

I .Product name:Sliding gate opener controller

II .Model:VELOCE DC

III.Product Function:

In order to make installation and debugging easier, our company has developed an intelligent self-learning sliding door controller. This controller adopts imported microcomputer chips, digital control, powerful functions, high safety performance, and easy installation and debugging.

IV. Product Features:

1. If the door is not in the travel position, every time it is powered on and operated for the first time, the door will slowly move to the limit position to prevent inertia from exceeding the limit.

2. Anti-collision travel design: When the door reaches the travel position, the motor can only operate by pressing the opposite direction button to prevent exceeding the travel position. Note: There is a power-off holding function when in travel position, and only reverse movement is allowed after power-on.

3. It uses dedicated Hall elements for travel sensing. When installing magnets, it is only necessary to distinguish between the north and south poles (as long as the magnets can attract each other), without distinguishing between high and low. External travel sensing is adopted. For two models of boards, as long as the motor action and the travel input indicator are the same color, the motor can be controlled to stop in place. If the direction is incorrect, the motor and travel direction can be changed simultaneously by setting the DIP switch 8.

4. Motor time protection: To avoid the motor running for a long time when the travel is malfunctioning, the controller will automatically learn the motor running time without manual setting. It adds 10 seconds more than the time within the travel. It will

automatically save after the motor completes several complete cycles (the motor protection time can also be set manually, which is the same as setting the slow-speed function when in place).

5. Automatic door closing function: The time can be adjusted from 1 to 250 seconds (check automatic door closing setting operation for time setting).

6. Motor strength adjustment: The motor running strength can be adjusted.

7. Motor slow-speed strength adjustment: The pushing force of the motor during slow-speed operation can be adjusted.

8. Obstacle return function: The resistance can be adjusted by a potentiometer (DIP switch 7 in the ON position)

9. Infrared input mode (default is normal open): It can be set as normal open or normal closed mode (check hidden function for operation).

10. With remote control function, which is sensitive, has a long remote control distance, strong anti-interference ability, and adopts advanced frequency hopping encoding and decoding technology, which has higher security and confidentiality than traditional remote controls (with a password of  $2^{32}$  times). The number of passwords can reach 400 million combinations and is not crackable.

