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# USER MANUAL

**Part No:**

# Econo 600-800 AC Motor Manual

## DESCRIPTION:

Our range of Econo 600 and Econo 800 motor systems are designed for electric operation of **spring assisted**, industrial roller shutter doors. The operator utilizes a sprocket & chain set between the motor's drive shaft and door's end shaft for power transmission.
Both the Econo 600 & 800 are available as 230V 1ph or 400V three phase models.

The operator is supplied with Push button control as standard.
Plug-in radio remote controls are sold as optional extra. (433Mhz fixed code)

## NOTE:

By adding the KT500 controller (NOT INCLUDED), the facility is created for:
Key switches, push buttons, access control, infrared photocells and external receivers.

## SAFETY: CAUTION- HIGH VOLTAGE !!!

This system should only be installed by personnel who are suitably trained and certified to work on:

- industrial roller shutter doors
- high voltage electrical equipment
- electronic equipment for gates and garage doors.

The manufacturer accepts no liability for any damage or loss, arising from use of this equipment outside of its design purpose, beyond technical specification or if used with 3rd party equipment.
The use of at least 1 safety device is recommended if wireless controls are used.

The use of safety body harnesses, protection safety wear and insulated tools is MANDITORY during installation.

## CHECK:

1) Check that the roller shutter door is without damage and free from obstruction.

2) Ensure that the springs on your industrial door offer no less than **50%** assistance to balance the load of the steel curtain. (Contact your door manufacturer for instructions)

3) Check that the motor mounting plate is welded correctly and securely to the door's head plate.

4) Sprocket & chain must align perfectly when observed from under the mounted door operator. (Fig 1)

5) Check that the supply voltage and motors rated voltage is identical:

- Measuring between combinations of L1, L2 & L3 lines, the voltage must be 380V - 400V AC.
- Measuring between Neutral and any LIVE voltage must be 220-230V AC.
- Measuring between Neutral and Earth voltage must be <1.5V AC

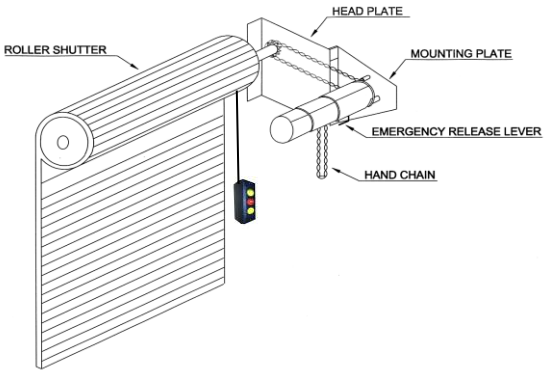



**FIG.1**

## BASIC FUNCTIONS:

- Wired Push Button Control: Open, Stop Close
- Plug-in Radio receiver (433mhz fixed code)-optional extra

