

Wiring Schematics

Details for the Electrician

Answer offers three different wiring schematics to allow you to match your specific wiring strategy to any typical building wiring plan.

Tip: All the components in an electrical system must use the same wiring schematic. The components are keyed and color coded to make it impossible to connect mismatched parts.

Black = Four-circuit, 3+1

Brown = Four-circuit, 2+2

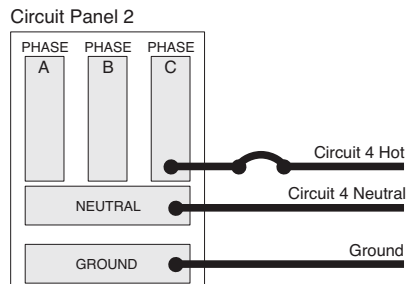
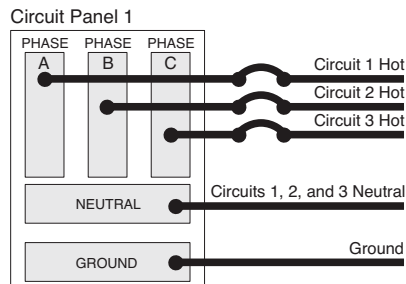
Rust = Three-circuit, separate neutrals (3SN)

Shared neutrals = 10 gauge

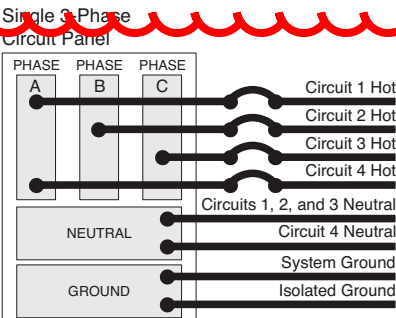
Non-shared neutrals = 12 gauge

Hot wires = 12 gauge

Four-Circuit, 3+1

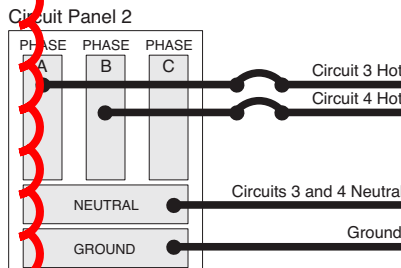
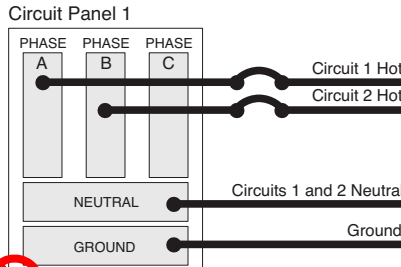


In the four-circuit 3+1 schematic, circuits 1, 2, and 3 are distributed from the first circuit panel and are supported with one shared neutral and one shared ground. Circuit 4 is distributed from a second circuit panel and is supported with a separate neutral and ground.

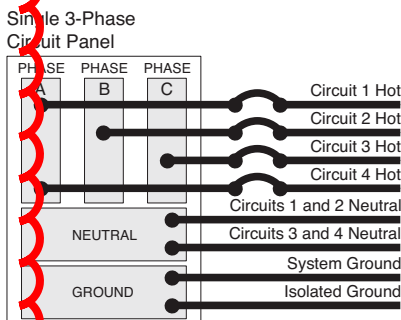


On a single 3-phase circuit panel, all four circuits are distributed as shown.

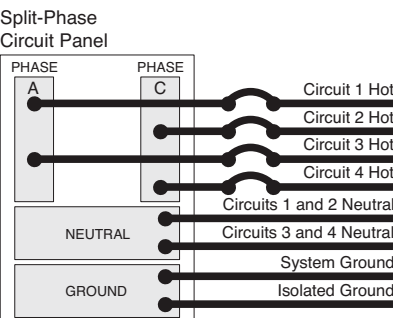
Four-Circuit, 2+2



In the four-circuit 2+2 schematic, circuits 1 and 2 are distributed from two different phases from the first circuit panel and are supported with one shared neutral and one shared ground. Circuits 3 and 4 are distributed from a second circuit panel and supported by their own shared neutral and ground.

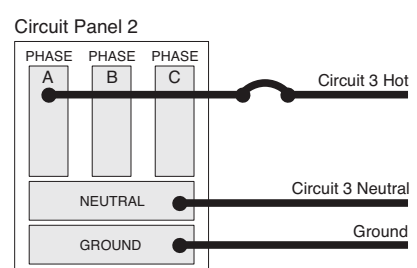
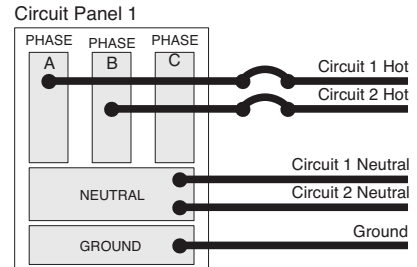


On a single 3-phase circuit panel, all four circuits are distributed as shown.

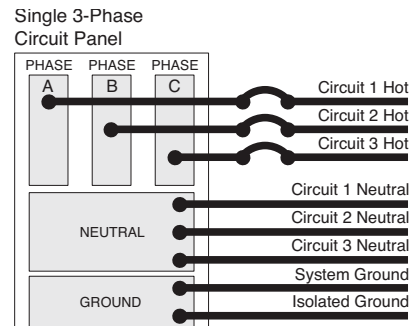


On a split-phase circuit panel, all four circuits are distributed as shown.

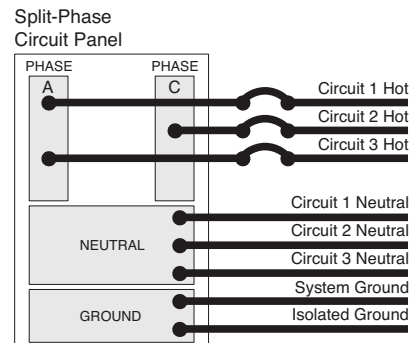
Three-Circuit, Separate Neutrals



In the three-circuit, separate neutral schematic, circuits 1 and 2 are distributed from two different phases from the first circuit panel. Each circuit is supported with its own neutral and a common ground. Circuit 3 is distributed from the second circuit panel and is supported by its own neutral and ground.



On a single 3-phase circuit panel, three circuits are distributed as shown.



On a split-phase circuit panel, three circuits are distributed as shown.