Operating power supply:  $\sim 220V \pm 10\%$

Maximum output current: 10A

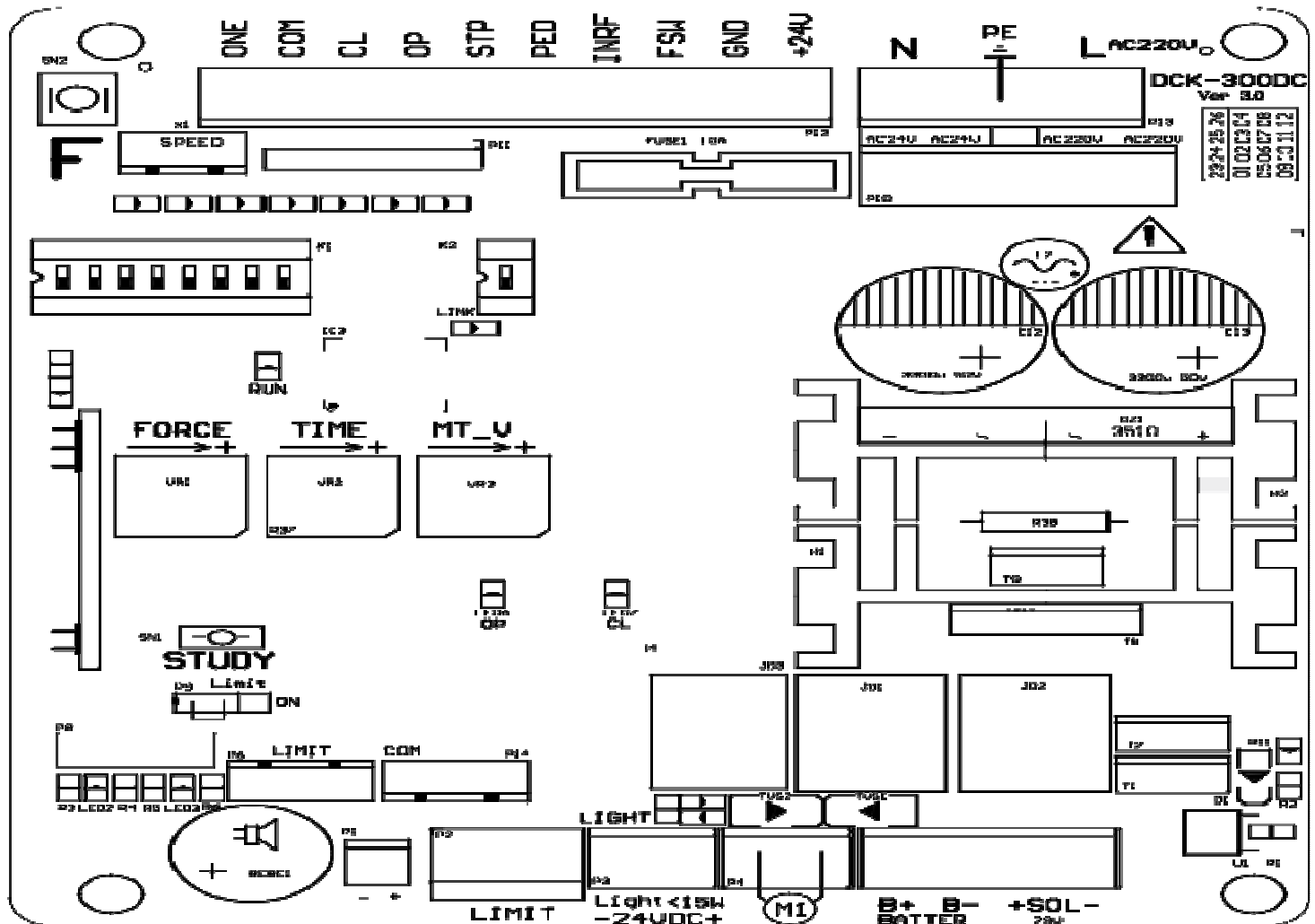
Fuse : AC220V 10A

Remote control distance: Open area > 30 meters

Operating temperature range: -25 degrees to +75 degrees

relative humidity: <60%

## V .Wiring Diagram



When the door is in the closing motion, the infrared sensor FSW detects an input. The door stops and immediately rebounds to the open position to prevent any obstructions.

DIP Switch Functions:

B1: Remote control single-button

B2: Switch between Normal open and Normal close modes for travel

B3: Automatic door closing function

B4: Slow-speed mode

B5: Maximum force starting

B6: Function setting

B7: Door obstruction detection function

B8: Motor direction (flipping this switch will simultaneously change the motor direction)

and travel direction)

## VI. Remote Control Coding and Decoding

### 1. Coding:

Press and hold the "Study" button for two seconds and release it. Then, press and hold any button on the remote control. After hearing a beep sound, release the button to complete the coding process.

Repeat the process for multiple codings. Up to 300 remote controls can be coded.

### 2. Decoding:

Press and hold the "Study" button. After approximately 8 seconds, you will hear a beep sound. Release the button to clear the previously coded transmitters.

### 3. Remote control single-button control:

When the red DIP switch 1 is in the ON position, the remote control functions in a single-button cyclic control mode, which includes the states of open, stop, close, and stop in a continuous loop.

### 4. Remote control three-button :

When the red DIP switch 1 is in the OFF position, the remote control operates in a three-button control mode. Each button corresponds to open, stop, and close functions respectively.

## VII. Function Selection

### 1. Remote Control Single Key Control B1

When DIP switch 1 is in the ON position, the remote control operates in single-key cyclic control mode; when it is in the OFF position, it operates in three-key mode.

### 2. Motor Travel Normal open/Close B2

The motor's travel mode can be switched between Normal open and Normal close. By default, the controller is set to Normal open mode. However, when DIP switch 2 is in the

ON position, the travel limit will be set to Normal close mode.

### 3. Automatic Door Closing Function B3

When DIP switch 3 is in the ON position, the automatic door closing function is activated. When the door reaches the limit position while opening, the closing time starts counting.

**Time Setting:** Put DIP switches 3 and 6 in the ON position, press the function key (F) to increase the time by one second. After the setting is complete, set DIP switch 6 to the OFF position while leaving DIP switch 3 unchanged.

### 4. Slow Speed Mode B4

When DIP switch 4 is in the OFF position, the slow speed is calculated based on the motor's running time; when it is in the ON position, it is calculated based on the number of motor rotations.

**Note:** Slow speed function is disabled when the TIME potentiometer is set to the minimum position. The slow speed position of the door can be adjusted clockwise by the TIME potentiometer.

