ELECTRONIC START SWITCHES

Models, Part Numbers & Wiring



Capacitor Start

Samusco Electronic Centrifugal Switches

Before beginning work be sure the motor is disconnected from a live electrical source, that you have the proper tools ready and are wearing appropriate safety gear.

Use the wiring diagram and/or specifications for your specific motor to identify the wire leads for the centrifugal switch and capacitor.

If no wiring diagram is available these steps may help you install the new centrifugal switch.

Step 1.

Identify the dedicated wire going from the capacitor to the existing centrifugal switch. Disconnect this wire at the centrifugal switch.

Step 2.

Identify the wires connected to each end of the power supply. The Main will be connected to both ends of the power source so if you find a wire that resistance tests at Zero (0) and is connected to both ends of the power you have identified the Main.

Step 3.

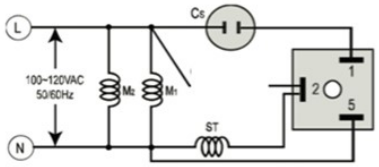
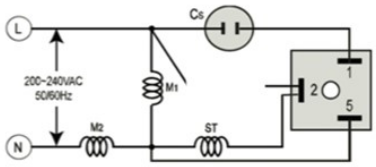
Using resistance testing identify the wire that is not connected to both ends of the power supply and the value is higher than Zero (0). This will be the Auxiliary.

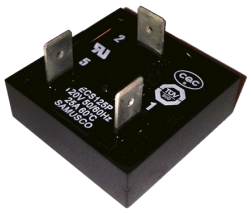
Step 4.

You have now identified all the wires that will connect to the new Samusco electronic centrifugal switch. Follow the Samusco ECS wiring diagram to connect the new centrifugal switch.

Wiring (Typical) 112P

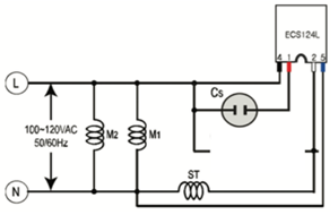
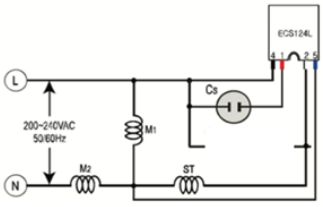
Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil

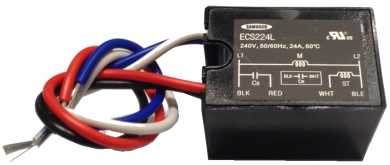
100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



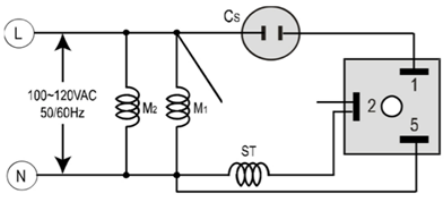
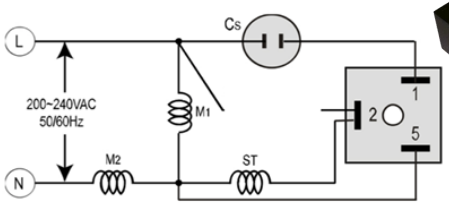
Wiring (Typical) 124L

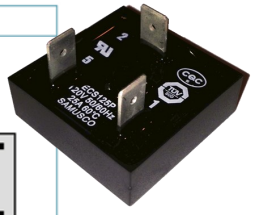
Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil

100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



TYPICAL WIRING 125P

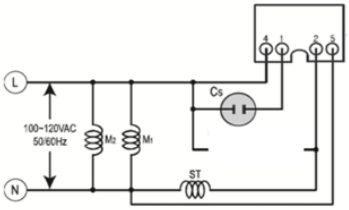
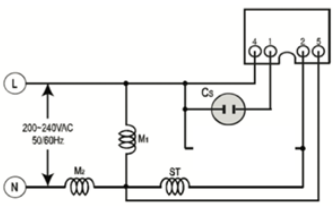
100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



Cs : Starting Capacitor, CR : Run Capacitor , M1,M2 : Main Coil , ST : Starting Coil

