensing
P-74
P-75
P-76
P-77
P-78 Auto send gate status data

P-79 /
P-80 Adaptive control coefficient
P-81 Adaptive mode learning limit power
P-82 Bluetooth connection
P-83 Pole lift loop detector without detecting angle

I. Key Description

The controller has 4 buttons, from left to right are "On/+", "Off/-", "Menu", "Stop/Cancel". "You can set various parameters of the controller by these four keys.

"On /+": Press this button to start the lever under normal working condition, and you can use this button to increase the menu items and adjust the setting value upwards after entering the setting state. In the parameter setting state, short press adds one each time. Long press will continuously add to the maximum value and then start from the minimum value upwards if the long press time is longer, the continuous addition will speed up.

"OFF/_": Press this button to drop the lever under normal working condition, after entering the setting state, you can use this button to reduce the menu items and adjust the setting value downwards. In the parameter setting state, short press to reduce one each time. If long press, it will reduce continuously to the minimum value and then start to reduce from the maximum value. If you press and hold for a longer period of time, the continuous reduction will speed up.

“Menu"This key has 3 functions.

1.Under normal working mode, press and hold this key for 3 seconds to enter the menu item selection state LED display "P-XX", then you can press "On / +", "Off -" button to select the menu item;
2.In the menu item selection state short press "menu" to enter the set parameters state;
3.After the parameter setting is finished, short press is used to save and exit.

Stop/Cancel": this key is stop function in normal operation, in the menu item selection state is to exit the setting state, in the parameter setting state, press this key will exit the

state and return to the menu selection state, i.e., return to the previous menu, and at the same time, the set value is invalid. If there is no key operation within 60 seconds in the menu selection state and parameter setting state, the controller will return to the normal working state after a long beep from the buzzer.

2.Display

The control board has a four-digit LED display that can be used to show the operating status, parameters, menu items and other information. After power-on, it operates in low-power mode, at which time the LED display is dimmed. Pressing any key will make the LED display enter the normal working mode and the LED will be brightly displayed. If no key is pressed, it will enter the low power consumption mode after 60 seconds, the LED brightness will be dimmed to reduce power consumption. 2 minutes later, if no key is pressed, the LED display will be turned off. The LED display will turn off after 2 minutes if no key is pressed.

3.Parameter setting

You can enter the parameter setting state by long pressing the "Menu" button for 3 seconds, the LED will display "P-XX", you can select the menu items by short pressing or long pressing the "On/+" button, "Off/" button, short pressing will add or subtract one, long pressing will add or subtract continuously, "OFF /" two buttons to select the menu items, short press once plus one or minus one, long press will be continuous plus or minus. Press the "Menu" button again to enter the setting of the specified item, press the "Stop/Cancel" button to return to the previous level or exit the setting. When the setting of the specified parameter is completed, it must be confirmed by pressing the "Menu" key to take effect. The parameters set by pressing "stop/cancel" key will not take effect. 60 seconds without pressing the key, the buzzer on the control board will beep once to exit the setting state and return to the normal working state.

List of commands for DC Brushless Barrier Gate Controller:

Note: Some of the preset defaults have versions that differ from the defaults listed in the table.

Menu	Function	Default value	Range	Functional Description
P-00	Open arm speed	60	10-200	The larger the value, the faster the speed, the smaller the value, the slower the speed; when adjusting to 200 still can't reach the required speed, you can increase P-72. (When P63 is 0 or 1, more than 100 is treated as 100; when P63 is set to 2, more than 100 is valid)
P-01	Close arm speed	60	10-200	Same as takeoff speed.
P-02	Open arm	45	10-90	Used to set the position at which

	deceleration angle			deceleration begins during pole raising. This parameter is used to set the position of deceleration in the process of starting the lever. It is measured in angle, which means 0 degree when the gate lever is in the horizontal position, and 90 degree when it is in the vertical position. This parameter indicates that the gate bar starts to decelerate when it reaches this angle.
P-03	Open arm end speed	10	1-80	If the speed is too small, the gate will not open in place, and if it is too large, the gate will wobble.
P-04	Downswing Deceleration Angle	70	0-80	This parameter is used to set the position at which deceleration begins during pole drop. This parameter is measured in degrees, 0 degrees for the horizontal position and 90 degrees for the vertical position of the bar. This parameter indicates that the gate bar starts to decelerate when it reaches this angle.
P-05	Downswing End Speed	15	1-80	If this speed is used to end the drop, too small a drop will cause the gate to fail to close, and too large a drop will cause it to wobble. If the P-26 command sets the bar drop low speed angle and is within the valid range, it will operate at that speed in the low speed uniformity zone.
P-06	Take-off acceleration time	60	0-255	The time it takes for the start of the take-off to accelerate to the take-off speed set by P-00 (the larger the value, the longer the time). (Unit 0.01 sec.).
P-07	Downswing Acceleration Time	50	0-255	The time it takes for the start of the drop bar to accelerate to the drop bar speed set by P-01 (the larger the value, the longer the time). (Unit 0.01 sec.).
P-08	Horizontal Position Trim	10	0-255	The distance of the horizontal position of the pole from the horizontal mechanical limit, the larger the value, the further away, and vice versa.
P-09	Vertical position fine adjustment	10	0-255	The distance of vertical position of the pole from the vertical mechanical limit, the larger the value the further away, and vice versa.

P-10	Motor Type	0	0-3	Value range: 0-3; default: 1. Due to the Hall polarity of the motor, the number of deceleration stages of the gate movement is not the same, and there is a left exit pole and a right exit pole. So this parameter is used for compatibility with various types of motors and gates. 0: Positive motor polarity, positive gearbox polarity 1: Positive motor polarity, negative gearhead polarity 2: Negative motor polarity, positive gearhead polarity 3: Motor negative polarity, gearhead negative polarity
P-11	Remote control learning method	0	0-1	0: Press the switch in sequence to stop the learning process. 1: Press any switch to finish learning
P-12	Remote control learning	0	0-50	Remote control learning: Enter P-12, it will show the number of remote controls saved, then press the switch of the remote control in order to learn, pay attention to press until the control board "drops" and release to press a key until the control board "drops" or the number shown on the digital tube increases upwards. When the digital display is up, it means the learning is finished, you can go on to learn the next one or press the cancellation button to go back. Remote Control Delete In this menu, press "+" or "Modify the value of the learned remote control" and click the menu key to confirm, then delete the learned remote control behind the value
P-13	Remote control fleet mode	0	0-1	0: Normal remote control mode; 1: Remote control "on"; 2: Normal remote control mode; 3: Normal remote control mode 1: Remote control "on" to enter fleet mode, will not process the ground sensing signal before manually pressing the down lever, - straight up lever state; (Normal remote control mode temporarily enter fleet mode method: When the setting value is 0, the

				remote control will not process the ground sensing signal before manually pressing the down lever, - straight up lever state; (Normal remote control mode temporarily enter fleet mode method: When the setting value is 0. When the setting value is 0, you can press and hold the remote control ON button for more than 5 seconds to enter the fleet mode temporarily, and the buzzer will beep for 2 seconds. The buzzer will beep for 2 seconds. (Pressing OFF will exit the fleet mode, and at the same time, Daoxin will be turned off).
P-14	Trigger time for rebound	2	1-40	How long does it take to judge that there is an obstruction (unit: 0.05 seconds).
P-15	Rebound force	30	1-100	The amount of resistance encountered is considered to be a blockage. The rebound condition is when the club meets the resistance set by P-15 and lasts for the duration of P-14 and then the club is lifted for a rebound.
P-16	Bounce angle	2	0-90	When the club is below the angle of this option, no resistance will be encountered, and 0 is to turn off the sub-function.
P-17	Learn Limit Speed	40	10-80	Setting different speeds of upper limit and lower limit, after entering the menu, the first setting is the speed of upper limit, the digital tube shows "1-XX "XX means the speed of upper limit, you can set the speed of upper limit by pressing "On/+" and "Off/", you can set the speed of upper limit by pressing "On/+" and "Off/". The speed can be adjusted by pressing the "On/+" and "Off/" buttons. After the upper limit speed is set, press "menu key", the digital tube will display "2-XX", then XX means the speed of lower limit. The same can be adjusted by pressing the "on / +" and "off /" two keys to adjust the speed and finally find the upper and lower speed limits are set to complete and then press the "menu" key to save the parameters. If you press "stop/cancel" key during the setting process, the set parameters will be invalid.

