



INSTALLATION AND

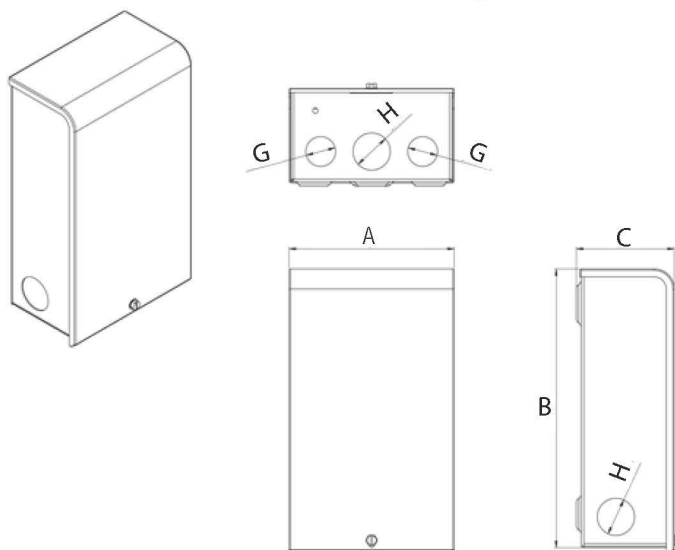
OPERATION

MANUAL

**SUBMERSIBLE MOTORS
TW4", GG4" & GF6"**

DAB Capacitor Box for GG and GX Submersible DAB Motors and Pumps 1.5 HP to 5 HP CBUS MODEL

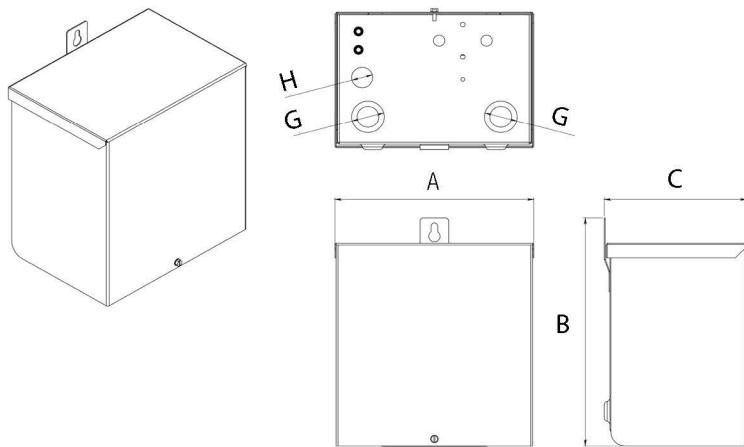
27. 4CBUS CONTROL BOX DIMENSIONS Type CSIR



4CBUS BOX & KNOCKOUT DIMENSION		
Pos.	mm	inch
A	124	4.9"
B	214	8.2"
C	74	2.9"
G	PG 13.5	1/2" conduit
H	PG 21	3/4" conduit

Volts/Hz	Hp Motor	kW Motor	CB Model	Capacitor	
				µF	Volts
115/60	0.5	0.37	4CBUS 0.5HP 115v60Hz Basic TESLA	250-300	125
230/60	0.5	0.37	4CBUS 0.5HP 230v60Hz Basic TESLA	59-71	250
	0.75	0.55	4CBUS 0.75HP 230v60Hz Basic TESLA	86-103	250
	1	0.75	4CBUS 1.0HP 230v60Hz Basic TESLA	105-126	250