Wiring (Typical) 125T

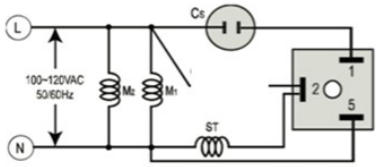
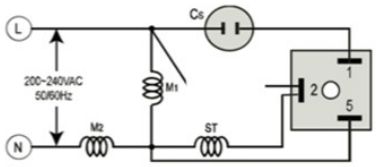
Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil

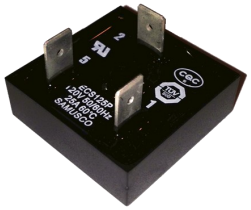
100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



Wiring (Typical) 112P

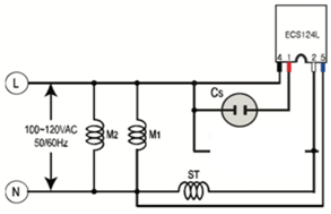
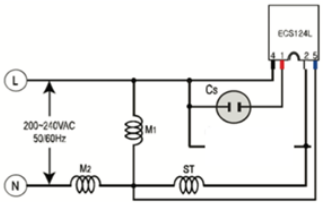
Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil

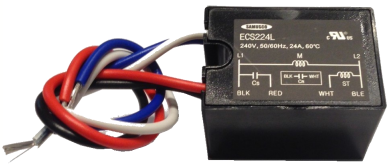
100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



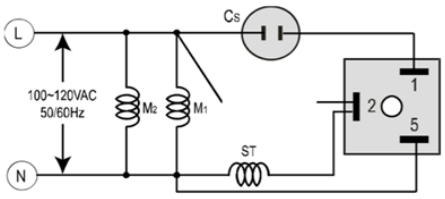
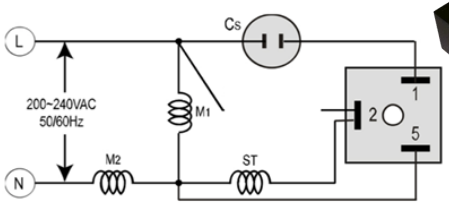
Wiring (Typical) 124L

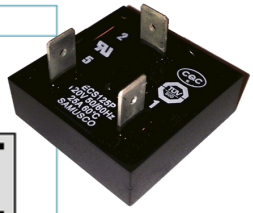
Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil

100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



TYPICAL WIRING 125P

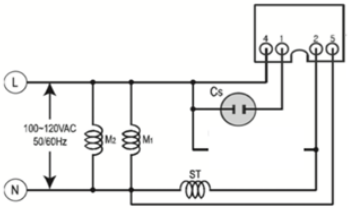
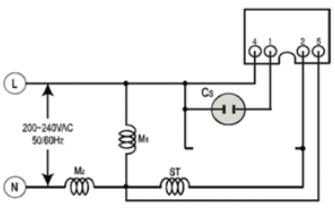
100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



Cs : Starting Capacitor, CR : Run Capacitor , M1,M2 : Main Coil , ST : Starting Coil

Wiring (Typical) 125T

Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil

100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



Start & Run Capacitor Motors

Samusco Electronic Centrifugal Switches

Before beginning work be sure the motor is disconnected from a live electrical source, that you have the proper tools ready and are wearing appropriate safety gear.

Use the wiring diagram and/or specifications for your specific motor to identify the wire leads for connecting the new centrifugal switch and the start and run capacitors.

If no wiring diagram is available following these steps may help with the installation.

Step 1.

Identify the wires connected to each end of the power supply. The Main is connected to both ends of the power source and will resistance test at Zero (0).

Step 2.

If your wire resistance tests greater than Zero (0) and is not connected to both ends of the power supply this will be the Auxiliary.

Step 3.

Identify the Start capacitor and run capacitor by looking at their labels for the µf ratings. Normally the start capacitor will have the higher µf rating.

Step 4.

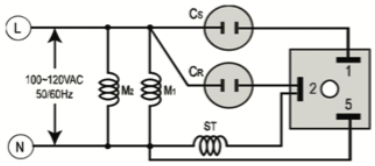
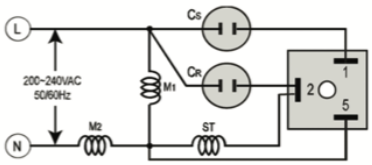
If you do not see labels on the capacitor the Capacitor connected to the one side of the Aux found above and the wire (resistance 0) is the run capacitor. The other is the start capacitor.

