

Summary	DG Predadoor Motor Replacement				
Products Affected	All Digital Gateway Predadoor Upgraded to SEW Motors				
Key Word Tags	Motor, Retro, DG, Relay Logic				
Tools/Equipment (If Required)					
Parts/Materials (If Required)	See Below				
Related Media					
Author	Mark Buresh, RevC M. Burzlaff	Issue Date	4/12/2006	Status	Active

Please Read The Entire Bulletin Before Proceeding

NOTE: The motor cable supplied with the new motor must be used. Failure to do so will void any motor warranty.

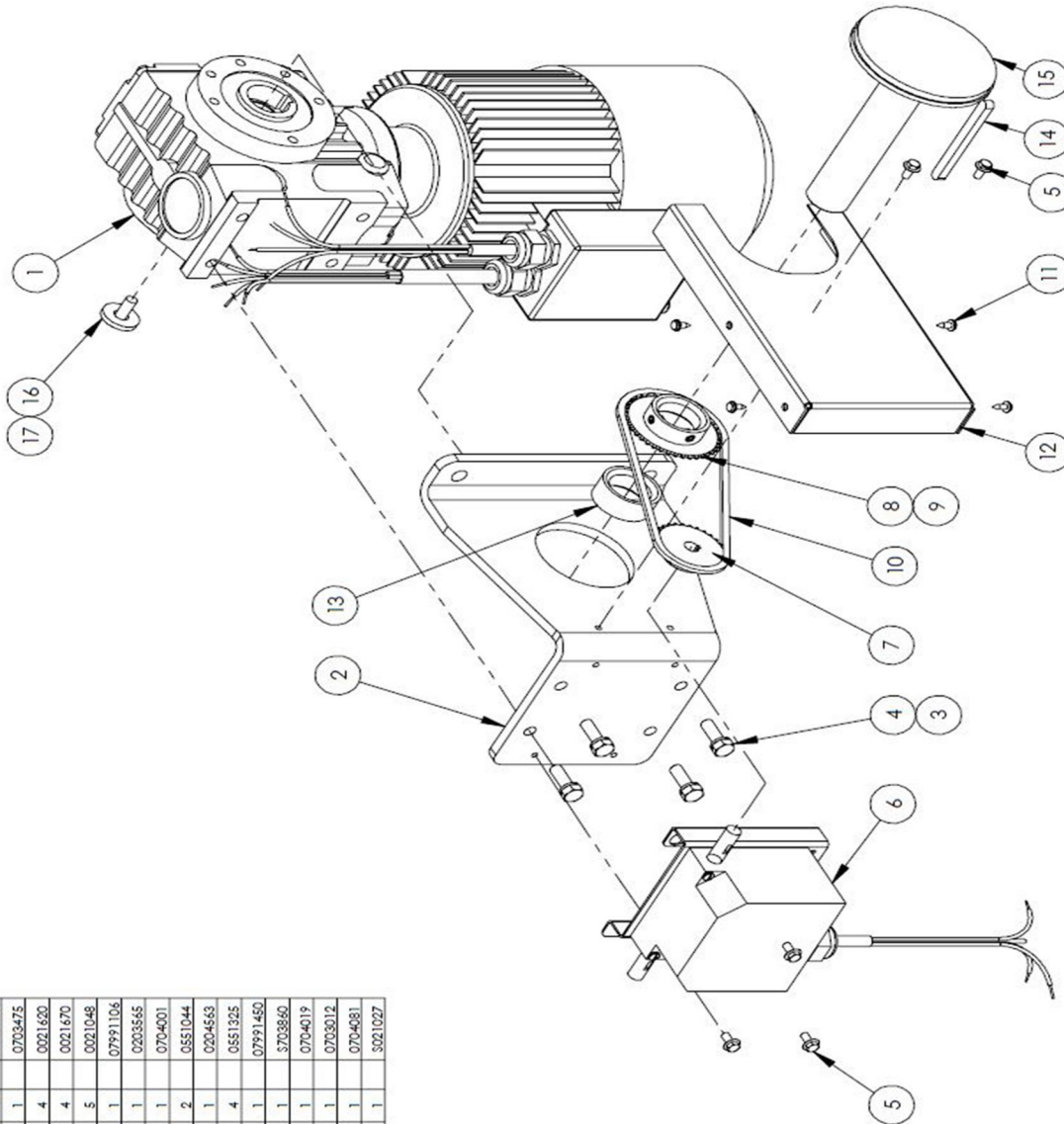
Standard doors shipping before June 2002 had an Electroid motor. The current standard is an SEW Eurodrive motor with the SA57 gearbox. Changing from the Electroid gearbox to an SA57 SEW Eurodrive gearbox requires different motor mounting brackets and limit switch mounting plates. The doors that originally shipped with Electroid motors will require a change to a Eurodrive motor.

When a replacement motor is ordered for a door that originally shipped with the Electroid motor, the following new hardware will be required and will be included with the order.

ASSEMBLY, SA57 EURODRIVE & SO CORD	Part Number Will Vary
MTR BRKT, EURODRIVE, 2.88" CENTERLINE, ROTARY LIMIT	R0703908 (1ea) (If height <13')
OR	
MTR BRKT,SEW 3.63" CENTERLINE,DG	R0703475 (1ea) (If height >13')
WASHER, M10 SPLIT LOCK, STL ZN	R01080040 (4ea)
HHCS, M10-1.5 x 30mm, STL ZN	R0021670 (4ea)
BRACKET, LIMIT SWITCH	R0703476 (1ea)
SRMS,#10-32 X 1-1/2,ZN	R0551043 (3ea)
WASHER,#10,LOCK,SPLIT,ZN	R0554115 (3ea)
HEX NUT, #10-32, STL ZN	R0553087 (3ea)
HFSMS, 1/4-20 x 1/2, GR5.2 ZN	R0021048 (5ea)
CHAIN GUARD ASSY, SA57 EURODRIVE	R07991450 (1ea)
SPACER, EURODRIVE SA57 & ELECTROID STYLE DRIVE SHAFT	RS703860 (1ea)

The new brackets, mounting plate, and base can be used for either right or left hand assemblies. Reference Drawings Below for proper assembly configuration.

ITEM	DESCRIPTION	QTY.	SIZE	PART NO.
1	ASSEMBLY, S&S7 EURODRIVE & SO. CORD, 1.2/0.6 HP	1		07991657
2	BRACKET, SEW MOTOR MOUNT	1		0703475
3	WASHER, MID-SPUT LOCK, STL ZN	4		0021620
4	HHCS, M10-1.5 x 30mm, STL ZN	4		0021670
5	HFSMS, 1/4-20 x 1/2, CRS, 2 ZN	5		0021048
6	LIMIT SWITCH ASSY, LH, 1.8/0.9HP SEW MOTOR	1		07991106
7	SPROCKET, #25 CHAIN, 30 TEETH, 0.5 BORE, W/ SETSCREWS	1		0203565
8	SPROCKET, 40 TOOTH, 25B&D, 1.438 BORE	1		0704001
9	SHS, 5/16-18UNC x 3/8, ALLOY, CONE POINT	2		0651044
10	CHAIN ASSEMBLY, TIMING	1		0204563
11	HWSDS, #10-16 x 1/2, STL ZN	4		0651325
12	CHAIN GUARD ASSY, S&S7 EURODRIVE	1		07991450
13	SPACER, EURODRIVE S&S7 & ELECTROID, STYLE DRIVE SHAFT	1		3703860
14	KEY, 3/8 x 5/16 x 3.98, ROUND ENDS, (REDUCER KEY)	1		0704019
15	SHAFT, DRIVE SIDE	1		0703012
16	DISC, EURODRIVE SIZE 47 HOLLOWBORE, 1.25 OD	1		0704081
17	HHCS, 3/8-16UNC X 1, 18-8 SS	1		5021027



