



## Minimum Melting Time-Current Characteristic Curves

### Fault Tamer® Fuse Limiters-S&C Standard Speed

**BASIS**— Although ANSI/IEEE standards do not specifically cover 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 the Fault Tamer Fuse Limiter’s ampere rating, and the minimum-melting and total clearing curves are based on tests starting with the fuse limiter at an ambient temperature of 25°C (77°F) 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; and fusible elements for backup limiters are copper. All fusible elements are of solderless construction.

**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. To avoid high probabilities of nuisance operations caused by 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.

As with all high-voltage fuses, Fault Tamer Fuse Limiters should be applied to accommodate transformer overloads, not to interrupt them.

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

**COORDINATION**— For coordination above 750 amperes, verify the minimum melting  $I^2t$  of the upstream fuse is greater than Fault Tamer Fuse Limiter’s maximum let-through  $I^2t$ , which is 15,000 ampere-squared seconds.

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

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

#### AVAILABLE FUSE LINKS

Style	Ampere Ratings
22 kV	1 through 20