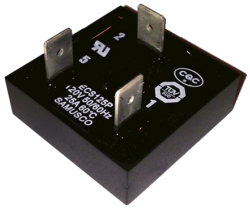
Step 5.

You have now identified the wires required to connect to the new Samusco Electronic Centrifugal Switch (ECS). Follow the ECS wiring diagram for the ECS model you are going to install.

Wiring (Typical) 112P

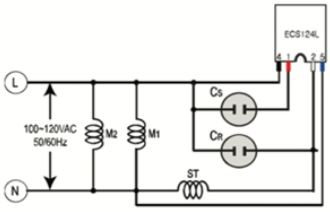
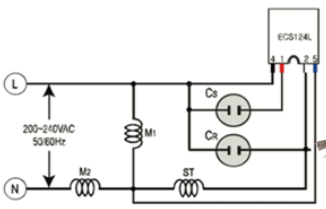
Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil

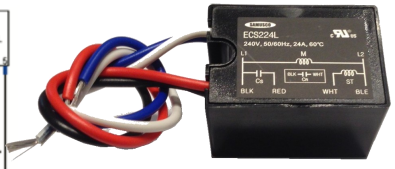
100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



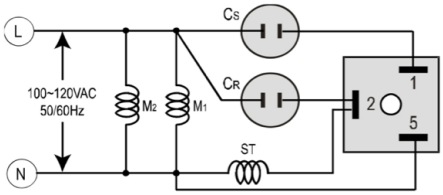
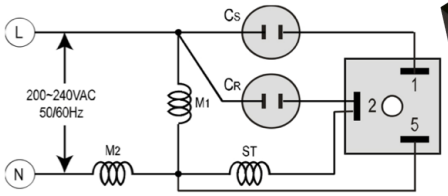
Wiring (Typical) 124L

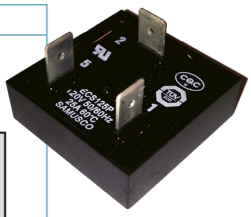
Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil

100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



TYPICAL WIRING 125P

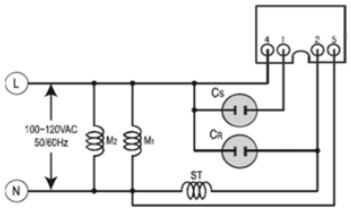
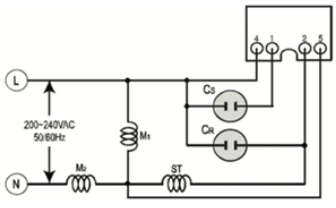
100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



Cs : Starting Capacitor, CR : Run Capacitor , M1,M2 : Main Coil , ST : Starting Coil

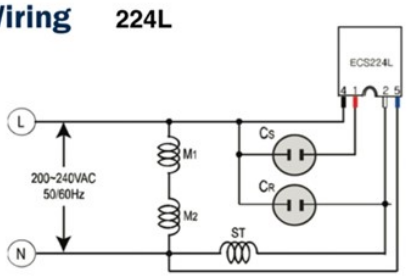
Wiring (Typical) 125T

Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil

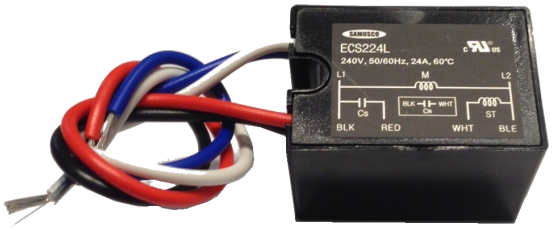
100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



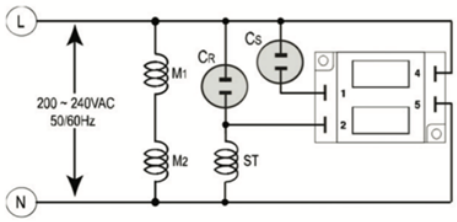
Wiring 224L



Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil



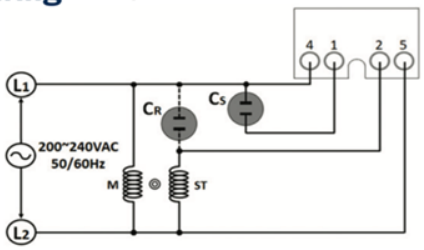
Wiring (Typical) 225P



Cs: Start capacitor, Cr: Run capacitor, M1/M2: Main coil, ST: Auxiliary coil



Wiring 225T





CAPACITORS



BRUSHES



BEARINGS



Split Phase Motors

Before beginning work be sure the motor is disconnected from a live electrical source, that you have the proper tools ready and are wearing appropriate safety gear.

