



TOTAL CLEARING TIME-CURRENT CHARACTERISTIC CURVES

FAULT TAMER[®] FUSE LIMITERS—S&C STANDARD SPEED

BASIS—Although ANSI/IEEE standards do not specifically cover S&C Fault Tamer Fuse Limiters, IEEE Standard C37.41-2000 Section 12, "Time-Current Tests," was used as a guide for the test program. 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 1 through 5 amperes are nickel-chrome, under controlled tension; fusible elements for fuse cartridges rated 7 through 20 amperes are silver, helically coiled; fusible elements for backup limiters are copper. All fusible elements are of solderless construction.

TOLERANCE—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. To avoid high probabilities of nuisance operations due to lightning-induced current surges, surge arresters should be located on the *source side* (i.e., on the cross-arm) of the Fault Tamer Fuse Limiter.

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 750 amperes, verify that the minimum melting I^2t of the upstream fuse is greater than Fault Tamer's maximum let-through I^2t , which is 15,000 ampere-squared seconds.

Unlike conventional fuse links, the fast clearing characteristics of Fault Tamer provide complete coordination with typically sized source-side lateral fuses up to the available fault current, or the interrupting rating of Fault Tamer, whichever is lower.

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

FAULT TAMERS AVAILABLE—

System Voltage Class	Ampere Ratings
22 kV.....	1 through 20