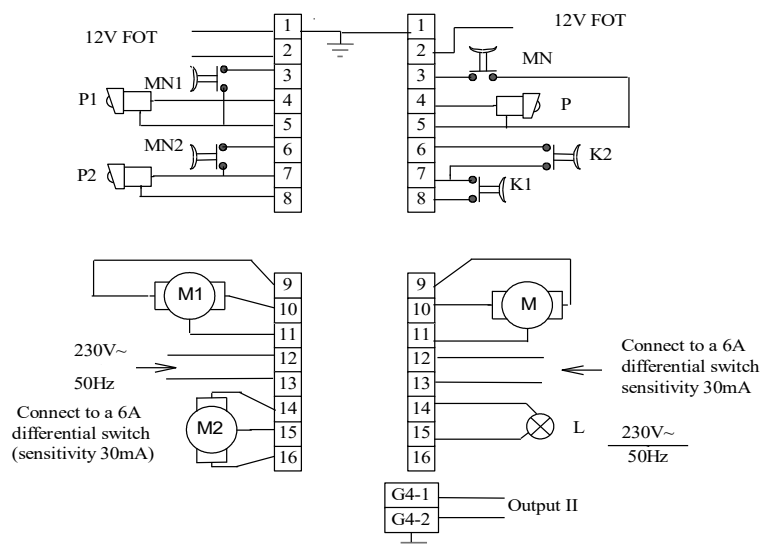


## TWO MOTOR MODE

## ONE MOTOR MODE



**Attention: In case the unit has to be connected to the limit switches please notify it when ordering.**

### Wiring to terminal strip in One Motor Mode (switch SW1-1 in ON position)

- 7,8 Limit switch [LS1] (normally open)
- 6,7 Limit switch [LS2] (normally open)
- 4,5 Photocell [P] (normally closed)
- 3,5 Manual button [MN] (normally open)
- 14,15 Warning light ~230V [L] (100W max)
- 9 Open wire [M]
- 10 Close wire [M]
- 11 Common wire [M]
- 12,13 ~230V/50Hz
- G5 Output of additional channel (activated by pressing second button on remote unit)

### Wiring to terminal strip in Two Motor Mode (switch SW1-1 in OFF position)

- 7,8 Photocell for second motor [P2] (normally closed)
- 6,7 Manual button for second motor [MN2] (normally open)
- 4,5 Photocell for first motor [P1] (normally closed)
- 3,5 Manual button for first motor [MN1] (normally open)
- 16 Close wire of second motor [M2]
- 15 Common wire of second motor [M2]
- 14 Open wire of second motor [M2]
- 19 Open wire of first motor [M1]
- 10 Close wire of first motor [M1]
- 11 Common wire of first motor [M1]
- 12,13 ~230V/50Hz

## General description.

This unit is to control 230VAC motors. It can work in two modes: One Motor Mode and Two Motor Mode.

In One Motor Mode it can control one motor and warning lamp (230VAC/60W). Another advantage of this mode is that other unit can be controlled by means of the additional channel output.

In Two Motor Mode it can control two independent motors (two gates, one motor each).

CRS-436 unit can be controlled in two ways: by use of the manual button or by use of the remote control units. Safety devices (photocells and others) can be connected to the unit. Safety devices can control two motors independently. Two limit switches can be connected to the unit in One Motor Mode. Those switches allow controlling motors that normally have not internal limit switches.

Signals from RCU or local button will cause such a sequence:

### One direction move; Stop; Opposite direction move; Stop; And so on

As long as the signal (open circuit) from photocell is present on the corresponding input the closing will be blocked. The time the power is being supplied to the motor can be adjusted in range of 10 up to 120 seconds. Local button marked with MN1 is to control M1 motor; the other one marked with MN2 is to control M2 motor. The same with buttons on RCU (upper and lower).

The warning lamp is blinking when gate is on the move. The lower frequency of blinking shows that gate is opening. The higher frequency shows that gate is closing. If gate is open the light is stable. If gate is closed there is no light. The time of opening or closing phase can be adjusted by means of the R25 potentiometer. The time adjusted by R25 must be longer than time required to open and to close the gate.

In One Motor Mode there are two ways we can control the motor: normal and quasi-automatic. Normal logic means that sequence of signals will cause the following: opening, stop, closing, stop and so on. Quasi-automatic logic means that signals (remote or local) will cause opening only, closing will be made automatically after the time preset by R25. If gate is closed then any signal will start opening. Every signals received during this phase will be ignored. As long as gate is being opened the lamp is blinking once every second. As long as gate is open the light is steady on (the time gate is open is set by the R25). Every signal received in this phase will cause that this time is counted from the beginning. When this time is out the gate will start closing. Five seconds earlier the lamp will start lighting, two times in every second, just warning that gate is to be closed. If during closing phase any signal is received (remote or local) then unit will start the opening phase. The same if signal from photocell is received.

Quasi-automatic logic is very convenient if there is a certain number of users. It eliminates possibility that one user will close the gate just being opened by another one.

