TOTAL CLEARING TIME-CURRENT CHARACTERISTIC CURVES

SMU FUSE UNITS—S&C VERY SLOW SPEED

COORDINATION—These curves represent the total time required for a fuse in the circuit to clear a fault current, and should be followed in coordination problems where fuses are applied as "protection" devices.

Any preloading reduces melting time. With respect to the "protected" fuse, the effect of preloading must be determined and adjusted in order to meet minimum melting curve:

1. When close coordination is required.
2. When, regardless of the precautions of coordination, the protected fuse is subjected to temporary overloads.

There are cases where the coordination requirements may be very exacting, for example, in coordinating a transformer primary fuse with a secondary breaker and a source-side breaker. The time interval between the operating characteristics of the two breakers may be very narrow. Under these circumstances there must be an extremely short time interval between the adjusted minimum melting curve and the total clearing characteristics of the fuse.

The fuse units represented by these curves possess this short time interval feature, since—having a nondamageable fusible element construction which is extremely short time interval between the minimum melting and the total clearing characteristics of the fuse.

Fuse units with a silver element construction which is not subject to damage by aging or transient overcurrents, it is unnecessary to replace unblown fuse units in single-phase or three-phase installations when one or more fuse units have blown. Sometimes a selected ampere rating will fail to meet the coordination requirements in any available speed. In this case the selection of another ampere rating for either the protecting or protected fuse usually will satisfy all requirements.

Do not assume that other fuses that do not employ S&C's silver, helically coiled fusible element construction can better resolve a coordination impasse than the use of another ampere rating in one of the S&C speed options. Such other fuses, including time-lag speeds, "super-slow" speeds, and "high-surge" speeds, require the use of "safety-zone" or setback allowances and, in addition, they have larger construction tolerances (plus 20% in current; plus 40% in terms of time). The application of these two factors will give a time interval between the adjusted minimum melting curve and the total clearing curve greater than in the case of S&C speed options.

FUSE UNITS AVAILABLE—

Type SMU-20


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