



TWIST 230

CONTROL UNIT FOR DUAL SWING GATE OPERATORS

DIRECTION FOR USE



TWIST 230

The installation of this apparatus requires technical routine.
 If necessary, consult an experienced technician for help.
 Warranty applies to a professionally installed and properly used apparatus only.
 Disconnect all power before working on this unit!
 If a fuse has blown, disconnect the power source before replacing!

CONNECTIONS:

For the easier installation and maintenance, this apparatus is equipped with removable terminal blocks. The terminal blocks can be connected in 2 different ways. We connected the connector of the motor in a different way as an example.

GND – common ground contact for mains and motors

230VAC – mains power input (230VAC)

N – neutral contact of mains

L – live contact of mains

FLASH – output for flashing light (230VAC)

N – neutral contact of the light

L – live contact of the light

MOTOR1 – output for the motor starts up first during opening (230VAC)

OP - opening direction, one side of the capacitor

N - common connection of the motor coils

CL - closing direction, the other side of the capacitor

MOTOR2 – output for the motor starts up second during opening (230VAC)

OP - opening direction, one side of the capacitor

N - common connection of the motor coils

CL - closing direction, the other side of the capacitor

12VDC – power supply output for photocells and external

radio receiver (12-18VDC)

- – negative contact of the power supply output

+ – positive contact of the power supply output

COM – low voltage common terminal for START and SAFETY inputs.

START - Normally Opened inputs for auxiliary devices with momentary contact (eg. pushbutton, key switch, radio receiver, keypad, card reader, loop detector). Functioning the same way as the FULL and PART buttons on the remote control transmitter.

PART – input for partial opening (one leaf).

FULL – input for full opening (both leaf).

SAFETY - Normally Closed inputs for entrapment protection devices.

Unused inputs must be connected to the COM terminal.

FOT1 – input for primary (exterior placed) photocell. While opening, this input is inactive. If the photo-beam interrupted during closing, the gate fully opens. When the photo-beam interrupted when the gate stopped, it prevents to close and restarts the auto close timer.

