



Minimum Melting 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. The minimum melting current is not less than 200% of the Fault Tamer Fuse Limiter’s ampere rating, and the minimum melting curve is 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 minimum test points. Maximum variations within the coordinating range (melting times less than 10 seconds) expressed in current values are plus 10%.

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

Moreover, the current-limiting action of Fault Tamer Fuse Limiters enables coordination with the instantaneous setting of source-side circuit

breakers, thereby preventing unnecessary momentary outages to the entire feeder caused by transformer faults.

NOTE: A coordination scheme designed to take full advantage of the nondamageability and the superior coordination capabilities of Positrol® Fuse Links may not function satisfactorily if fuse links of the same speed but of other makes are substituted. However, S&C “K” Speed Positrol Fuse Links can replace, on a one-for-one basis, other manufacturers’ “K” speed fuse links in existing coordination schemes. Such replacements, unlike tin-element fuse links, are not subject to nuisance fuse operations (“sneak-outs”) caused by damage from surge currents, load cycling, vibration, and aging.

AVAILABLE FAULT TAMER FUSE LIMITERS

Style	Ampere Ratings
22 kV	1 through 20