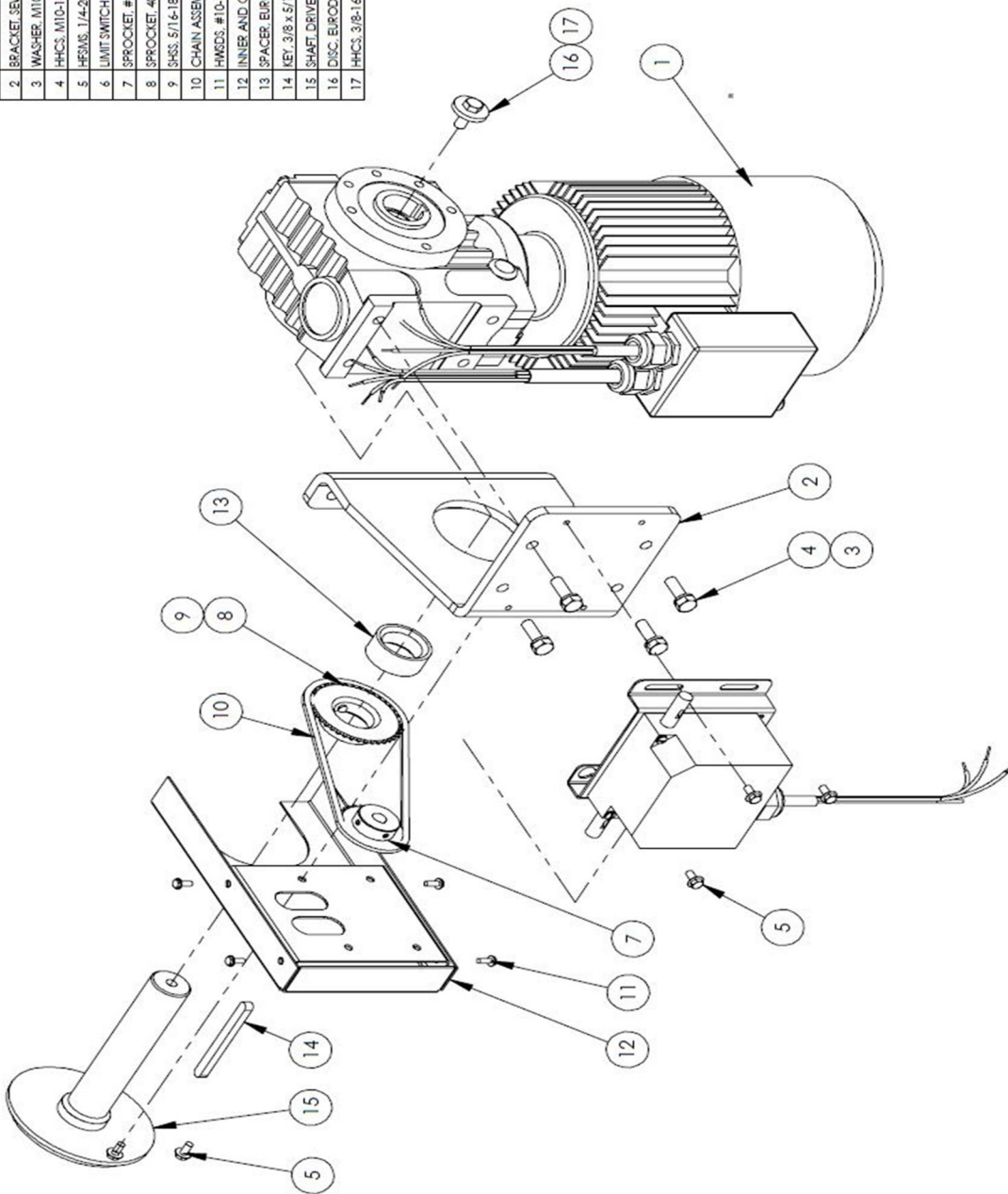
RYTEC CORPORATION
 ONE CEDAR PARKWAY, JACKSON, WI 53037-0403
 CONFIDENTIAL: THE DRAWINGS ARE THE PROPERTY OF RYTEC CORPORATION AND CAN NOT BE USED WITHOUT THE WRITTEN CONSENT OF RYTEC CORPORATION

DRAWING NAME: ASSEMBLY, MOTOR (2 SPEED EURODRIVE), LIMIT, AND DRUM (1.438 DIA. SHAFT), LH
 SCALE: 1:4
 DATE: 4/11/02
 DRAWING NUMBER: 07991655
 SHEET: 1 of 1
 REF. MODEL: (07991655)
 APPVD BY: ---
 REV.: -

ALL DRILL HOLES = TOL: +0.004/-0.002
 ALL ANGLES = TOL: ±9° 30'
 ALL MACHINED SURFACES 125
 REMOVE ALL SHARP EDGES AND BURRS
 TOLERANCES (UNLESS OTHERWISE SPECIFIED):
 3 DECIMAL PLACES = TOL: ±0.005
 2 DECIMAL PLACES = TOL: ±0.015
 ALL FRACTIONS = TOL: ±0.000



ITEM	DESCRIPTION	QTY.	SIZE	PART NO.
1	ASSEMBLY, 5A57 EURODRIVE & 30 CORD, 1.2/0.6 HP	1		07991657
2	BRACKET, SEW MOTOR MOUNT	1		0709475
3	WASHER, M10 SPLIT LOCK, STL ZN	4		0021620
4	HHCS, M10-1.5 x 30mm, STL ZN	4		0021670
5	HFMS, 1/4-20 x 1/2, GR5-2 ZN	5		0021048
6	LIMIT SWITCH ASSY, RH, 1.8/0.9HP SEW MOTOR	1		07991108
7	SPROCKET, #25 CHAIN, 30 TEETH, 0.8 BORE, W/ SETSCREWS	1		0020365
8	SPROCKET, 40 TOOTH, 25B40, 1.438 BORE	1		0704001
9	SHCS, 5/16-18 UNC x 3/8, ALLOY, CONE POINT	2		0551044
10	CHAIN ASSEMBLY, TIMING	1		0020563
11	HWDS, #10-16 x 1/2, STL ZN	4		0551325
12	INNER AND OUTER GUARD (KIT)	1		07991450
13	SPACER, EURODRIVE 5A57 & ELECTROID STYLE DRIVE SHAFT	1		5703840
14	KEY, 3/8 x 5/16 x 3/8, ROUND ENDS, REDUCER KEY	1		0704019
15	SHAFT, DRIVE SIDE	1		0703012
16	DISC, EURODRIVE SIZE 47 HOLLOWBORE, 1.25 OD	1		0704081
17	HHCS, 3/8-16 UNC x 1, 18-8 SS	1		5021027



RYTEC CORPORATION				DRAWING NAME: ASSEMBLY, MOTOR (2 SPEED EURODRIVE), LIMIT, AND DRUM (1.438 DIA SHAFT), RH			
ONE CEDAR PARKWAY, JACKSON, W 53037-0403				SCALE: 1:4			
CONFIDENTIAL: THE DRAWING IS THE PROPERTY OF RYTEC CORPORATION AND CANNOT BE USED WITHOUT THE WRITTEN CONSENT OF RYTEC CORPORATION.				DRAWN BY: BND			
				DATE: 4/11/02			
				APPROVED BY: ---			
				DRAWING NUMBER: 07991656			
				SHEET: 1 of 1			
				REF MODEL: [07991655]			
				REV: -			

REV	ECO#	DATE	INITIAL RELEASE	BND	BY
1	707	04/11/02	DATE		
TOLERANCES (UNLESS OTHERWISE SPECIFIED):					
3 DECIMAL PLACES = TOL: ±0.005					
2 DECIMAL PLACES = TOL: ±0.015					
ALL FRACTIONS = TOL: ±0.030					
ALL DRILL HOLES = TOL: +0.004/-0.002					
ALL ANGLES = TOL: ±0° 30'					
ALL MACHINED SURFACES 125					
REMOVE ALL SHARP EDGES AND BURRS					

CAUTION

Doors that originally shipped with an Electroid motor do not have a tapped hole in the end of the drive shaft to allow for a bolt to hold the motor to the shaft. To prevent the drum from shifting, tighten the set screws on the non-drive side bearing and secure them with Loctite.

Electrical Changes from Electroid to Eurodrive:

The Electroid motor had different electrical connections than the SEW Eurodrive. This will require modifying the wires on the new contactors in the control box. The following instructions can be used as a general guide on how these changes can be done.

Read the instructions carefully and completely before beginning the retrofit. Only a qualified electrician should perform this work. It is imperative to have an understanding of these changes to prevent damage to the electrical controls and any possible injury.

WARNING

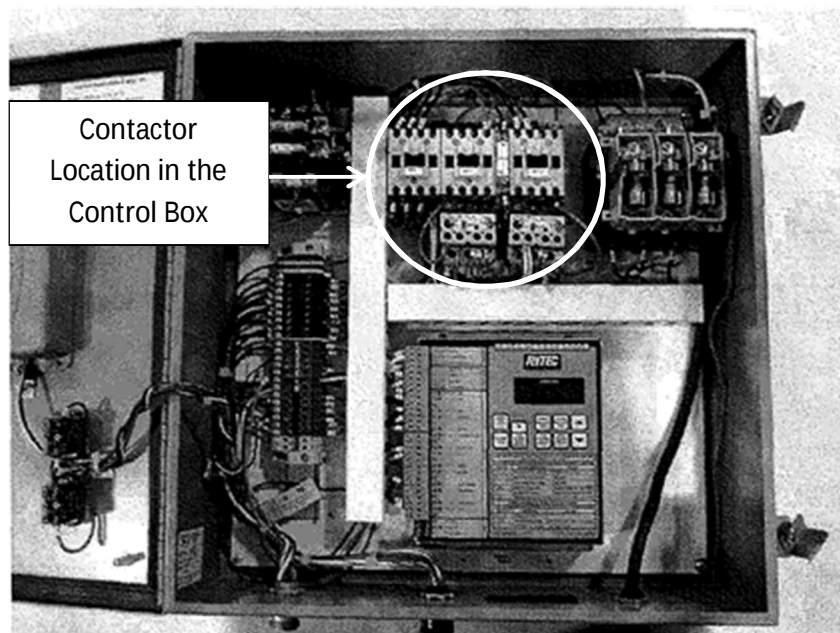
The disconnect must be in the OFF position and properly locked and tagged before performing the next step of the procedure.

A two speed motor can be identified as having six (6) motor leads and two (2) overloads.

