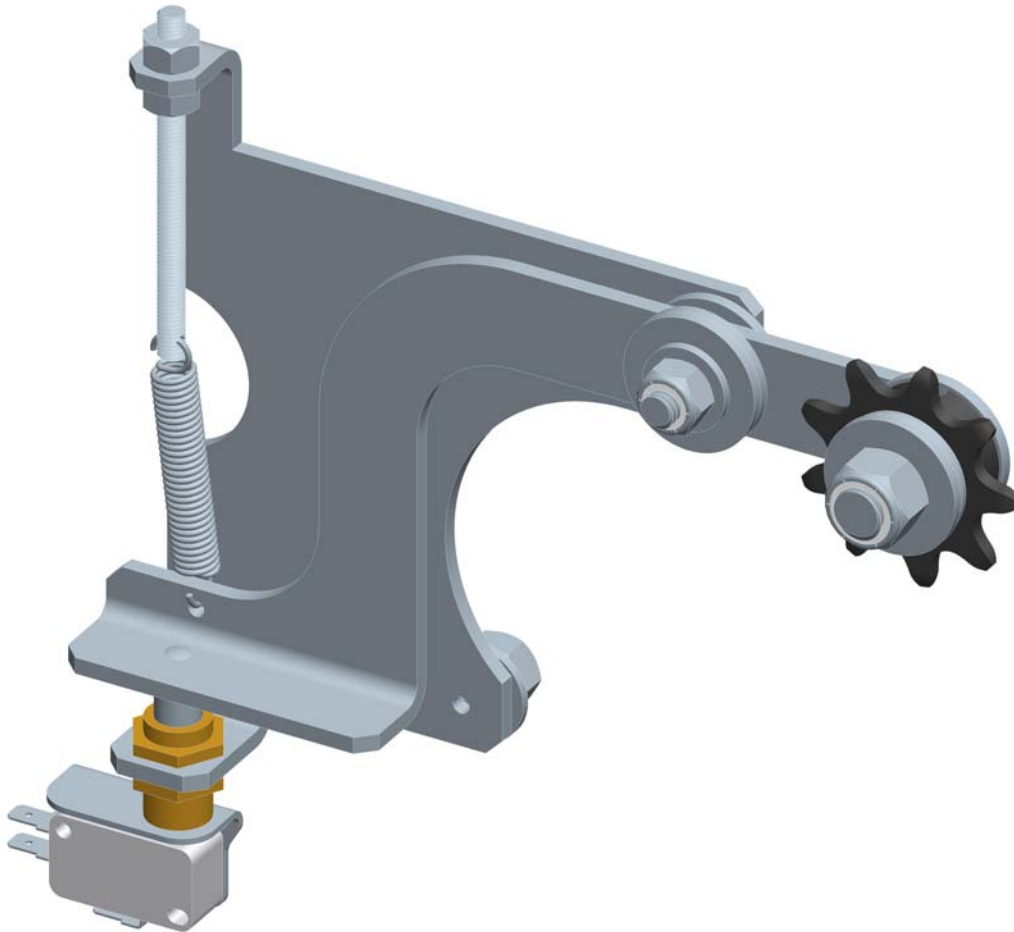


# Addendum – Mechanical door lock sensor



**Applicable on:**  
Opera-HJ

**Note:** This addendum is to be used in conjunction with the Installation & Instruction Manual supplied with the operator.

For wiring and adjustment of mechanical door lock sensor please refer to this addendum.

**For all general information, refer to Installation and Instruction Manual supplied with the operator.**



## General information:

<b>Application</b>	The Mechanical Door Lock Sensor is available on Opera-HJ model with Electronic Control Board.
<b>Functions</b>	This feature will sense any extra load on the operator's reduction. When extra tension is sensed, it will stop the operator from running (specially designed to detect mechanical door lock)
<b>Operation</b>	The door lock sensor detect all tensions on the door from fully closed position and stop the door while opening. Press close button to release the tension and to allow unlocking the door.

