

# Swing Gate Opener control board SW2000 user manual

## Control board wiring

### Wiring

### Main functions

- (1) Just a battery voltage can be connected at once, or 12 or 24V.

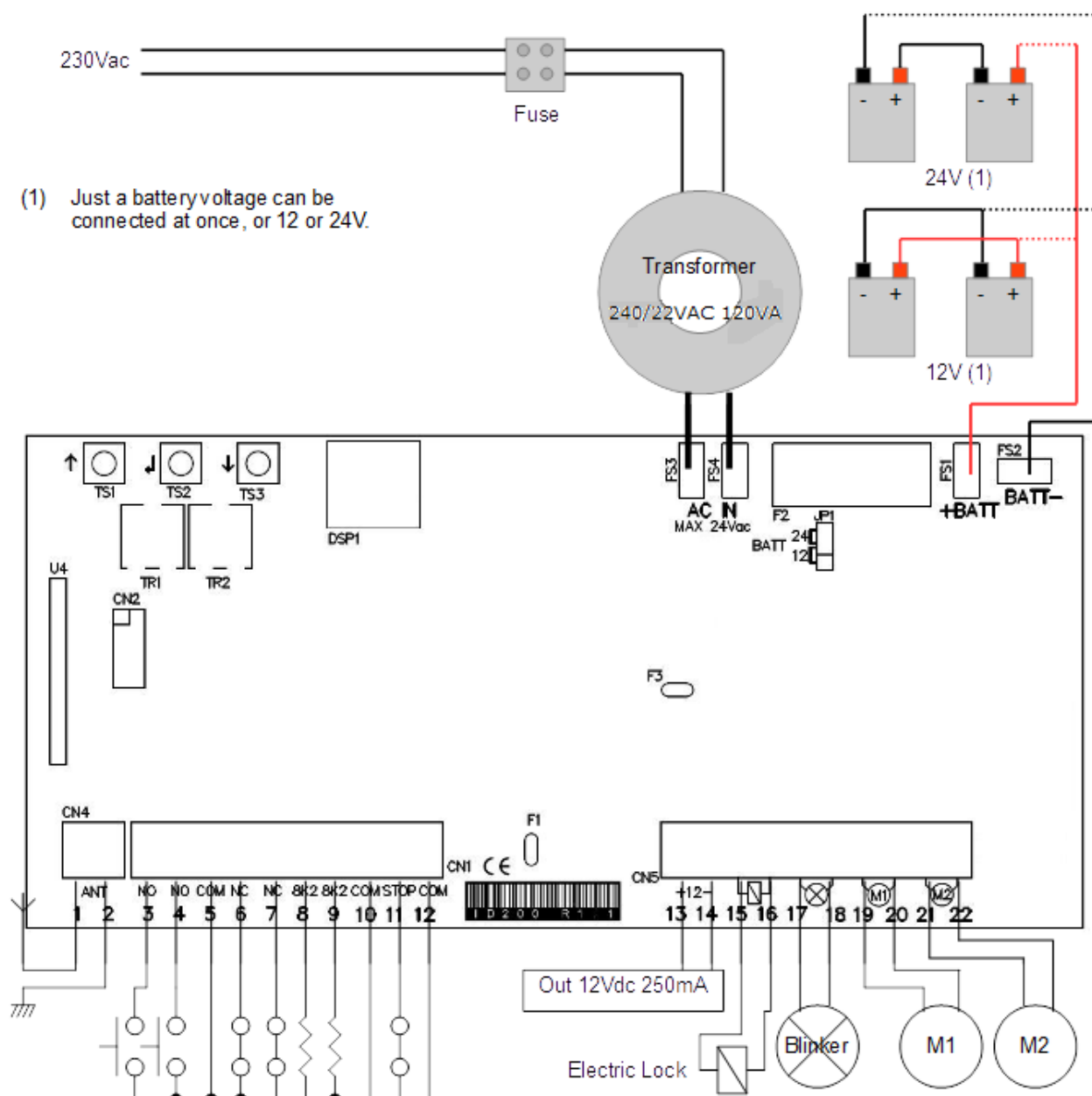


Figure 17

1. Antenna
2. Antenna's shield
3. Start input (NO)  
It completely opens the gate
4. Pedestrian start in. (NO)

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It opens just motor 2

5. Common

6. Photocell input (NC)

During pause: Reloads pause

During closing: Reverses motors direction

7. Photo stop input (NC)

During pause: Reloads pause.