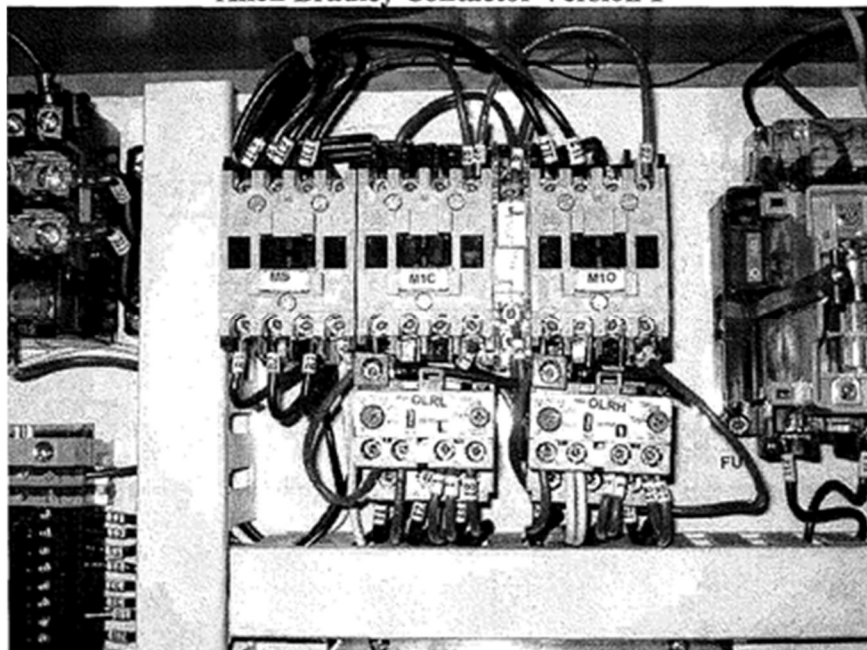
A single speed motor can be identified as having three (3) motor leads and one (1) overload.

Two Speed Motor Connections:

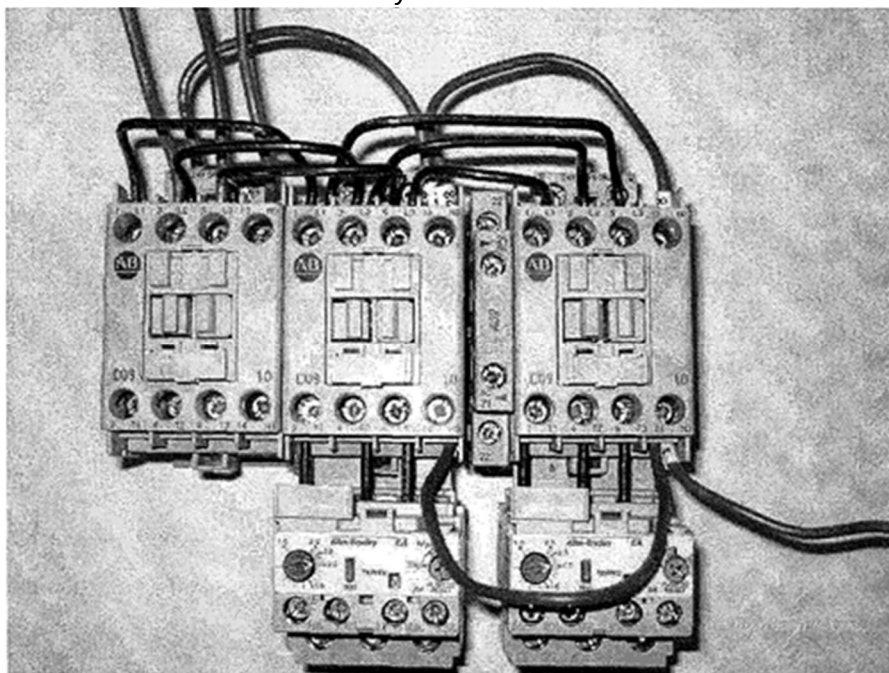
1. The beginning wiring is shown below. It is important to note that several versions of the Allen Bradley contactor have been used in the Predadoor control box. While they may look slightly different, the wiring in each step of the process will be the same. Two versions are shown below.

