



Total Clearing Time-Current Characteristic Curves

Fault Tamer®-Fuse Limiters

BASIS—Though ANSI/IEEE standards do not specifically cover Fault Tamer Fuse Limiters, IEEE Standard C37.41-1994 Section 12, “Time-Current Tests,” was used as a guide for the test program. The total-clearing time current tests were performed using the most severe interrupting test requirements described in Section 6.6.2.1, “Cutouts with Single-Voltage Rating” and Section 6.6.5, “Current-Limiting Power and Distribution Fuses.” The minimum melting current is not less than 200% of Fault Tamer’s ampere rating, and the minimum melting and total clearing curves are based on tests starting with the Fault Tamer at an ambient temperature of 25°C and no initial load.

CONSTRUCTION—Fusible elements for fuse cartridges rated 3 through 7 amperes are nickel-chrome, under controlled tension; fusible elements for fuse cartridges rated 10 through 20 amperes are silver-copper eutectic; fusible elements for backup limiters are copper. All fusible elements feature solderless connection to their terminals.

TOLERANCES—Curves are plotted to maximum test points. All variations are minus.

APPLICATION—Fault Tamer Fuse Limiters are ideally suited for protecting single-phase transformers, three-phase banks of single-phase transformers, or three-phase transformers.

Like all high-voltage fuses, Fault Tamer should be applied to accommodate transformer overloads, not interrupt them.

Curves are applicable to both 50-Hz and 60-Hz systems.

COORDINATION—For coordination above 1,000 amperes, verify that the minimum melting I²t of the upstream fuse is greater than the Fault Tamer’s maximum I²t let-through which is 20,000 ampere²-seconds.

Unlike conventional fuse links, the fast clearing characteristics of Fault Tamer provide complete coordination with typically sized upstream lateral fuses up to the available fault current or the rating of Fault Tamer.

Moreover, the current-limiting action of Fault Tamer enables coordination with the instantaneous setting of upstream circuit breakers, thereby preventing unnecessary momentary outages to the entire feeder caused by transformer faults.

FAULT TAMERS AVAILABLE

System Voltage Class	Ampere Ratings
15 and 38 kV	3 through 20

