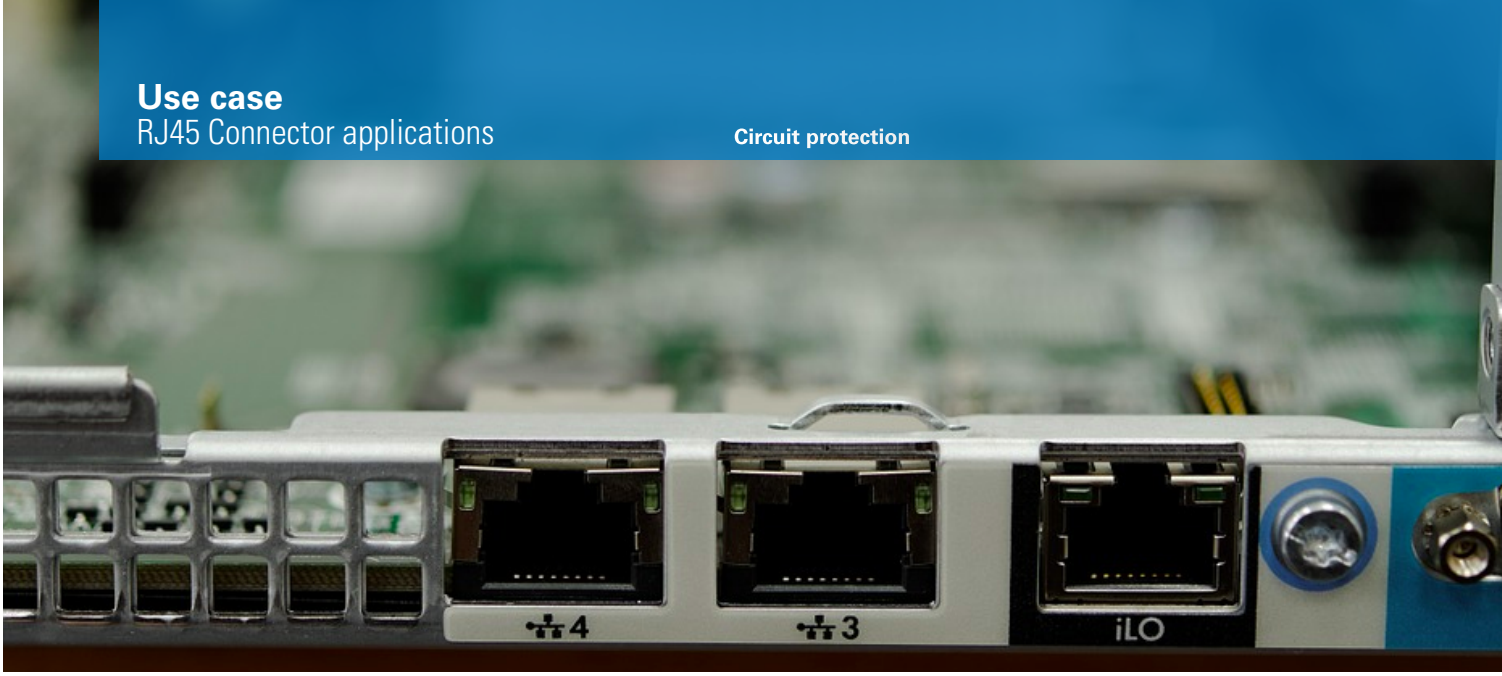

Eaton fast-acting fuses provide reliable protection for RJ45 connector applications

The reliability of data transmission between devices set up in a network depends chiefly on the medium of propagation. In networking protocols, such as Ethernet for Local Area Networks (LAN) which transmit data via physical connections, the reliability and efficiency rely heavily on the integrity of the signal cables.

RJ45 is a standard networking interface for connecting computers to I/O modules for telecoms switches, Ethernet for LANs, other computers, and more. RJ45 data cables comprise an 8-wire configuration enclosed in plastic male/female jacks, with unshielded twisted-pairs (UTP) that help minimize crosstalk and electromagnetic interference during data transfer.

During normal use, these connectors can be affected by surge (instantaneous) currents when first plugged in, static charge or other triboelectric generation, and short circuits. Thus, there is a need for circuit protection to isolate sensitive components, should a fault occur. The ideal solution is a small form factor, fast-acting fuse sensitive enough to detect abnormal currents. These components work by instantly shutting off the power supply to a device's electronics during overload or short circuit conditions to prevent damage to the components or melting of the cable.

Due to space constraints, design engineers and OEMs looking to specify components on an RJ45 connector application will require overcurrent protection devices suited to the highest voltage ratings in the smallest form factor possible.

Eaton's Bussmann series 0603HV fast-acting fuses are reliable overcurrent protection devices ideal for sensitive electronics that utilize RJ45 connectors as well as other space-constrained electronic applications. The 0603HV fuses are small 0603 (1608 metric) footprint surface mounted devices designed to interrupt up to 50 A at 63 Vdc. They are the smallest-sized fuses on the market capable of supporting the 63 V requirement.

Despite their small form factor (0603 industry size), 0603HV fuses offer excellent on-off and temperature cycling characteristics with operating temperatures ranging from -55 °C to +125 °C, easy installation via solder-free design, and durable packaging for rugged operation.

Eaton's Bussmann 0603HV fast-acting fuses help protect electronic circuits in I/O modules that utilize RJ45 connector applications from shorts and overload conditions. Besides computer and telecoms applications, they also achieve protection in the high-voltage, small-footprint circuits of Inkjet printers, TFT LCDs, and lithium-ion battery modules.

As an environmentally responsible manufacturer, Eaton utilizes only the highest-grade, eco-friendly materials in its 0603HV fuses. Every product is halogen and lead-free, UL certified, and RoHS compliant.

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