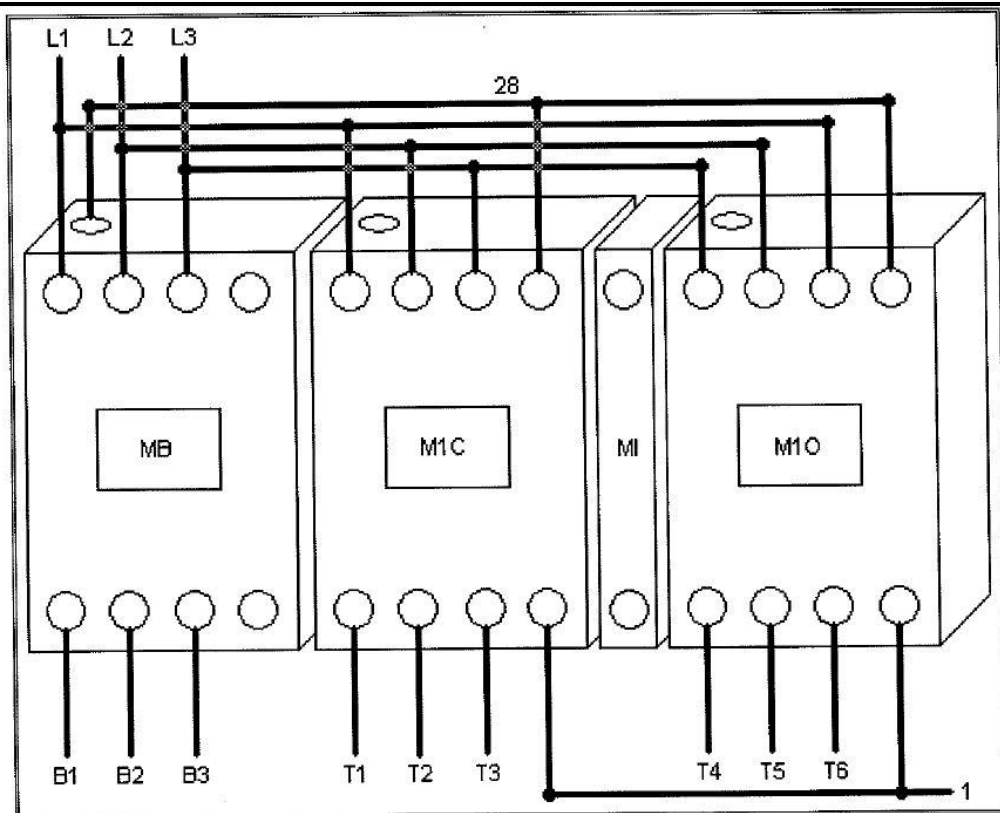


Allen Bradley Contactor Version 1



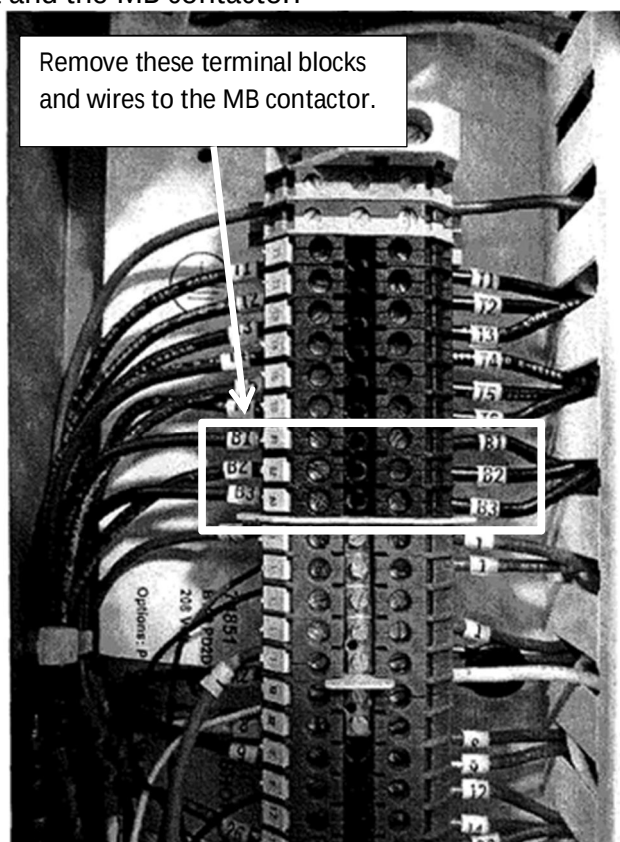
Allen Bradley Contactor Version 2



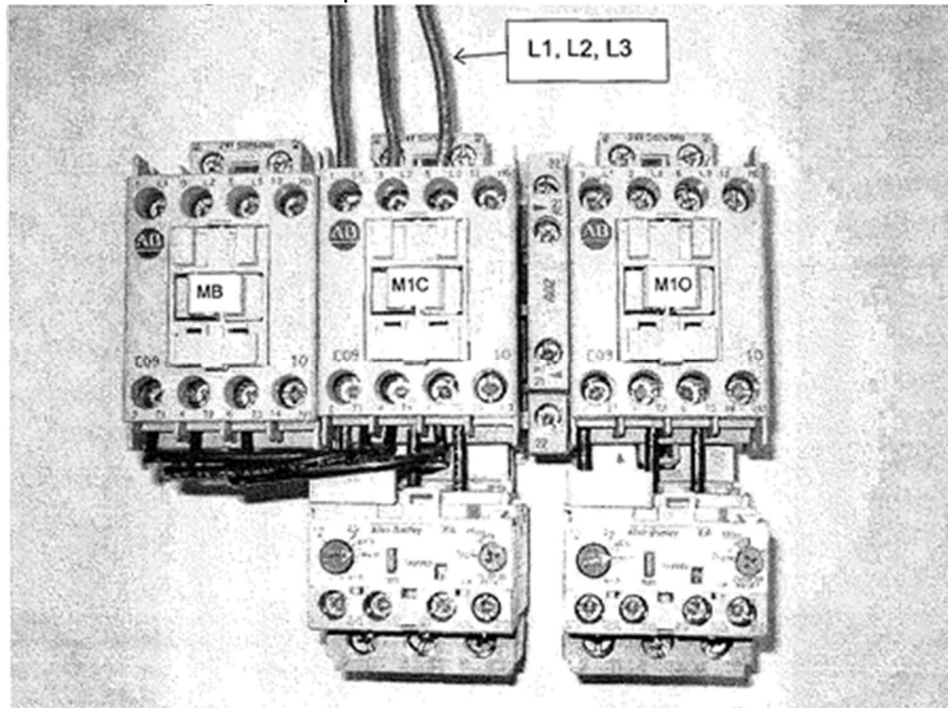


Original Wire Layout

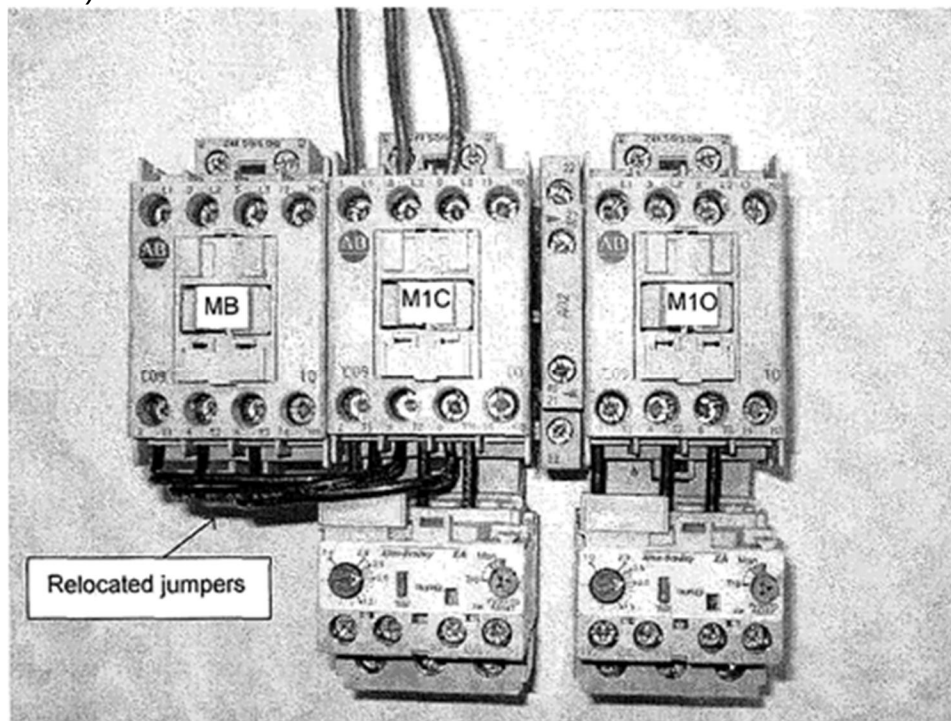
2. Remove terminal blocks B1, B2, and B3 from the controller along with the wires that are attached between it and the MB contactor.



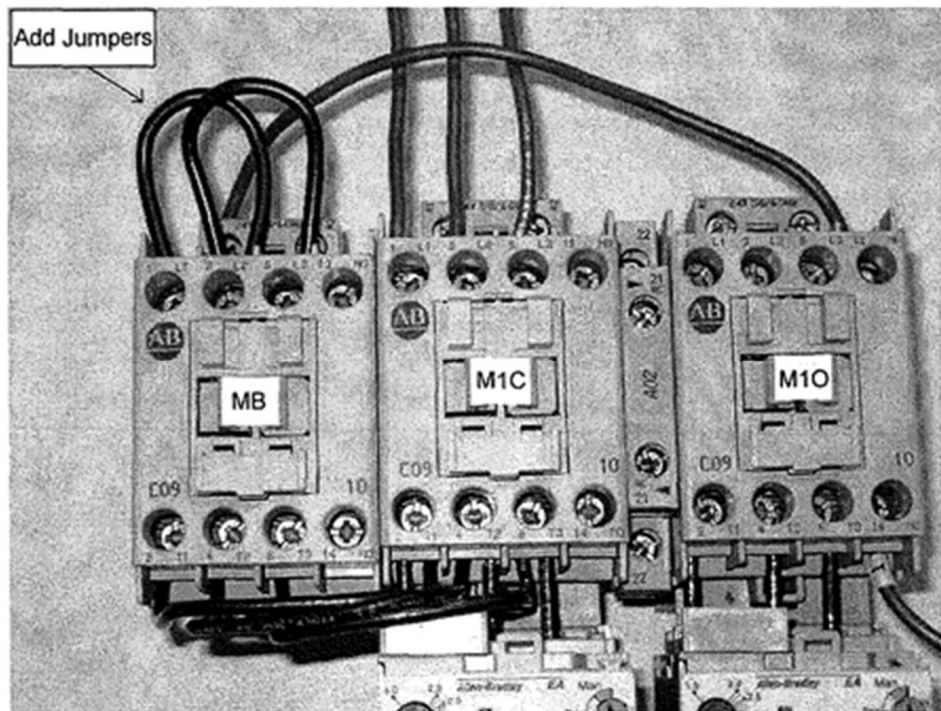
3. If the incoming power L1, L2, and L3 are connected to the top of the MB contactor, remove them and relocate them to the top three terminals of the M1C contactor.



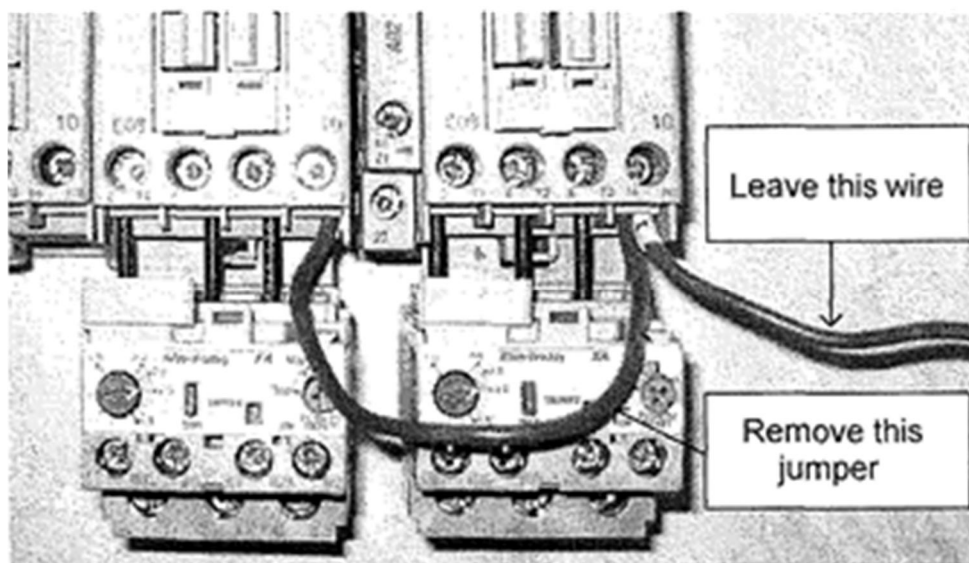
4. Remove the three black jumpers from the top of the MB contactor that connect to the top of the M1C contactor. Re-use these jumpers to connect from the bottom left three terminals of the MB contactor to the bottom left three terminals of the M1C contactor where the OLRL (overload left) attaches to the M1C.