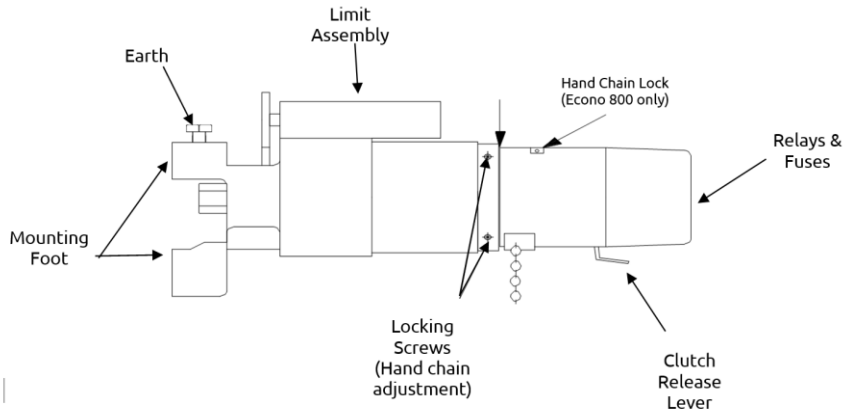



**FIG.2**

## MOTOR WIRING:

**Single phase:**
Blue - Neutral
Brown - Live
Grn/Yel - Earth

**Three Phase**
Blue - Neutrel
Red - L1, L2, L3
Grn/Yel - Earth

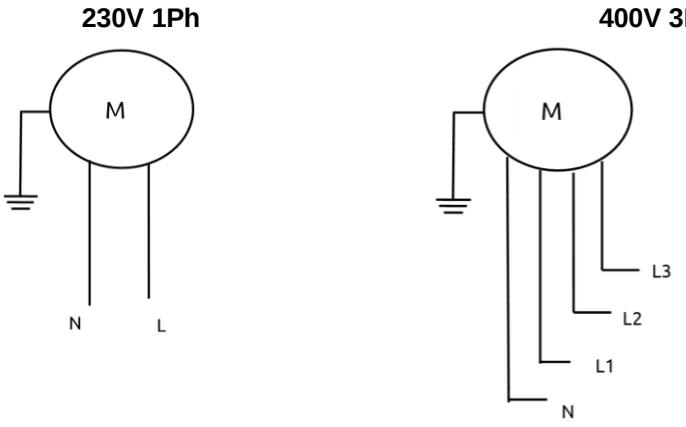



**FIG.3**

## CHANGE MOTOR DIRECTION

230V Single Phase or Three Phase

- Toggle the switch on the size of the Econo radio receiver
- Swap the position of the white and yellow cable on the inside of the push button station.

400V Three Phase

- Swap the position of the any of the 3 Live lines (L1, L2, L3)

**FIG.4**

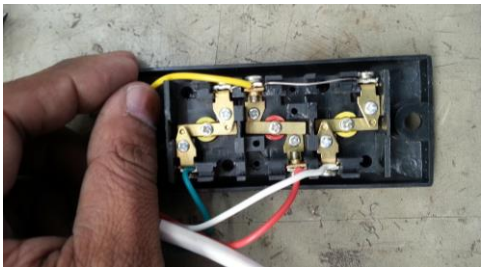
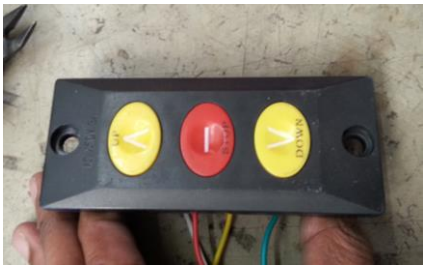


**FIG.5**



## PUSH BUTTON WIRING:

| | | |
|---|---|---|
| Open Command | - | Green |
| Close Command | - | White |
| Common | - | Yellow |
| Stop Command | - | Red |

## OPERATING MODES:

It is recommended to switch to Press & Hold Mode before attempting to set the travel limits. By this method the user is given complete control, thus reducing the risk of injury or damage to any equipment.

**PRESS & HOLD MODE**

Switch off the mains power. Remove the red wire from the terminal on the back of the push button station supplied. Insulate the loose red wire. (exercise caution- HIGH VOLTAGE)
This step converts the motor function to **"Dead Man"** mode. Re-Apply Power. The motor is now operational as "Dead Mans Mode"

**PRESS & RELEASE MODE**

Switch off the mains power. Wire the push button station as shown in FIG 4.

## SETTING THE TRAVEL LIMITS:

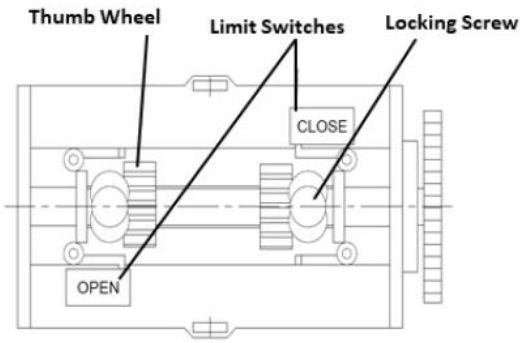



**FIG.5**

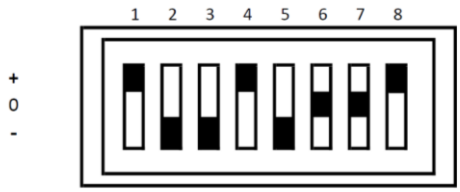
a) Drive the door to the full **CLOSE** position by using the push button or the emergency hand chain.
b) At the full **CLOSE** position. Loosed the Locking screw on the limit actuators. Rotate the thumb-wheel so the cam may activate the limit switch for door **CLOSE** position. Re-tighten Locking Screw.
c) Drive the door to the full **OPEN** position by using the push button or the emergency hand chain. Rotate the thumb-wheel so the actuator may activate the **OPEN** position limit switch. Re-tighten Locking Screw.
d) Operate the motor via the direction buttons to check if the travel limits have been set correctly. Some fine adjustment may be necessary.

## CODING REMOTES:

Each remote transmitter and receiver has a bank of dipswitches inside, numbered 1 to 8.
A code may be set on the remote transmitter by adjusting the position of each of the 8 switches, to either **+** or **0** or **-** . **(as example shown in the figure below).**

To code the system, the receiver and remote must have identical dipswitch configuration across all digits 1 through to 8.

**Example:** If dip 1 is at **+** on the remote, then dip 1 must also be at + on the receiver.
If dip 2 is at the **-** position on the remote, then dip 2 must also be at **–** position on the receiver.