28. 4CBUS CONTROL BOX DIMENSIONS Type CSCR



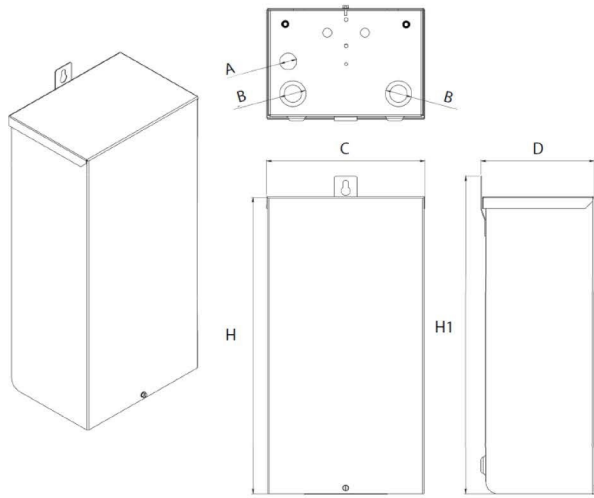
4CBUS BOX & KNOCKOUT DIMENSION

Pos.	mm	inch
A	210	8.3"
B	249	9.8"
C	150	5.9"
G	34	1" Conduit
H	23	1/2" Conduit

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Volts/Hz	Hp Motor	kW Motor	CB Model	Run Cap		Start Cap	
				μF	Volts	μF	Volts
230/ 60	1.5	1.1	4CBUS 1.5HP 230 Basic	10	370	105-126	250
	1.5	1.1	4CBUS 1.5HP 230 Plus	10	370	105-126	250
	2	1.5	4CBUS 2.0HP 230 Basic	20	370	105-126	250
	2	1.5	4CBUS 2.0HP 230 Plus	20	370	105-126	250
	3	2.2	4CBUS 3.0HP 230 Basic	45	370	208-250	250
	3	2.2	4CBUS 3.0HP 230 Plus	45	370	208-250	250
	5	3.7	4CBUS 5.0HP 230 Basic	80	370	270-324	250
	5	3.7	4CBUS 5.0HP 230 Plus	80	370	270-324	250

28. 6CBUS CONTROL DIMENSIONS BOX Type CSCR



6CBUS BOX & KNOCKOUT DIMENSION		
Pos.	mm	inch
A	23	1/2" Conduit
B	34	1" Conduit
C	210	8.268"
D	160	6.299"
H	392	15.433"
H1	420	16.535"

Volts/Hz	Hp Motor	kW Motor	CB Model	Run Cap		Start Caps.	
				µF	Volts	µF	Volts
230/ 60	7.5	5.0	6CBUS 7.5HP 230V60Hz PLUS	45	370	270-324	330
						216-260	330
	10	7.5	6CBUS 10 HP 230V60Hz PLUS	35	370	270-324	330
				35	370	216-260	330
						130-156	330
	15	11	6CBUS 15 HP 230V60Hz PLUS	45	370	270-324	330
				45	370	270-324	330
				45	370	161-193	330

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29. 4CBUS - CONTROL BOX - WIRING DIAGRAMS – CSIR SERIES



TO PREVENT HAZARD OF FATAL OR SERIOUS ELECTRIC SHOCK :

Connect this control enclosure, all metal plumbing, and the motor frame to the power supply grounding terminal using copper wire complying with electrical codes. A ground wire at least the size of power wires complies. Smaller wire may comply under some conditions.

Permanently close all unused wiring opening in this and other equipment.

Switch off power to this circuit at the power supply panel (not in this control) before working on or around the control, pipes, cable, pump or motor.

Cable 1 = Red

30. 4CBUS - CONTROL BOX - WIRING DIAGRAMS – CSCR SERIES



TO PREVENT HAZARD OF FATAL OR SERIOUS ELECTRIC SHOCK :

Connect this control enclosure, all metal plumbing, and the motor frame to the power supply grounding terminal using copper wire complying with electrical codes. A ground wire at least the size of power wires complies. Smaller wire may comply under some conditions

Permanently close all unused wiring opening in this and other equipment.

Switch off power to this circuit at the power supply panel (not in this control) before working on or around the control, pipes, cable, pump or motor.

INSTALLATION AND OPERATION:

Mounting – Be sure that the control box is mounted in a vertical position with the top side up. If it is mounted in any other position, the starting relay may not function and the overload may trip.

Connections – The control box should be wired to the line and the motors as shown in the diagram.

The pump will not operate without this control box.

Operation without the control box will burn out the motor. Installation of this motor and control must include circuit and component protection in compliance with U.S. National Electrical Code or Canadian Electrical Code, Part.1

Protection – Trip of overload indicates a shorted capacitor, voltage problems, an overloaded or locked pump, or the start relay should be replaced. Reset and analyse for tripping cause.

Do not remove or short out overload protection, since doing so is likely to cause motor burnout.

Use 75° C copper wires/conductors only, 14-10 AWG, tightening torque 20lbs*inch.

For guarantee the Enclosure Type 3R need fix the box using 2 fixing holes.

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CHECKING PROCEDURE: BE SURE POWER IS TURNED OFF:

A) OVERLOAD (Push reset button to make sure contacts are closed)

1. Ohmmeter setting: (Rx1).
2. Terminal connections: ohmmeter leads to overload terminals.
3. Ohmmeter reading: should not be over 0.5 ohms.

B) CAPACITOR (Disconnect one lead from each capacitor prior to checking)

1. Ohmmeter setting: (Rx1000).
2. Terminal connections: individual capacitor terminals.
3. Ohmmeter reading: pointer should swing toward zero then drift back toward infinity.