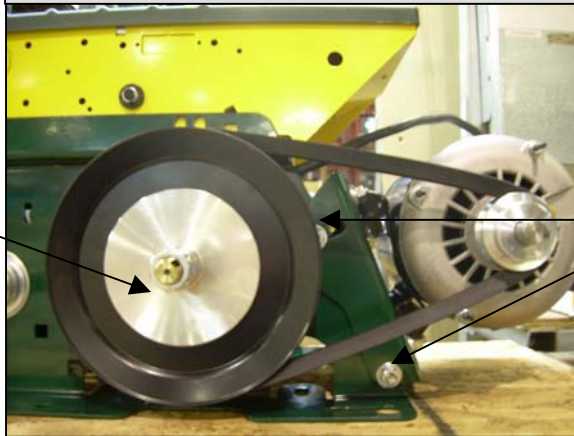
## Mechanical Door Lock Sensor step-by-step installation instructions.

### ! WARNING

**Before starting any intervention on the door operator, shut-off the main power to prevent electrical hazards, electrocution or serious personal injuries.**

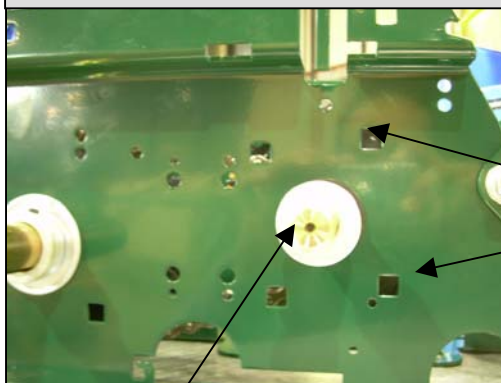
**Step 1:** Take-out the pulley and the V-Belt from the operator.

- Unscrew the nuts.
- Remove the clutch plate and the clutch pad from the shaft.
- Remove the pulley.



Loosen the four nuts & slightly push the motor to remove tension on the V-Belt.

**Step 2:** Locate the two holes to mount the Mechanical Door Lock Sensor.



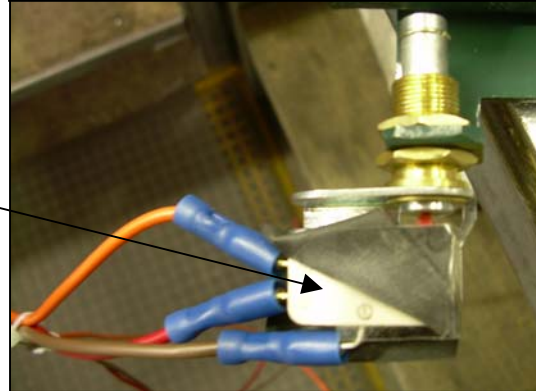
Mechanical Door Lock Sensor mounting holes.

Input shaft.

Before mounting the Mechanical Door Lock Sensor on the frame, connect the three wires to the cut-off switch.

- BROWN to COM (1)
- RED to NO (4)
- ORANGE to NC (2)

**Step 3:** Verifying proper wires connection on cut-off switch.



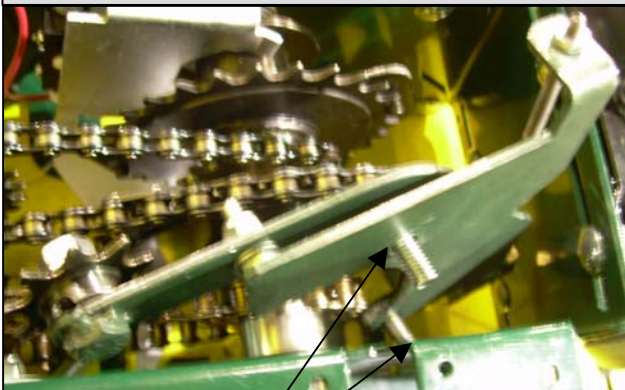
**Step 4 (A):** Positioning the Mechanical Door Lock Sensor inside the frame (on #41 chain - last stage).