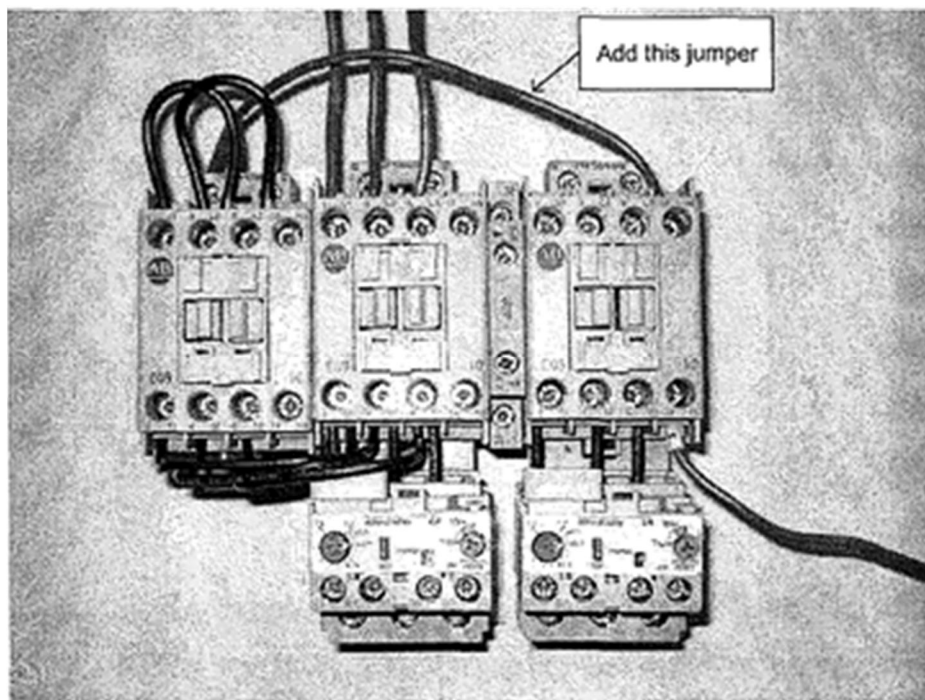
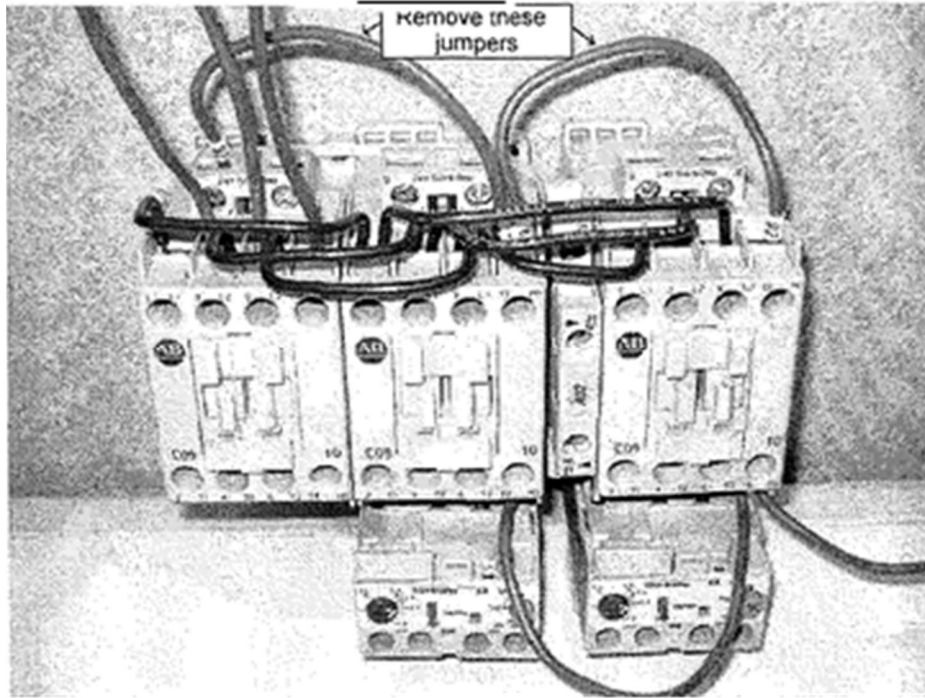
5. Install two jumpers on the top three terminals of the MB contactor that will bridge from the 1st to the 2nd terminal and from the 2nd to the 3rd terminal.



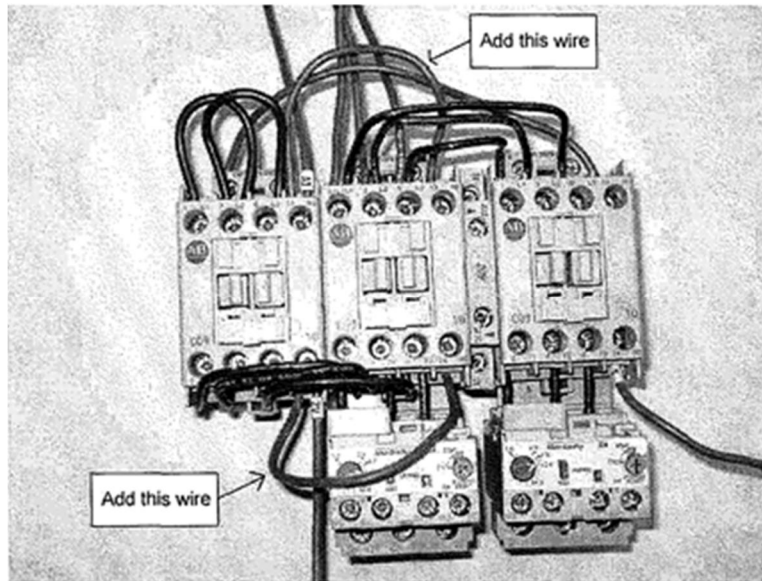
6. Remove the red wire that connects the fourth bottom terminal of the M10 to the fourth bottom terminal of the M1C. Leave the other red wire labeled #1 in place on the M10.



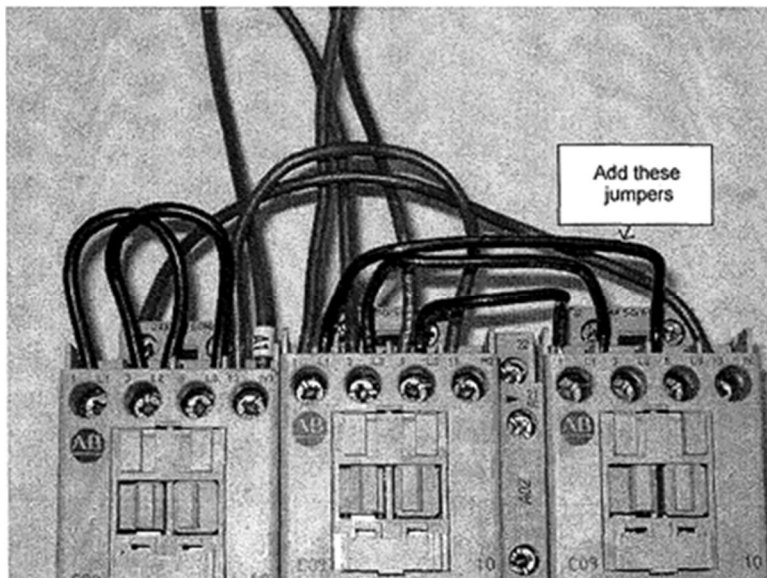
7. Remove the two red wires that are connected to the fourth top terminal on the M1C. The wires should lead to M1O and MB. Replace the old wires with one long wire that connects from the fourth top terminal of the M1O to terminal A1 on the MB contactor.



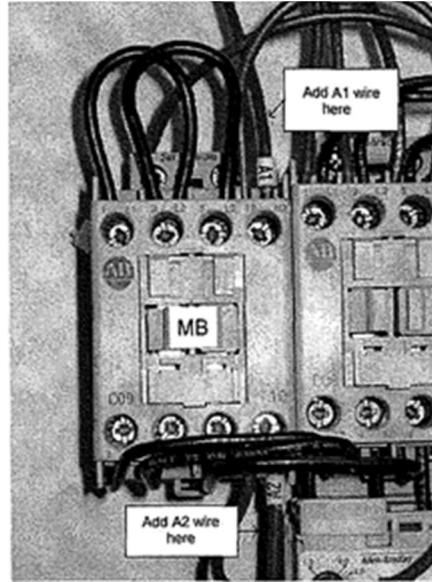
8. Install a jumper from the fourth top terminal of the MB contactor to the fourth top terminal of the M1C contactor. Install another jumper from the fourth bottom terminal of the MB contactor to the fourth bottom terminal of the M1C



9. Install a jumper from the M1C contactor terminal 1 to the M10 terminal 3. Install a jumper from the M1C terminal 2 to the M10 terminal 2. Install a jumper from the M1C terminal 3 to the M10 terminal 1.