P-18	Find Limit Mode	0	0-2	0: Search for double limit position. 1: Search for upper limit position. 2: Search for lower limit position. 2: Search for lower limit.
P-19	Manually Learning Upper Limit	no	no	After entering this setting, the digital tube will display L-00, the lever will automatically start and stop in place, and display L-01, the operation will be the same as P-21 to find the vertical and horizontal limit positions, and after learning the horizontal position, it will automatically return to the setting page, which means it is successful, and then P-18 will be set to 1 and can be used.
P-20	Manually Learning Lower Limits	no	no	The operation is the same as P-19, but reversed. Enter into the setting display L-00, automatically find the lower limit position, stop in place, display L-01, the user manually find the horizontal and vertical position, press the first OK that is the horizontal position, display L-02, the second time for the vertical position and return to the setup page, and then set P-18 to 2 can be used.
P-21	Manually Learning Upper and Lower Limits	no	no	After entering this setting, the digital tube displays L-00, and the wen machine will automatically drop the pole first, and display L01 when it is in place, and stop when it is in place, and display L-02. At this time, press and hold the pole lifting or dropping pole, it will lift or drop the pole, and then stop when it is loosened, and then it will report the worry when it is in the mechanical limit position. Users can adjust their own position, to determine a good press menu to learn a limit, the first time to press the menu for the vertical limit, digital tube display L-03, the second time for the horizontal limit, press the second time will automatically return to the setup page, said the learning> success, this function is set up after the need to set the P-18 0.
P-22	Take-up lever rebound buffer time	80	10-255	Buffer time from start to finish, if it is too fast, it is easy to have too much instantaneous current. (Unit 0.01 second)

P-23	Down Lever Bounce Buffer Time	100	10-255	The buffer time from down to up, if it is too big, it is easy to have a high instantaneous current. (Unit: 0.01 sec)
P-24	Stop buffer time	100	10-255	The time it takes for the motor to stop from the starting lever or the stopping lever, if it is too big, the motor will stop slowly and steadily, if it is too short, it will be easy to have the instantaneous current too big. (Unit 0.01 second)
P-25	Starting bar deceleration end angle	90	45-90	In the take-off motion, the pole will first accelerate to P-00, and then start to decelerate at P-02, stop decelerating at this option and enter into constant speed motion until the end of the take-off.
P-26	End angle of deceleration of falling bar	0	0-45	During the downswing, the club will accelerate to P-01, then decelerate at P-04, stop decelerating at this option and move at a constant speed until the end of the downswing.
P-27	Anti-smashing function	1	0-4	If the anti-smash port signal is valid, 0:invalid, trigger anti-smash signal will not move the pole, 1: valid, trigger anti-smash signal to start the pole in the process of dropping the pole, 2: Anti-smash interface is multiplexed as "open" interface function,3: Anti-smash interface is multiplexed as"close" interface function, 4: Anti-smash interface is multiplexed as ground sensing interface function. interface is multiplexed as ground sensor interface function. (After the anti-smash interface reuse function, the original interface of this function is invalid).
P-28	Locking power	8	0-21,255	When the motor stops in the non-mechanical locking area, the spring force will pull up the pole because there is no mechanical locking. This function is controlled by the controller output for locking, which will cause the motor and the board to be hot, so it is recommended to set it according to the actual situation, and it should not be too large. When the setting value is 255, it is to adapt the locking power

				automatically.
P-29	Open position locking time	0	0-255	How long does it take to close the lock gate when the pole is opened in place. (Unit: seconds)
P-30	Locking time in closed position	0	0-255	How long it takes for the lock gate to close when the pole is closed. (Unit: second)
P-31	Reverse Locking Turns	0	0-20	If the motor is reversed for any reason when the pole is raised, how many revolutions are made before the lock gate is closed.
P-32	No ground sensing auto drop time	0	0-255	The time for the pole to fall automatically when there is no ground triggering, set to 0 means there is no ground triggering and the pole will not fall automatically. (Unit: second)
P-33	Passing delay time	2	0-255	How long after the ground sensing signal disappears, the default is 0.2 seconds. (Unit: 0.1sec)
P-34	Loop detector count	1	0-4	0: no counting of start signal, drop the pole after passing the vehicle. 1: count the start signal, the maximum count value is 1, when the ground sense is triggered, the count will be self-subtracted, when the ground sense disappears and the count is 0, the pole will be dropped. 2: Count the start signal, the maximum count value is 2, the count is self-reducing when the ground sense is triggered, the count is 0 when the ground sense disappears and the count is 0. 3: Counts the start signal, the maximum count value is 3, the count is self-salted when the ground sense is triggered, and the club is dropped when the ground sense disappears and the count is 0. 4: counts the start signal, the maximum value is 255, counts down when the ground sense is triggered, and drops the club when the ground sense disappears and the count is 0.
P-35	Loop detector non-detection	0	0-45	If the angle of the pole is lower than this value, the ground sensing signal will not be processed, and the pole will be dropped

	angle			directly.
P-36	Loop detector trigger buzzer frequency	4	0-20	When the ground sensing is triggered, the buzzer will beep at 0, the bigger the number is, the faster the buzzer will beep.
P-37	Loop detector signal trigger judgement time	4	1-255	How long does the signal stay on for the ground sensor to be triggered. (Unit: 0.01 seconds)
P-38	Loop detector signal validity judgement time	4	1-255	When the ground sensor is triggered, how long it still keeps triggering to consider it as a real ground sensor signal, i.e. there is a car (unit: 0.01 seconds).
P-39	/	/	/	
P-40	/	/	/	
P-41	/	/	/	
P-42	Priority for open arm	0	0-2 50-80	0: All control signals have the same priority in any state. 1: The highest priority is given to the starting lever, and other signals are useless when starting the lever. 2: If a vehicle has passed the ground sensor during the starting lever, the lever will start to drop immediately, instead of waiting until the gate is in position to drop the lever. 50-80: If a vehicle has already passed the ground sensor during the starting lever before it is put into position, the lever will start to drop immediately when the gate is opened to the angle of this setting value. The gate will start dropping the lever as soon as it reaches the set angle.
P-43	Lever Start Signal	5	1-255	The duration of the start signal is considered to be a valid start signal. (Unit:

	Judgement Time			0.01 sec)
P-44	Relay Output Mod	0	0-7	0：Pass Light Mode： Relay closes when open in position.Relay closes when closed in position. 1: Advertising light mode： Used for advertising gates to switch on/ off the lights of the advertising gate according to the external light sensor. 2：Ground Sensing Mode : Closed when starts to lift the bar and closed when Relay is closed in place. 3：Traffic light mode 1：Normally closed for red light, normally open for green light. When the gate is opened in place, the relay closes and lights up green, otherwise the relay breaks and lights up red. 4：Traffic light mode 2：Normally closed for red light, normally open for green light. If the angle of the gate is greater than 60°, the green light will be on when the relay is closed, otherwise the red light will be on when the relay is closed. 5：Traffic light mode 3：Relay closes when the gate is raised and opens when the gate is lowered. 6：realise the alarm：When relay is closed in place, manually lift the pole to more than 5 degrees to close the relay, which can be used to connect to the alarm to realise the alarm. 7：Pulse Mode：Relay closes when closes in position closes after 1 second.
P-45	Field environment Sensitive Value	no	no	A light intensity of the current environment, the smaller the value the brighter

P-46	Light Sensitive Value	30	0-200	If the current ambient light intensity is greater than this value and P44 is set, a relay signal will be output.
P-47	lamplight Delay On	10	0-255	When the current light intensity is greater than P-46, how long the delay time is to output the relay signal. (Unit: second)
P-48	lamplight Delay Off	250	0-255	How long to delay switching off the relay output when the current ambient light is lower than P46. (Unit: second)
P-49	Ambient Temperature	no	no	This option is used to display the current ambient temperature on the digital tube.
P-50	Antifreeze Temperature Smell Value	0	-40-0	When the temperature is low, it prevents the machine from freezing, when this function is turned on when the temperature is lower than the temperature set by this option if there is no movement within the interval P-52 then it will automatically run to the angle of P-51, and then turn off.
P-51	Antifreeze Lift Angle	0	0-45	Range: 0-45 Default: 0,Anti-freezing open angle When the ambient temperature drops to the temperature set by P-50 after the P-52 Anti-freezing interval command set timing time arrives, the gate will open to the angle set by this parameter, and then automatically close. If the parameter is 0, the anti-freeze function is disabled. If P-51 and P-52 are not 0 at the same time, the anti-freeze function is enabled.
P-52	Antifreeze Lift Time Interval	0	0-255	When the ambient temperature is lower than the set temperature, the timer starts, and if there is no operation during the timer time, the gate opens at the angle set by P-51 at the time interval set by the change command, and then closes automatically. If this parameter is set to 0, the anti-freezing function will be turned off. (Unit: hour)
P-53	Rustproof opening angle	0	0-45	The angle of the anti-rust start, together with If this parameter is not 0, the controller will turn on the angle specified in this parameter after the time interval

				specified in the P-54 command has not elapsed, and then turn off automatically. During normal operation, the starting and dropping of the gate will clear the time interval and restart the timing of the time interval. If this parameter is 0, the anti-rust function will be turned off.
P-54	Rustproof Lift Interval	0	0-255	If the gate is installed on the site and not activated for a long time, it may rust, so you can turn on the parameter and open the gate once after a certain time interval. The opening angle is set by the P-53 command. If this parameter is 0, the rust prevention function is turned off. Both P-53 and P-54 must not be 0 to turn on the rust prevention function. (Unit: minutes)
P-55	Setting 485 baud rate	4	0-4	Set the baud rate of the control board, set parameters:0: 9600; 1: 19200; 2: 38400; 357600; 4: 115200
P-56	Setting 485 address	0	0-255	Address of this control board on the 485 bus.
P-57	Controller master-slave mode	0	0-1	Set the master-slave mode of the control board: 0: Slave Mode 1: Master Mode 0: Slave mode 1: Master mode
P-58	Number of times to close the gate automatically after manual lever up	0	0-20	When off in place, it is considered that lifting the lever more than 5 ° the machine will automatically drop the lever, this parameter is the number of times to drop, manual lifting and dropping the lever more than the number of times to drop the lever will not drop the lever.
P-59	Automatic test	0	0-255	Automatic test interval. 0 means that the automatic test is closed, for automatic testing and aging test test is completed after the parameter is set to 0 to lift the automatic test. Short press the "On" button to start on/off in place auto test, long press the "On" button to start simulation of falling pole to the middle position when the pole start auto test. (Unit: second)
P-60	Restore Default Settings	0	0-255	This option has three functions: Clear Remote Control, Partial Restore Factory Settings and Full Restore Factory Settings. In order to prevent misuse, you need to set

				specific values and then press the "Menu" key to complete the operation. 5: Empty the remote control 10: Restore factory settings (remote control and motor type are not restored). 15: Fully restore factory settings
P-61	Parameter Backup	0	0-5	In the setting mode, long press the "Menu" button for 3S, it will automatically save all the current settings (except P-12 remote control learning and P-61 parameter backup) and beep twice, the digital tube will display the serial number of the saved parameters for 2 seconds and then exit. When you need to restore to the backup parameters, enter P-61 and select the corresponding parameter serial number, press the "Menu" button to confirm, and the parameter settings will be restored to the backup value corresponding to the serial number.
P-62	On-board Ground Sense Abnormal Auto Reset	0	0-1	0: Disable, 1: Enable. When this function is enabled, if the on-board ground sensor is not turned off after being triggered, it will detect the signal of the next vehicle passing through the gate after receiving three external "open" signals, and automatically reset the ground sensor and drop the pole when the next vehicle passes through and leaves the ground sensor coil.
P-63	Adaptive mode	0	0-2	0: Conventional mode; 1: Adaptive mode is used for initialisation limits; 2: Adaptive mode is used for both initialisation limits and the landing bar. Both use adaptive mode.
P-64	Timeout for gate start/fall	20	6-40	Set the timeout for the gate to raise/lower the pole, if the gate raise/lower the pole beyond the set time is not in place, then the gate will automatically pause and report the raise timeout type warning (Err5) or lower the pole timeout warning (Err6) (unit seconds).
P-65	Power failure auto start/stop voltage	0	0-21	0: Off; 1: 21 Trigger the automatic lever up/down voltage, this function needs to be equipped with a backup power supply, and

				also with the P-69 setting item, it is recommended to set it to 15.
P-66	Brake recoil voltage warning value	32	30-40	If the spring of the gate is not well matched, the motor deceleration generates a warning that the recoil voltage is too high, the buzzer will sound 5 times, and the digital tube will display ERR2, the warning will not interrupt the operation of the gate; the effect of the recoil voltage can be reduced by lowering the operating speed of the gate or by matching the balance between the spring and the pole. (unit: V). Setting a value of 0 turns off this alert warning.
P-67	Digital display of drive voltage and drive current	1	0-1	0-No voltage and current data is displayed. 1 - During the process of raising and lowering the gate, the digital tube displays the driving voltage (unit: V) or driving current (unit: A), and you can switch the display of current or voltage by pressing the "Menu" button briefly under the working mode.
P-68	Trigger the ground-sensitive gate to pause when the pole is dropped.	0	0-1	0: When the ground sensor is triggered during the pole drop process, the gate will start automatically. 1: When the ground sensing is triggered during pole drop, the gate stops at the current position (it can play the role of fee evasion prevention to a certain extent).
P-69	Power failure automatic operation function	0	0-4	Set the option of automatic operation in case of power failure, when the P-65 setting is not 0, when the power supply voltage is detected to be lower than the set value of P-65, the processing method of the road smell; 0: no processing; 1: automatic lever up; 2: automatic lever down; 3: automatic lever up in the middle of the position when the gate is in the open/close position; 4: automatic low-speed lever down in the middle of the position when the gate is in the open/close position;