C) RELAY COIL (Disconnect lead from terminal 5)

1. Ohmmeter setting: (Rx1000).
2. Terminal connections: “5” and “2” on relay.
3. Ohmmeter reading: 4500-7000 ohms

D) RELAY CONTACT (Disconnect lead from terminal 1)

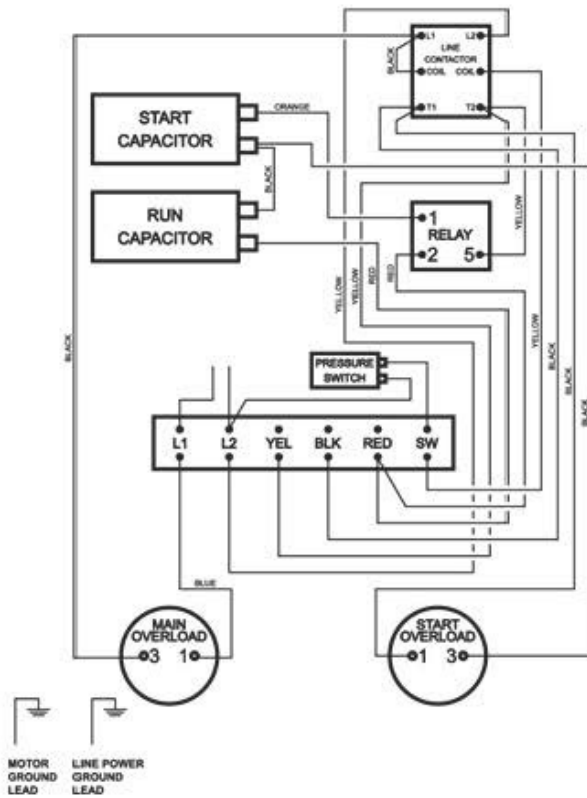
1. Ohmmeter setting: (Rx1).
2. Terminal connections: “1” and “2” on relay.
3. Ohmmeter reading: should be zero.

E) MAGNETIC CONTACTOR ONLY (Disconnect 1 coil lead)

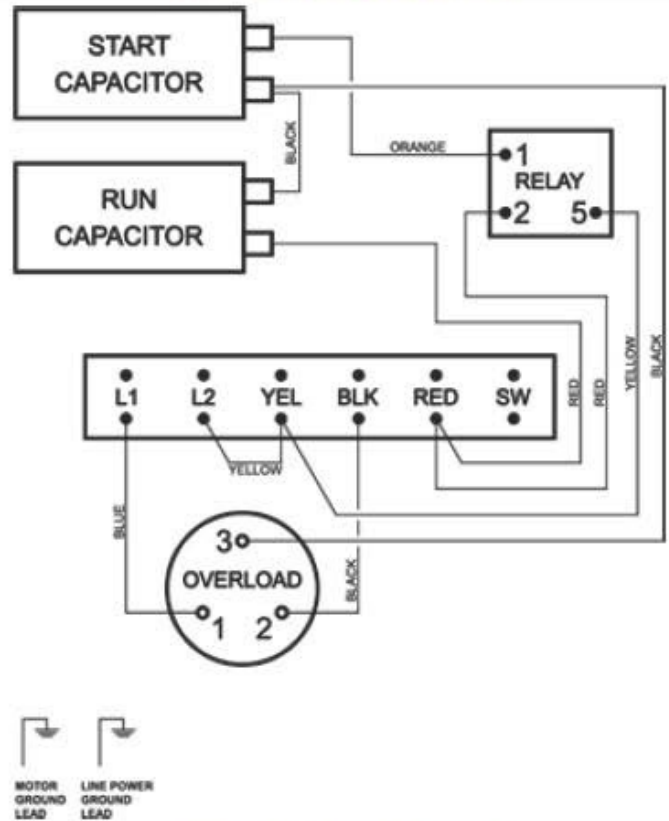
1. Ohmmeter setting: (Rx100).
2. Check coil resistance: 1000-1400 ohms.
3. Remove contact cover and inspect contacts

