

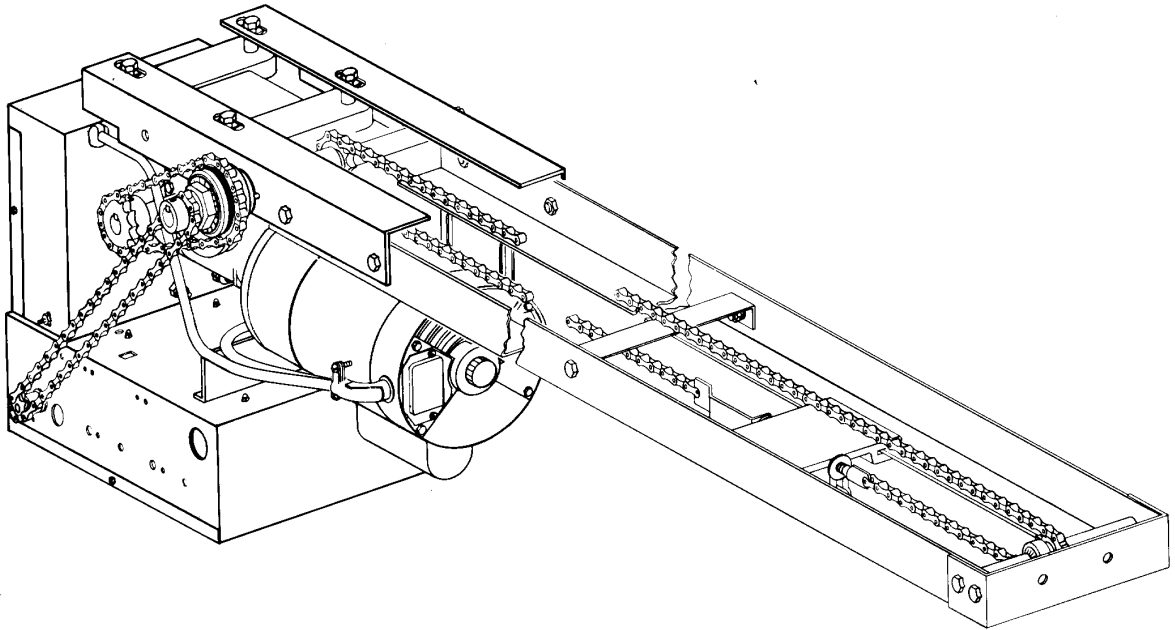
Lift-Master®

The Professional Line

The Chamberlain Group, Inc.
A Unit of Duchossois Industries, Inc.
845 Larch Avenue, Elmhurst, Illinois 60126

