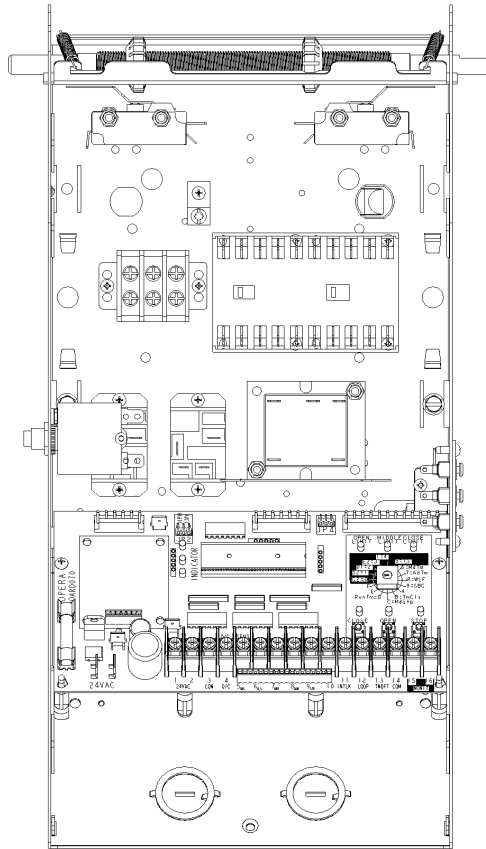


Addendum – ECB070 & Electromechanical Control

This addendum is to be used in conjunction with the Installation & Instruction Manual.



OPH / OPJ / OHJ / OSH / OGH / OTH / OTBH / OSL
MGH / MGT / MGSL

Electrical Control (BOARD 070E/M) & Reversing Contactor MOD 110

READ AND FOLLOW ALL INSTRUCTIONS.
SAVE THESE INSTRUCTIONS.
GIVE TO END-USER.

Serial # _____

Model # _____

Wiring Diagram # _____

Project #/Name _____

Door #/Name _____



For technical support, please call 1-800-361-2260 or visit www.manaras.com for more information

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NOTICE

- This operator is supplied with an **electronic control board** and a **heavy-duty reversing contactor**.
- Due to its rugged design, it is capable of withstanding extreme voltage/amperage fluctuations, thus increasing its reliability and immunity against electrical interferences.
- The single and 3-phase motors are driven by the contactor rather than by the power voltage relays mounted on the PCB (on-board).

Installation Instructions

IMPORTANT INSTALLATION INSTRUCTIONS

WARNING

TO REDUCE THE RISK OF SEVERE INJURY OR DEATH TO PERSONS:

1. READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.
2. Install only on a properly operating and balanced door. A door that is operating improperly could cause severe injury. Have qualified service personnel make repairs to cables, spring assemblies and other hardware before installing the operator.
3. Remove all pull ropes and remove, or make inoperative, all locks (unless mechanically and/or electrically interlocked to the power unit) that are connected to the door before installing the operator.
4. Installation of this door operator must be done by a qualified installer.
5. Verify that the operator is correct for type, size of door and frequency of use per the operator specifications.
6. Install the door operator at least 8 feet (2,4 m) or more above the floor if the operator has exposed moving parts.
7. Do not connect the door operator to the source of power until instructed to do so.
8. Locate the control station: (a) within sight of the door, (b) at a minimum height of 5 feet (1,5 m) so small children cannot reach it, and (c) away from all moving parts of the door.
9. Install the Entrapment Warning Placard next to the control station in a prominent location.
10. For products having a manual release, instruct the end user on the operation of the manual release.
11. If you have any questions about the safety of the door operating system, do not install the operator, contact Manaras-Opera at 1-800-361-2260.

1 Electrical Wiring

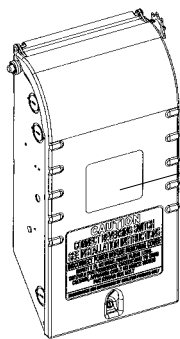
⚠ WARNING

To reduce risk of SEVERE INJURY or DEATH to persons:

- All electrical wiring should be done by a qualified professional and in accordance to local electrical codes.
- Always shut OFF the main power before performing any electrical intervention.
- Use proper wire gauge for incoming power line and for accessory connections.
- Install operator main circuit breaker next to operator for easy access for power shut-off.
- Use separate knockouts on operator control box for accessories and main power cables.
- Always separate low and high voltage wires.
- Operator should be properly grounded to the building ground and to the main power supply ground lug.
- Always use suitable and appropriate rating circuit breakers for operator protection.
- Compare available power supply voltage to voltage on operator name plate prior to electrical connection. Failure to connect appropriate power supply voltage may cause serious damage to the operator.

