



AC Source Wiring Diagram for Split-Phase Systems

The purpose of this document is to explain the AC source wiring options supported by ICT's Modular Power Series, MPS Ultra, Hybrid Power Series, Hybrid Ultra and Platinum Series DC power systems for a single-phase, 3-wire system, also known as a "split-phase" system.

The electrical diagrams shown below represent important AC system interface connections that will ensure balanced loading to the AC source. Ensure the conductor size of the power cord is proportional to the breaker size of the AC source, e.g., use a 10AWG power cord for 30-amp breakers.

Note 1: The absolute maximum AC input voltage applied to the Modular Power Series, MPS Ultra, Hybrid Power Series, Hybrid Ultra and Platinum Series DC power systems must not exceed 300 VAC. However, for steady-state operation, the maximum AC input voltage must not exceed 275 VAC.

Note 2: The Modular Power Series, MPS Ultra, Hybrid Power Series, and Hybrid Ultra are only fused on the line "L" side of the AC input.

Note 3: For safety and compliance, a certified electrician should be involved to connect the wiring and all relevant National Electrical Code standards must be followed.

Single-Phase, 3-Wire System (Split-Phase System)

In a single-phase 3-wire system (also known as a split-phase system), the voltage between Line-1 (L1) to Line-2 (L2) is 230 VAC, and the voltage between Line-1 (L1) or Line-2 (L2) to Neutral (N) is 115 VAC. Modular Power Series, MPS Ultra, Hybrid Power Series, Hybrid Ultra and Platinum Series DC power systems can accommodate split-phase systems as long as the wiring correctly represents what is shown below. Figure 1 shows the AC wiring for a split-phase system with 230 VAC input voltage for Platinum Series and Figure 2 shows the AC wiring for a 230 VAC input split-phase system for Modular Power Series, MPS Ultra, Hybrid Power Series and Hybrid Ultra.

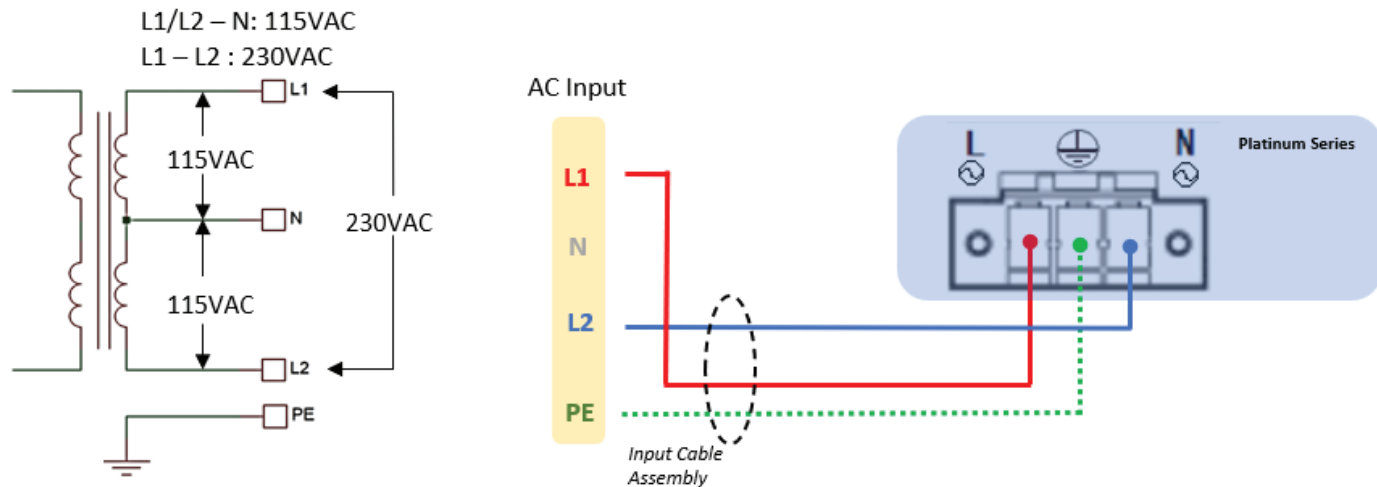


Figure 1. Split-phase connection from single-phase, 230 VAC input for Platinum Series

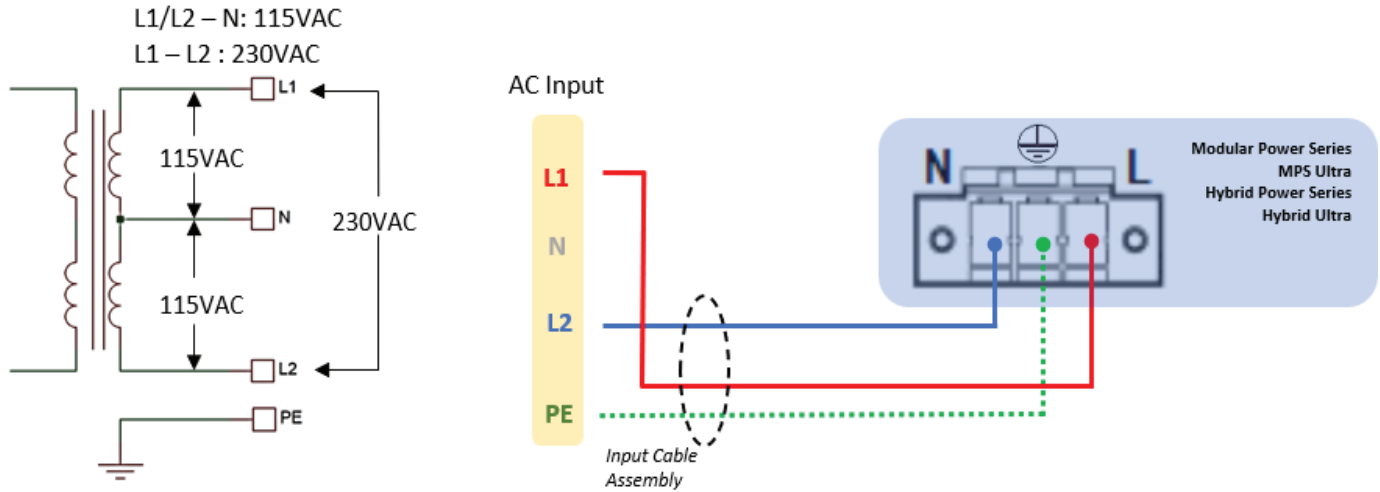


Figure 2. Split-phase connection from single-phase, 230 VAC input for Modular Power Series, MPS Ultra, Hybrid Power Series, and Hybrid Ultra