During closing: Reverses motors direction.

During opening: stops the motors and waits till contact returns close.

8. Analog opening edge input (8K2 ohm)

Waiting an opening command: inhibits opening

During opening: reverses motor direction for 1 second.

If not used left unconnected.

9. Analog closing edge input (8K2 ohm)

Waiting a closing command: inhibits closing.

During closing: reverses motor direction for 1 second.

If not used left unconnected.

10. Common

11. Stop input (NC)

It always stops motors and blocks control unit activity.

12. Common

13-14. Power supply output

12Vdc 250mA

15-16. Electric lock output

17-18. Flashing light output

12/24V 1A

19-20. Output motor 1

8A

21-22. Output motor 2

8A

TR1. Slowing down speed trimmer

TR2. Obstacle detection sensibility trimmer.

TS1-TS3. Buttons up/down

TS2. Enter button

DSP. Display

FS3-FS4. Transformer input 12-20Vac / 100-200VA

F2. Battery fuse 10A Fast

FS1-FS2. Backup battery input 12/24Vdc

J1. Back up battery voltage selector 12/24V

### Inputs status

When the control unit is in standby. User can read inputs status on display:

\_ \_ : No input active.

5t: Stop input active.

P5: Photo stop input active.

Pc: Photocells input active.

EO: Analogic edge opening input active.

EC: Analogic edge closing input active.

5B: Start input active.

5p: Pedestrian input active.

op: Open input active.

CL: close input active.

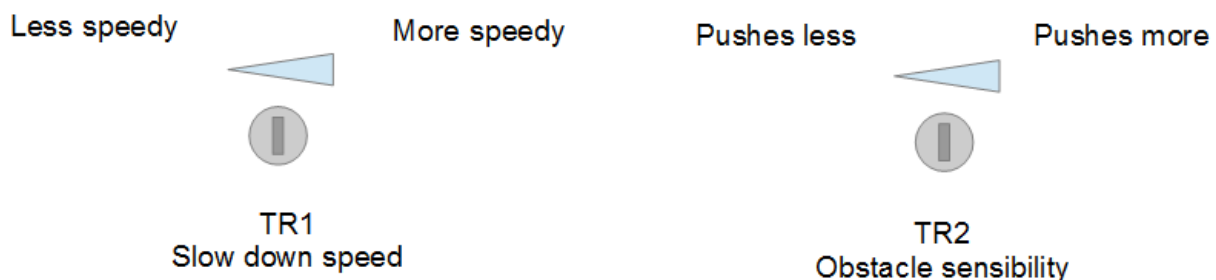
During pause, the display show the seconds countdown to closing.

### Trimmers setting

**Slow down speed trimmer** regulates the slowdown speed. Do not set speed to low (less than 10 cm/sec on the wing edge) to avoid that gate stops in too cold conditions.

**Obstacle sensibility trimmer** fine tunes the obstacle detection level learned by the control unit during working times programming. This fine regulation must be done after working times learning.

Normally the trimmer goes in the center, in this position should be possible to respect rules in most of installations. If it's need to resolve problems related to norms or to environmental situations (ex. Strong wind) is it possible to regulate this trimmer increasing or decreasing sensibility.



**Figure 18**

### Quick installation

To program quickly the working times, open both wings, then keep pushed up till you read **AU** on the display. The control unit will do several tests and then it'll learn working times. When the procedure is finished the blinker goes off.

### Auto Learning transmitters:

It's possible to learn transmitters quickly without using the base menu. To insert a new transmitter transmit 3 times with the new remote, making at least 1 second pause between each transmission. Then transmitter already in memory and then once with the new. When programming is done, the

blinker flash once. **Attention:** function must be enabled, refer to “advance menu ”-auto learning transmitters. The new code takes the same channel as the one used to insert it.

## Board settings

### Base Menu

Push enter 1 for at least 1 second to enter base menu.