OWNERS MANUAL

MODEL GT GEARHEAD TROLLEY SERIES B



WIRING
TYPE



COMMERCIAL DOOR OPERATOR
LISTED

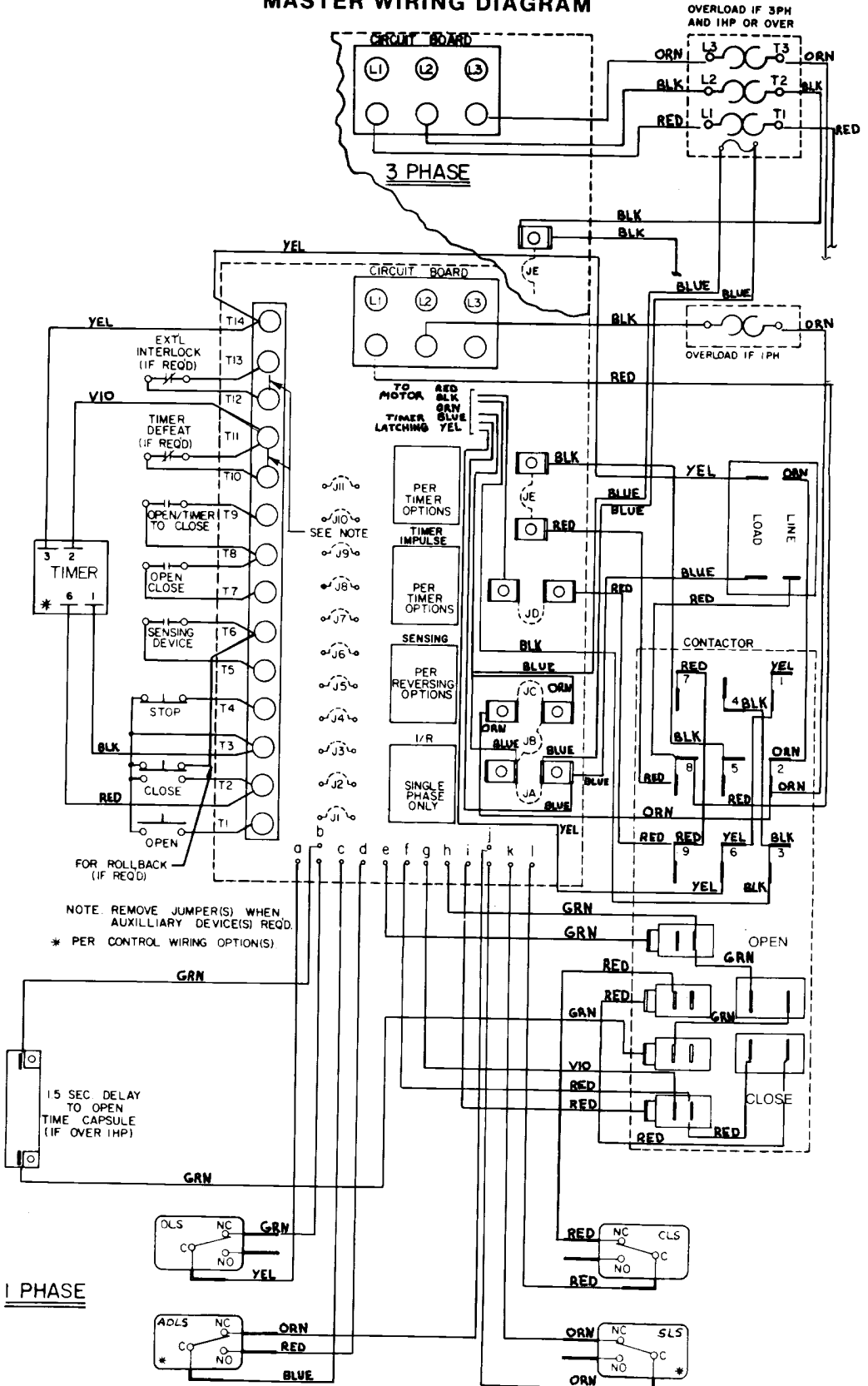
| <u>TYPE</u> | <u>STATION</u> | <u>NUMBER</u> | <u>FUNCTION</u> |
|-------------|----------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B | 3 Button | 453365 | Momentary contact to open, close and stop. |
| B1 | 3 Button | 453639 | Momentary contact to open, close and stop plus wiring for sensing device to stop. |
| B2 | 3 Button | 453642 | Momentary contract to open, close and stop plus wiring for sensing device to reverse and auxiliary devices to open and close with override. |
| C | 3 Button | 453636 | Momentary contact to open and stop with constant pressure to close. |
| C1 | 3 Button | 453640 | Momentary contact to open and stop with constant pressure to close and wiring for sensing device to stop. |
| C2 | 3 Button | 453643 | Momentary contact to open and stop with constant pressure to close. |
| D | 2 Button | 453641 | Constant pressure to open and close. |
| D1 | 2 Button | 453641 | Constant pressure to open and close with wiring for sensing device to stop. |
| E | 2 Button | 453638 | Momentary contact to open and constant pressure to close. Release of close button will cause door to reverse (rollback feature). |
| E2 | 2 Button | 453644 | Momentary contact to open with open override and constant pressure to close. |
| S | 1 Button | 453645 | Momentary contact to open and close plus wiring for sensing device to reverse, auxiliary devices to open and close, with open override. |
| T | 3 Button | 453646 | Momentary contact to open, close and stop with open override and timer to close. Open button may be connected to activate timer if desired. Auxiliary controls may be connected to open and activate to close or to open and close, without activating timer. |
| ST | 1 Button | 453647 | "T" type wiring with single button instead of three button operation. (See "S" type wiring.) |
| TS | 3 Button | 453648 | momentary contact open, close and stop with open override and timer to close. <u>EVERY</u> device that causes door to open will activate timer to close including sensing device to reverse. Timer may be deactivated until next opening signal is received by depressing stop button after door has reached open position or permanently by use of optional timer defeat switch. Photo-cell or loop detector not recommended for use as a sensing device to reverse with this wiring type. |
| STS | 1 Button | 453649 | 'TS" type wiring with single button instead of three button operation. (See 'S" type wiring.) |

Notes: 1. External interlocks may be wired into all wiring types.