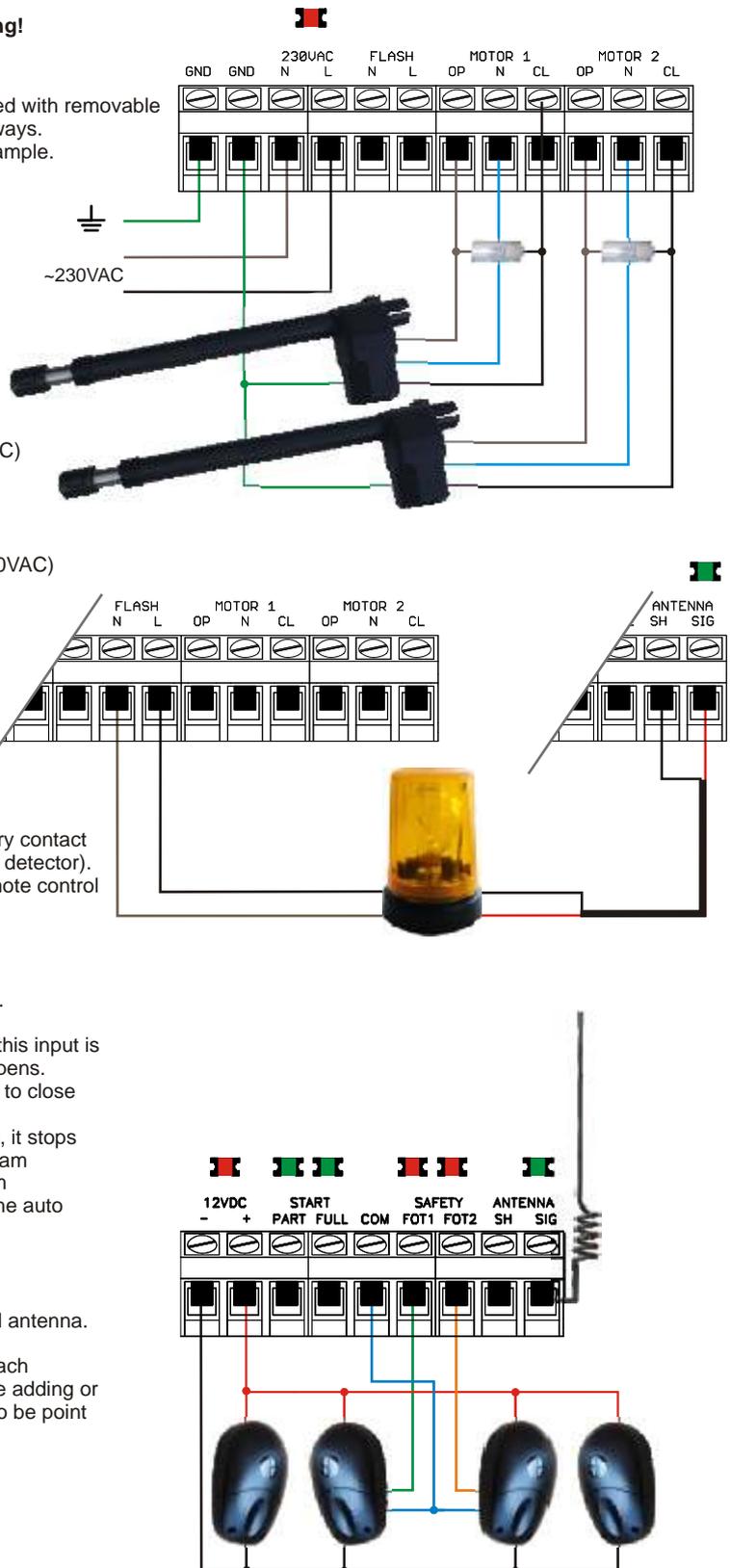
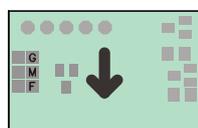
FOT2 – input for secondary (interior placed) photocell. While opening, it stops the gate as long as the photo-beam being interrupted. If the photo-beam interrupted during closing, the gate fully opens. When the photo-beam interrupted when the gate stopped, it prevents to move and restarts the auto close timer.

ANTENNA - connections for antenna.

SH – shield connection for external antenna.

SIG – signal wire connection for external antenna, or the included rod antenna.

DECODER CARD - this circuit board stores the individual codes of each memorized transmitters. The control unit must be potential free before adding or removing a decoder card. The arrow seen in the decoder card have to be point to the DECODER CARD inscription of the control unit.



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STATUS LEADS:

The input LEDs are lights up when the inputs are activated (shorted to COM terminal).

Status LEDs of Normally Closed inputs (red LEDs - FOT1, FOT2) have to light continuously after connecting mains power ->SAFETY inputs

Status LEDs of Normally Opened inputs (green LEDs PART, FULL) should be OFF, the LEDs only have to light up at the moment of operating these inputs->START inputs

230VAC – red LED, indicating the presence of mains power on the circuit board.

12VDC – red LED, indicating the supply voltage for motors and the circuit board are present. If this status LED is OFF, while 230VAC is ON, check the fuses. If a fuse is blown, it can refer to a serious fault. Inspect the cause, then replace the fuse with the same type and rating.

ANTENNA-SIG – green LED, indicating the operation of the integrated radio receiver.

ADJUSTMENTS:

POWER1– force adjusting trimmer of the motor opening firstly. It can regulate the force of the motor between 50-95%. Turn toward '+' for more power, turn toward '-' for less power. It has to be set properly for safety: during opening the force at the edges of the gates should not exceed 150 Newtons (15 Kgs). For the first 2 seconds of opening, the control unit applies full power to the motor outputs.

POWER2– force adjusting trimmer of the motor opening secondly. It works the same way as POWER1 trimmer.

Check working times if you adjusted the settings of the POWER trimmers, if necessary adjust the WORKTIME trimmers as well.

PAUSE – trimmer to adjust auto close timer. If the trimmer is turned fully left, the gate will never close automatically, it can be closed with the transmitter. Turning right toward the '+' sign the timer can be set between 10-128 second: after the delay time expired, the gate is closing automatically.