30. 4CBUS - CONTROL BOX - WIRING DIAGRAMS – CSCR SERIES

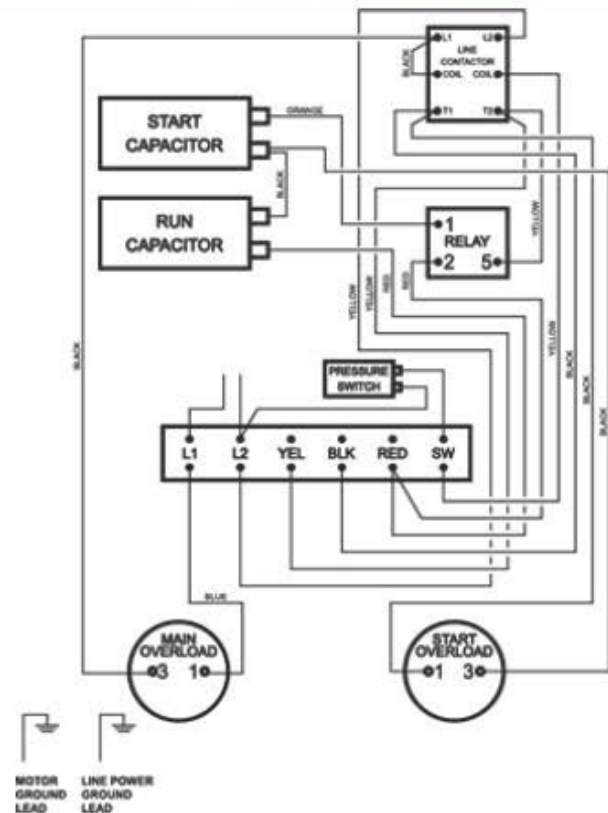
1.5 HP 230V 60Hz PLUS



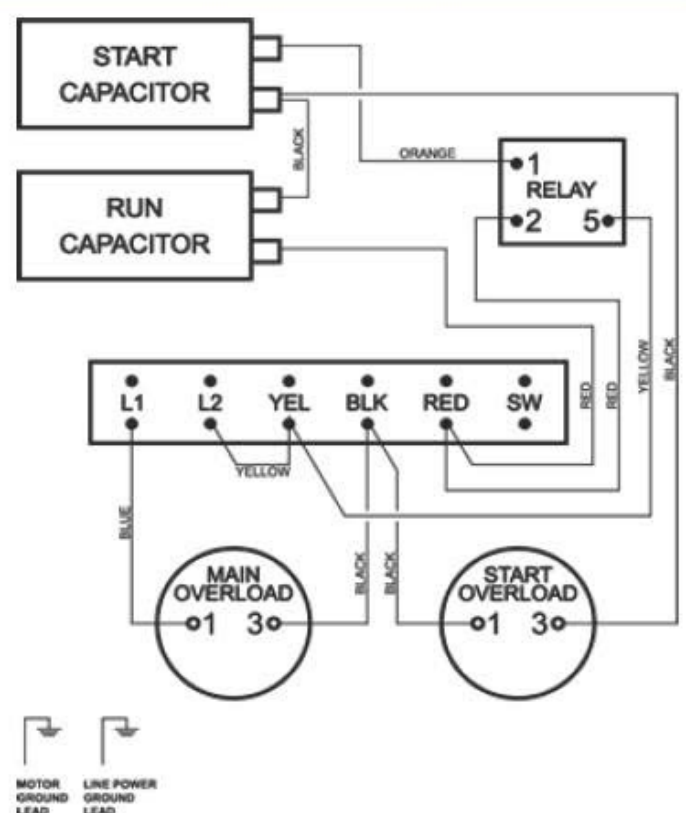
1.5 HP 230V 60Hz BASIC



2 HP 230V 60Hz PLUS

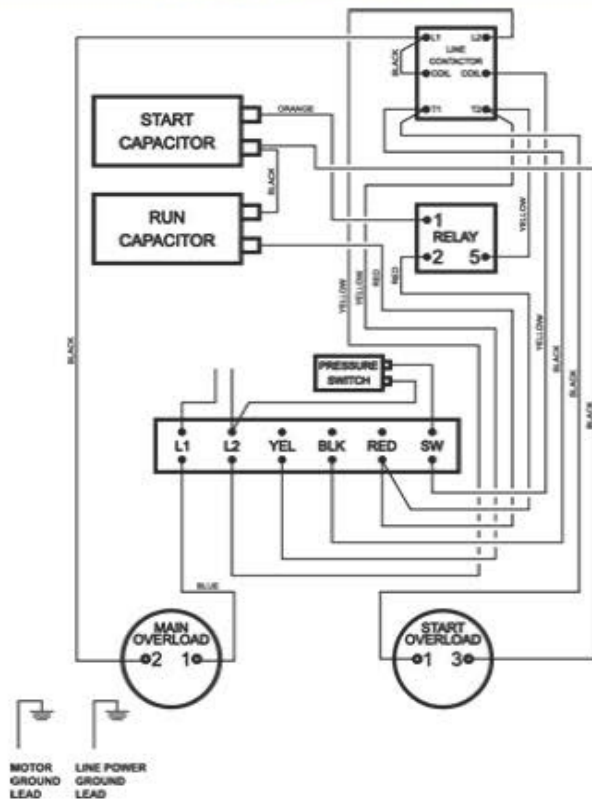


2 HP 230V 60Hz BASIC

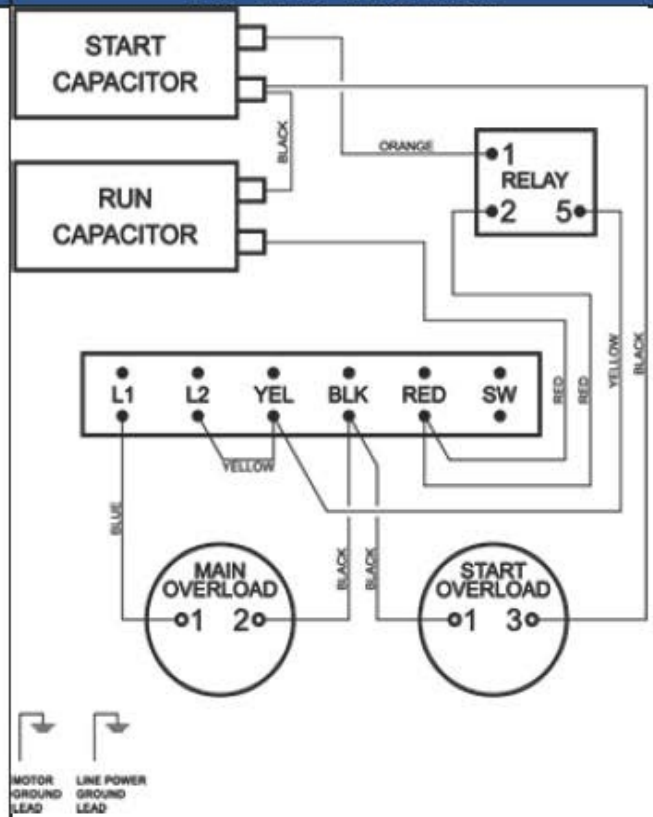


30. 4CBUS - CONTROL BOX - WIRING DIAGRAMS – CSCR SERIES