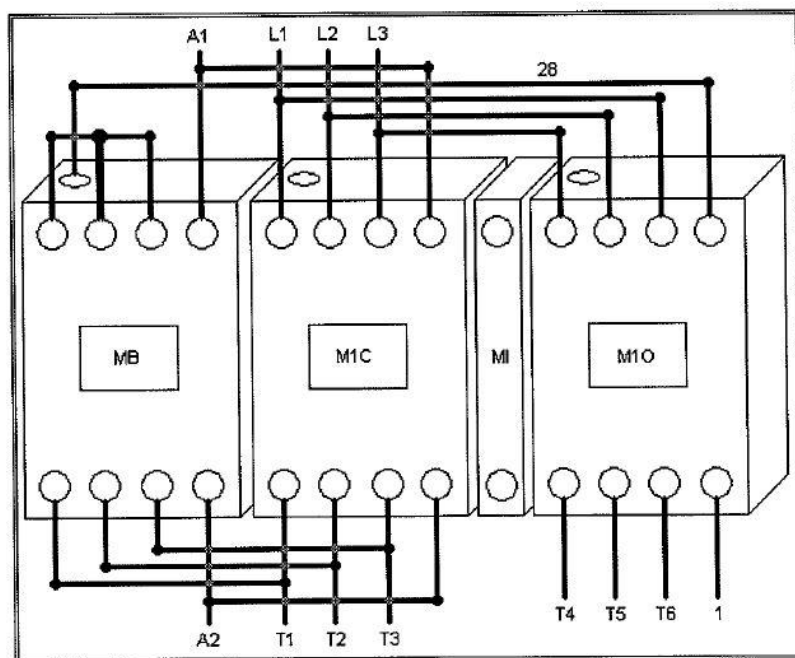


10. Run a wire from the fourth top terminal of the MB contactor to an unused terminal block. (Use the old B1 and B2 terminal blocks for this step.) This terminal should be re-labeled A1. Run a wire from the fourth bottom terminal of the MB contactor to the other unused terminal block. This terminal block should be re-labeled A2. (NOTE: These terminals have nothing to do with and do not represent the A1 and A2 terminal on the coils of all the contactors.)



IMPORTANT!!!

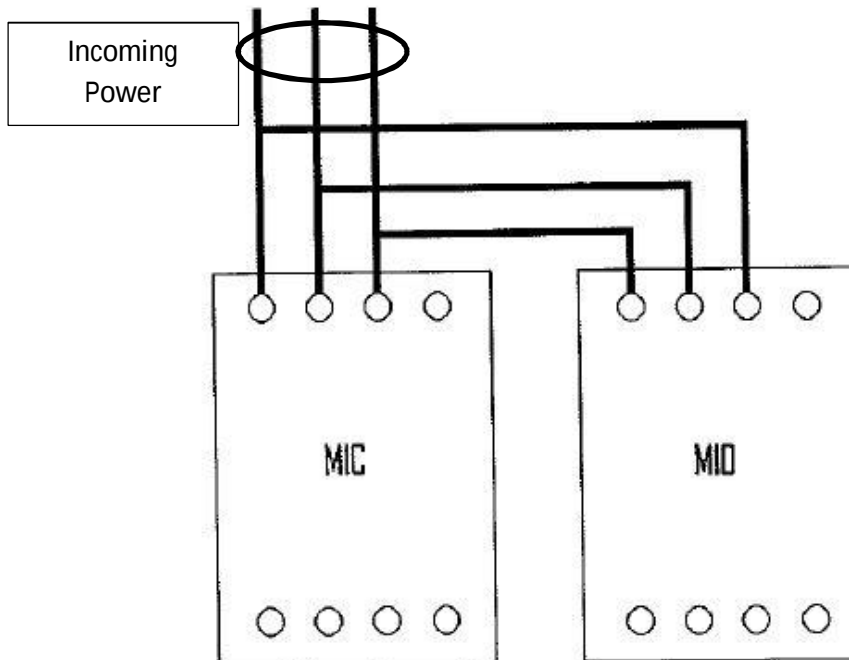
The new contactor setup will short out wires A1 and A2 whenever the M1O or the M1C contactors pull in. This allows the brake to grab immediately upon release. In addition, the MB contactor will ONLY pull in when the M1O is energized. When the MB contactor pulls in, it will short together all three legs of the low speed motor. It is important to double check all of the above steps. If the MB contactor pulls in with the M1C, you will blow all of your line fuses and possibly burn and fuse the two contactors.



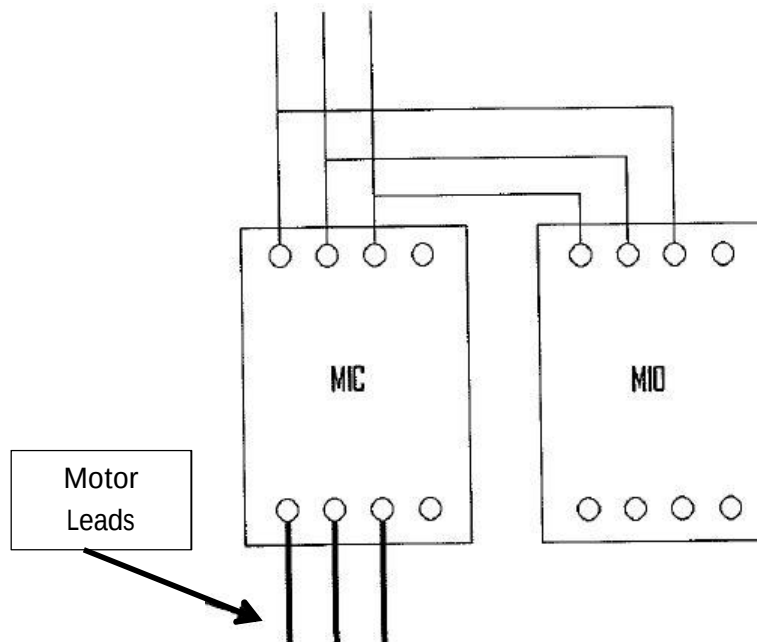
Final Wire Layout

Single Speed Motor Connections

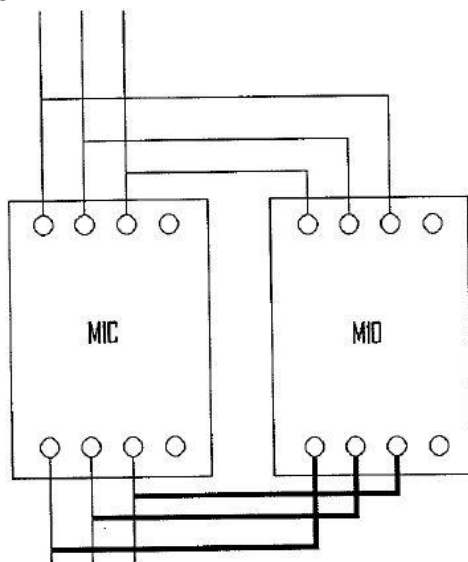
11. With a Single Speed motor you will NOT be using the MB contactor. You will only use the M1C and M1O contactors.
12. Connect the incoming power to L1, L2, and L3 on your M1C contactor.
13. Put a jumper from L1 on the M1C contactor to L3 on the M1O contactor. Put a jumper from L2 on the M1C contactor to L2 on the M1O contactor. Put a jumper from L3 on the M1C contactor to L1 on the M1O contactor.



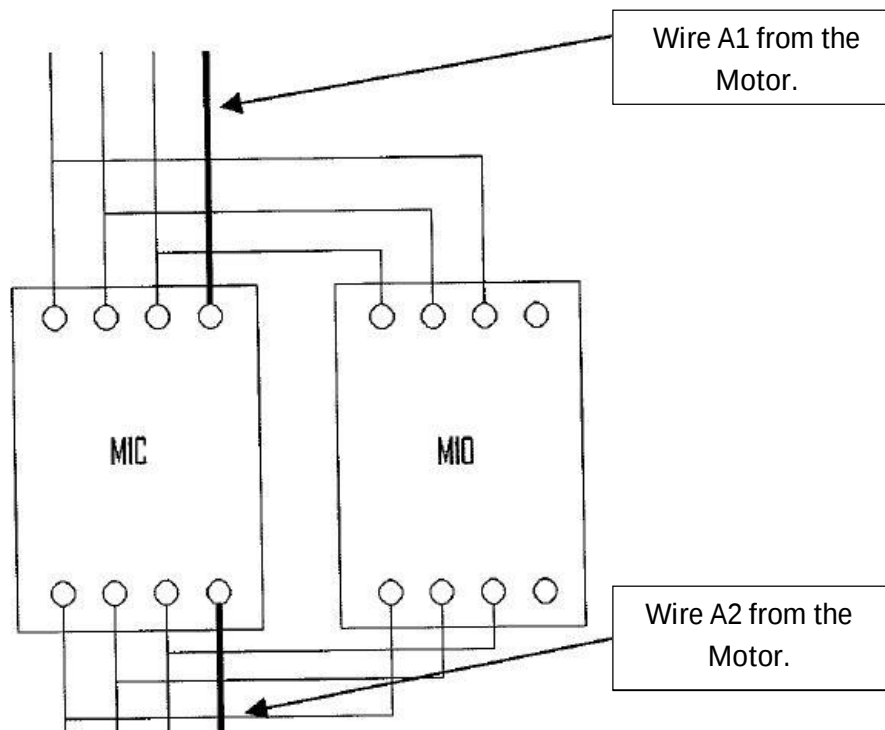
14. Connect T1, T2, and T3 from the motor leads to T1, T2, and T3 on the M1C contactor.