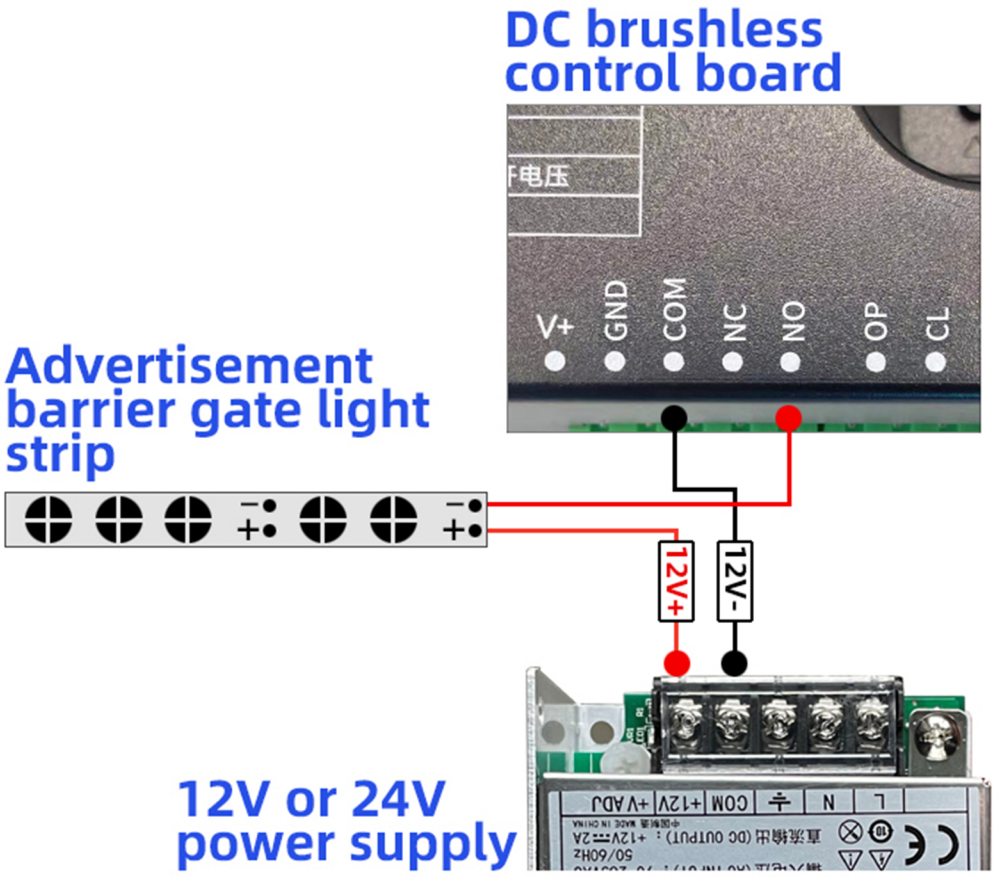
P-70	Customised parameter setting	/	/	No effect for the time being
P-71	Over-current protection value	120	20-160	Overcurrent protection value, when the gate operating current exceeds the value, the road smell automatically stop running. If overcurrent protection occurs in the falling pole, the road gate will be treated as a rebound in case of obstruction. (Unit: 0.1A)
P-72	Power supply power	75	20-100	During the operation of the gate, the maximum limitation of output power%
P-73	Automatic speed of pole drop without ground sensing	0	0-80	Groundless automatic rod speed, when set to 0 is invalid, groundless automatic drop gate use P-01 (rod speed) as the rod running speed, when the set value is not 0, change the parameter instead of P01 (rod speed) as the rod running speed. This function solves the problem that the speed is too fast and may hit the pedestrians when there is no ground sensing automatic pole drop, you can set a relatively small parameter of the automatic pole drop speed to prevent the automatic pole drop from hitting the pedestrians.
P-74		/	/	
P-75		/	/	
P-76		/	/	
P-77		/	/	
P-78	Auto send gate status data	0	0-1	When the setting is 1, the gate automatically sends out the gate status command when the road smell triggers the up/down action.
P-79		/	/	
P-80	Adaptive control coefficient	4	0-9	Adaptive control parameters, for some special road gates, optimize the effect of use (non-professionals do not recommend adjusting this parameter)
P-81	Adaptive mode learning limit power	40	10-80	In the adaptive mode, the maximum power of learning limit is set. For some power supplies with low power, this parameter can be reduced if the power supply overcurrent protection occurs during the learning limit. For the spring counterweight is not good, the learning limit lifting/ dropping rod motor torque is not enough, the parameter will be increased.

P-82	Bluetooth connection	/	/	The first time the applet connects to the motherboard via Bluetooth, please enter the P82 menu, and then connect to the motherboard Bluetooth to connect. After the applet has the connection data of the motherboard, it can be directly connected to the Bluetooth without entering the P82 menu.
P-83	Pole lift loop detector without detecting angle	20	0-80	When the ground sense is lower than the set angle in the process of starting the lever, the ground sense trigger is invalid.

Table of relationships between relay output modes and relay switch closures:

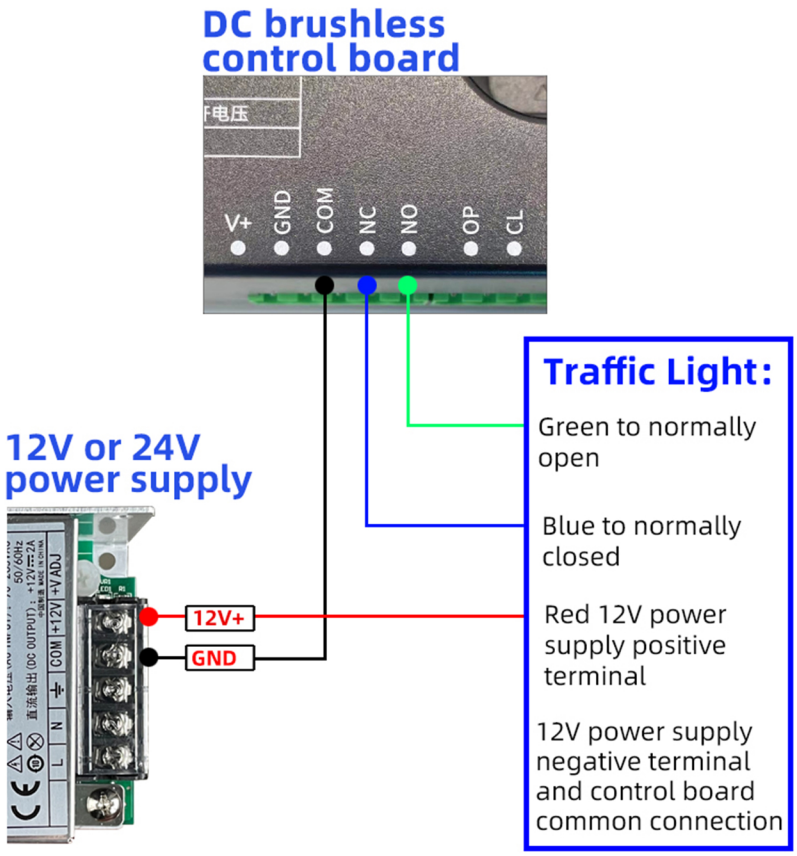
Mode ports	Relay
0: Pass-through light mode	Relay closes when open in position.Relay closes when closed in position.
1: Advertising light mode	Used for advertising gates to switch on/off the lights of the advertising gate according to the external light sensor.
2: Ground Sensing Mode	Closed when starts to lift the bar and closed when Relay is closed in place.
3: Traffic light mode 1	Normally closed for red light, normally open for green light. When the gate is opened in place, the relay closes and lights up green, otherwise the relay breaks and lights up red.
4: Traffic Light Mode 2	Normally closed for red light, normally open for green light. If the angle of the gate is greater than 60°, the green light will be on when the relay is closed, otherwise the red light will be on when the relay is closed.
5: Traffic Light Mode 3	Relay closes when the gate is raised and opens when the gate is lowered.
6: realise the alarm	When relay is closed in place, manually lift the pole to more than 5 degrees to close the relay, which can be used to connect to the alarm to realise the alarm.
7: Pulse Mode	Relay closes when closes in position closes after 1 second.