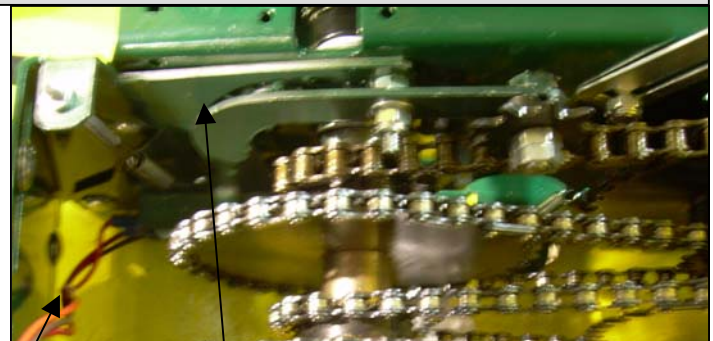
- Position only the sprocket of the Mechanical Door Lock Sensor on the #41 chain of the gear reduction.
- Make sure the teeth on the sprocket are properly engaged in between the pitches of #41 chain.

#41 chain on last stage of gear reduction.

**Step 4 (B):** Fixing the Mechanical Door Lock Sensor on the operator frame.



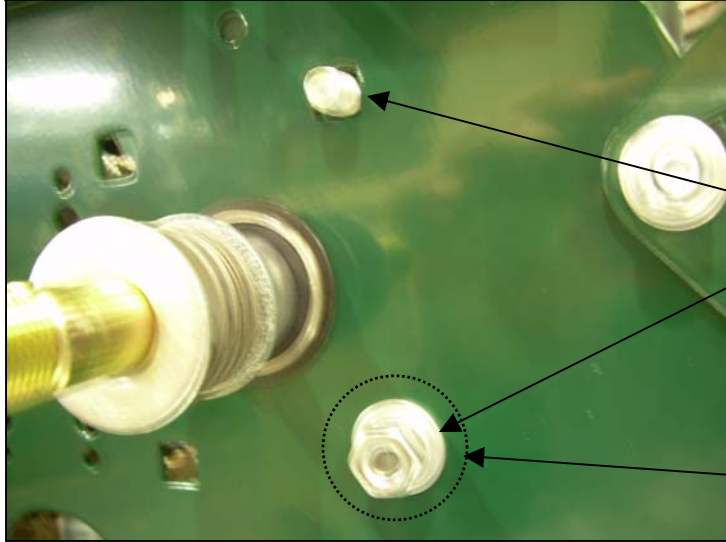
Match the mounting holes and insert the holding screws.



Mechanical Door Lock Sensor properly in place.

Once the Mechanical Door lock Sensor is in place, make sure that the wires are not interfering with the chains or sprockets.

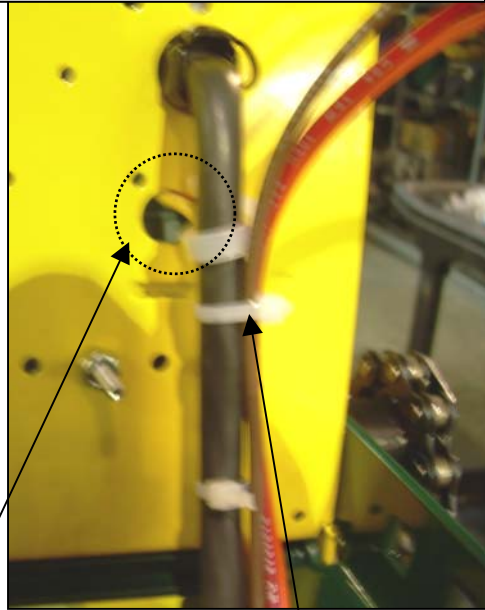
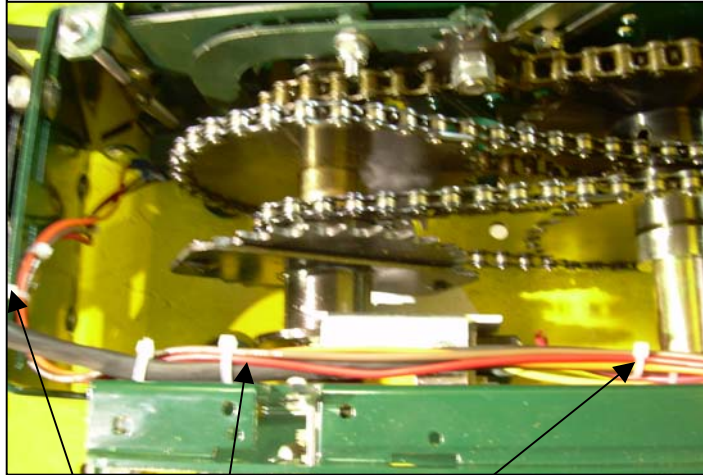
**Step 5: Securing the Mechanical Door Lock to the frame**



Once the Mechanical Door Lock Sensor is properly in place, secure it to the frame by tightening the two bolts.

