Wiring Diagrams

There are well over a thousand wiring diagrams in our files. The following are many of the most common. They are arranged by voltage, with a non-reversing and reversing on each page.

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<td>Mid 80’s – Mid 90’s</td>
<td>N Open Thermal</td>
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<td>Permanent Magnet</td>
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<td>1995 – 2000</td>
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NON-REVERSING 12V

DOTTED LINE IS PRIMARY

WIRE SIZE FOR PRIMARY
UP TO 20 FEET # 2
20 TO 30 FEET # 0
30 TO 40 FEET # 00
40 TO 50 FEET # 000
ALL OTHER # 14 - 16 FIGURED ONE WAY

REVERSING 12V

NOTE: FOOTSWITCH PARTS SUCH AS THE SWITCH ELEMENT, RUBBER COVER, MOUNTING PLATE, MOUNTING RING, SCREWS ARE AVAILABLE SEPARATELY, OR THE ENTIRE ASSEMBLY CAN BE REPLACED. ALL IDEAL FOOTSWITCHES ARE THE SAME SIZE. THE ONLY DIFFERENCE IS AC OR DC. SOLENOIDS ARE AVAILABLE INDIVIDUALLY OR WIRED TOGETHER & MOUNTED ON A BRACKET FOR REVERSING APPLICATIONS. MOTORS AVAILABLE WITH GEARING & BEARING, OR WITHOUT. MOTORS INCLUDE THE BRONZE PLATE TO MOUNT TO THE WINDLASS. SOME MOTOR PARTS AVAILABLE. PROTECTOR PANEL 12 PP IS OBSOLETE AND PARTS ARE NO LONGER AVAILABLE. A REPLACEMENT WITH THE SAME SIZE PLATE IS AVAILABLE.
NON-REVERSING 12V

NOTES ON WIRING:
2 BREAKERS ARE TIED TOGETHER BY THE COPPER BUSS BAR. BRING THE POWER IN ON ONE SIDE, AND OUT ON THE OTHER SIDE AS SHOWN. THERMAL SENSOR: IF WHEN FIRST TESTING THE BREAKER TRIPS IMMEDIATELY REMOVE THE PLUS OR MINUS FROM THE SENSOR. IF THIS STOPS THE BREAKER FROM TRIPPING, RELOCATE THE SENSOR.

REVERSING 12V

NOTES ON WIRING:
2 BREAKERS ARE TIED TOGETHER BY THE COPPER BUSS BAR. BRING THE POWER IN ON ONE SIDE, AND OUT ON THE OTHER SIDE AS SHOWN. THERMAL SENSOR: IF WHEN FIRST TESTING THE BREAKER TRIPS IMMEDIATELY REMOVE THE PLUS OR MINUS FROM THE SENSOR. IF THIS STOPS THE BREAKER FROM TRIPPING, RELOCATE THE SENSOR.

WIRE SIZE FOR PRIMARY
UP TO 20 FEET # 2
20 TO 30 FEET # 0
30 TO 40 FEET # 00
40 TO 50 FEET # 000
ALL OTHER # 14 - 16

DOTTED LINE IS PRIMARY

12 VOLT REVERSING 2 POST MOTOR
FOR SIZE 1 - 5

PAGE 3
AL-969

NOTE: TO SWITCH
ROTATION SWAP
F1 & F2

BREAKER 150 AMP

FOOTSWITCH

Solenoid

Buss Bar

Thermal Sensor
Normally Open

(+) Positive

(->) Negative

Ground to Mounting Bolt of Windlass

WIRE SIZE FOR PRIMARY
Up to 20 Feet # 2
20 to 30 Feet # 0
30 to 40 Feet # 00
40 to 50 Feet # 000
All Other # 14 - 16

AL-972

Footswitch

Solenoid

Breaker 150 Amp

Buss Bar

Thermal Sensor
Normally Open

(+ ) Positive

(-> ) Negative

Ground to Mounting Bolt of Windlass

Dot ted Line is Primary
Replacing a 3 post motor with a 2 post motor:

**NEW WIRING**

1. **FOOTSWITCH**
2. **FOOTSWITCH**
3. **NEW GEAR BOX**
4. **MOTOR**
   - **F1**
   - **F2**

**Solenoids**

**Ground to Mounting Bolt of Windlass**

**12 Volt Reversing Original Wiring**

1. **FOOTSWITCH**
2. **FOOTSWITCH**
3. **12 Volt Reversing Gear Box**
4. **MOTOR**
   - **A2**
   - **F1**
   - **F2**

**Dotted Line is Primary Wire Size for Primary Wire**

- Up to 20 feet: #2
- 20 to 30 feet: #1
- 30 to 40 feet: #10
- 40 to 50 feet: #100
- All other: #14 - 16

**(-) Negative**
24 VOLT NON-REVERSING

24 VOLT REVERSING

DOTTED LINE IS PRIMARY
ABOVE SHOWS SOLENOID ASSEMBLY WITHOUT MOTOR CONNECTIONS

BELOW SHOWS MOTOR & COPPER BUSS BAR ONLY
115V NON-REVERSING

MOTOR STARTER

T1 T3 T5
T2 T4 J10

TERMINAL #2 IS MISSING

BLUE T1
ORANGE T3
BLACK T5
WHITE T2
YELLOW T4
RED J10

TO REVERSE SWAP BLACK T5 & RED J10

MOTOR 2 HP
FRANKLIN
18.6 AMPS

MOTOR 1.5 HP
115/1/60
FLA 16.8 AMPS

115V REVERSING

MOTOR TERMINAL BOARD CONNECTIONS

T1 & T3
T2 & T4

TERMIONAL #2 IS MISSING

GE MOTOR
AL-696

MOTOR WIRES J10 & T5 ARE NOT ON MOTOR TERMINAL BOARD. THEY COME FROM BEHIND THE TERMINAL BOARD AND GO DIRECTLY TO THE CONTROL BOX. IF ON TERMINAL BOARD TAKE OFF & EXTEND EACH TO THE CONTROL BOX.
T1  
T3  
T5  
T2  
T4  
T8  

TO REVERSE SWAP
T5 & T8

L1  

T1  
T2  
T3  
T4  

T8

T5

LEESON MOTOR

T6

START

T9

T5

CAPACITORS MOUNTED SEPERATELY

RUN
PINK T1 —— L1
YELLOW T3 ——
ORANGE T5 ——
BLACK T2 ——
BLUE T4 ——
RED T8 —— L2

TO REVERSE SWAP
ORANGE T5 & RED T8

L1  L2

OL
T1&T3
T5
T8

MOTOR 2 HP
115/1/60
FLA 18.6 AMPS

MOTOR

T2&T4

FRANKLIN MOTOR