NOTICE

- THE OPERATOR MUST BE ADEQUATELY PROTECTED AGAINST OVERCURRENT AND SHORT-CIRCUIT.
- PLEASE REFER TO LOCAL ELECTRICAL CODE.
- PLEASE REFER TO NATIONAL ELECTRIC CODE (NFPA 70) ARTICLE 430 SECTION IV (430.51 / 430.52 / 430.53).
- PLEASE REFER TO CANADIAN ELECTRIC CODE (CSA 22.1) SECTIONS 28-200 / 28-206.



Manaras		TOLL FREE #		Opera	
TEL: 1-800-361-2260		FAX: 1-888-626-0606		WWW.MANARAS.COM	
MODEL		SER.#			
HP		VOLTS		PH	
				AMPS	
				FLA	
CONTROL CIRCUIT		60 Hertz		FT.LB/ SEC	
DATE MFG.					
		Fabriqué au Canada		Made in Canada	
CAUTION DISCONNECT ELECTRIC POWER BEFORE ADJUSTING DOOR OR OPERATOR ATTENTION COUPEZ LE COURANT ELECTRIQUE AVANT DE METTRE AU POINT LA PORTE OU L'OPERATEUR					

FLA = Full Load Amp

Guideline to determine the branch-circuit rating of the protective device [A]:

Time Delay Fuse: $1,75 \times \text{FLA}$

Non-Time Delay Fuse: $3,0 \times \text{FLA}$

A fuse that does not exceed the next higher standard ampere rating shall be permitted.

Example: If **FLA = 3,8A**

- Time Delay Fuse: $1,75 \times 3,8\text{A} = 6,65\text{A} \rightarrow$ Standard fuse to use: 10A
- Non-Time Delay Fuse: $3,0 \times 3,8\text{A} = 11,4\text{A} \rightarrow$ Standard fuse to use: 15A

NOTICE

- The installer **MUST** test for proper connection and functionality of the operator and its accessories before leaving the job site.
- The installer should also perform a demonstration for the end-user.

1.1 Low Voltage (Controls) and High Voltage (Power) Connections

1. Route the power line wires either from the right or from the left of the control box, as shown in Figure 1.
2. Route all low voltage control wires, as shown in Figure 1. **KEEP LOW VOLTAGE WIRES SEPARATE FROM LINE VOLTAGE WIRES.**
3. **USE COPPER CONDUCTORS ONLY.**