Flat washer – Lock washer - Nut

**Step 6 (A): Routing the Mechanical Door Lock cut-off switch wires**

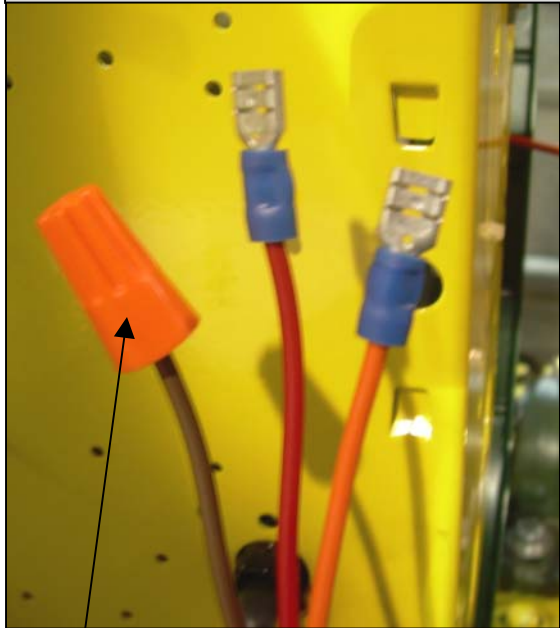


Use tie-wraps and attach the three wires of the cut-off switch to operator frame.  
**Note:** Make sure that the wires are not obstructing any moving parts.

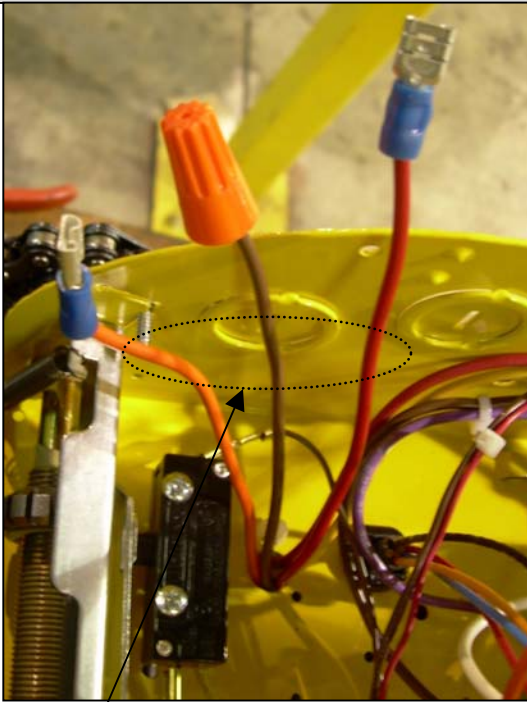
Use hole to pass cut-off switch wires

Attach the wires to the motor cable.

**Step 6 (B):** Bringing cut-off switch wires inside the control box.

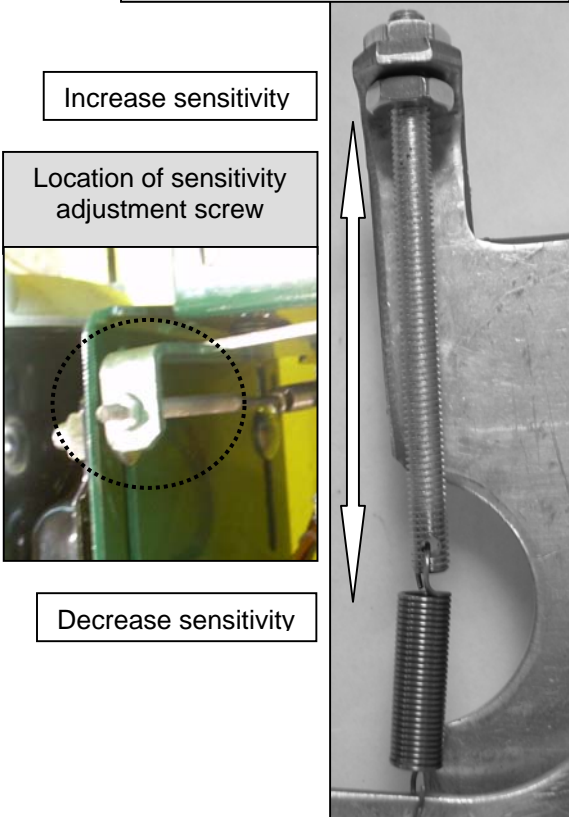


Remove the wire nut from the brown wire and pass the three wires through the hole as shown in **step 6 (A)**