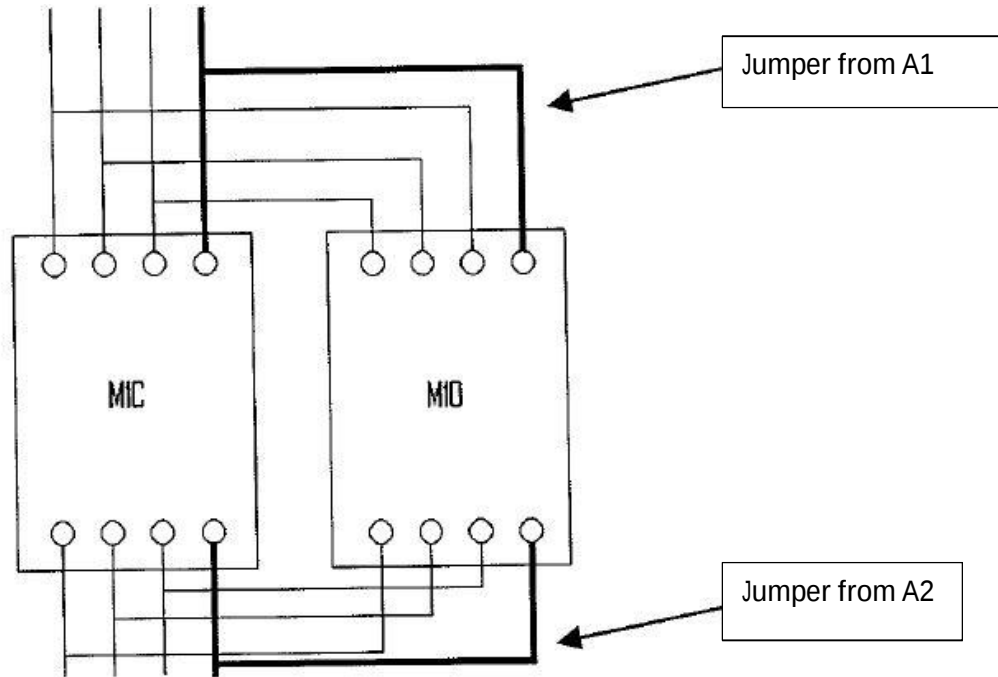
15. Put a jumper from T1 on the M1C contactor to T1 on the M1O contactor. Put a jumper from T2 on the M1C contactor to T2 on the M1O contactor. Put a jumper from T3 on the M1C contactor to T3 on the M1O contactor.



16. If there is an A1 and A2 from the motor, connect the A1 to terminal 13 on the M1C contactor and A2 to terminal 14 on the M1C contactor. If there is no A1 or A2 coming from the motor, continue to step 19.



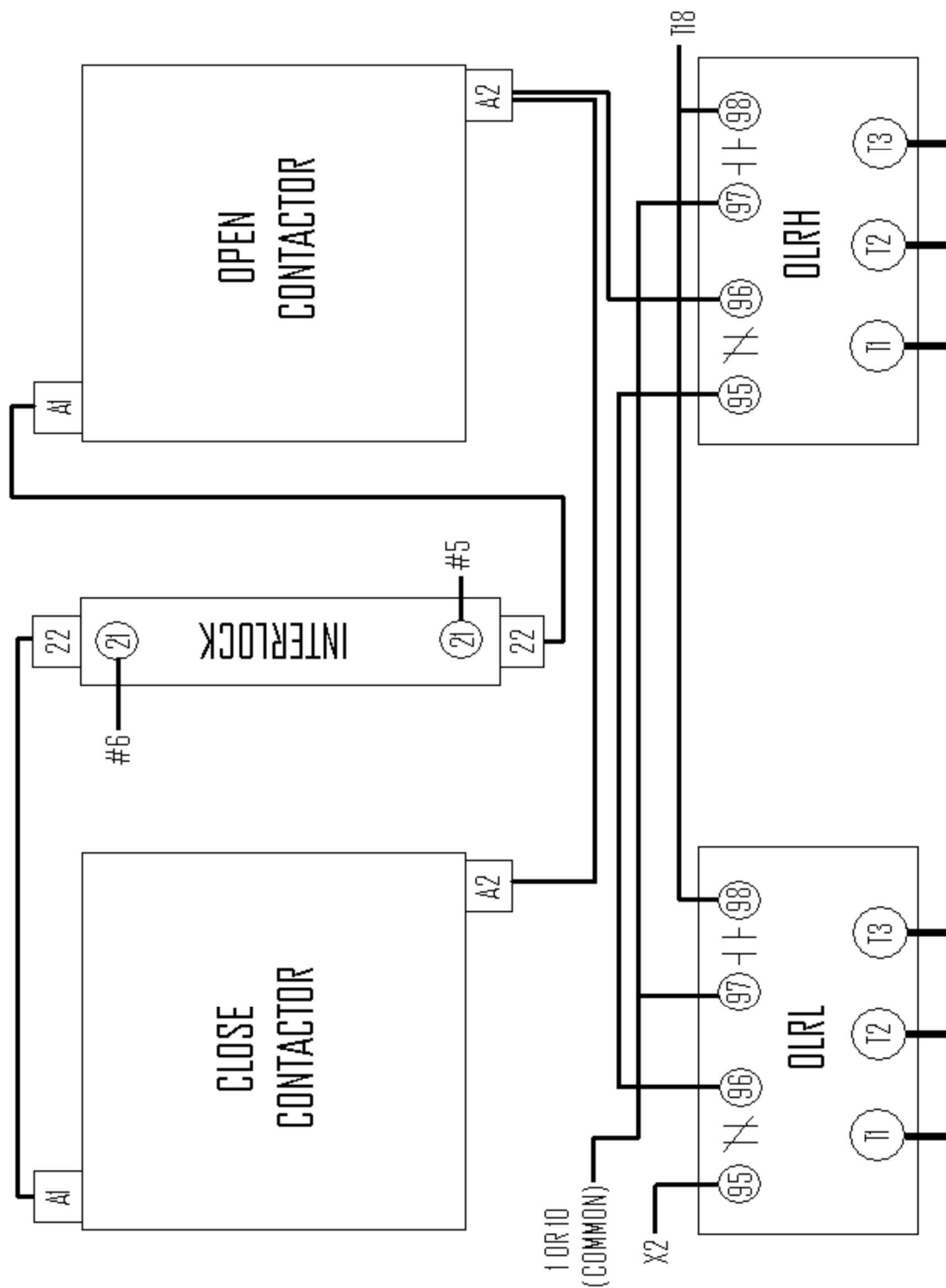
17. Put a jumper from terminal 13 on the M1C to 13 on the M1O. Put a jumper from terminal 14 on the M1C to terminal 14 on the M1O.



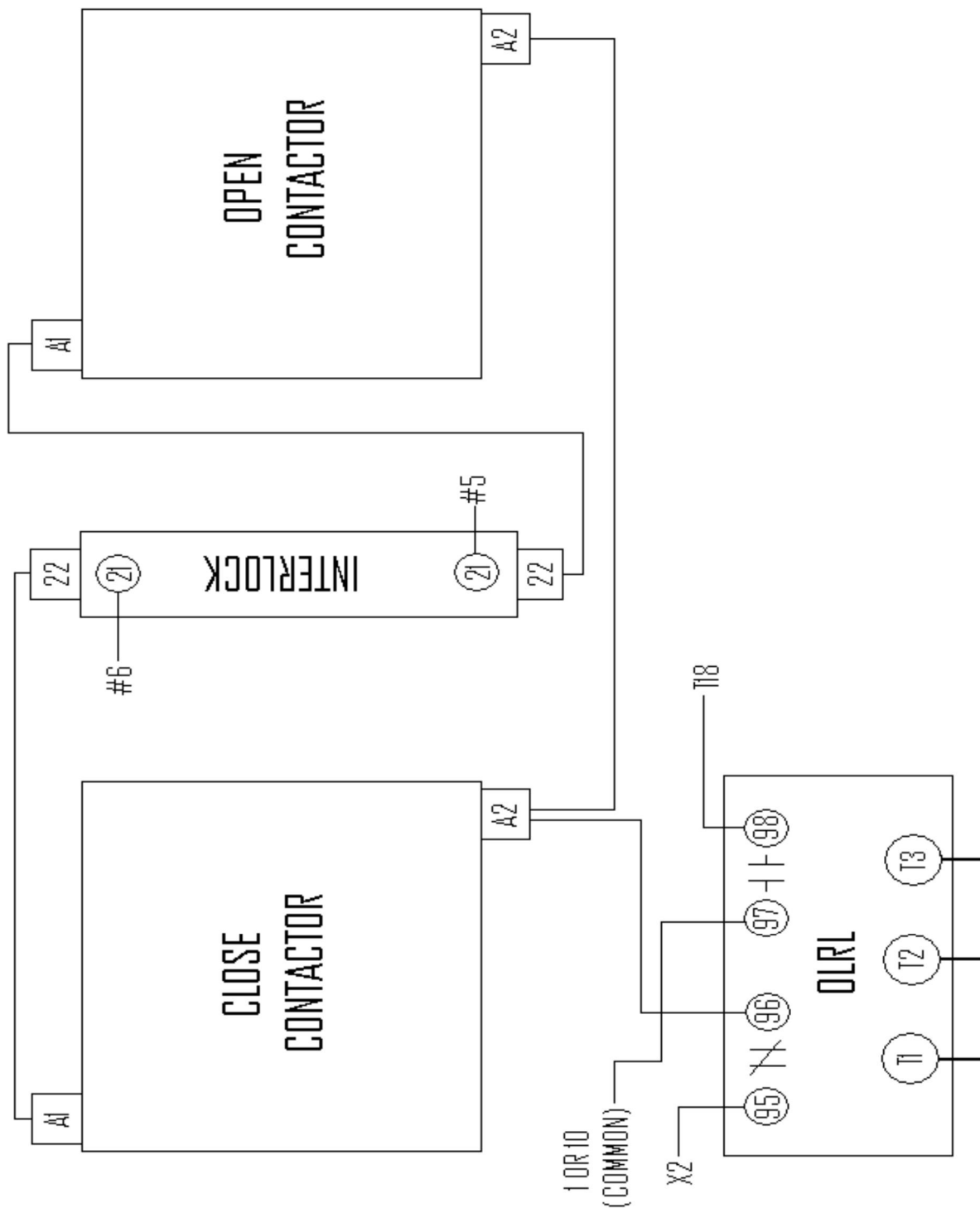
18. Cap wires from the motor T4, T5, and T6 and move them out of the way so that they do not interfere with any other wiring or contactors.
19. After double checking all the connections turn power on and run the door. Make sure there is no mechanical binding and that the door runs freely.