Use the wiring diagram and/or specifications for your specific motor to identify the wire leads for the centrifugal switch and start and run capacitors.

If no wiring diagram is available these steps may help with the installation of your new electronic centrifugal switch.

Step 1.

If, when you open your motor, you do not see any capacitors you likely have a Split Phase motor.

Step 2.

Locate the power source and the wiring running from the power source to the existing centrifugal switch.

Step 3.

Find the motor windings connected to each end of the power supply. The main winding (Main) is connected to both ends of the power source, so if you find the wire (resistance 0) that is tied to both ends of the power from the line from the motor, this is the Main.

Step 4.

If you find a wire (with resistance) that is not directly connected to both ends of the power supply and each of the wires from the motor, this is the Auxiliary. (Generally, the resistance value of the Auxiliary is greater than the resistance of the Main)

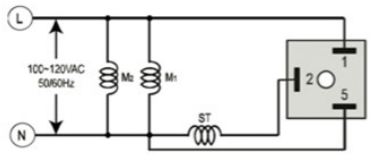
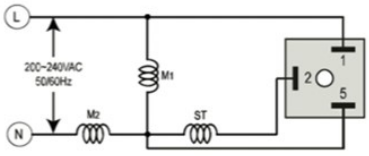
Step 5.

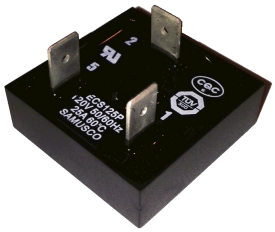
You have now identified all the wires that will connect to the new electronic centrifugal switch.

Follow the wiring diagram for the new electronic centrifugal switch model you are installing to connect the new Samusco ECS.

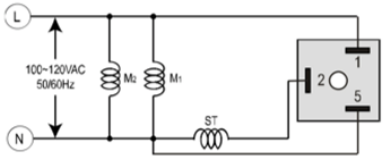
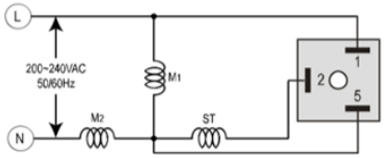
Wiring (Typical) 112PS