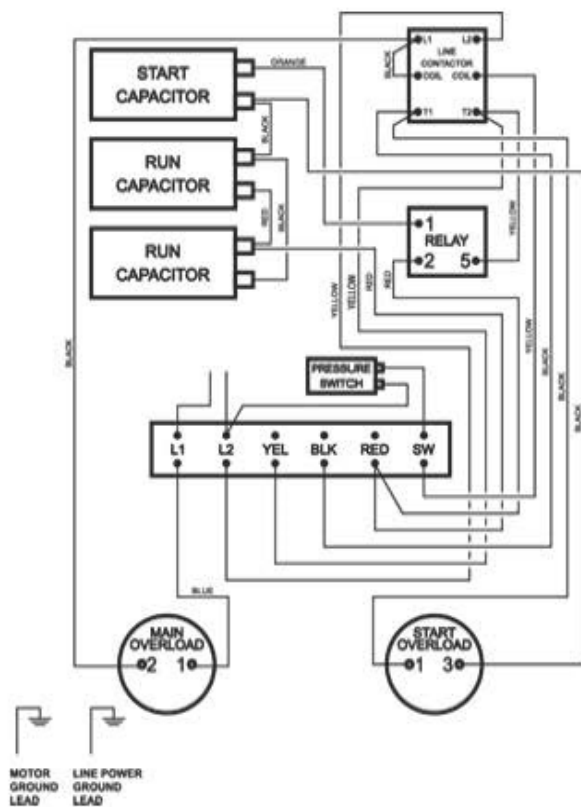
3 HP 230V 60Hz PLUS



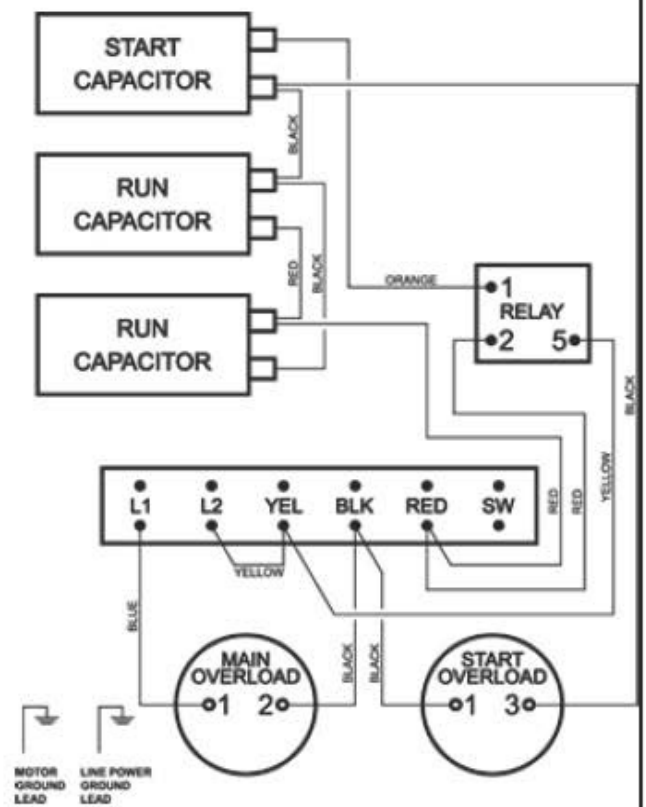
3 HP 230V 60Hz BASIC



5 HP 230V 60Hz PLUS

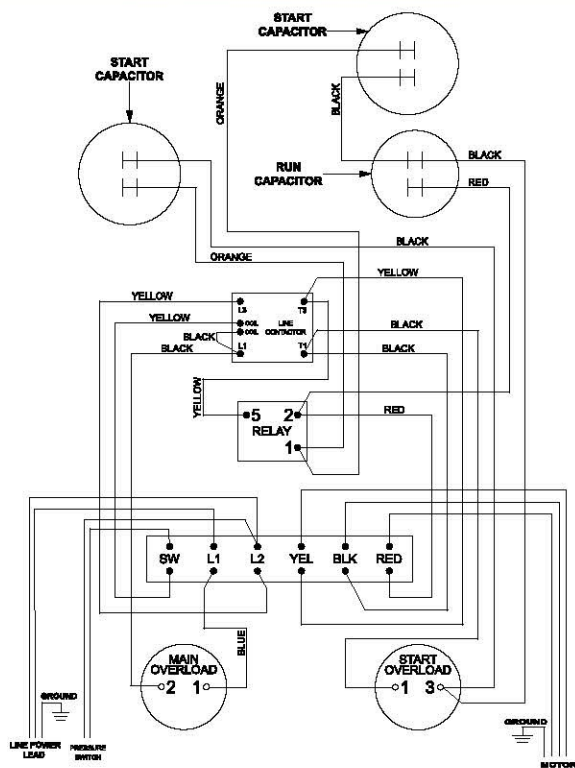


5 HP 230V 60Hz BASIC



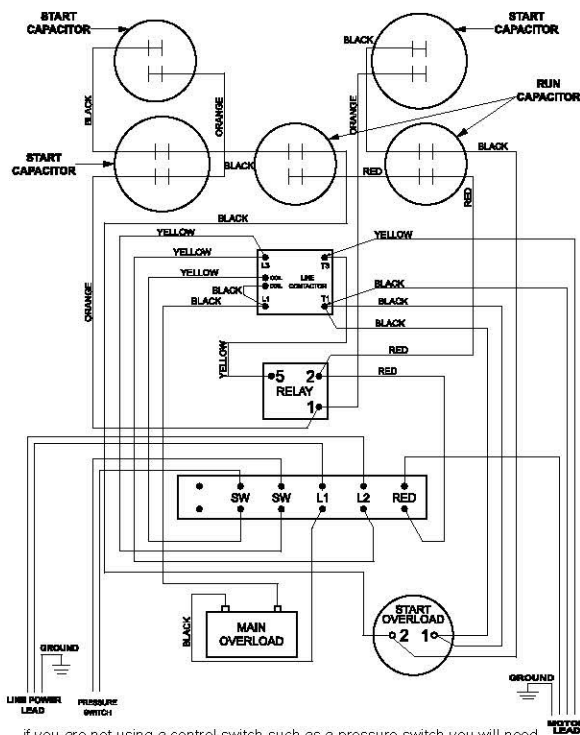
30. 6CBUS - CONTROL BOX - WIRING DIAGRAMS – CSCR SERIES

7.5 HP 230V 60Hz PLUS