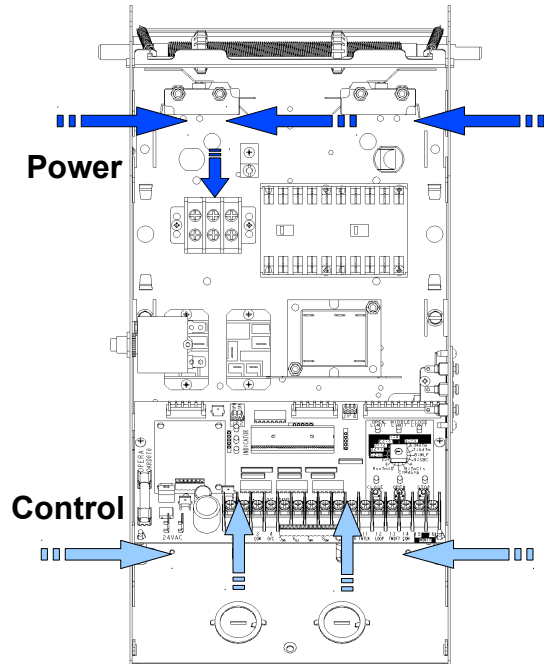
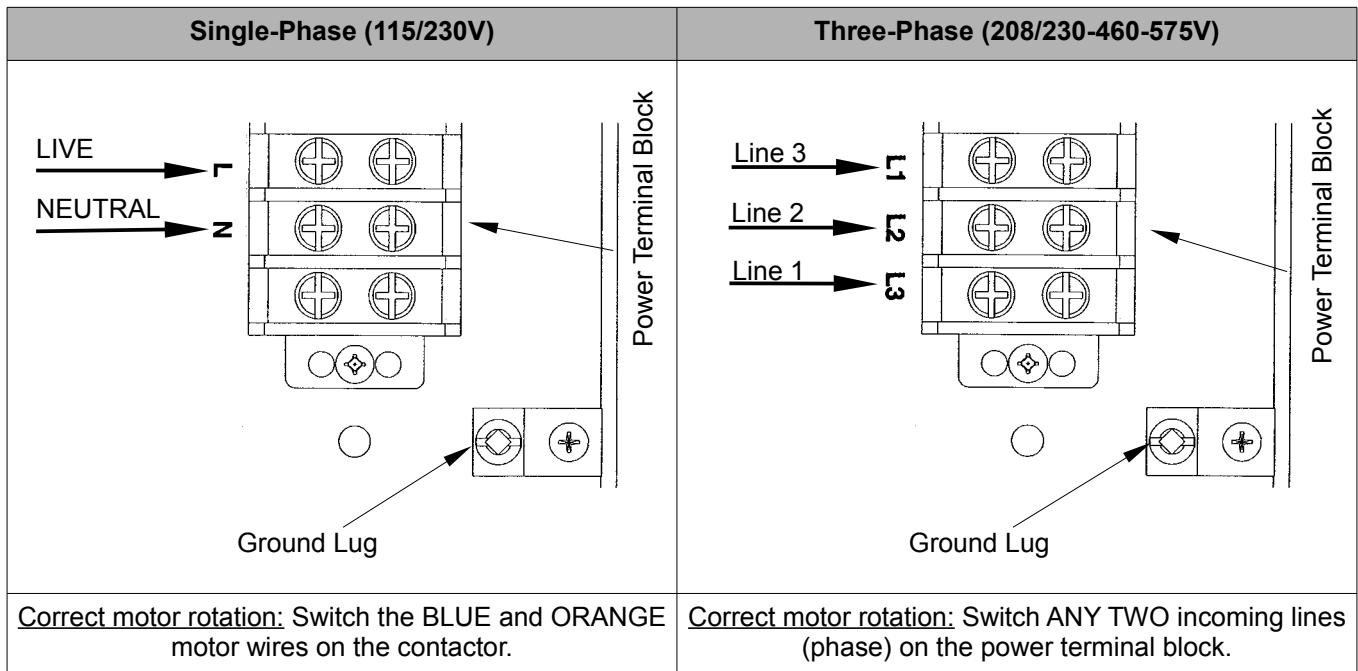


Figure 1 - Low Voltage
(Controls) and High Voltage
(Power) Connections

1.2 Main Power Supply Connection



2 Electrical Drawings

2.1 1 Phase Operator with BOARD 070E/M and Reversing Contactor (044)

