



AT ISSUE: ▼

A transformer equipped with an integral Vacuum Fault Interrupter (VFI) can be a superior alternative to a non-VFI transformer in combination with stand-alone switchgear.



RECOMMENDATION: ▼

The VFI Transformer from Cooper Power Systems combines a conventional distribution transformer with the Kyle® Vacuum Fault Interrupter (VFI) - the same advanced technology used in Kyle® VFI Padmounted Switchgear. This combination provides both voltage transformation and overcurrent protection in one space-saving, money-saving package.



RATIONALE: ▼

INSTALLATION COST SAVINGS

There is only one pad and one enclosure to deal with. As little as half the installation area of conventional transformer/switchgear packages is required. Also, because there is only one piece of low-profile equipment to install, the installation is faster, simpler, cheaper, and more aesthetically pleasing.

Customers report that total installed costs for a VFI transformer are half or even less than half of the installed cost of a comparably rated non-VFI transformer with switchgear.

LOWER MAINTENANCE COST

There is one piece of equipment to maintain instead of two. Substation units reduce inventory and maintenance costs associated with insulators or barriers. The sealed tank design protects the oil-immersed VFI breaker so that operation is unimpaired by contaminated, hazardous environments or flooding conditions. Breaker maintenance is virtually eliminated.

SYSTEM PROTECTION

The VFI Transformer provides transformer or loop overcurrent protection up to 35 kV. When a transformer fault or overload condition occurs, the VFI breaker trips and isolates the transformer, leaving the feeder uninterrupted. When a fault occurs downstream, the VFI breaker trips and isolates the fault, leaving the transformer load uninterrupted.

PERFORMANCE

Extended Protection Ratings. Continuous current and interrupting ratings far exceed those of standard fuses, expanding the scope of transformers that can be protected internally instead of with a separate piece of switchgear.

Faster Service Restoration/Eliminates Fuse Changeouts. The resettable breaker mechanism eliminates the added downtime and expense of changing out conventional fuses.

Expanded Operating Flexibility Satisfies All Coordination Requirements. Tri-Phase Electronic Breaker Control offers over 100 minimum trip settings and an assortment of field replaceable time-current-characteristic (TCC) curve modules that approximate the operation of fuses, reclosers or relays.

Loadbreak and Sectionalizing Capability. The breaker can be used as a vacuum load-break or sectionalizing switch.

SAFETY

Trip-free VFI operation provides added safety for field personnel and customers. If a fault condition is present when the VFI breaker is closed, the trip-free feature will prevent the mechanism from being held in the closed position, protecting the operator from closing in on a fault.

THE BOTTOM LINE: ▼

The VFI Transformer is vital for installations where conventional protective equipment doesn't provide adequate protection or coordination. It is recommended for sites where aesthetics are particularly important, or where real estate is limited. The VFI Transformer is available as a three-phase (livefront or deadfront) pad-mounted unit as well as for primary open or secondary unit substation applications. Single-phase pad-mounted units are also available.

