

Technical Information: Electrical Data

Typical Heater Connections

Parallel

Cartridge Heaters are usually wired in a simple parallel connection. Heaters are rated at applied voltage.

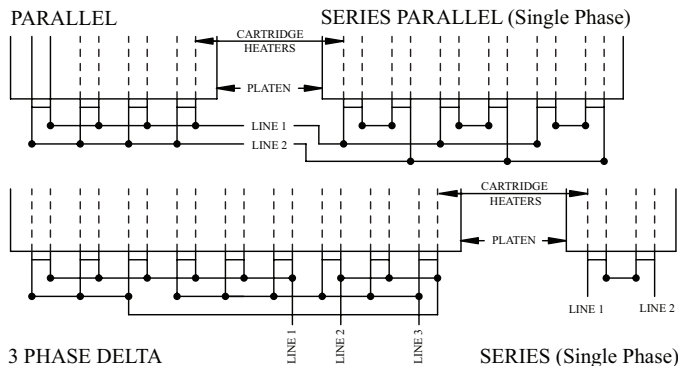
Parallel (Single Phase)

Cartridge heaters may be wired in series.

1. To reduce wattage in a system, two heaters rated at 240V wired in series will reduce the total wattage to 1/4 of its rated value when 240V is applied. Three similar heaters wired in series will reduce wattage to 1/9 of its rated value.
2. For use at higher voltage - two 120V heaters wired in series for use on 240V, or two 240V heaters wired in series for 480V.

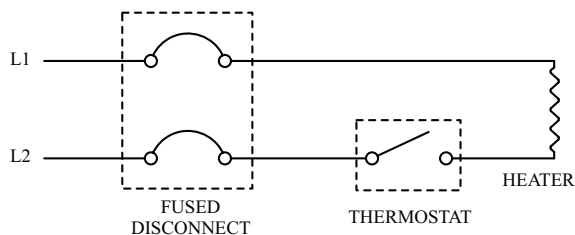
3 Phase Delta

The most commonly used method of making 3 Phase connections. The heaters are arranged in multiples of 3 for a balanced system.

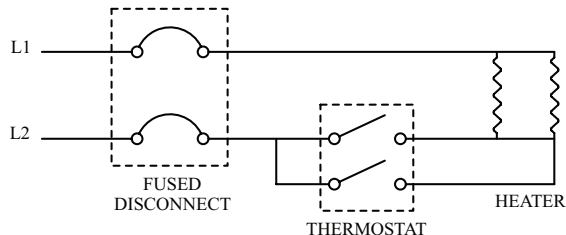


Typical Wiring Diagrams - Single Phase

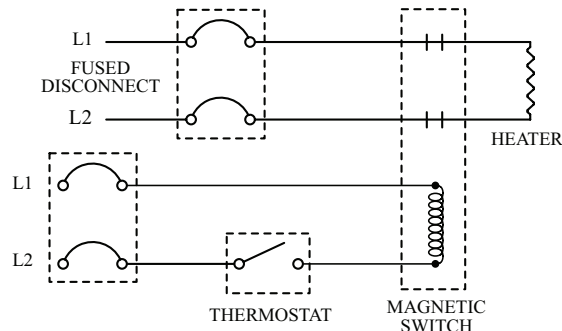
AC or DC Heater Circuit



Circuit with thermostat connected for half current load across each contact

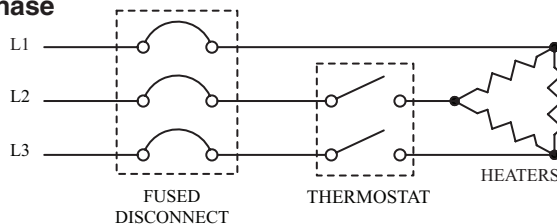


Typical connections when line current exceeds thermostat rating

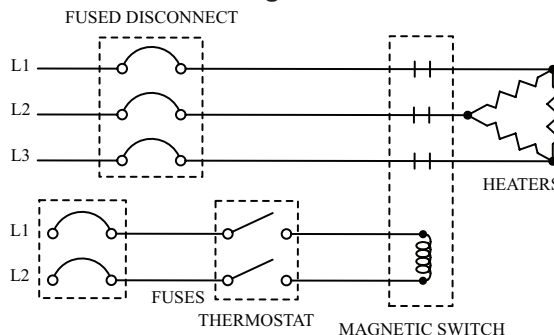


Three Phase

3 Phase



Typical connections when line current exceeds thermostat rating



Typical connection with ETR temperature control