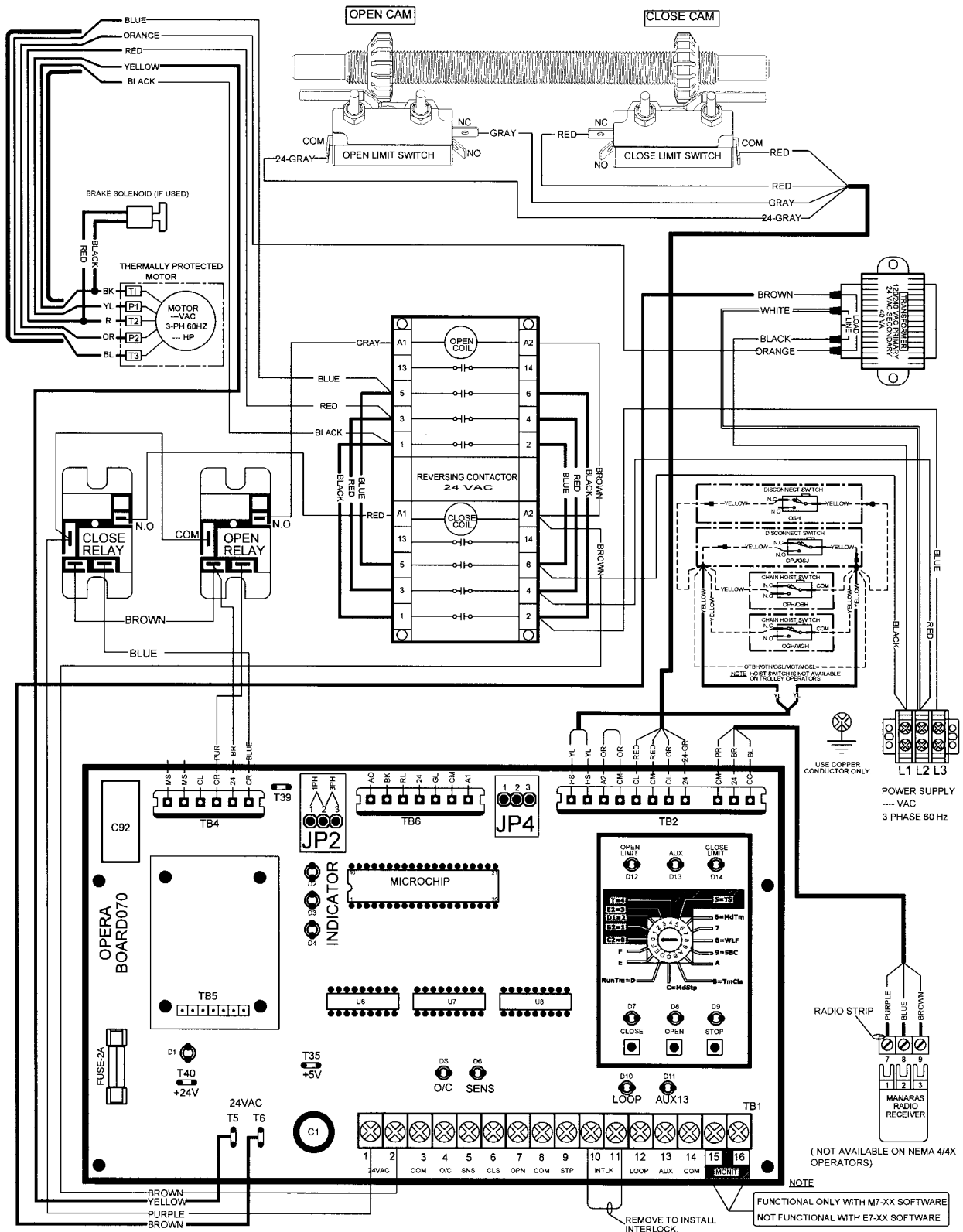


Figure 2 - EDWG13070C4401

2.2 1 Phase Operator with BOARD 070E/M and Reversing Contactor (045)