Advertising Light Wiring Diagram



Traffic Light Wiring Diagram

(As shown in the following diagram, the wiring schematic for the common cathode strip; the common anode strip can be connected by reversing the 12V and GND of the power supply. (The following figure shows the wiring diagram of the common negative strip; the common positive strip can be connected by reversing the 12V and GND of the power supply)



Error code

When the controller detects an exception, the type of error is indicated by an error code display.

The details are as follows:

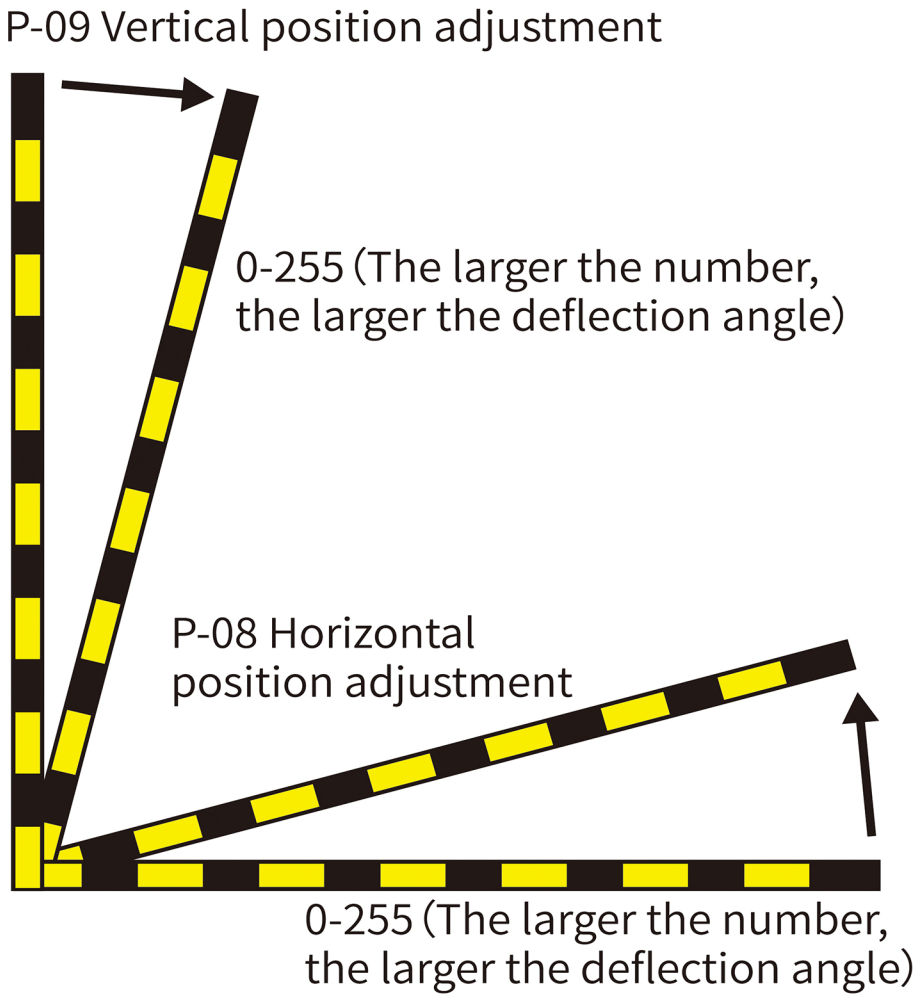
Error Code	Cause of error
Error 0	When clearing the remote control and restoring the factory settings, it is necessary to set the correct confirmation value, and an incorrect confirmation value will prompt an Err0 error.
Error 1	Reserved.
Error 2	Brake recoil voltage is too high, usually caused by the spring is not matched well and the speed is too fast, it can be solved by matching the balance of the spring and the lever, and reducing the running speed. It can be solved by matching the balance between spring and lever and reducing the running speed. You can also increase the P-66 setting to increase the trigger value.
Error 3	Possible causes: spring is broken, too small starting speed, too small ending speed. You can increase the starting speed and ending speed.
Error 4	Possible reasons: the spring of the gate is too tight, the gate pole is not hung, the speed of the pole or the end speed of the pole is too small. Check whether the spring is too tight, whether to hang the gate pole, increase the drop speed or drop end speed.
Error 5	Take-off timeout because the take-off time is more than 15 seconds. Increase start speed and end speed.
Error 6	Take-off timeout because the take-off time is more than 15 seconds. Increase start speed and end speed.
Error 7	Motor type is incorrectly selected and can be changed to the correct type with P-10.
Error 8	Retention.
Error 9	Motor reversal due to broken spring etc. during take-off.

The digital tube displays the meaning of the message:

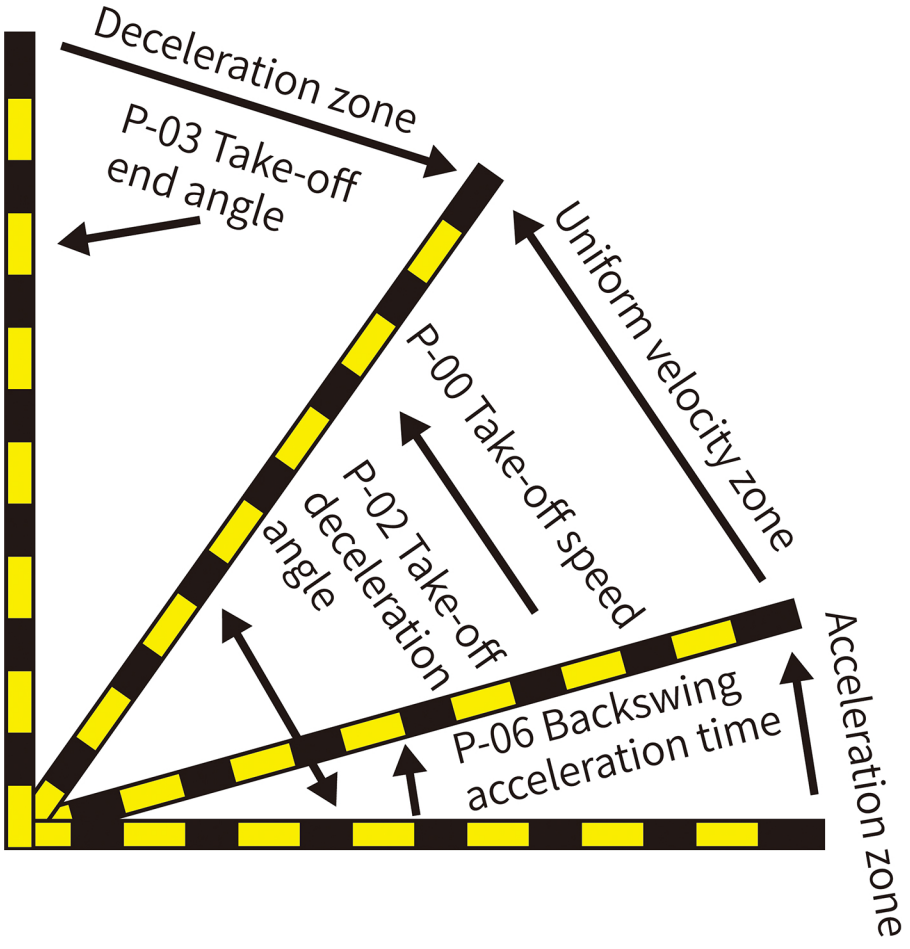
Contents	**Meaning**
IDLE	Motor not connected, or motor hall fault, may be due to loose wiring
STOP	Gate closed in place
CLOS	Gate is closing
OPEN	Gate is opening
HOLD	Gate opened in place
LOCK	Gate is locked
FLET	Fleet mode