2. Auxiliary devices are any devices that have only one set of contacts. Examples are: photo-cell, loop detector, pneumatic or electric treadles, residential radio controls, one button stations, pull cords, etc.

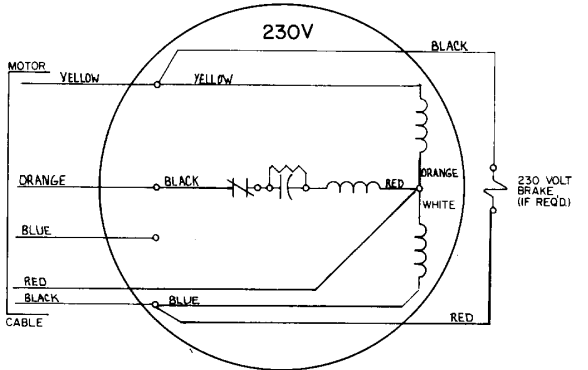
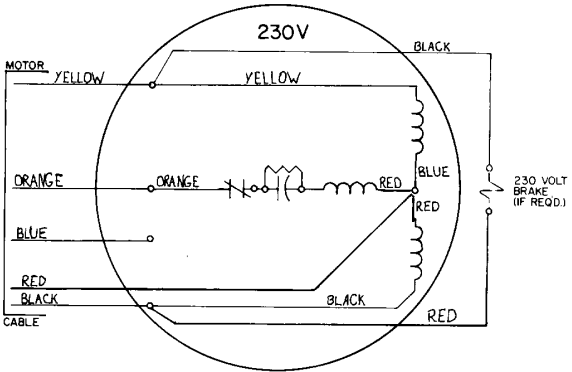
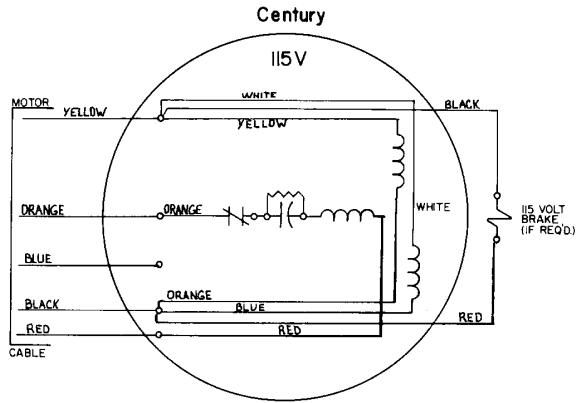
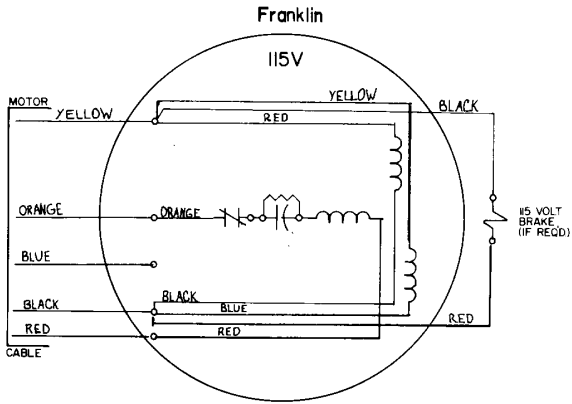
3. open override means that the door may be reversed while closing by activating an opening device without the need to use the stop button first

MASTER WIRING DIAGRAM

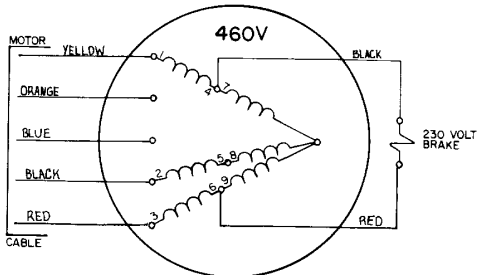
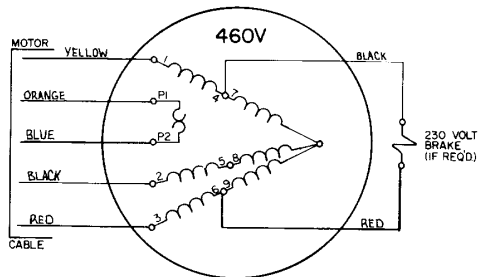
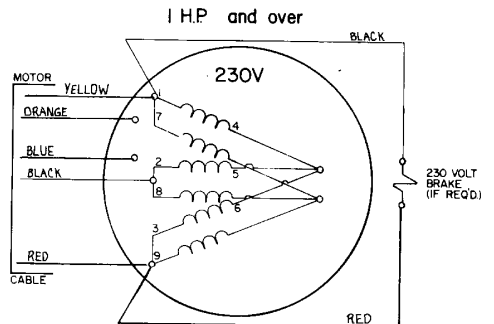
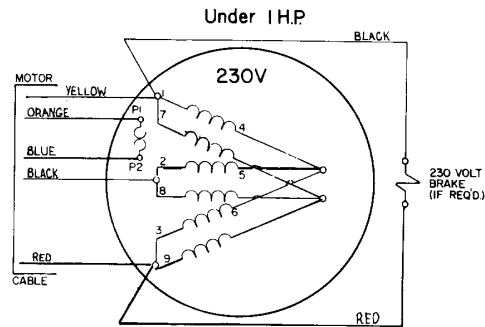