### 5. Maximum Force Starting Function B5

When DIP switch 5 is in the ON position, the maximum force starting function is activated. When the door is relatively heavy and cannot be started smoothly, setting DIP switch 5 to the ON position allows the door to start, but it may increase the noise during door operation.

### 6. Function Setting B6

When DIP switch 6 is in the ON position, the settings for remote control single-key operation, automatic door closing time, and other functions can be adjusted. After the settings are complete, it must be set to the OFF position.

## 7. Obstruction Return Function (B7)

When the red DIP switch 7 is in the ON position, the obstruction return function is activated, which means that if the door encounters resistance while opening, it will automatically return.

The optimal adjustment method for this function is as follows:

Ensure that the door can open and close normally.

Activate the obstruction return function by toggling switch B7 to the ON position.

Initiate the closing action and during the closing process, adjust the resistance potentiometer (FORCE) in the counterclockwise direction.

Adjust the resistance potentiometer until the door automatically stops and returns. This point represents the critical threshold for the door's obstruction return. Slightly increase the resistance potentiometer in the clockwise direction to set the threshold for encountering resistance.

If, during testing, it is found that the force applied when encountering an obstruction is still too strong, you can adjust the motor torque potentiometer (TORQUE) in the counterclockwise direction to achieve a more suitable resistance.

## 8. Motor Direction Conversion (B8)

When the door's operating direction and travel limits are properly aligned, and the door is not in the limit position and is in a stopped state, you can switch DIP switch 8 to the ON position to simultaneously change the motor direction and travel direction.

## VIII. Ground Sensor

There are three states for the ground sensor input:

1. During door closing, if a ground sensor signal is detected, the door will stop and then proceed to open. If there is no ground sensor signal input within 5 seconds, the door will open for 5 seconds and then initiate the closing action. If the ground sensor

continuously detects input, the door will stop after opening for 20 seconds and wait for the ground sensor signal to disappear before initiating the closing action.

2. During door opening, if a ground sensor signal is detected, the door will continue to open. If there is no ground sensor signal input within 5 seconds, the door will open for 5 seconds and then initiate the closing action. If the ground sensor continuously detects input, the door will stop after opening for 20 seconds and wait for the ground sensor signal to disappear before initiating the closing action.

3. When the door reaches its travel position while opening, if a ground sensor signal is detected within 2 seconds, the door will initiate the closing action.

## IX. Optional Accessories

1. Warning Light: The door opener can be connected to a 220V AC warning light externally.

2. Emergency Stop Switch: When the door opener is in operation, pressing this switch will immediately stop the door's movement.

## X. Access and view the hidden setting functions

B6 and B7 are hidden function settings.

1. Cancel Time Protection: With B1, B6, and B7 in the ON position, press the F key. If there is a ground sensor input indicator (continuous light), it means the motor protection time is canceled. Press the F key again (one beep) to restore the motor protection time.

2. Remote Lock: With B2, B6, and B7 in the ON position, press the F key. If there is a door closing input indicator (continuous light), it means the remote lock function is activated, and the manual function can be locked (with pedestrian passage function taking priority). Press the F key again (one beep) to cancel the remote lock.

3. Pedestrian Passage: With B3, B6, and B7 in the ON position, press the F key. If there is a card swipe input indicator (continuous light), it means the pedestrian passage

function is activated. After the door reaches the closed position, the remote lock key will keep the door open for 4 seconds. Press the F key again (one beep) to cancel the pedestrian passage function.

To change the pedestrian passage time: With B3, B6, and B7 in the ON position, press and hold the F key. After a rapid beep sound for 4 seconds, the door will start opening automatically. Release the F key when the door reaches the desired position, and press the F key again to set the pedestrian passage time.

4. Time Counting: With B4, B6, and B7 in the ON position, press the F key(2 beeps). If there is a corresponding indicator light (continuous light), it means the speed measurement is canceled, but the counting function still works even without a speed probe. Press the F key again (one beep) to restore the speed measurement function.

5. Infrared Normal Closed: With B5, B6, and B7 in the ON position, press the F key(2 beeps). If there is an infrared input indicator (continuous light), it means the infrared is in normally closed mode. Press the F key again (one beep) to restore the normally open mode.

6. Restore Default Settings: With power on, set all switches B1, B2, B3, B4, B5, B6, B7, and B8 to the ON position, then switch them back to their original positions to restore the default settings.

Note: When setting hidden functions, it is recommended to disconnect the wiring terminal to avoid external inputs affecting the indicator light functionality (if not connected externally, no need to disconnect).