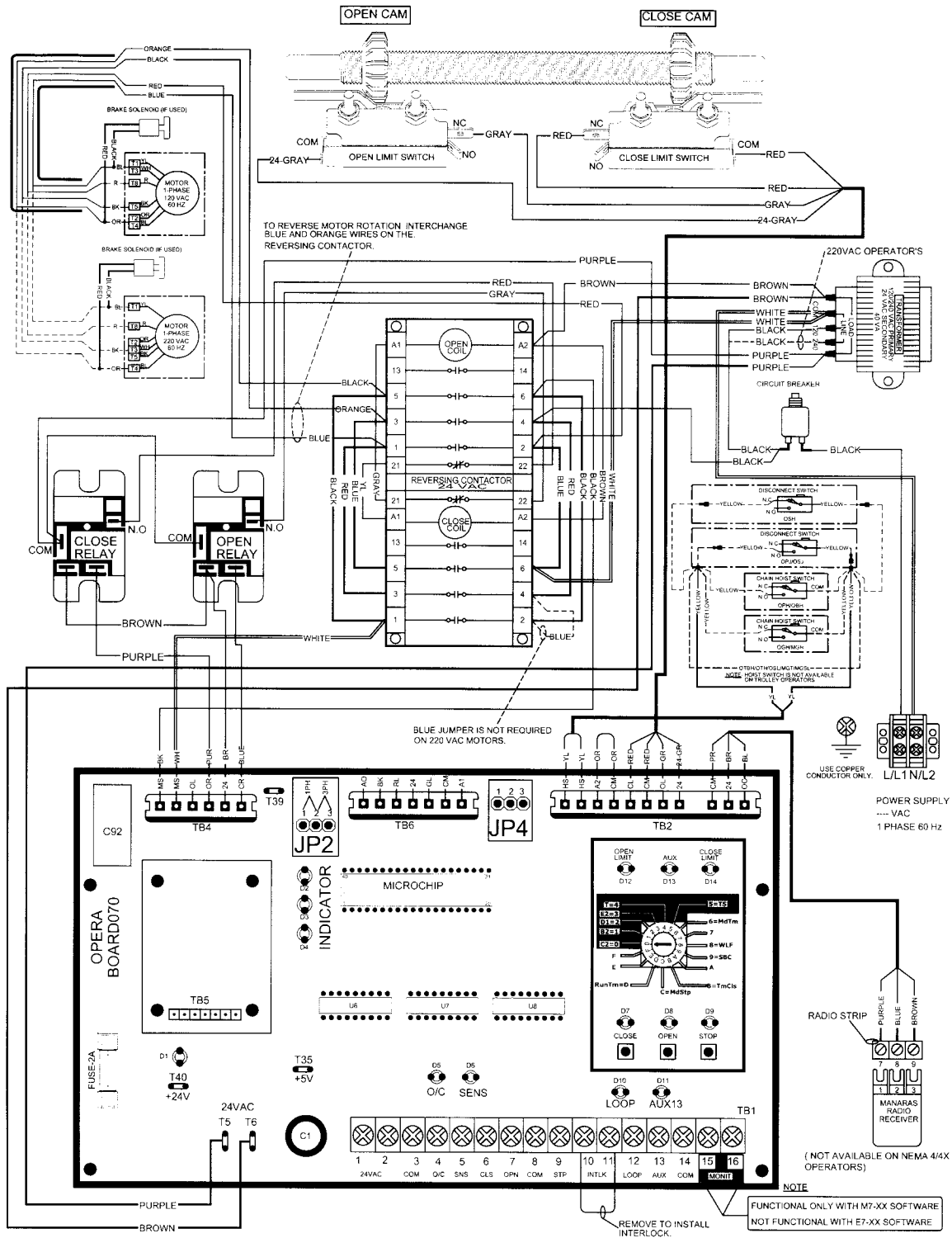


Figure 3 - MECB11-70-C045-W

2.3 3 Phase Operator with BOARD 070E/M and Reversing Contactor (044)