Bring the three wires inside the control-box

**Step 7: Sensitivity adjustment**



Increase sensitivity

Location of sensitivity adjustment screw

Decrease sensitivity

**Functionality tests.**

**Note:** This feature is delivered with a standard sensitivity adjustment

**Sensitivity must be adjusted so that the door can:**

- Perform a complete cycle (opening & closing) without activating the Mechanical Door Lock Sensor.
- Perform a reverse operation from mid-way travel, without activating the Mechanical Door Lock Sensor feature.

Finally, verify if the feature is properly adjusted by manually holding the door during the upward motion. The Mechanical Door Lock Sensor should stop the door.

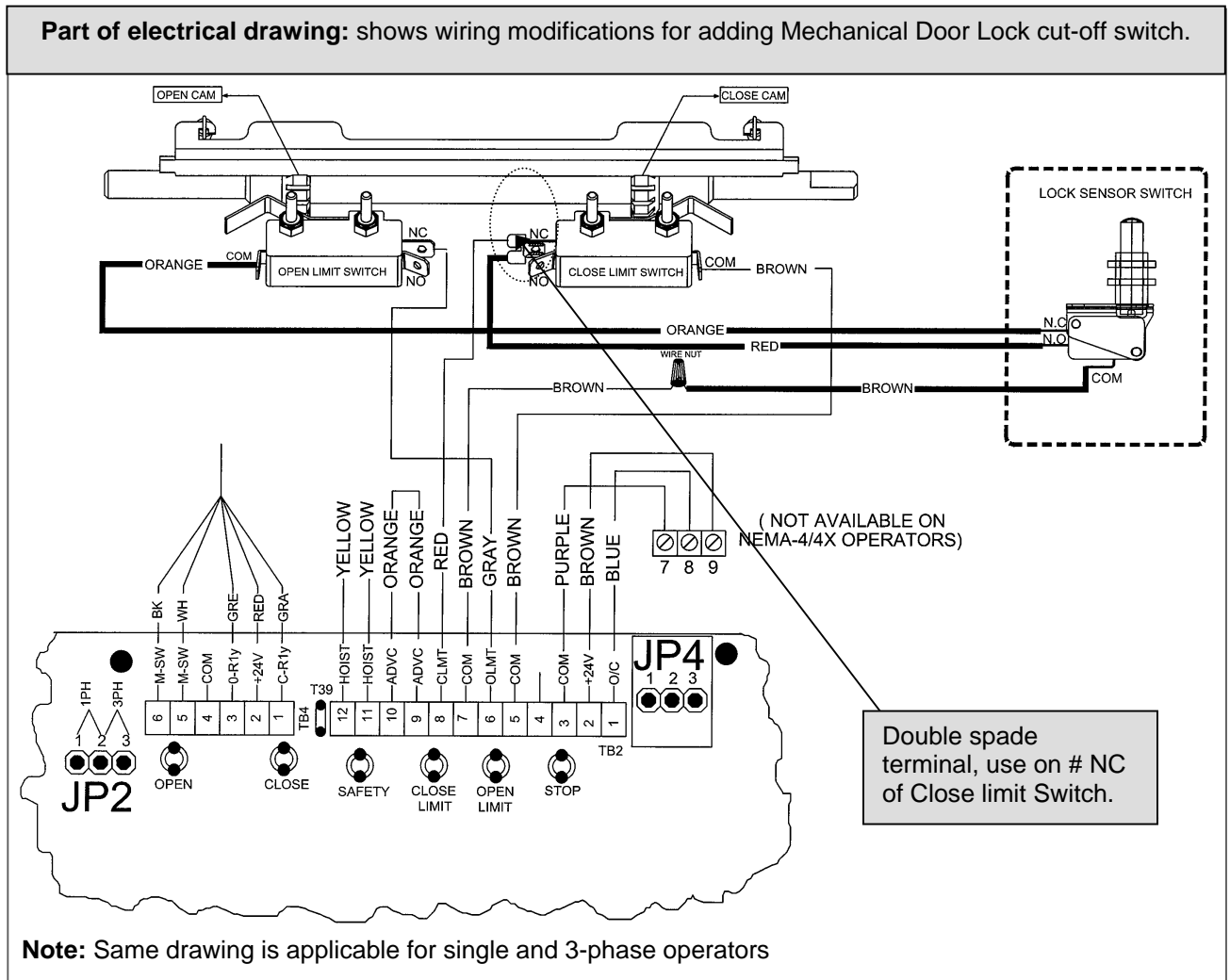
**Improper Door Lock Sensor adjustment may cause the following**