### Mode selection.

Mode selection is possible by means of switch 1 on SW1 Dipswitch. One motor mode is achieved if switch 1 is in ON position; two motor mode is selected when it is in OFF position. Switch 2 allows us to select normal or quasi-automatic logic (only in one motor mode). Normal logic is achieved if Switch 2 is in OFF position. The quasi-automatic logic is selected if Switch 2 is in ON position.

**After changing position of any switch of SW1 the power must be off and on.**

### Wiring.

Power (230VAC) should be connected to terminals **12 and 13**. For safety reasons a 6A differential switch-sensitivity 30mA has to be used. Terminals **9, 10, 11** are to be connected to the motor. In Two Motor Mode this is the first motor [M1].

Second motor [M2] (in Two Motor Mode) is to be connected to **14, 15, 16** terminals. In One Motor Mode the warning lamp can be connected to terminals **14 and 15**. On **G5** socket there is an output of additional channel. A short circuit is on G5 as long as the second button is pressed on RCU.

The ground of unit is available on terminals **1, 5 and 7**. Depending on mode the same terminals can be connected to different devices.

In Two Motor Mode photocells should be connected to terminals **7 and 8** (M2 motor) and **4 and 5** (M1 motor). Manual button for M1 should be connected to terminals **3 and 5** and respectively for M2 to **6 and 7**.

In One Motor Mode photocell should be connected to terminals **4 and 5**. Manual button has to be connected to terminals **3 and 5**. Limit switches should be connected to terminals **6 and 7** [LS1] and to **7 and 8** [LS2].

In any case if photocells are not used the short wire must be on corresponding terminals. In case of the limit switches if they are not used the corresponding terminals should stay NC.

Photocell should be normally closed device.

Limit switch should be normally open device.

#### Programming of the unit.

Unit can be controlled by up to 15 different RCU. Every RCU has different number - that is why every unit must be preprogrammed to cooperate with particular RCU. To do that we have to enter so-called learning option. This is achieved by pressing and holding SW3 switch. The **L5** (red LED) will light for about 1 sec indicating that learning option has been entered. The number of 0.5sec flashes will inform us how many RCU are learned already by unit. If there is no flashing it means that unit is not preprogrammed. To teach the unit to cooperate with particular RCU we have to press the button on this RCU (still holding SW3) until L5 will light for about 1 second. This is the confirmation that unit is ready to cooperate with this RCU. After this the unit will show the number of RCU preprogrammed by the number of 0.5 sec. flashes. If the number after the teaching has increased by 1 it means that this RCU has been registered. If number of flashes has not increased that means that this RCU had been registered before or that unit has registered 15 RCU. To be back in normal option you have to release SW3 switch. The L5 will light for about 2 seconds confirming that normal option has been entered. Registered codes are stored in EEPROM so they are safe in case power is off.

#### Erasing of registered codes.

If there is such a need all registered codes can be erased. This is possible by pressing SW3 and SW2 at the same time

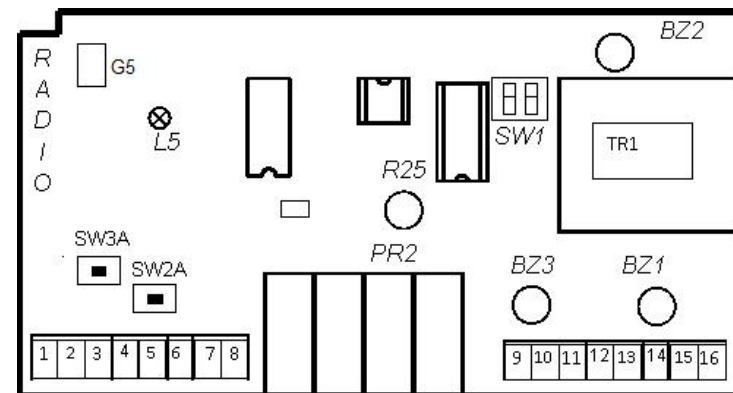
Manufacturer:

**P.I.E. INEL Sp. z o.o.**  
ul. Mostowa 1  
80-778 Gdańsk  
tel/fax. (58)301-15-81  
tel. (58)305-49-77

# CRS-436XG

## CONTROL UNIT

Hopping codes-never the same code is transmitted!



- SW2, SW3** - learning switches
- SW1** - mode selection switch
- R25** - opening/closing time potentiometer
- PR1..PR4** - relays
- L5** - current mode LED
- RADIO** - radio connector
- TR** - power transformer
- 1-8,9-16** - motor, photocell, opening/closing limit switches connectors
- G5** - additional channel output (one motor mode only)
- BZ1** - 3.15A Fuse – M1 motor power
- BZ2** - 315mA Fuse
- BZ3** - 3.15A Fuse – M2 motor power

#### PARAMETERS

Supply voltage	230VAC
Current consumption	35 mA / Stand-by
Radio frequency	433.92 MHz
Antenna impedance	50Ω
Relays	JW1aFSN (10A/250VAC)
Number of channels	2
Range	~150 m



It is not permitted to dispose of waste equipment together with other waste. Dispose only in specially designated areas. The household plays a key role in the recycling of waste equipment. By correct sorting of waste, including waste equipment and batteries, household members ensure that the equipment is not disposed together with household waste, but in specially designated areas, and thus may be used again after recycling.