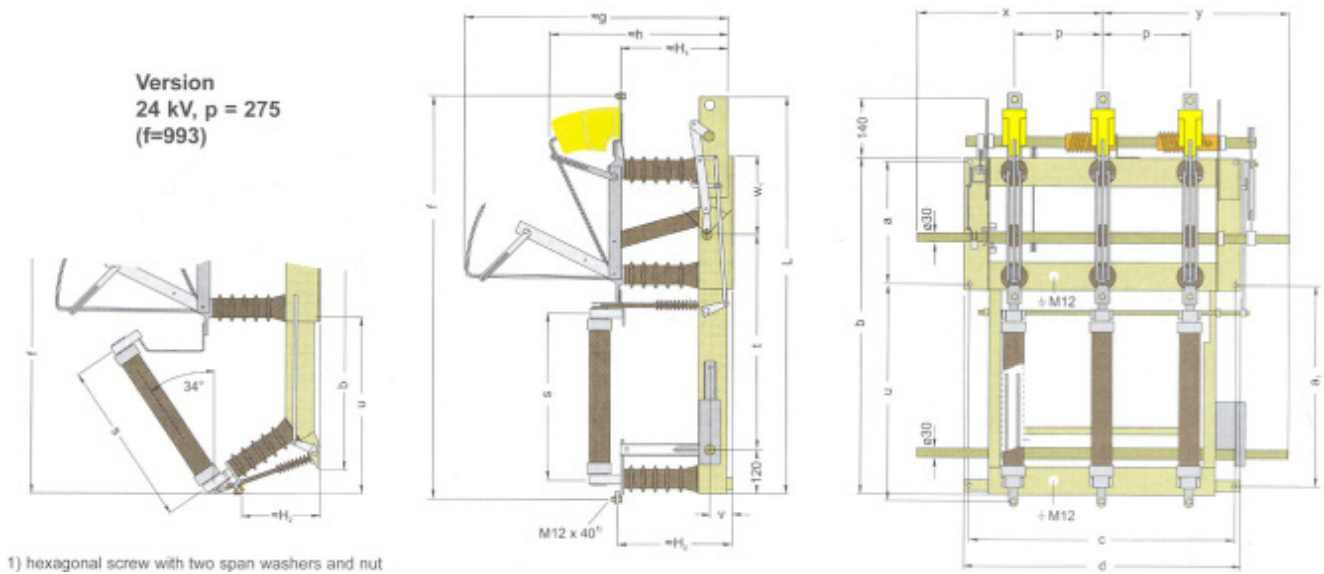


Switch-Fuse Combinations HV Back-Up Fuses

SWITCH-FUSE COMBINATION



Fig 1. Type H 22 SEA with earthing switch mounted below



1) hexagonal screw with two span washers and nut

Type H 22 SEA with earthing switch mounted below

Combination of medium voltage fuses with on-load switches have proved to be a very successful device both for short-circuit protection and disconnection of the power transformers for many years.

Fuse switch combinations are full-range switching devices which are capable of breaking both overcurrents and short-circuit currents up to the rated breaking current of the fuses.

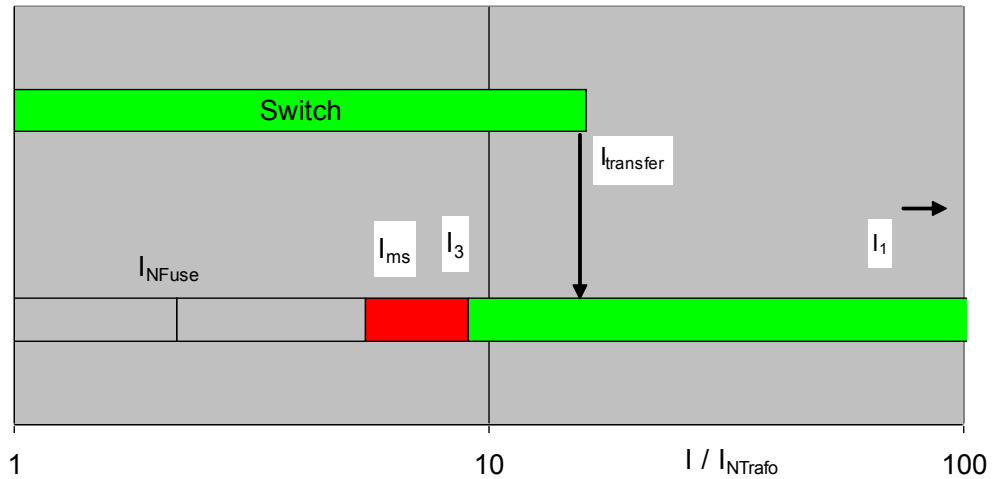
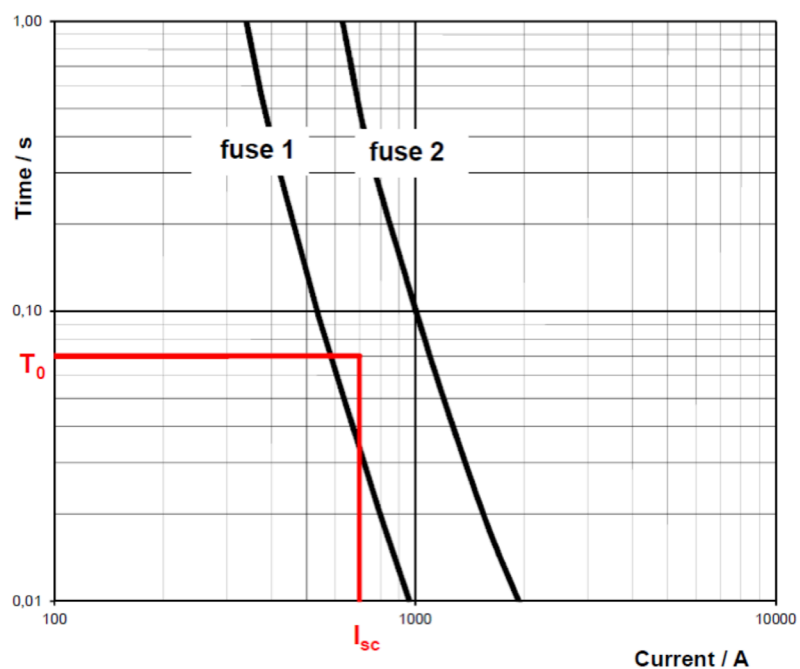