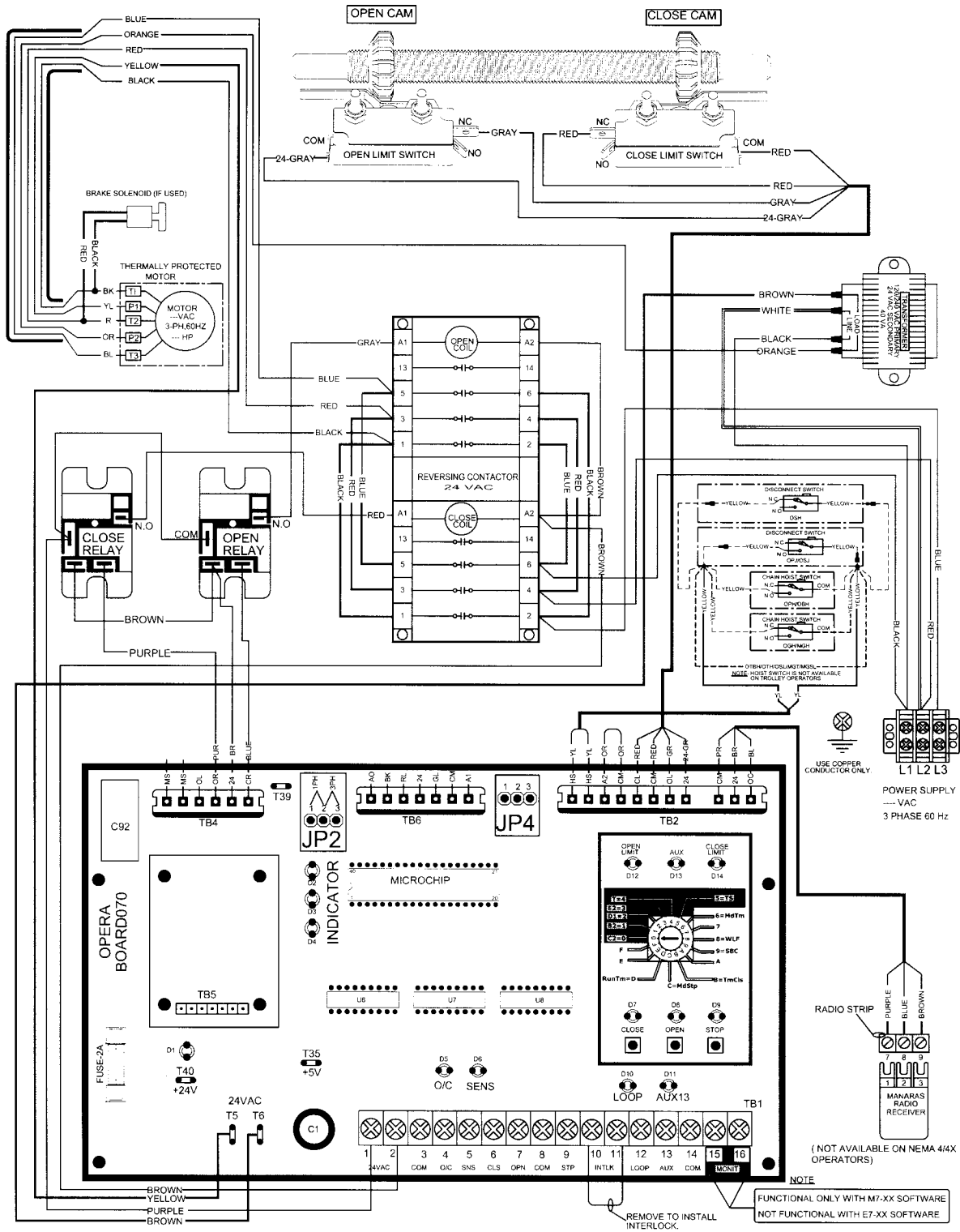


Figure 4 - MECB33-70-C044-W



2.4 3 Phase Operator with BOARD 070E/M and Reversing Contactor (045)