Symptom	Suggested action.
If Door Lock Sensor is activated and stops the door while it was opening from fully closed position.	<u>Adjust the sensitivity</u> then press "open" button to open the door
If the Door Lock Sensor is activated and stops the door while it is in motion.	<u>Adjust the sensitivity</u> then press "open or close" button to re-start the door.
If the Door Lock Sensor is activated, stops the door while it is closing from fully open position and INDICATOR LED flashes.	<u>Adjust the sensitivity</u> then press the "close" button to close the door. If the INDICATOR LED flashes again, clear the close limit switch and press "close" button to close the door.

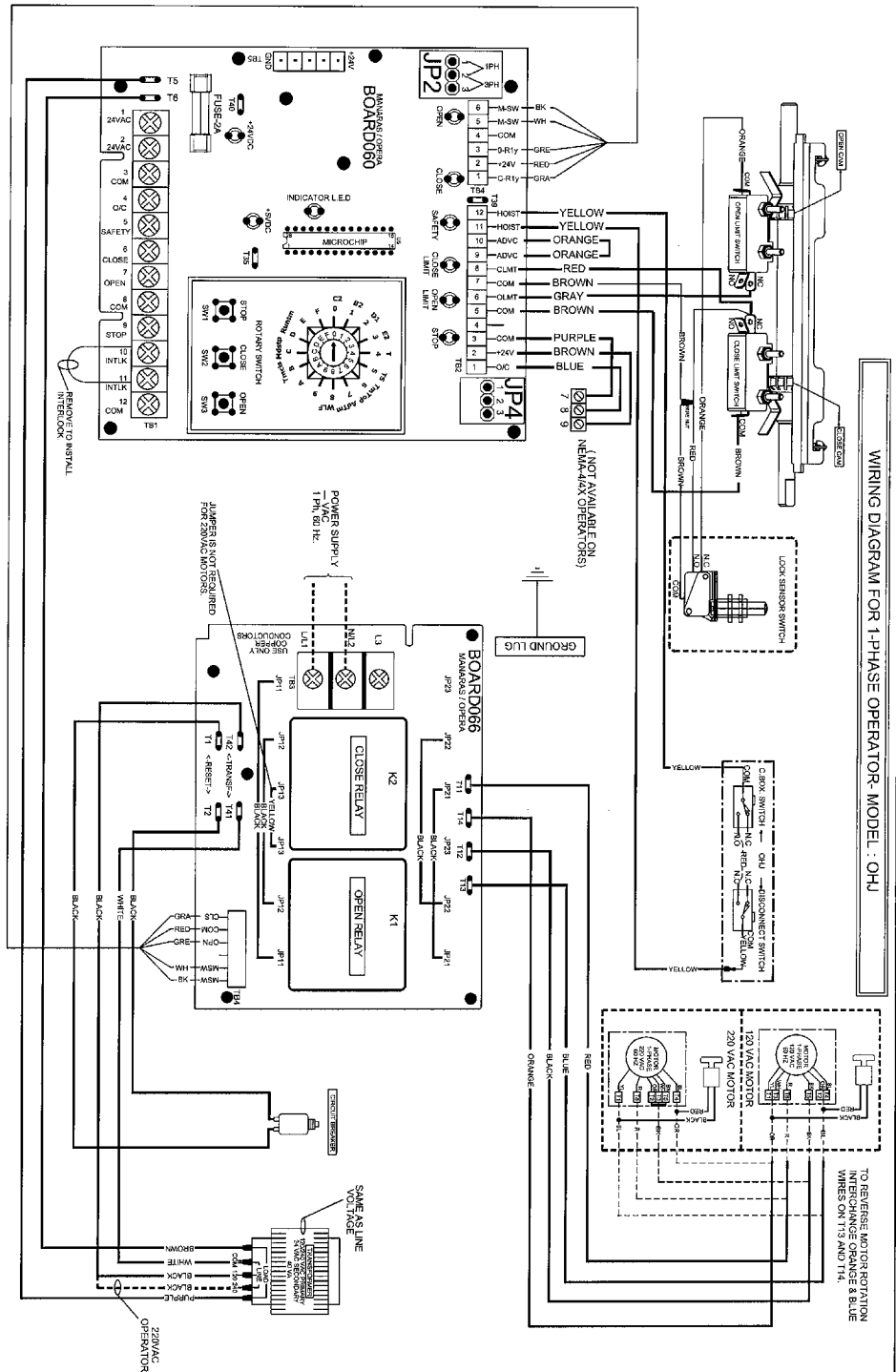
For more details about INDICATOR LED, refer to operator instruction manual