**OL** is on the display, with up/down it's possible to select other functions of this menu.

To exit this menu select **EX** or push up and down together.

After 2 minutes without actions, the control unit exits itself from this menu.

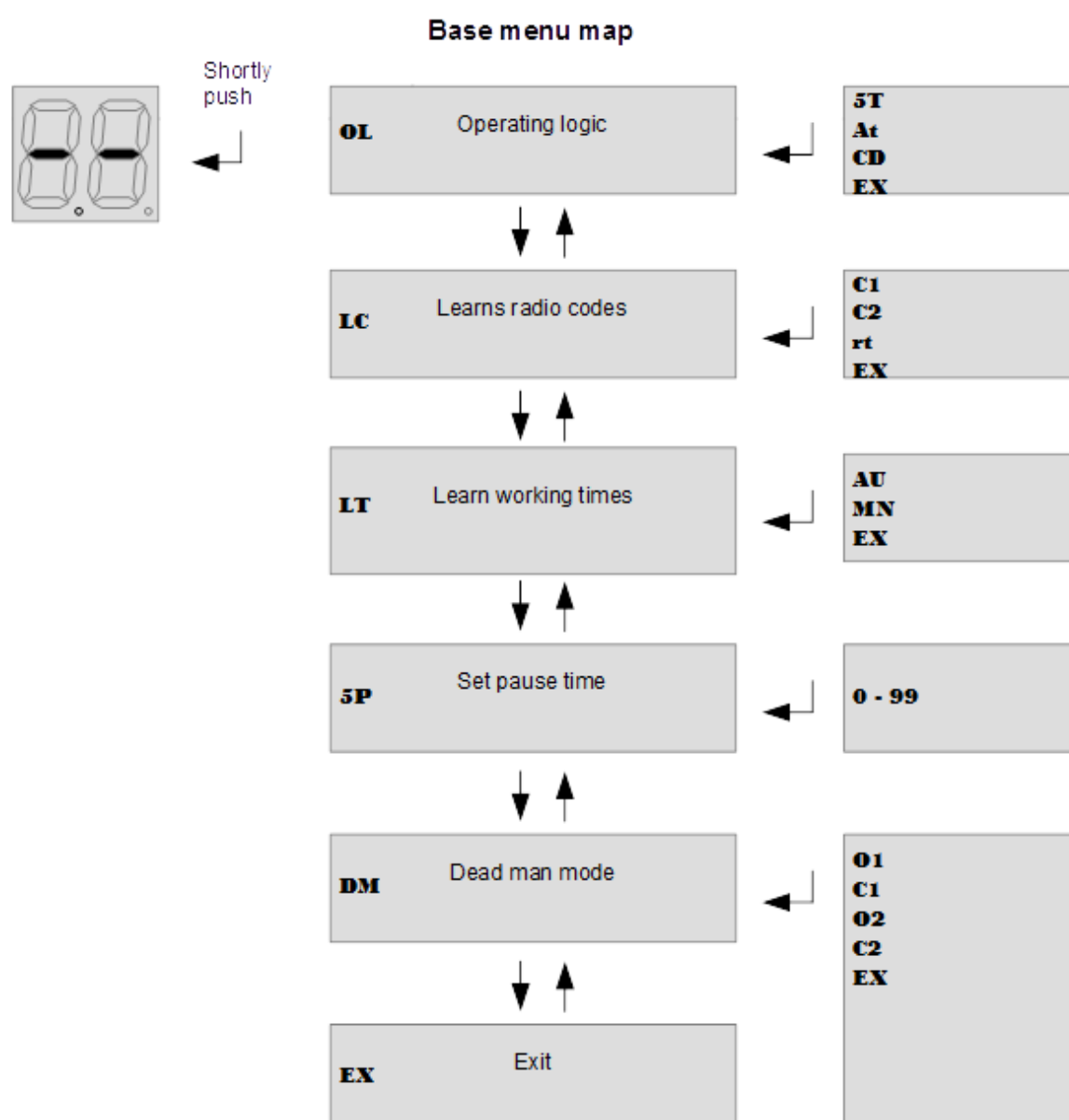


Figure 19

### Base Menu description:

**Operating logic OL:**

Select **OL** and push enter, with up/down select wanted logic between following end push once enter. Check tab operating logic for further information.