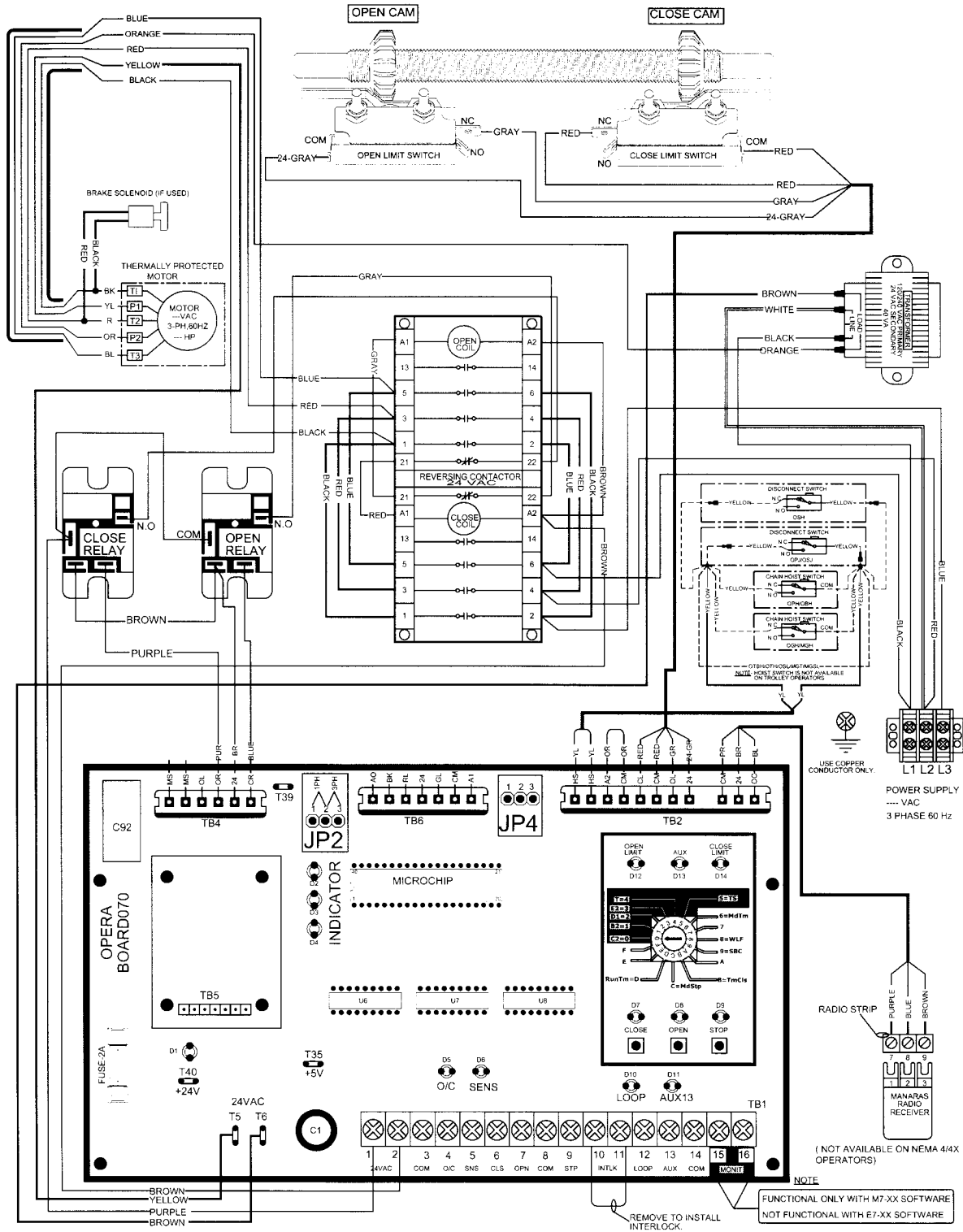


Figure 5 - MECB33-70-C045-W

3 Mechanical Exploded Views and Replacement Components

3.1 Control Box (MOD 110) For Models OPH / OPJ / OHJ / OSH / OGH / OTH / OTBH / OSL / MSJ

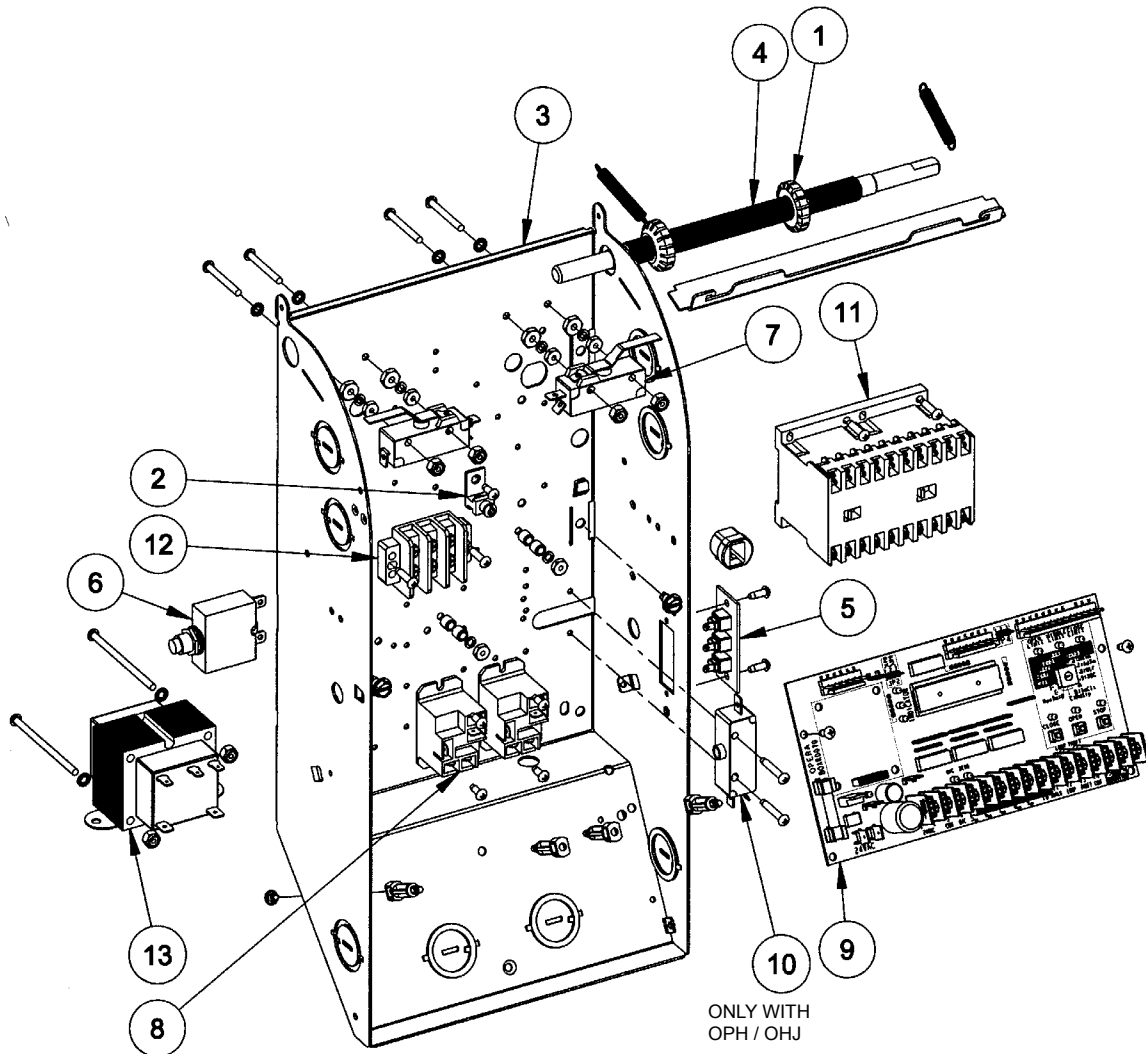


Figure 6 - Control Box MOD 110 Mechanical Exploded View

Table 1 - Control Box MOD 110 Replacement Components

No	Qty	Description	Manaras-Opera Part #	No	Qty	Description	Manaras-Opera Part #
1	2	CAM LIMIT OPERA	CAM011	8	2	SPST-NO 30A 24VDC FLANGE MOUNT.	RELAY068
2	1	GROUND LUG TA61G-UL	CONNECTOR039	9	1	STD ELECT. CONTR. BOARD	BOARD070
3	1	OPERA CONTROL BOX	CBOX	10	1	STD SINGLE CUT-OFF SWITCH	LIMIT020
4	1	OPERA LIMIT SHAFT	SHAFT103	11	1	TELEM. REVERS. CONT. 24V	CONTACTOR
5	1	RADIO CONTROL TERM STRIP	TSTRIP005	12	1	TERMINAL STRIP	TSTRIP
6	1	RESET	SEE MOTOR TABLE	13	1	TRANSFORMER	SEE MOTOR TABLE
7	2	SINGLE LIMIT SWITCH - LEVER 46 DEG	LIMIT023				

Notes



Notes



Notes



Notes



Warranty

Manaras-Opera warrants its operators to be free from defects in material and workmanship under normal and proper use for a period of two years from date of invoice, unless otherwise stated. Mechanical, electrical and electronic accessories are warranted for one year from date of invoice, unless otherwise stated. Wearing parts such as clutch pads, v-belts, and brake bands are excluded from warranty.

Manaras-Opera's only obligation shall be to repair or replace defective equipment which does not conform to the warranty. Manaras-Opera shall not be liable for any injury, loss or damage, direct or consequential, arising out of the inability to use the equipment. Before using, Buyer and/or the ultimate User shall determine the suitability of the product for its intended use, and User assumes all risks and liability in connection therewith. The foregoing may not be changed except by an Agreement signed by an authorized representative of Manaras-Opera.

The articles that are replaced pursuant to the terms of this warranty shall be retained by Manaras-Opera, and the User is responsible for any freight costs relating to repair or replacement.

The foregoing warranty is exclusive and in lieu of all other warranties of quality, whether written, oral or implied (including any other warranty of merchantability or fitness for purpose).

The following are exclusions from warranty:

- If usage, product modification, adaptation or installation are not in accordance with our installation and operating instructions.
- If the product has been opened, dismantled or returned with clear evidence of abuse or other damage.
- If our written specifications are not properly applied by the Buyer when selecting the equipment.
- If our written instructions for installation and wiring of the electrical connections have not been followed.
- If our equipment has been used to perform functions other than the functions it was designed to handle.
- If Manaras-Opera equipment is used with electrical accessories (switches, relays, etc.) that have not been previously approved in writing by the Manaras-Opera Engineering Department.
- If electrical accessories and other components have been used in disregard of the basic wiring diagram for which they were designed.

All costs related to installation and reinstallation of the Manaras-Opera equipment covered by this warranty are not the responsibility of Manaras-Opera. Manaras-Opera will not be responsible for any consequential damages following installation procedures performed by the Buyer or the User. If the Buyer resells any Manaras-Opera products to another Buyer or User, it shall include all of the terms and provisions of this warranty in such resale. Manaras-Opera's responsibility to any such Third Party shall be no greater than Manaras-Opera's responsibility under the warranty to the original Buyer.

Returns

No returns will be accepted without prior written authorization by Manaras-Opera. All returns must be accompanied by a Return Authorization Number issued by Manaras-Opera, and all unauthorized returns will be refused. The return shipment is to be freight prepaid by the Buyer, and under no circumstances shall the Buyer deduct the value of the returned merchandise from any remittance due. A restocking fee of 15% of the Manaras-Opera sale price will be charged for all returns not covered under warranty.



Commercial Door OPERATOR



Manaras-Opera is extending their well-known OPERA brand name across its entire line of Commercial Door OPERATORS. Over the years, the OPERA brand name has become synonymous with innovation and reliability. The high quality products you have come to expect from us will now be backed by the OPERA brand name.

**When you think
Commercial Door OPERATORS,
just think OPERA.**

Call us for more information
1-800-361-2260

www.manaras.com