**For wiring modifications, please refer to the instructions below and to the electrical drawing on page 7**

Steps	Modifications
1.	Disconnect the brown wires from #COM of Open Limit Switch.
2.	Connect the brown wire from #COM of Open Limit switch to brown wire coming from Mechanical Door Lock cut-off switch by using the wire nut.
3.	Connect the orange wire from cut-off switch to #COM of Open Limit Switch
4.	Remove the red wire from #NC of the Close Limit Switch and mount the double spade terminal on #NC of Close Limit. Reconnect the first red wire and the red wire coming from Mechanical Door Lock cut-off switch on the double spade terminal.



# Wiring diagram for Opera-HJ – single phase



LINE POWER	EXTERNAL INTERLOCK	SAFETY REVERSE	OPEN/CLOSE COMMAND	SINGLE PUSH-BUTTON STATION	TWO PUSH-BUTTON STATION	RADIO RECEIVER
L1 L2 24 VAC POWER 1 2 24 VAC POWER ADDITIONAL PROTECTION 1 PH 60 Hz	10 11 FACTORY INSTALLED JUMPER REMOVE IS ESSENTIAL	3 5 CONTACT FOR SAFETY EMERGENCY DEVICE	3 4 CONTACT FOR OPEN/CLOSE DEVICE	9 7 6 8 NOTE: PLACE A JUMPER BETWEEN TERMINALS 9 AND 8. IF STOP BUTTON IS NOT USED	P.B. SH1 P.B. SH2	RADIO CONTROL TERMINAL STRIP

ATTENTION: USE 16AWG OR HIGHER FOR WIRING ALL EXTERNAL CONNECTIONS

## EXTERNAL WIRING

WIRING DIAGRAM FOR 1-PHASE OPERATOR- MODEL : OHU

## ROTARY SWITCH SETTINGS

WIRING TYPES	PROGRAM SETTINGS
0 CZ WIRING	6 MID-STOP TIMER TO CLOSE
1 BZ WIRING	7 ADV. CLOSE TIME
2 D1 WIRING	8 WARNING LIGHT TIMER
3 E3 WIRING	B TIMER TO CLOSE
4 T WIRING	C MID-STOP
5 TS WIRING	D RIN TIMER

## ON BOARD JUMPER SETTINGS

JP2	1.2	JP4 (DISCONNECT)	1.2	2.3
24V	240VAC/1PH	PRESENT	PRESENT	NOT PRESENT

## WARNING LIGHT/RECEIVER MODULE

CONNECTION FOR WARNING LIGHT AND RECEIVER MODULE (CONSULT FACTORY)

## NOTE:

FOR ROTARY SWITCH SETTINGS AND PROGRAMMING FOR OPERATOR, REFER TO INSTRUCTION MANUAL.

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TITLE: WIRING DIAGRAM, 120/208/220VAC, 1-PHASE

DRAWN BY: JP

DATE: 15 NOV 2006

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DATE: 18 JAN 2008

REV: DATE: A



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