Functional diagram

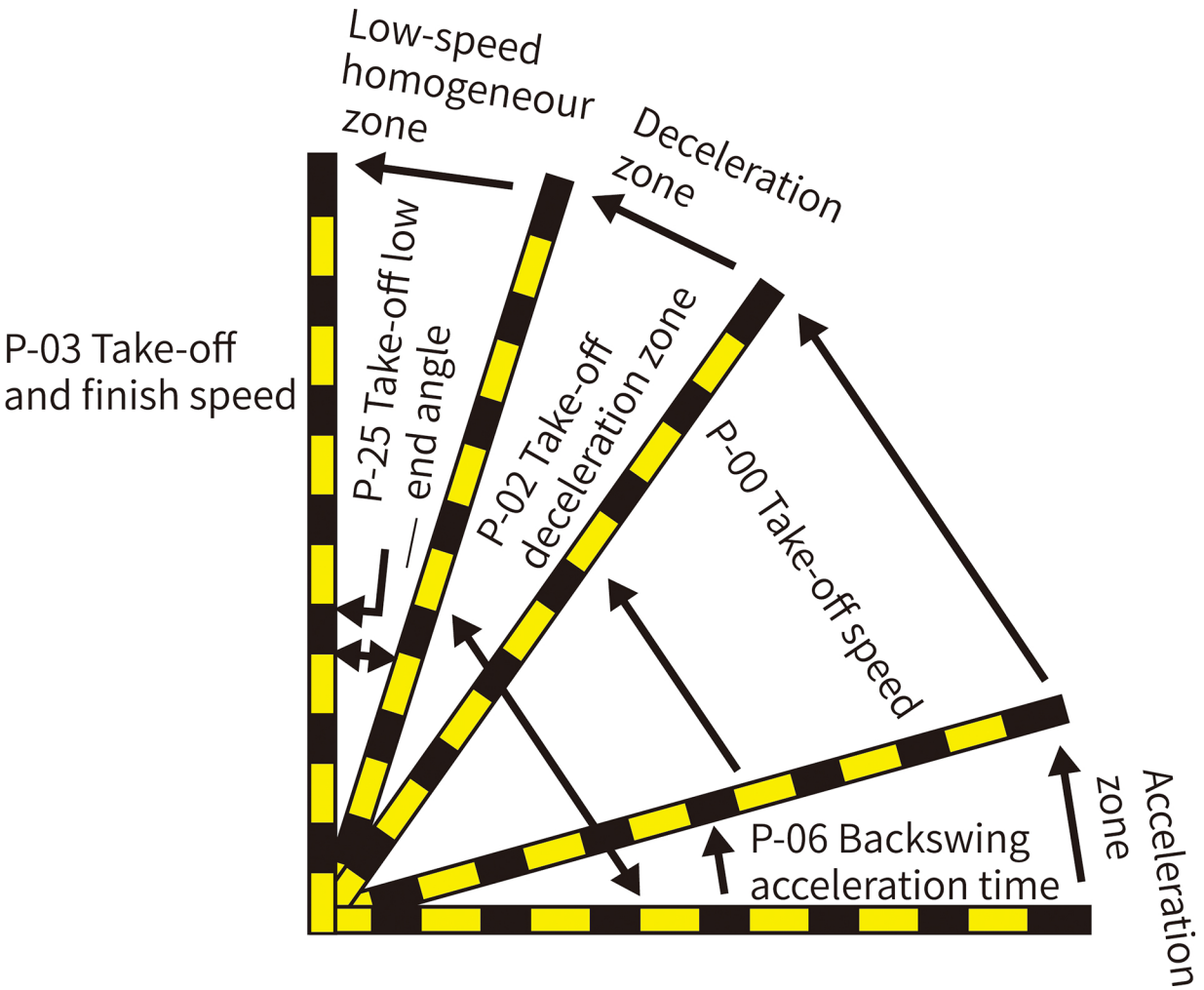
1. Diagram of horizontal and vertical position adjustment by P-08/P-09



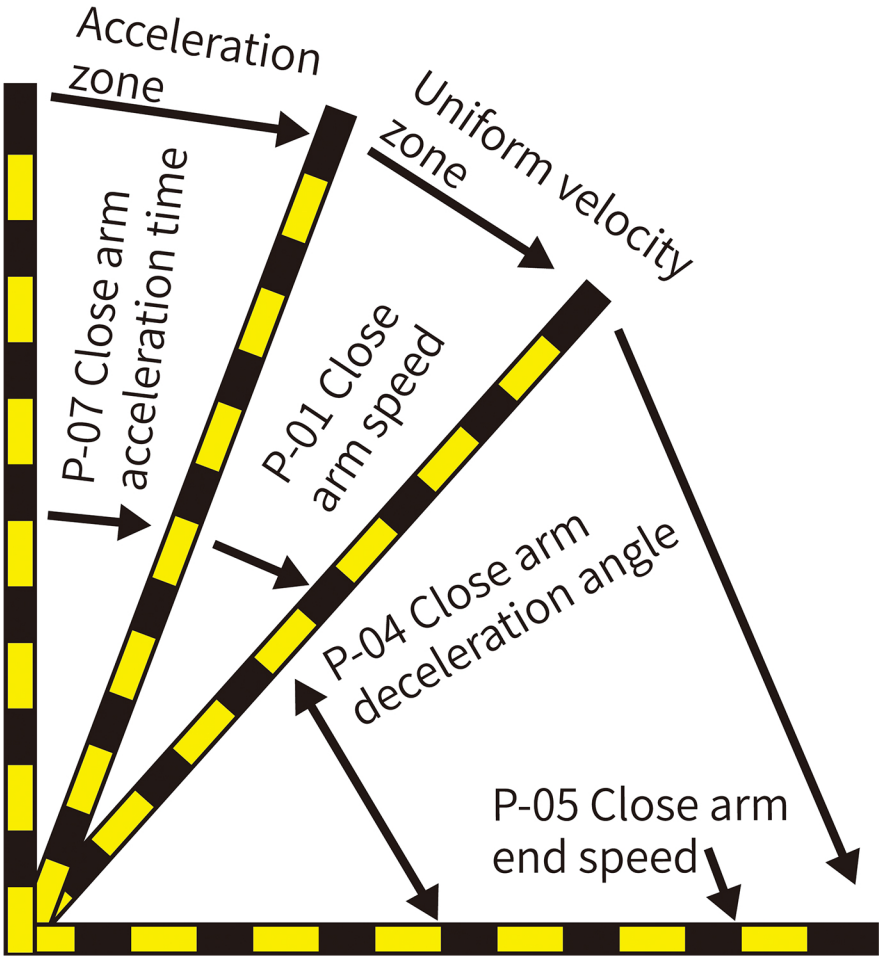
2. Schematic diagram of take-off arm without low-speed operating zone (P-25 greater than or equal to 90)



