

CIRCUIT PROTECTION NEEDS IN SERVER RACK POWER DISTRIBUTION UNITS

Challenge

The explosion of computing power around the world has translated into a continued expansion in telecom and server facilities. As technologies within these data centers continue to rapidly evolve, their power designs have as well.

Architectures in data centers have moved from 120VAC and 208/120VAC to 208VAC Delta, 230VAC and 240VAC voltage levels, with server racks housing more and more data in smaller and smaller areas.

Managing the flow of power into these racks are power distribution units (PDUs), which are generally mounted vertically inside the IT rack enclosure. A narrow power strip package is also desired to allow improved equipment airflow cooling and cable management – creating a downstream emphasis on the size of the circuit breakers contained within.

On the performance side, interrupting capacities within that breaker also continue to increase – driven in some situations by insurers evaluating the risks associated with both the technology and server costs as well as the potential liability for the data they store.

Solution

Taken together, all of those trends have created significant demand for UL Listed circuit breakers with a 240VAC rating.

The Sensata | Airpax LEJ and LUX series are ideal for these applications. UL489 Listed, their small compact size helps them achieve the narrow form factor desired in this type of equipment.

The LEJ has also been expanded to allow for current ratings up to 30A, and its 10kA interrupting capacity provides the performance needed to manage the requirements demanded by these high-value facilities. Other features of the LEJ series are also designed in a way which is an ideal fit for these datacom applications, such as rear access terminal screws for ease of assembly and wire routing in small enclosures.

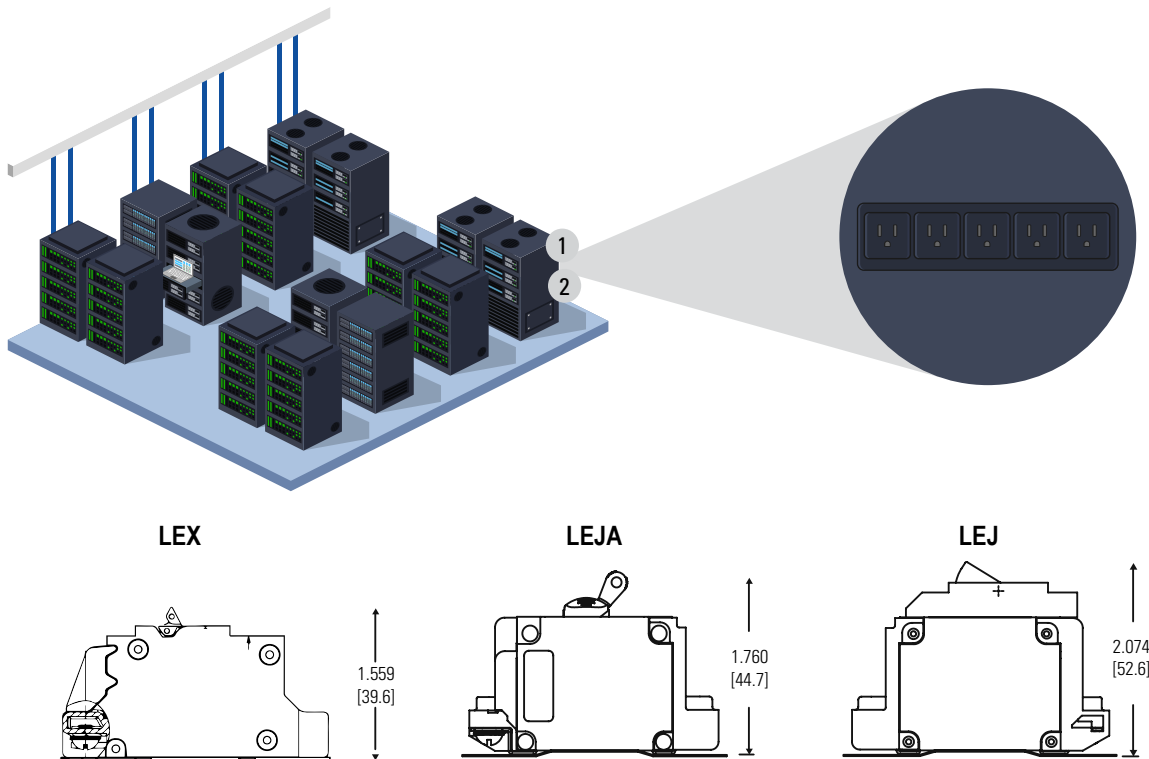
The LEX series is also ideal for datacom applications, with its narrower design (39.6mm depth compared to 52.6mm standard LEJ depth) providing an even tighter footprint.

As with all Sensata | Airpax hydraulic magnetic circuit breakers, they are resistant to changes in ambient temperature, can also be designed with custom trip values to help manage the inrush currents associated with the equipment they support.

● RELATED PRODUCTS

Reference on Diagram	Product	Features	Function
1	 LEJ	• Current ratings from 2-30A • 5kA and 10kA interrupting capacity • UL 489 listed and TÜV approvals available • Low-depth LEJA model available	Provides circuit protection for PDU
2	 LEX	• 39.6mm depth • Up to 30A per pole • 5kA and 10kA interrupting capacity	Provides circuit protection for PDU

● DATACOM CENTER LAYOUT



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