MOTOR WIRING DIAGRAMS

1 PHASE

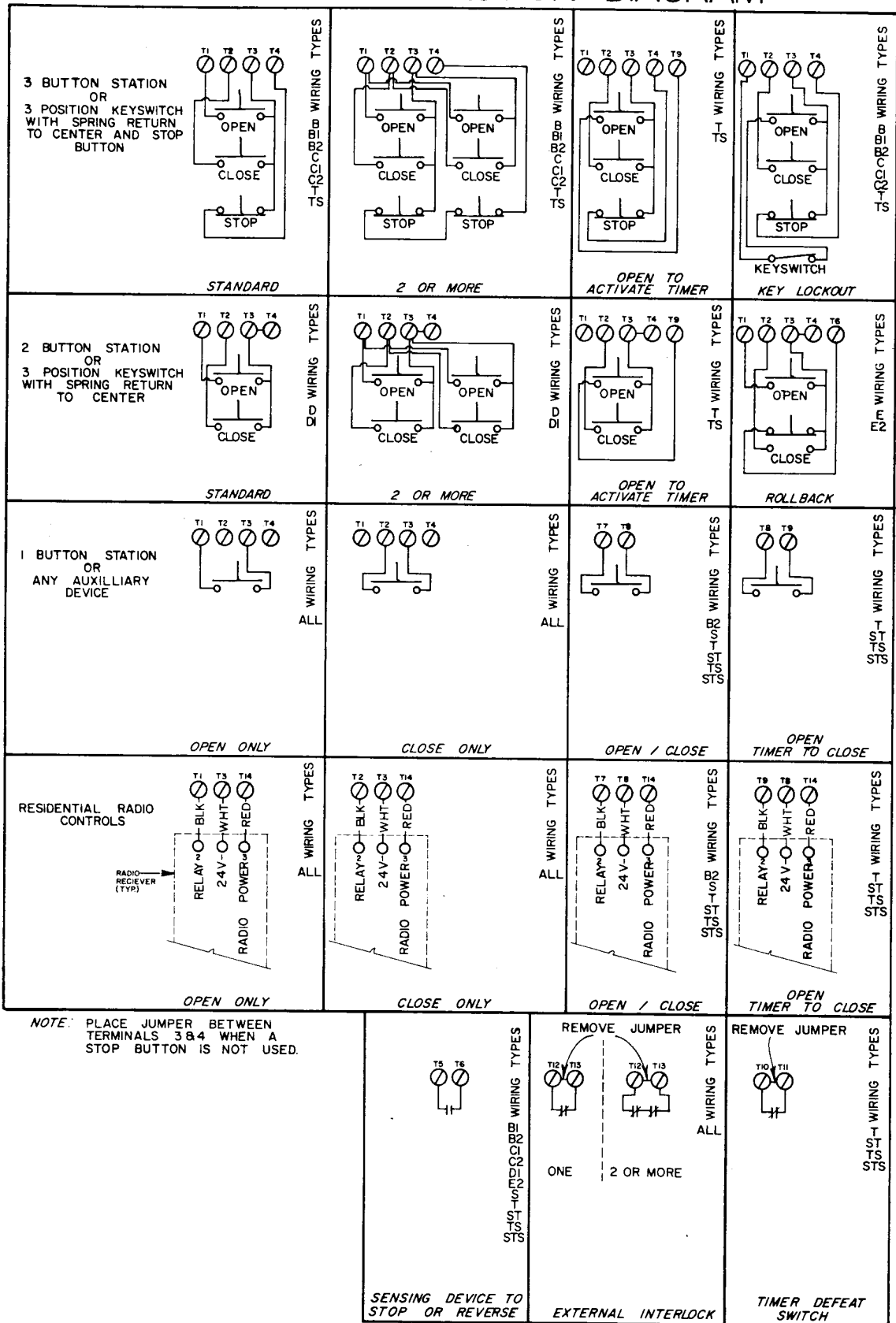


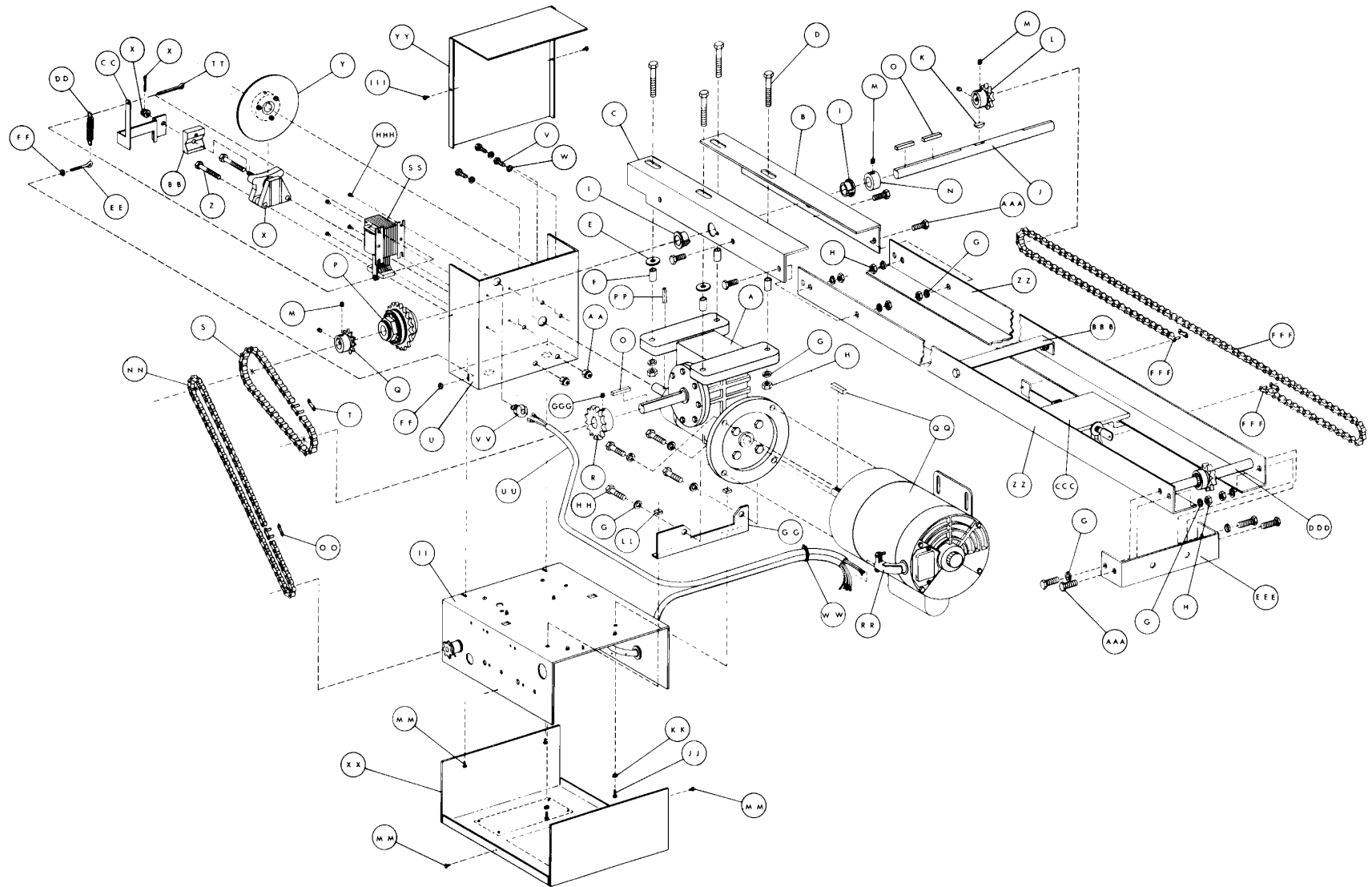
3 PHASE



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CONTROL CONNECTION DIAGRAM





NOTE: * See Chart "A". Door height will determine PART requirements.
 ** Door height will determine QUANTITY requirements