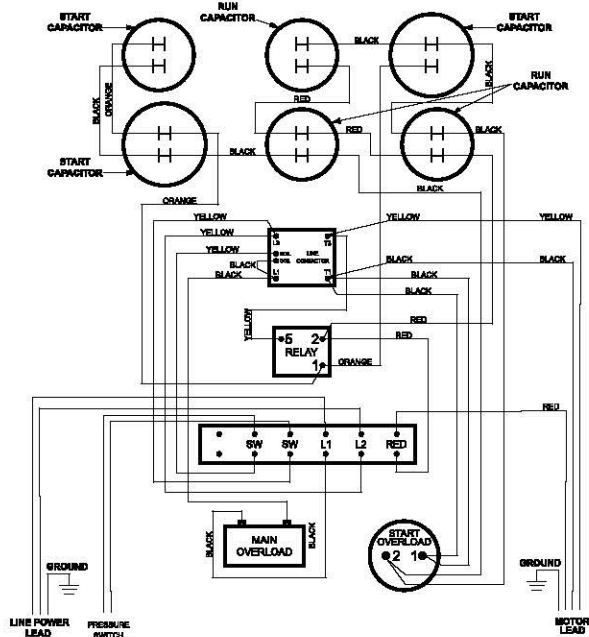
if you are not using a control switch such as a pressure switch you will need to connect a wire between the SW & L2 terminals for the panel to work.

10HP 230V 60Hz PLUS



if you are not using a control switch such as a pressure switch you will need to connect a wire between the SW terminals for the panel to work.