**5T:** Step by step logic.

**At:** Automatic closing with stop function.

**CD:** Automatic closing for condominium function.

To exit this menu select **EX** or push up/down together.

**LC Learning/ removing transmitters code:**

Select learning code function **LC** and push enter, than select one of following functions with up/down.

**C1:** learn a transmitter on channel1.

**C2:** learn a transmitter on channel2.

**Rt:** Delete all transmitter in memory.

Once selected the channel transmit the code, on the display is show "**OK**" for a while if operation is done.

To replace the channel of a code, just select desired channel and transmit once the same code.

To delete just one code, select **RT** and transmit the code to be removed, on the display is show "**OK**" for a while if operation is done.

To delete all codes, select **RT** and push enter, then confirm with **YS**.

To exit this menu select **EX** or push up/down together.

**LT learn working time:**

Attention: before to start learning procedure, the gate must be open to do automatic procedure, otherwise must be closed to do the manual procedure. Use "dead man " function to put the gate in the right position.

Is it possible to program working time automatically, please refer to "**Quick installation**"

Select **LT** in the base menu and push enter, after select the learning mode with up/down.

**AU:** automatic learning procedure.

**MN:** Manual learning procedure.

To exit this menu select **EX** or push up/down together.

**AU: Automatic procedure for working times learning.**

Attention: in this procedure all safety inputs are disabled.

The wings close themselves, in the meanwhile all the working times and values for obstacle detection sensor are learned. If just motor 2 is connected, the control unit sets itself for "single wing working". If analogue edges are connected, they are automatically enabled.

**5p Set pause times:**

Use up/down to set the pause time between 0 and 99 seconds. Push enter to confirm. To exit without modifications push together up and down.

Attention: setting pause time doesn't enable auto closing, please refer to chapter "OL operating logic" to enable this function.

**DM Dead man mode:**

Selecting this menu it's possible to control each motor in dead man mode. Push up and down to select one of following item:

O1 open motor1  
C1 close motor1  
O2 open motor2  
C2 close motor2  
EX Exit

Keep pushed enter to start the selected motor in dead man mode.

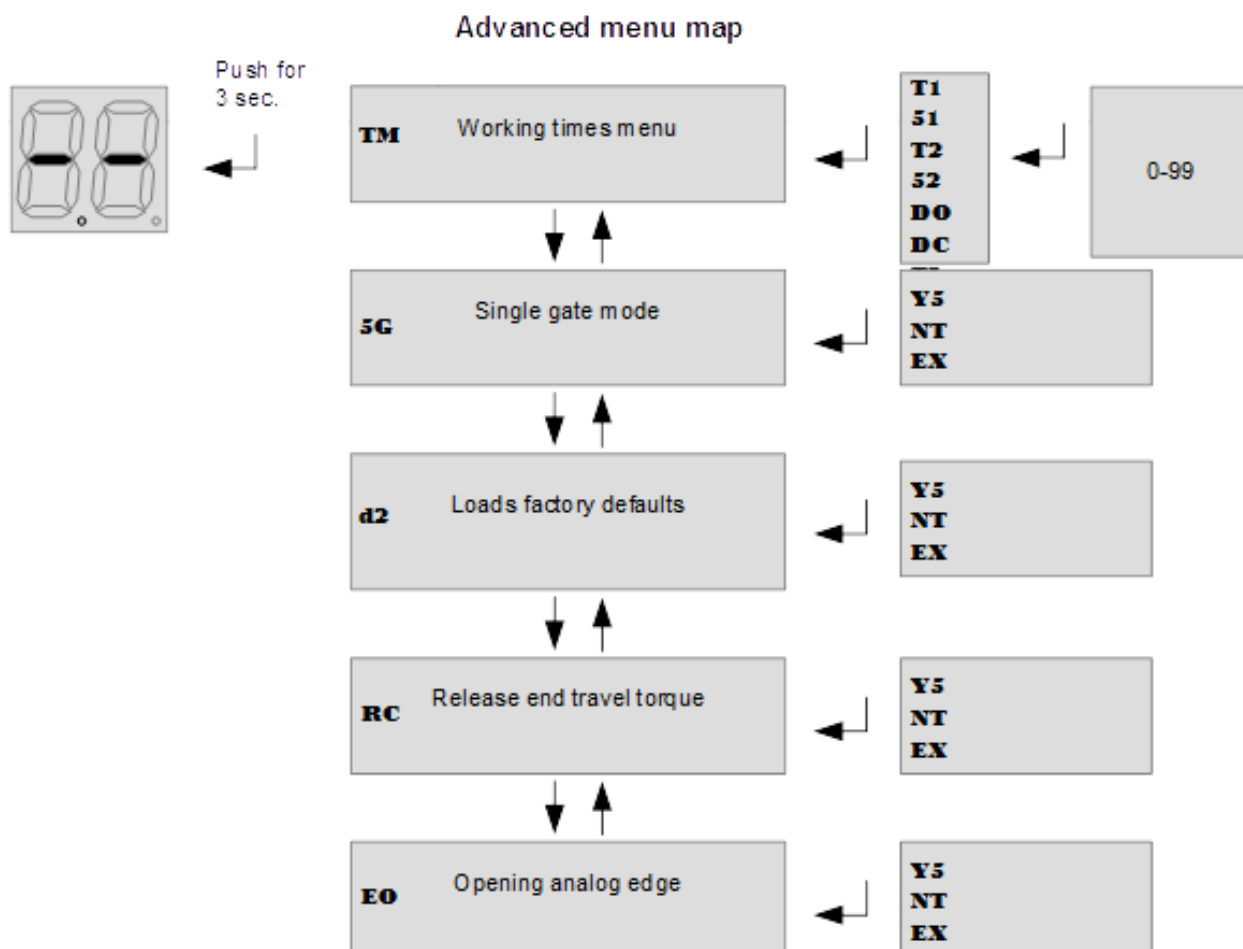
### Board settings:

#### Advanced Menu

Push enter button till on the display is shown **TM**. With up/down it's possible to select all items in this menu.

To exit this menu select **EX** or push up/down together.

After 2 minutes without actions, control unit exits itself from this menu.



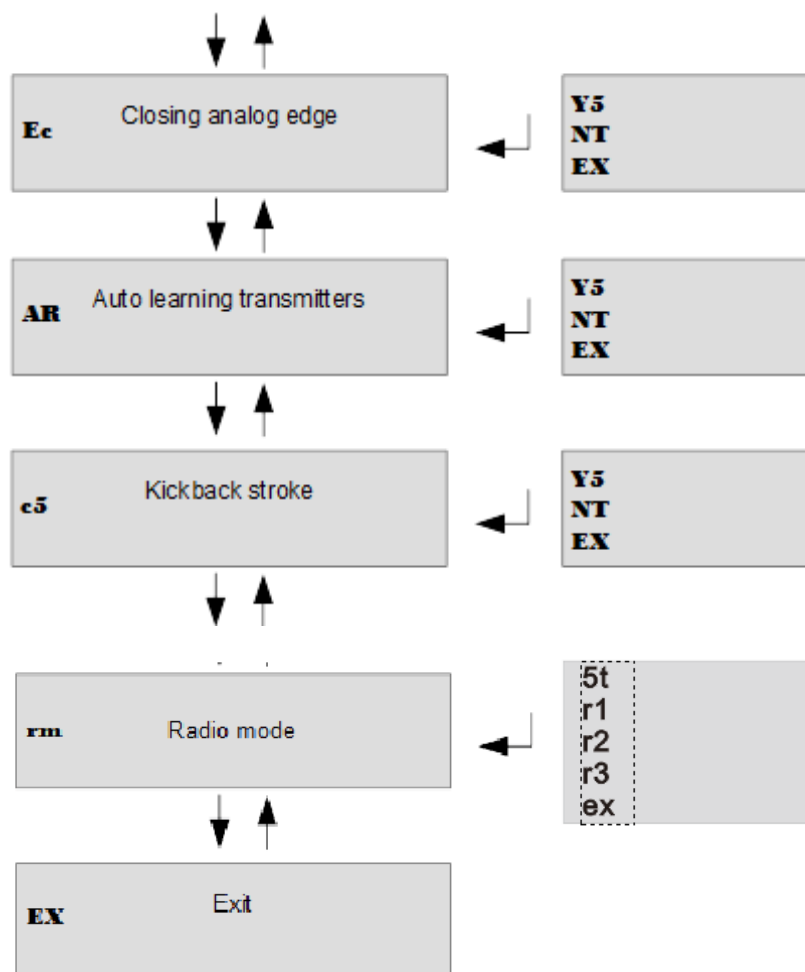


Figure 20

### Advanced menu

#### TM working times menu:

In this menu it's possible to modify working times of control unit:

T1- Working time motor1

51- Start time slowdown motor1

T2- Working time motor2

52- Start time slowdown motor2

DO-Motors delay opening

DC- Motors delay closing

TL-Electric lock activation menu.

EX-Exits from advanced menu.

Once selected working times to be changed, use up/down to modify it from 0 to 99 seconds. Push enter to confirm.

To exit without modifications select EH or push together up and down.

#### 5G Single wing mode:

In this menu it's possible to verify or set if gate works in single wing mode (motor2). Use up/down to choose yes (YS), not (NT) or exit(EX). Push enter to confirm.

**D2 Load defaults:**

Choosing this menu and confirming with yes (YS), set the control unit at factory defaults.

**RC release torque at work end:**

Enabling this function, the motors reverse direction for a while to release the torque at end of work .Use up/down to choose yes(YS),not (NT) or exit(EX). Push enter to confirm.

**EO Enable opening analogue edge:**

Enabling this function it's enabled the edge active in opening period. Choose yes(YS) is enables the edge.

**EC Enable closing analogue edge:**

Enabling this function it's enabled the edge active in closing period. Choose yes(YS) is enables the edge.

**Ar Enable automatic transmitters learning:**

Enabling this function it's possible to insert new transmitters without accessing base menu. Refer to "Automatic transmitters learning".

**C5 Enable kickback stroke:**

In this menu you can enabled the stroke at start to unlock electric lock and the final stroke to lock it.

**rM Radio mode:**

In this menu it's possible to modify how transmitters work with the control unit.

**5T- Step by step mode:** Each button (code) of the transmitter is entered separated by the others, Codes learned on C1 work as "Start command". Transmitters learned on C2 word as "Pedestrian command".

**R1-** Learning a code from a transmitter, it enables all the four buttons of transmitter wording with the control unit. Sequence is: Button1=close command, Button2=open commend, Button3=Pedestrian commend, Button 4=stop commend.

**R2-** Learning a code from a transmitter, it enables all the four buttons of transmitter wording with the control unit. The sequence is same as above, except buttons3 and 4 inverted. Button3= stop commend, Button 4= Pedestrian commend.

**R3-** Learning a code from a transmitter, it enables all the four buttons of transmitter wording with the control unit. Sequence is: Button1=open command, Button2=stop commend, Button3=close commend Button, 4=Pedestrian commend.



**Default settings (Factory presets)**

Here it follows list default settings. The same set after a **D2** command of advanced menu.

Setting	Default
<b>OL</b> Operating logic	<b>5T</b> Step by step
<b>5P</b> Pause time	<b>10</b> 10 seconds
<b>T1</b> Working time motor 1-2 <b>T2</b>	<b>30</b> 30 seconds
<b>51</b> Slowing down time motor 1-2 <b>52</b>	<b>20</b> 20 seconds
<b>D0</b> Wings delay opening	<b>02</b> 2 seconds
<b>Dc</b> Wings delay closing	<b>05</b> 5 seconds
<b>TL</b> Electric lock activation time	<b>02</b> 2 seconds
<b>5G</b> Single gate mode	<b>NT</b> Not
<b>RC</b> Release end travel torque	<b>NT</b> Not
<b>E0</b> Opening analog edge	<b>NT</b> Not
<b>EC</b> Closing analog edge	<b>NT</b> Not
<b>AT</b> Auto learning transmitters	<b>Y5</b> Yes
<b>rm</b> Radio mode	<b>5T</b> Step by step
<b>C5</b> Kickback stroke	<b>NT</b> Not

**Figure 20**