**Note:** A random or specific dipswitch combination must be set. Leaving all 8 switches all ON, all OFF or all CENTRE, would leave your unit vulnerable to unauthorized access.

**CHANGING REMOTE CODES**

Should you wish to change the code which is being transmitted by the remote, then the position of one or more of the 8 dipswitches must be adjusted to create a new code. Those changes to dipswitches must be duplicated on the receiver as well in order for them to communicate.

Both the receiver and the remote must have their dipswitches configured to be identical.

## WIRING DIAGRAMS:

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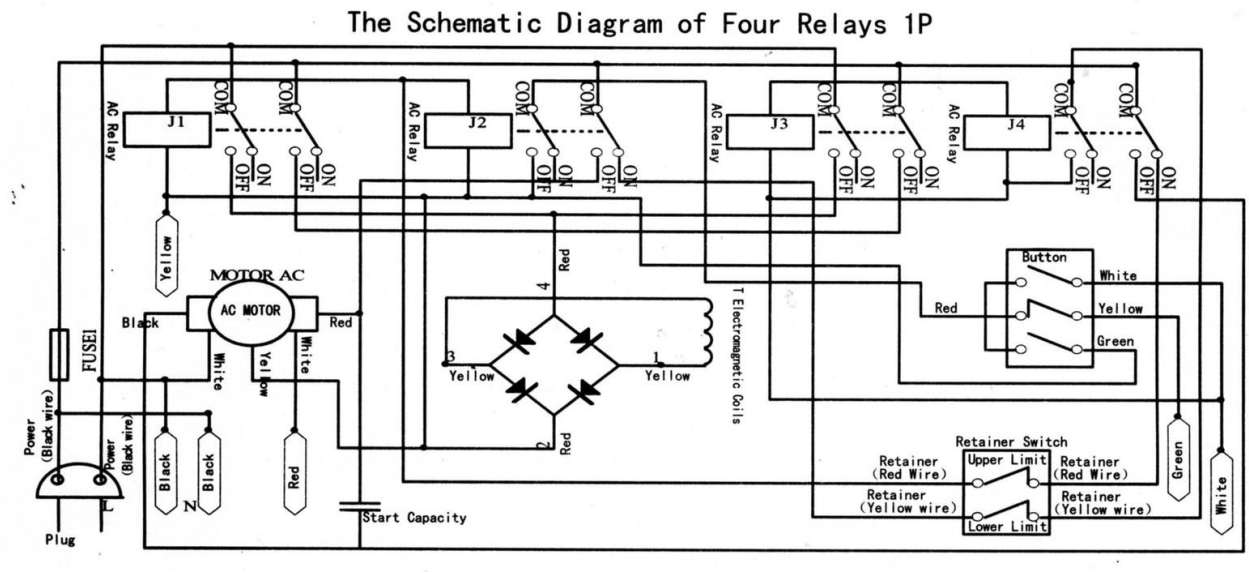
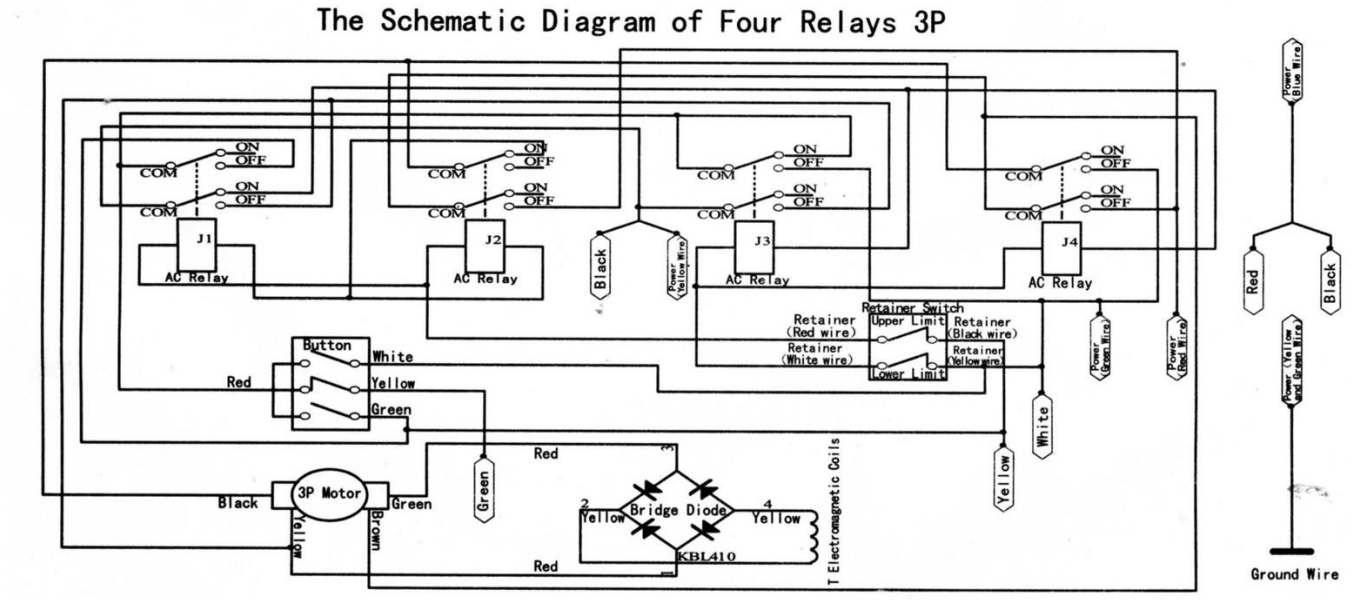
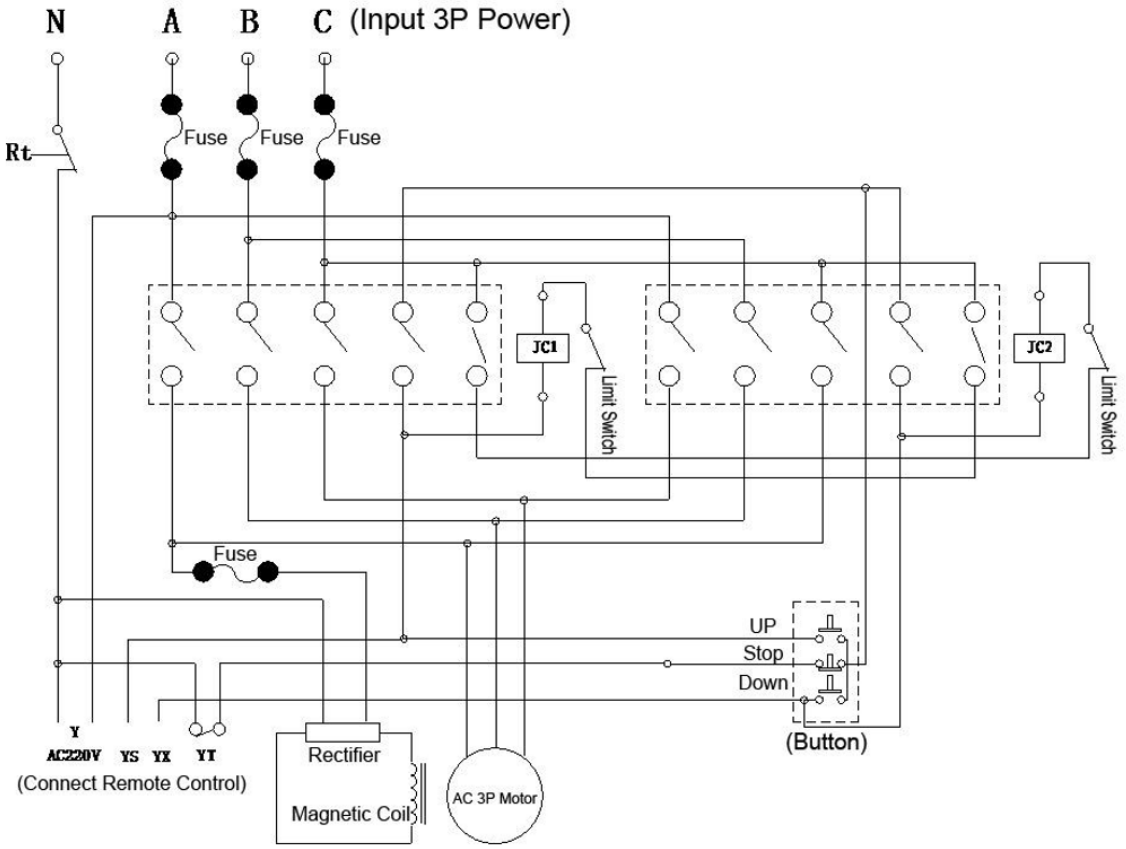
**230V 1PH. WITH 4 RELAYS**




**400V 3PH. WITH 4 RELAYS**




**400V 3PH. WITH 2 CONTACTORS**


N
A
B
C
(Input 3P Power)
Rt
Fuse
Fuse
Fuse
JC1
Limit Switch
JC2
Limit Switch
Fuse
UP
Stop
Down
(Button)
Y
AC220V
YS
YX
YT
(Connect Remote Control)
Rectifier
Magnetic Coil
AC 3P Motor