Using partial opening, the delay time will be halved (about 5-64 seconds).

PUBLIC - public function. If you pull the jumper off the function is on and the PART and the FULL button works as following. While the gate is opening the buttons are inactive. If you set up automatic closing time too this time restarts for these buttons. During closing if you push one of these button the gate doesn't just stop but does full opening.

LRN/DEL –pushbutton to add („memorize”) and delete transmitters. Also for modifying global transmitter settings.

Memorizing a remote control: press LRN/DEL button for a moment, the green ANTENNA-SIG LED turns on for 30 seconds.

During this 30 seconds press any button on the transmitter you want add: if the ANTENNA-SIG LED turns off after pressing the transmitter's button, the transmitter is successfully added. To add more transmitters, repeat this process. After memorizing the 61th the ANTENNA-SIG LED blinking 3 times, indicating that the memory is full. In this case, deletion of older transmitters are needed in order to add new transmitters.

Entering to configuration menu: continuously hold down LRN/DEL button, the number of blinks of ANTENNA-SIG LED indicates serial numbers on menu. Count the number of blinks carefully, the option at the given menu will be changed after the blink.

The options are applied to all transmitters being on the same decoder card, and can be modified globally at any time. Factory default values are in **bold**. Settings in *italic* are not recommended, they can cause malfunctioning. The configuration menu is locked by default unlock to enable custom settings by entering 11th menu (11 blinks, configuration menu unlocked).

At the first 4 menu (1-4 blinks), a different transmitter button can be assigned for a given function: after the appropriate number of blink(s) (when LED is dark) release LRN/DEL button and press the button on the transmitter you would like to use for the given function within 5 seconds. If no button is pressed within 5 seconds on the transmitter, the given function can not be operated by remote controls.

Number of blinks and menu settings table:

1 full opening (FULL) **button „A”**

2 partial opening (PART) **button „B”**

3 -

4 shift key - **button „D”**

5 **rolling-code** / simple decoding method

If a transmitter stops reacting from one day to another, set it to simple decode method. It can occur when the remote control transmitter is being used infrequently. For security reasons, it is part of the rolling-code system, it is not a fault of the unit.

6 **monostable** (momentary) / *bistable (toggle) switching mode*

7 2 / 4 bistable outputs. Working in bistable switching mode only.

8 **normal** / shift mode

In shift mode, the unit will not react to the pressing of a single button on the remote control transmitter, you have to press shift button first, then the desired button next for operation. It can protect from accidental operation.

9 **switching only with shift key** / without shift key

To use more than one control unit with the same transmitter, activate both 8th and 9th menu:

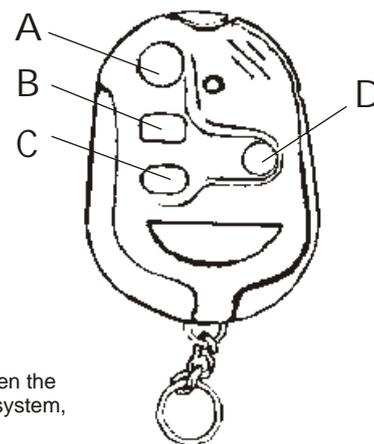
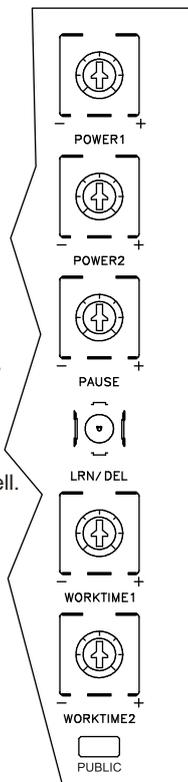
- enable shift mode (8th menu) on all the control units

- change the 9th menu settings („switching only with shift key”): this control unit will operate by pushing shift button first, then the configured button

- leave the 9th menu unchanged („switching only without shift key”): this control unit will operate by pushing the configured button only

The control units have to be within the radius of the transmitter for stable and safe operation.