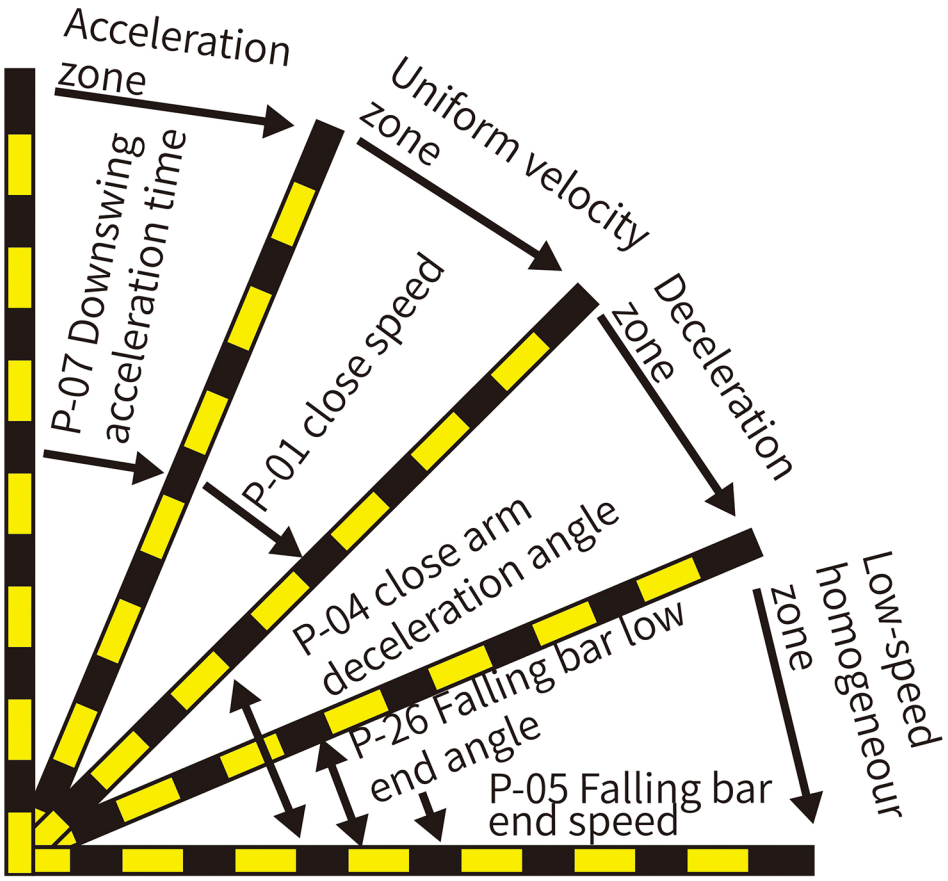
3. Schematic diagram of take-off arm with low-speed operating zone (P-25 less than 90 and P-25 greater than P-02)



4. Schematic diagram of the close arm without low-speed operation zone (P-26 equals 0)



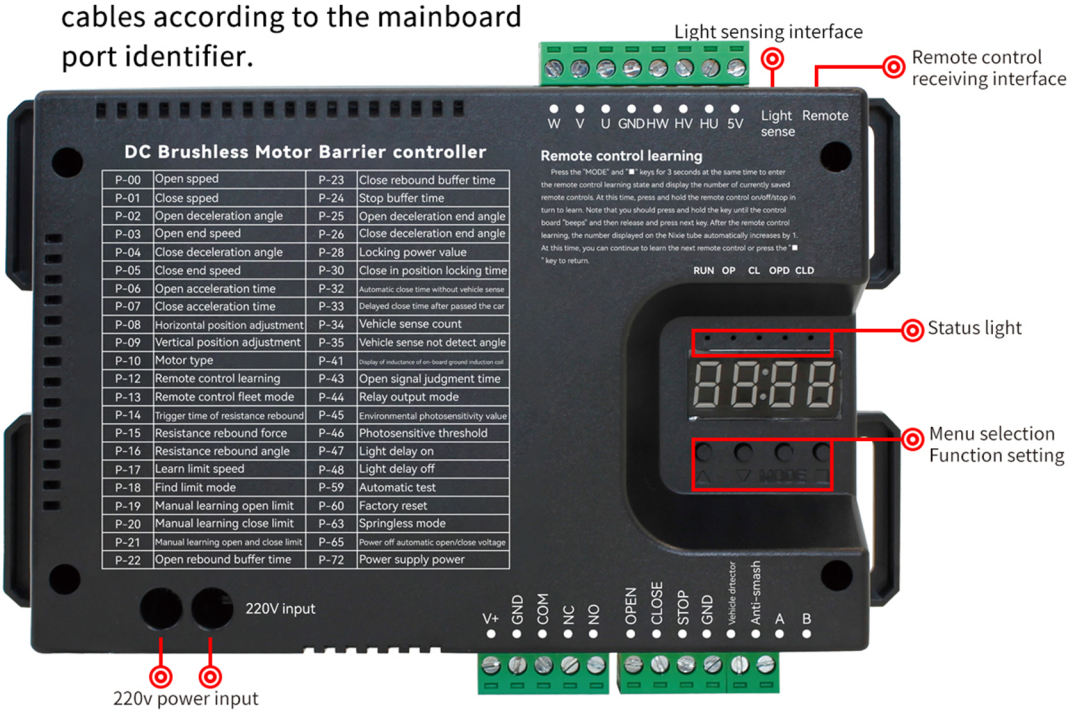
5. Schematic of close arm with low-speed operating zone (P-26 not 0 and P-26 less than P-04)