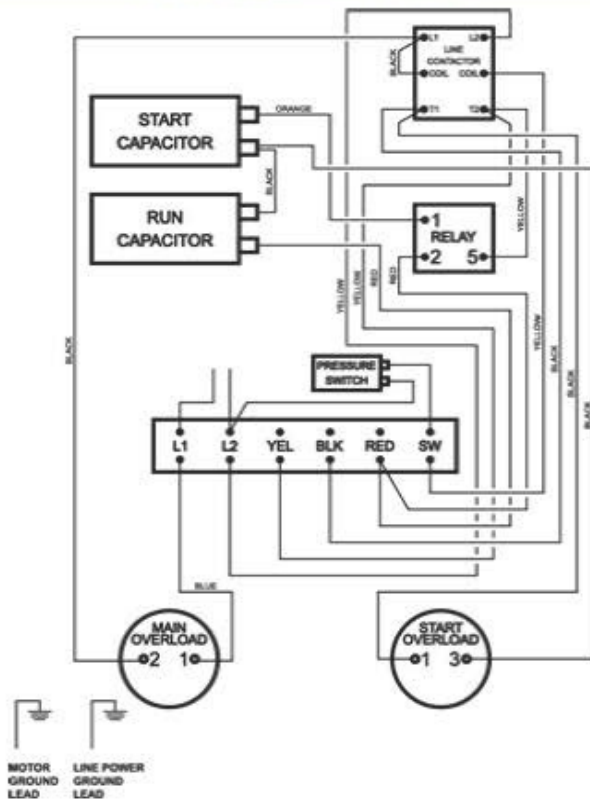
15 HP 230V 60Hz PLUS



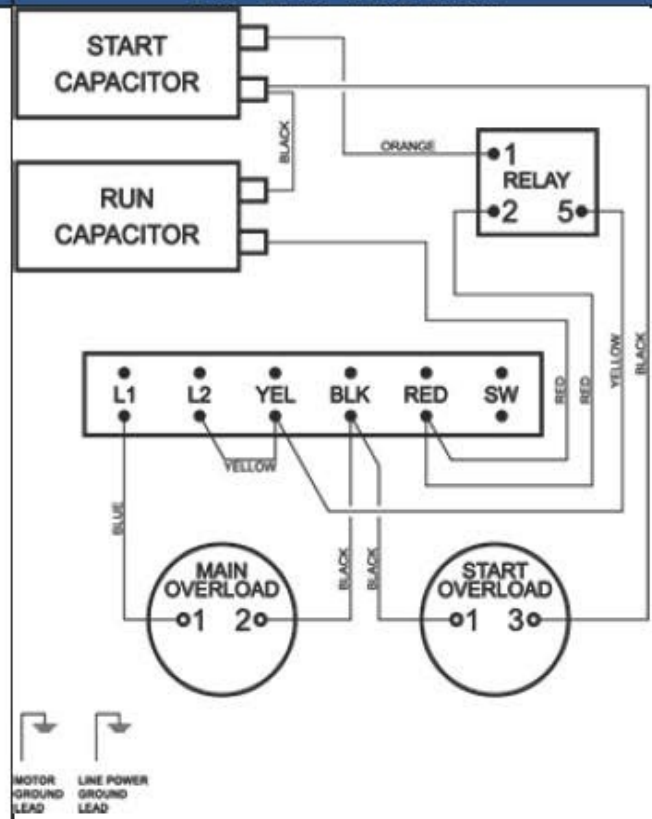
if you are not using a control switch such as a pressure switch you will need to connect a wire between the SW terminals for the panel to work.

