Next generation of branch circuit protection
Keeping you safe and productive with UL 61800-5-1

ABB offers more options to keep your personnel safe and your equipment running smoothly.

Our all-compatible drives offer additional fuse options, as well as a circuit breaker and manual motor protection options, all while meeting UL 61800-5-1 standards.

The choice is yours.
The standard
Underwriters Laboratories (UL) is no longer supporting new updates to VFDs under UL 508C and now requires drives to be compliant to UL 61800-5-1. This new standard harmonizes the United State’s UL requirements with European requirements. UL 61800-5-1 was built upon the IEC 61800-5-1 specification and although there are many similarities, the UL version has differences not required by IEC.

Existing UL 508C drives are safe to operate, and are allowed to stay UL 508C as long as no rating or major component changes are made.

Compliance
UL requires the drive to perform better than in the past. Creepage and clearances were tightened, but most important, short circuit testing rules became more stringent and general testing specifications were increased.

What does UL61800-5-1 do for our system integrators, OEMs, and end users?
With the expanded testing required, most of our drives can now be protected with not only Class T fuses, but also class J, CC, and CF fuses. Time-delay fuses are also approved. With the expanded list of fuses allowed, there is improved product availability and pricing options.

Circuit breaker only protection
While ABB tested drives for compliance to UL 61800-5-1, some drives were also tested using circuit breaker protection only – no input fuses required.

The ACS380 drives were already capable of using Manual Motor Protectors for branch circuit protection. Now, the ACS, ACQ, and ACH580-01 and ACS880-01 drives can also be protected with circuit breakers.

What is the customer advantage?
- Wider selection of manufacturers’ fuses available.
- Wider selection of fuse classes available including fast-acting, time-delay and high-speed fuse options.
- No waiting for uncommon fuses with long lead times.
- Circuit breakers or manual motor protectors are now available for protection in most of the drive modules.
- Circuit breakers or manual motor protectors can be reset and reused where a blown fuse always has to be replaced.

IMPORTANT: Please follow the manual supplement 3AXD50000645015 for the latest devices available to use as branch circuit protection.