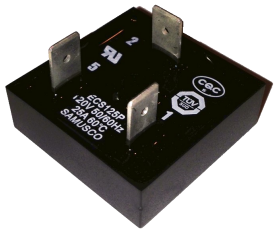
M1/M2: Main coil, ST: Auxiliary coil

100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	



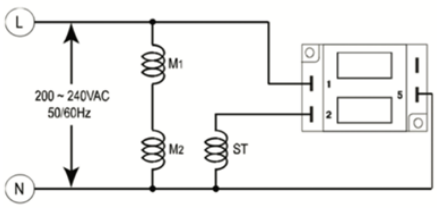
TYPICAL WIRING 125PS

100~120VAC 50/60Hz Motor Operation	200~240VAC 50/60Hz Motor Operation
	

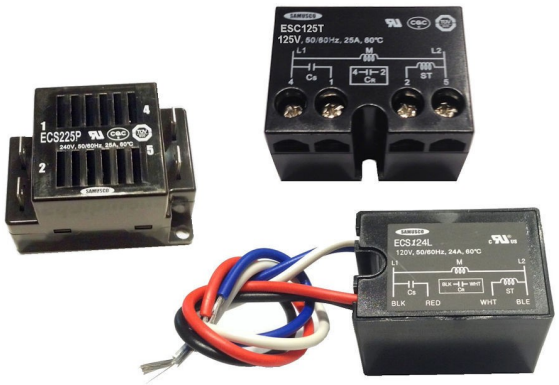


M_1,M_2 : Main Coil , ST : Starting Coil

Wiring 225PS



M1/M2: Main coil, ST: Auxiliary coil



CAPACITORS



BRUSHES

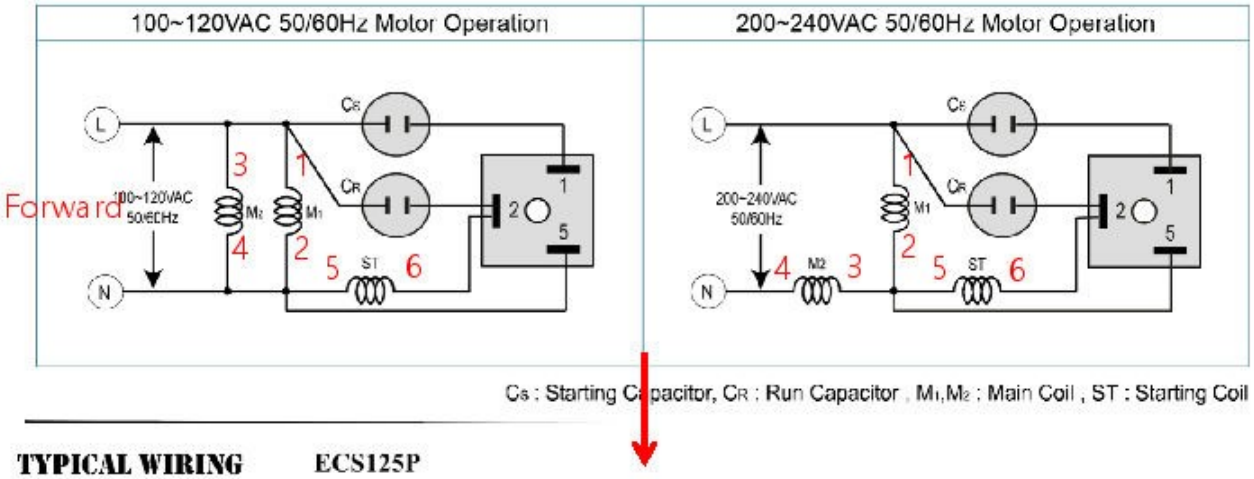


BEARINGS



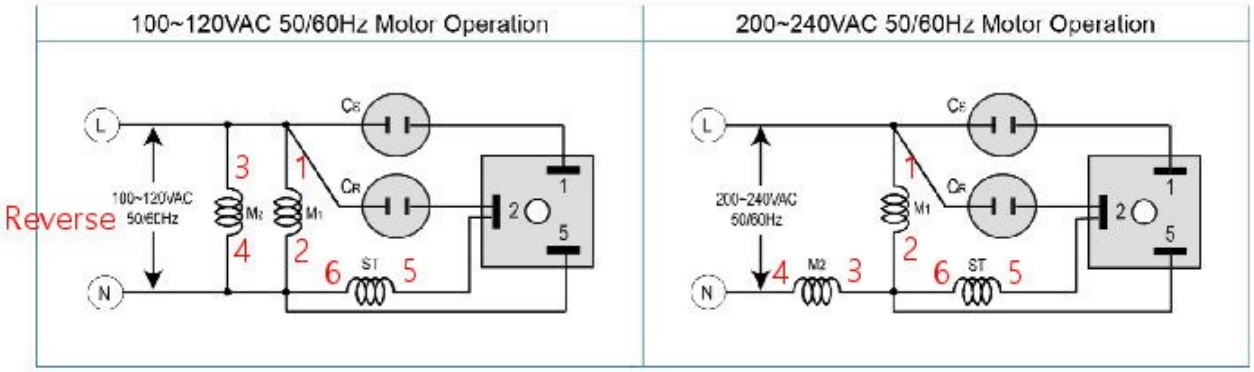
FORWARD / REVERSE WIRING

TYPICAL WIRING **ECS125P**



Cs : Starting Capacitor, CR : Run Capacitor , M1,M2 : Main Coil , ST : Starting Coil

TYPICAL WIRING **ECS125P**



Cs : Starting Capacitor, CR : Run Capacitor , M1,M2 : Main Coil , ST : Starting Coil

FORWARD / REVERSE WIRING