30. 4CBUS - CONTROL BOX - WIRING DIAGRAMS – CSCR SERIES

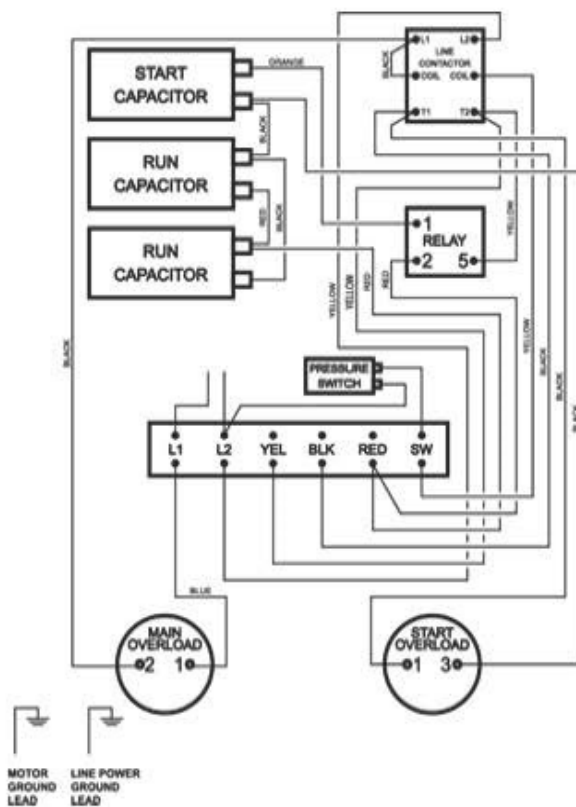
3 HP 230V 60Hz PLUS



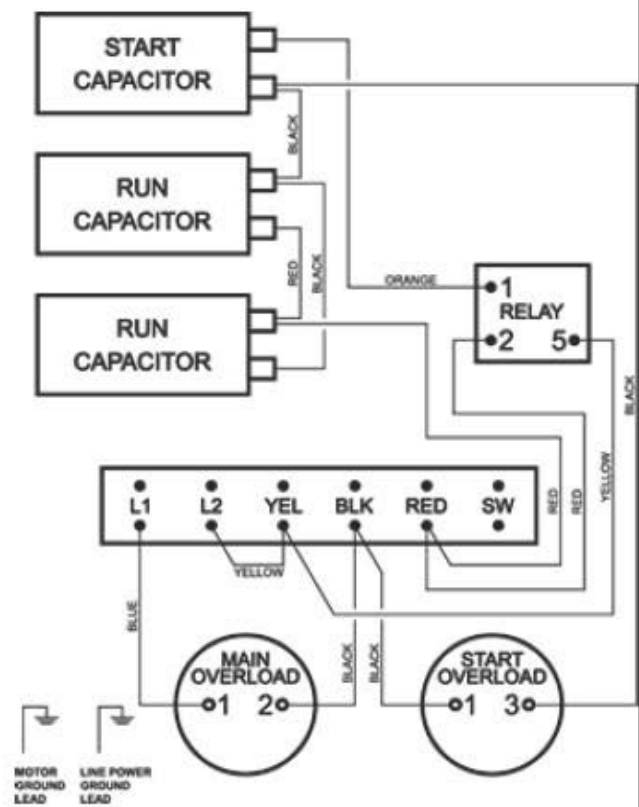
3 HP 230V 60Hz BASIC



5 HP 230V 60Hz PLUS



5 HP 230V 60Hz BASIC



DAB Capacitor Box for GG and GX Submersible DAB

CAPACITOR BOXES FOR THREE WIRE SUBMERSIBLE MOTORS

THIS IS ONE OF ACCESSORIES THAT IS NECESSARY FOR STARTING

X The control boxes are made with metal casing which is painted with a protective coating. The control boxes come with three knockouts for easy access.

X It is a well-known fact that, unlike three-phase motors, single phase motors have a starting torque which is a fraction of the rated torque, therefore a control box / starter box is required to solve this problem.

X Tesla offers a range of Control Boxes with either Capacitor Start or Capacitor Start Capacitor Run.

X The Small & Larger Type with Capacitor Start, Capacitor Run are available from 0.5Hp to 5.0Hp in either **Basic** or **Plus** version, (in the Plus Version you can add Pressure switch or Float Switch for Auto system)

Important attention

X This Large Capacitor BOX is Necessary for GG and GX series from 1.5 HP Till 5 HP DAB motor and it is Can control Overload but need one stater control or At least one circuit breaker for start and stop

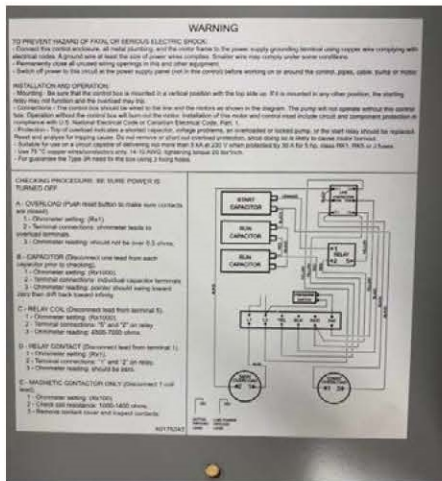
X All single phase GG & GX with 1.5 up to 5 HP don't have any thermal protection inside , but you must use the large Capacitor Box for Starting control of your Motor For more information you can ref to "guide of protection system with overload " and you can find more infromation about Weg stater in our web site

X This pump must be installed and commissioned by an licensed electrical technician.
Wrong connection of pump and electric wires not only has life-threatening consequences, but also the dynamo of your pump will burn, and both your personal and financial life will be affected.
This pump cannot use its warranty either

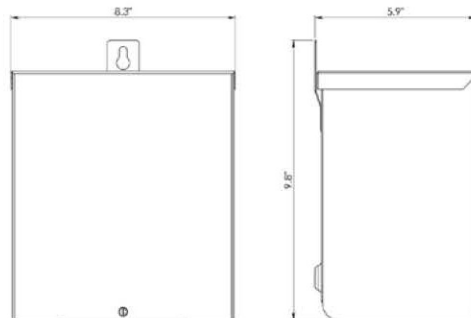
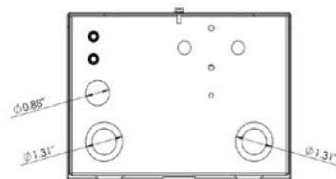
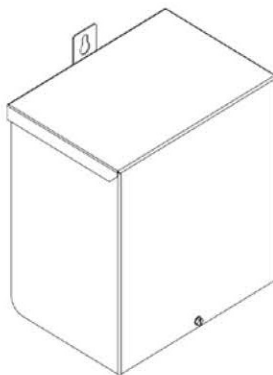
Small Capacitor BOX -Bacic



Large Capacitor BOX -Bacic



CONTROL BOX - DIMENSION - Large





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