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| O | | | | | | | | | |
| P | G | G | G | G | G | G | G | G | G |
| E | T | T | - | - | - | - | - | - | - |
| R | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| A | 4 | 2 | 2 | 1 | 4 | 2 | 2 | 2 | 1 |
| T | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 1 | 1 |
| O | | | | | | | | | |

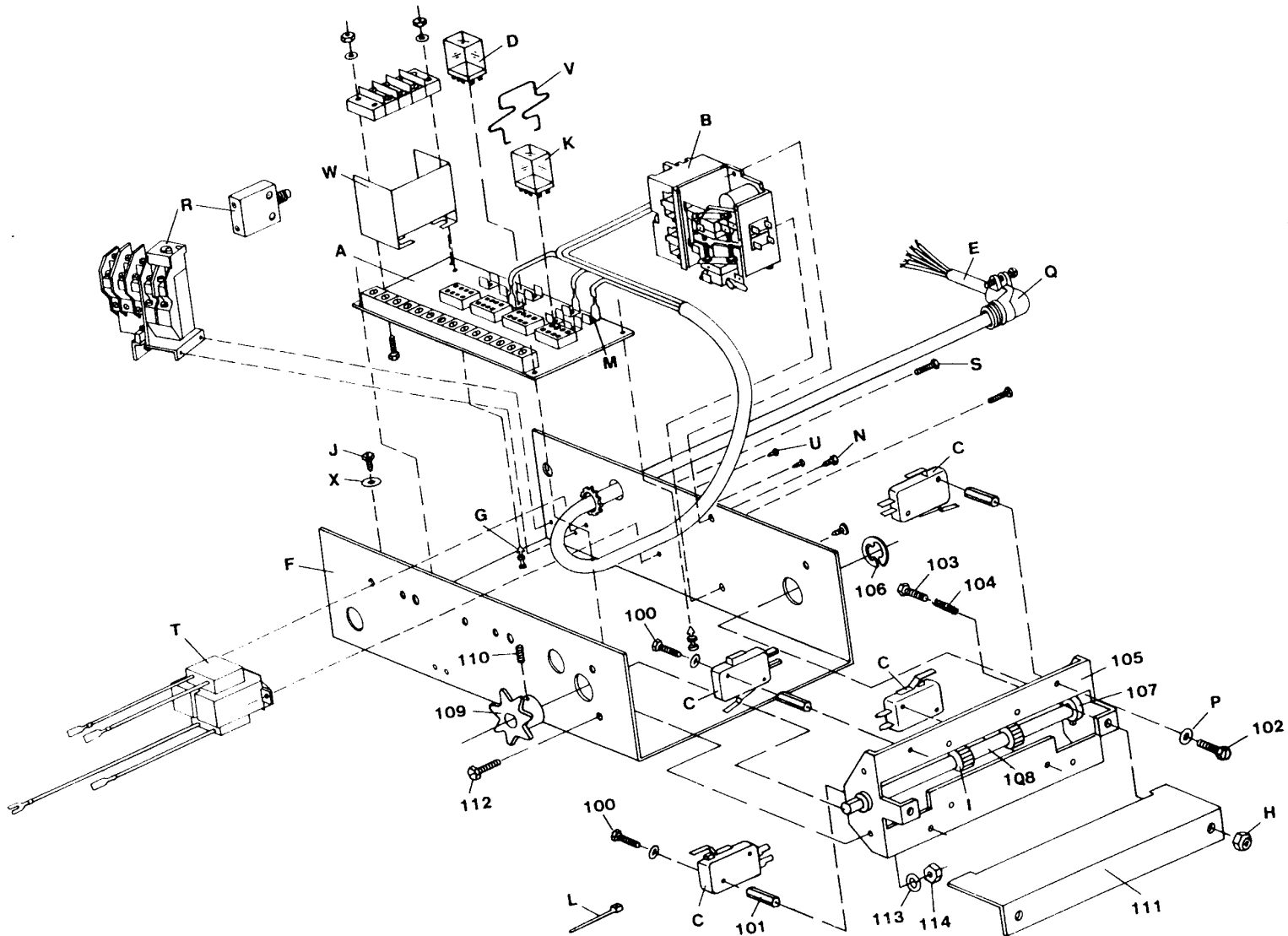
| ITEM | PT. NO. | DESCRIPTION | QUANTITY | | | | | | | |
|------|---------|---------------------------------|----------|---|---|---|---|---|---|--|
| A | 450343 | GT Gear Reducer | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| B | 454022 | LH GT Frame Angle | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| C | 454023 | RH GT Frame Angle | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| D | 453125 | 3/8-16x2-1/2" Hex Hd. Cap Screw | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| E | 230503 | 3/8" Flat Washer | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| F | 452809 | Spacer | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| G | 230601 | 3/8" Spllit Lockwasher | | | | | | | | |
| H | 230301 | 3/8-16 Hex Nut | | | | | | | | |
| I | 452219 | 3/4" Keyed Flange Bushing | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| J | 450168 | J Disconnect, T Ouput Shaft | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| K | 450421 | 3/16x3/4" Woodruff Key | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| L | 450519 | 41B10x3/4" Sprocket | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| M | 452032 | 5/16-18x1/4" Set Screw | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| N | 453105 | 3/4" Set Collar | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| O | 450420 | 3/16x1-1/4" Square Key | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| P | 454398 | GT Clutch Assembly | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Q | 450572 | 43B10x 3/4" Sprocket | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| R | 450505 | 41B14 x3/4" Sprocket | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| S | 451825 | 41 P. #41 Chain | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| T | 451804 | #41 Masterlink | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| U | 93C100 | GT Brake Housing | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| V | 453122 | 1/4-20x1/2" Hex Head Cap Screw | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| W | 230602 | 1/4" Split Lock Washer | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| X | 450701 | Brake | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Y | 454227 | Gearhead Brake Disc Assembly | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Z | 452085 | 5/16-18x2" Hex Head | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| AA | 452076 | 5/18-18 Lock Nut | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| BB | 450330 | Brake Cam | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| CC | 454004 | Brake Arm | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| DD | 451620 | Brake Spring | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| EE | 453104 | 10-24x5/16x1-3/8" Eye Bolt | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| FF | 230311 | 10-24 Hex Nut | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| GG | 454036 | GT Elec. Box Bracket | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