10 **assign one output to a single button** / assign more outputs to a single button



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11 lock configuration menu / unlock configuration menu

1 blink: configuration disabled, 2 blinks: configuration enabled

12 display the number of memorized transmitters - each blink means one transmitter

13 display the settings of menus 5-10.

short blinks: default settings, long blinks: settings changed

14 -

15 reset settings to factory default values: menus 1-10 will be set back to default values. It does not delete transmitter memory.

16 -

17 delete lost transmitters. Disconnect the power source for 30 seconds, then use the remained transmitters at least once.

After the activation of 17th menu, the transmitters what are not used after the disconnection of the power source will be deleted.

18 delete a memorized transmitter. Release the LRN/DEL button after the 18th blink, then press any button on the transmitter would like to remove from memory.

19 clear transmitter memory. It also sets back factory default settings.

20 -

WORKTIME1 – opening and closing time adjusting trimmer of the motor opening firstly. The range of the time could be set between 10-50 seconds. Turn toward „+“ for more time, turn toward „-“ for less time.

WORKTIME2 – opening and closing time adjusting trimmer of the motor opening secondly.

It works the same way as WORKTIME1 trimmer.

These settings being detected when the gate is closed. If you change the settings of POWER1 or POWER2 trimmers, check opening / closing times (WORKTIME1, WORKTIME2), if necessary adjust them as well.

The ratardation time between the two gateleafs is 4 sec at opening and 5 sec at closing. This time is not adjustable.

INSTALLATION:

After checking the connections, connect mains power: the flashing warning light will flash once or twice.

Memorize at least one transmitter.

Set both leafs manually half opened position, then lock the emergency release. After pushing „full“ button on the transmitter, both leafs must have to open. If a leaf does not move toward opening direction, disconnect the power source, remove the particular motor's terminal block, and connect the other way (exchange the wires of the 'OP' and 'CL' connections).

If the opening and direction of the leafs are correct, unlock the emergency release, close the leafs manually, then lock the emergency release. Disconnect mains power for about 30 seconds.

Open the gate with the transmitter, it will be opening until the opening time expires. If the opening time is too long too short at a leaf, close the gate with the transmitter, and adjust the appropriate trimmer (WORKTIME1, WORKTIME 2). Open the gate with the transmitter, check the opening time - if correct at present, continue the experimenting.

The opening time is accurate when the leafs starts moving slower about 3 seconds before they fully open.

About three months after the installation you have to check the right working of the gate, set power and working time of the motor.

USAGE OF THE CONTROL UNIT:

Use „FULL“ button if you traveling by car for full opening. If you would like to open the gate as a pedestrian, use „PART“ button to open just one leaf.

With both of these buttons the gate cold be stopped during opening and closing.

If just one leaf is opened (or if it stopped during opening), the leaf can be closed with „PART“ button, or with the „FULL“ button the other leaf can opened as well.

After both leafs are opened („FULL“), opening just one leaf („PART“) is not possible.

The auto close timer (if it has been set) could be turned off temporarily: if the gate opened fully, press „FULL“ or „PART“ button (in case of partial opening („PART“), press „PART“ button). The flashing light blinks for a few times, and the gate remaining opened. For the next pushing of the button, the gate will close instantly.

The gate could be operated the same way with an auxiliary device (eg.: pushbutton, key switch) connected to „PART“ and „FULL“ terminals. Rubber bumpers are necessary for the correct operation of the gate opener.

TECHNICAL SPECIFICATIONS:

Power supply voltage: 230 VAC 50 HZ

Power consumption: maximum 6 VA

Protection rating: IP56

Internal receiver: 433.92 MHz, HCS KEELOQ

Mechanical size: 135x100x35 mm

Motor outputs: 230 VAC, maximum 2x350 W

Auxiliary power supply: 12 - 18 VDC, maximum 200 mA

Flashing light output: 230 VAC, maximum 40 W

Fuse for the motors: 250 V F5 A 5x20 mm

Fuse for the circuit board: 250 V T50 mA 5x20 mm

Operation temperature: -20 °C - +55 °C