5.Barrier gate controller wiring diagram

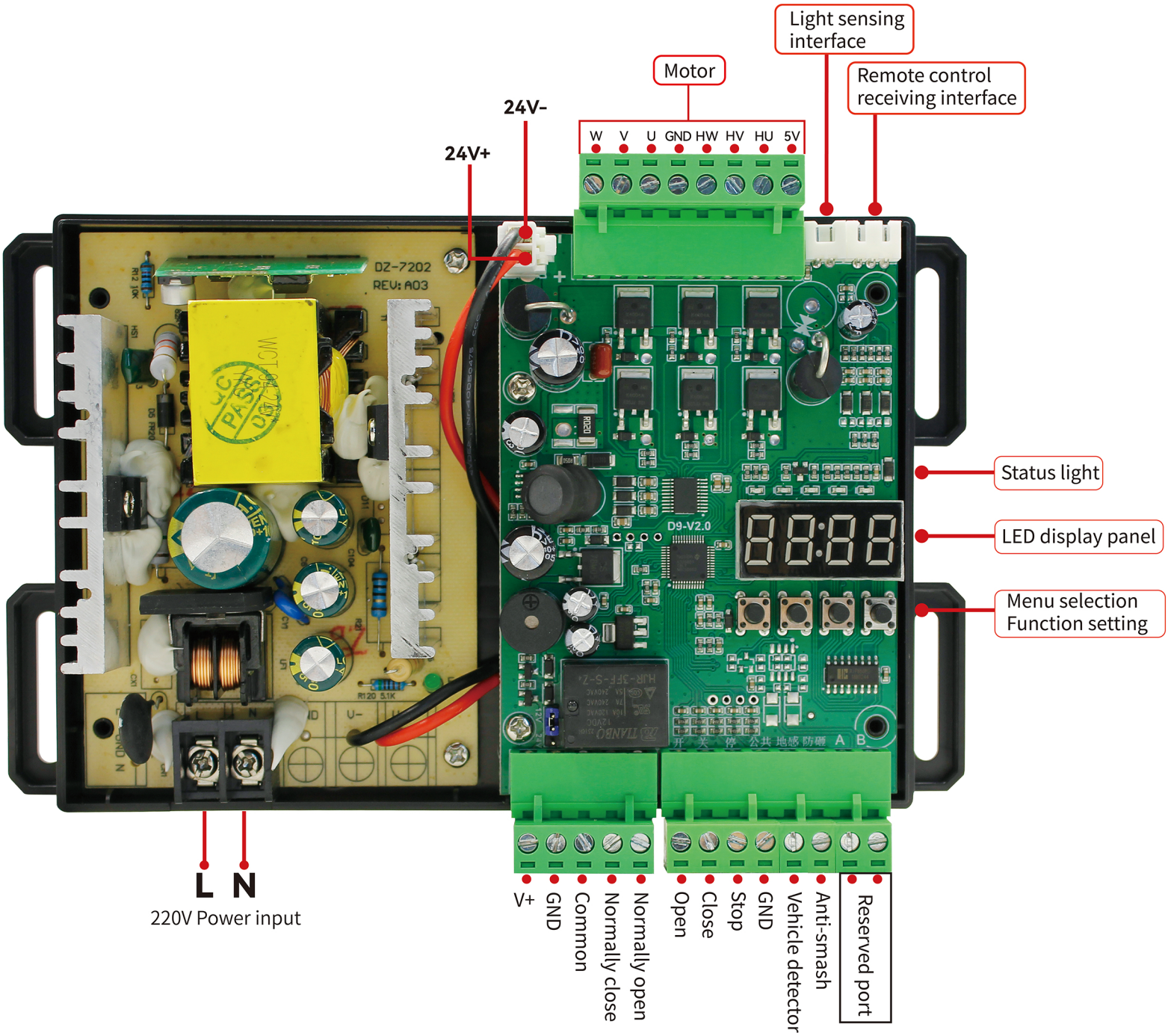


Tips: For version 2.1, please connect cables according to the mainboard port identifier.

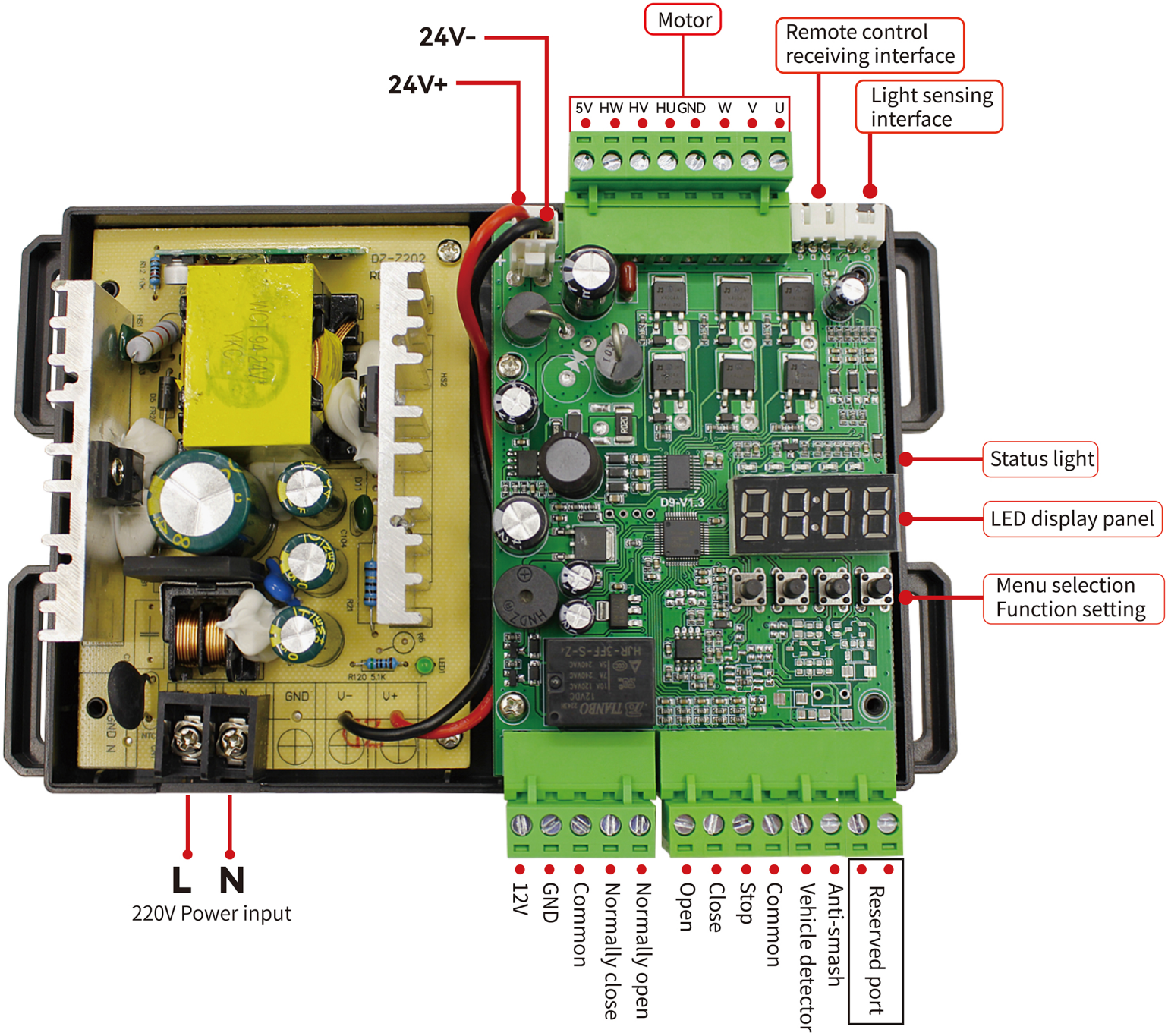


P-00	Open spped	P-23	Close rebound buffer time
P-01	Close spped	P-24	Stop buffer time
P-02	Open deceleration angle	P-25	Open deceleration end angle
P-03	Open end speed	P-26	Close deceleration end angle
P-04	Close deceleration angle	P-28	Locking power value
P-05	Close end speed	P-30	Close in position locking time
P-06	Open acceleration time	P-32	Automatic close time without vehicle sense
P-07	Close acceleration time	P-33	Delayed close time after passed the car
P-08	Horizontal position adjustment	P-34	Vehicle sense count
P-09	Vertical position adjustment	P-35	Vehicle sense not detect angle
P-10	Motor type	P-41	Display of inductance of on-board ground induction coil
P-12	Remote control learning	P-43	Open signal judgment time
P-13	Remote control fleet mode	P-44	Relay output mode
P-14	Trigger time of resistance rebound	P-45	Environmental photosensitivity value
P-15	Resistance rebound force	P-46	Photosensitive threshold
P-16	Resistance rebound angle	P-47	Light delay on
P-17	Learn limit speed	P-48	Light delay off
P-18	Find limit mode	P-59	Automatic test
P-19	Manual learning open limit	P-60	Factory reset
P-20	Manual learning close limit	P-63	Springless mode
P-21	Manual learning open and close limit	P-65	Power off automatic open/close voltage
P-22	Open rebound buffer time	P-72	Power supply power

Dmotherboard internal structure



For version 1.3, please connect the cables according to the port identifier of the mainboard, as shown below:



Barrier gate controller hole spacing dimensions