| CHART A | | |
|-------------|-------------|-------------|
| DOOR HT. TO | ZZ PART NO. | FFF PART NO |
| 8'6" | 453840 | 451868 |
| 10'6" | 453841 | 451869 |
| 12'6" | 453842 | 451870 |
| 14'6" | 453843 | 451871 |
| 16'6" | 453844 | 451872 |
| 18'6" | 453845 | 451873 |
| 20'6" | 453846 | 451874 |
| 22'6" | 453847 | 451875 |
| 24'6" | 453848 | 451876 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| O | | | | | | | | | |
| P | G | G | G | G | G | G | G | G | G |
| E | T | T | - | - | - | - | - | - | - |
| R | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| A | 4 | 2 | 2 | 1 | 4 | 2 | 2 | 2 | 1 |
| T | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 1 | 1 |
| O | | | | | | | | | |

| ITEM | PT. NO. | DESCRIPTION | QUANTITY | | | | | | | |
|------|---------|----------------------------------|------------|---|---|---|---|---|---|--|
| HH | 230703 | 3/8-16x1" All Thread | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| II | | Basic Elec. Box with P.C.B. | See Detail | | | | | | | |
| JJ | 230906 | 10-24 x 5/16" Hex Hd Mach. Screw | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| KK | 230614 | # 10 Split Lock Washer | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| LL | 231102 | 10-24 Square Nut | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| MM | 171A334 | Screw, Type F- #8-32x3/8" | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| NN | 451890 | 65 P. #48 Chain | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| OO | 451850 | #48 Master Link | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| PP | 232127 | Roll Pin 3/16x11x16" | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 451348 | 1/2 HP, 1 Phase Motor | | | | | | 1 | 1 | |
| QQ | 451351 | 1/2 HP, 3 Phase Motor | | | | | 1 | 1 | | |
| | 451349 | 1 HP, 1 Phase Motor | | | 1 | 1 | | | | |
| | 451352 | 1 HP, 3 Phase Motor | 1 | 1 | | | | | | |
| RR | 450236 | 3/8" , 90° Cable Clamp | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| SS | 450218 | 115V Brake Solenoid | | | | 1 | | | 1 | |
| | 450219 | 230V Brake Solenoid | 1 | 1 | 1 | | 1 | 1 | 1 | |
| TT | 232124 | 3/16x1-1/2" Cotter Pin | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| UU | 451774 | Brake Cable Assembly | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| VV | 453035 | 5/8" Straight Through Bushing | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| WW | 450252 | Wire Tie | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| XX | 451276 | P.C.B. Electrical Box Cover | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| YY | 454040 | GT Brake Housing Cover | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| ZZ | * | Track Angle | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| AAA | 230702 | 3/8-16x3/4" Hex Head Cap Screw | ** | | | | | | | |
| BBB | 453822 | Track Spacer | ** | | | | | | | |
| CCC | 453406 | Trolley Slide Assembly | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| DDD | 453435 | Idle Shaft Assembly | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| EEE | 453823 | Wall Bracket | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| FFF | * | #41 Roller Chain | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| GGG | 452030 | 1/4-20x1/4" Socket Hd. Set Screw | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| HHH | 171A334 | Screw, Type F- #8-32x3/8" | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| III | 171A333 | 1/4-20x1/4" Socket Hd. Set Screw | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |

ELECTRICAL BOX ASSEMBLY



| | | | | | | | | | | |
|---------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|
| G T E L E C T R I C A L B O X | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | / | / | / | / | | | | | | |
| | 2 | 2 | 2 | 2 | | | | | | |
| | H | H | H | H | H | H | H | H | H | H |
| | P | P | P | P | P | P | P | P | P | P |
| | 1 | 2 | 2 | 4 | 1 | 2 | 2 | 4 | 2 | 4 |
| | 1 | 3 | 3 | 6 | 1 | 3 | 3 | 6 | 3 | 6 |
| | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| | V | V | V | V | V | V | V | V | V | V |
| | 1 | 1 | 3 | 3 | 1 | 1 | 3 | 3 | 3 | 3 |
| P | P | P | P | P | P | P | P | P | P | |
| H | H | H | H | H | H | H | H | H | H | |
| A | A | A | A | A | A | A | A | A | A | |
| S | S | S | S | S | S | S | S | S | S | |
| E | E | E | E | E | E | E | E | E | E | |

| ITEM | PT.NO. | DESCRIPTION | QUANTITY | | | | | | | | | | |
|------|--------|-----------------------------------|----------|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| A | 453020 | P.C. Board, Option - Commercial | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| B | 453021 | Contractor, S/D | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| C | 453336 | Switch, Limit - Open, Wired | | | | | | | | | | 1 | 1 |
| D | 453339 | Switch Limit - Closed, Wired | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| E | 453335 | Assembly, Motor Cable | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| F | 451278 | Box, Electrical - P.C.B. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| G | 453115 | Standoff | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| H | 452077 | Nut Lock 8-32 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| I | 450587 | Nut Limit - Plastic, 1/2x20 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| J | 452078 | Screw, Sheet Metal - Grn. (Gnd) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| K | 452033 | Screw, Sheet Metal #6x3/8" | | | | | | | | | | 2 | 2 |
| L | 450252 | Wire Ties 3/32" | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| M | 450229 | Terminal, Double Male 1/4" | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| N | 452094 | Screw, Sheet Metal 12-24x1/2" | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| O | 230612 | Washer, Lock #4 Internal Tooth | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| P | 453332 | Assy. Wire 22 GA. Green (Gnd) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| Q | 452036 | Cable Clamp 90°-3/8" | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| R | 453393 | Timer, Delayed Open | | | | | | | | | | 1 | 1 |
| S | 452073 | Nut, Hex 6-32x1/2" | | | | | | | | | | 2 | 2 |
| T | 452074 | Screw, Rd. Hd. 6-32x1/2" | | | | | | | | | | 2 | 2 |
| U | 452096 | Washer, lock - Split #6 | | | | | | | | | | 2 | 2 |
| V | 453376 | Assembly, Overload 1.95A, 3 Phase | | | | | | | | 1 | | | |
| | 453378 | Assy., Overload 4.0/3.2A, 3 Phase | | | | | | | 1 | | | | 1 |
| | 453380 | Assembly, Overload 6.2A, 3 Phase | | | | | | | | | | 1 | |
| | 453358 | Assembly, Overload 10.0A, 1 Phase | 1 | | | | | | | | | | |
| | 453355 | Assembly, Overload 5.0A, 1 Phase | | 1 | | | | | | | | | |
| | 453359 | Assembly, Overload 15.0A, 1 Phase | | | | | 1 | | | | | | |
| | 453357 | Assembly, Overload 8.0A, 1 Phase | | | | | | 1 | | | | | |

