



UL limited-power (LP) cable certification

A simple way to help ensure safety compliance in power over LAN cable applications.

Powering over LAN cable technologies such as Power-over-Ethernet (PoE) have become a powering option for a wide range of applications. Changes in technologies and equipment design have resulted in the four-pair LAN cables being used to provide low voltage (<60 Vdc), limited power along with the data and communications signals. Power levels have been steadily increasing and are expected to continue to do so.

As the power is increased the heat generated within the cable increases as well. This is especially true when the cables are bundled. It has become a concern that the additional heat generated by the increased current pushes the cables beyond their rated temperatures.

With a view to address this concern, UL has introduced a Limited Power (LP) Certification to simplify the cable choice and installation considerations. The “-LP” cable designation indicates that the cable has been evaluated to carry the

marked current under installation scenarios without exceeding the temperature rating of the cable. The testing requirements developed for the LP certification was developed after extensive testing and research and takes advantage of a number of factors which can effectively manage the cable heating, such as AWG size, cable design variations, material selection, and installation practices. The requirements help maximize the opportunity for innovation in cable design and minimize the need to include onerous restrictions on cable installation planning.

Program Benefits

- Provides an uncomplicated way to ensure installations are ready for the increasing power levels and are not susceptible to safety issues caused by excessive heat generation. This simplifies installation planning.
- Provides a consistent test method for evaluating a cable's ability to handle a specified current.
- Cables are distinguished with an industry recognized and trusted UL certification Mark. This ensures compliance and reduces risk to all stakeholders in the supply chain.
- Test-based requirements allow for innovation in cable design.

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