Fig 2. For switch-fuse combinations used in air insulated switchgears, two technical terms shall be considered

1. Take Over Current

Where switches are equipped with overcurrent release, our fuses are supposed to provide backup protection for the switch. The breaking function is exchanged from the switch to the fuse at the take-over current I_{to} , which can be read from the intersection point of the two curves.

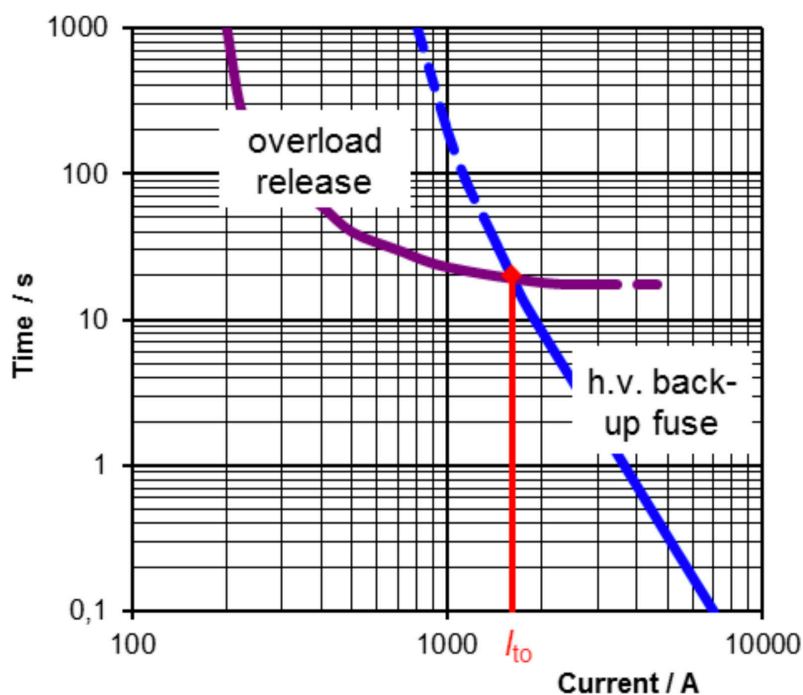


2. Transfer Current

The fuses are fitted with strikers in order to open automatically all three poles of the switch on the operation of one fuse-link. This combination is widely used in transformer substations, as it ensures correct operation.

The fuse selection for transformer protection has to take into account both, the transformer bolted secondary short-circuit current and the striker initiated opening time of the switch.

For practical uses, below table might be of assistance. Fuses having characteristics that pass below the intersection of the opening time of the switch (T_0) and the transformer secondary short-circuit current (I_{sc}) basically fulfils the requirements.



Note: The selection might be very confusing for many users/manufacturers both due to complexity of the challenge and the discrepancy between IEC 60282-1 and IEC 62271-105. You are more than welcome to contact us for technical assistance in this regard.

IMPORTANT

Fuses with Thermal Protection feature is global standard in the fuse-switch combinations. Similarly, in motor protection and capacitor protection applications, thermally protected fuses have become the global practice. We recommend this feature whenever fuses work in combination with an on-load switch

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