Reference drawings below for Interlock and Overload specific wiring, and Complete Schematics.

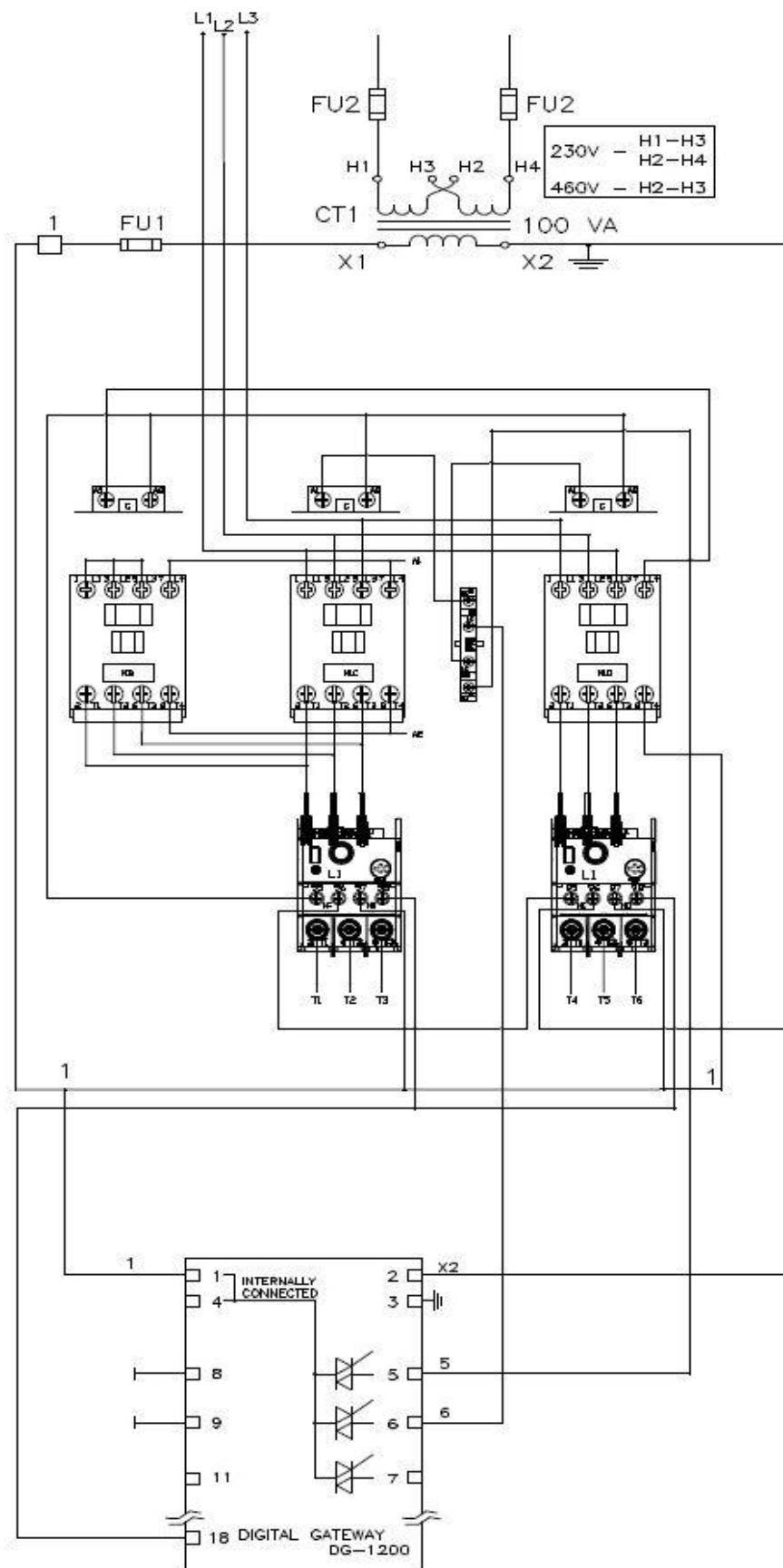
If you have any questions please contact Rytec Customer Support at 1-800-628-1909.

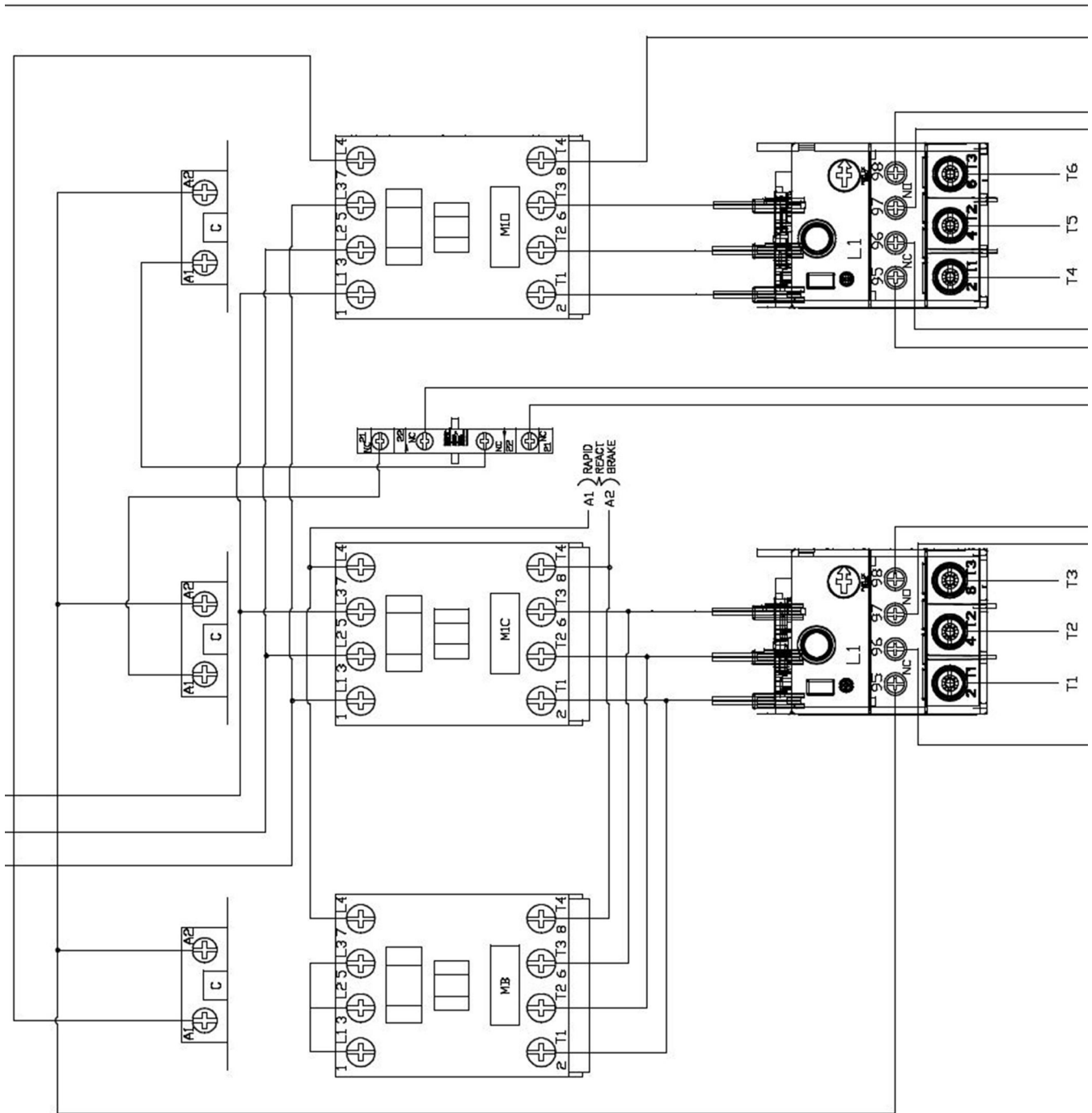


Two Speed Interlock and Overload Connections



Single Speed Interlock and Overload Connections





Close up of contactors, overloads, and interlock for 2 speed motor

