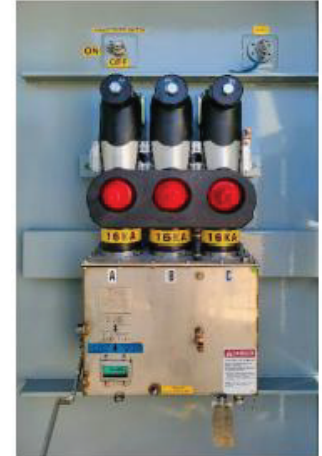


WHAT IS VFI?

Liquid filled padmounts and substations are a challenge to manage using conventional transformer fusing and usually require a separate load break switch or LI switch. This adds additional footprint, plus can add extensive outage time if an overload occurs causing the fusing to open.

With our modular Vacuum Fault Interrupter (VFI), we can properly protect transformers from an overload event and protect the network from a transformer fault. Our VFI is resettable after clearing the overcurrent event instead of having to replace equipment, and unlike traditional switches, its settings can be readjusted if needed to future proof it (e.g., kVA, impedance, in-rush). The VFI is overcurrent protection, using vacuum bottles, to protect the transformer from short circuit or overload events and to protect the network from a transformer fault when coordinated with current limiting fusing.

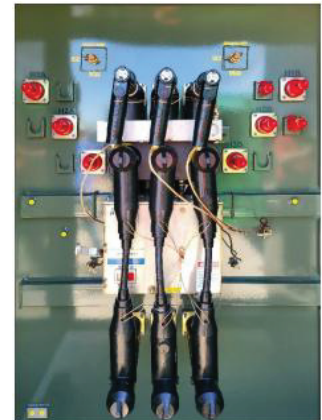


HV RADIAL FEED

WHY CHOOSE OUR SOLUTION?

Compared to alternative solutions in the market that have the VFI inside the oil, our modular solution is external, right in the compartment. Our externally mounted VFI is an economical solution compared to other under-oil solutions, as it does not require additional transformer footprint to accommodate dielectric clearances, nor does it rely on dielectric integrity of the fluid for proper operation. External mounting is significantly easier to access should there ever be a reason to service or reset. The VFI is effectively maintenance-free and has been tested to clear up to 2000 faults – far more than expected over the useful life of the transformer. This is a safe solution; solid dielectric dead front insulation construction leaves no exposed live or energized parts at the interrupter.

In addition to these feature benefits, our current lead times are 48-50 weeks. This is a proven technology with over 10 years of interrupter experience.



HV LOOP FEED

WHERE CAN THIS BE UTILIZED?

VFI is a great solution for **Data Centers, Renewable, Oil and Gas, Commercial, Industrial markets**, or any application that currently uses traditional standalone switches. The VFI was originally designed for more extreme submersible applications in underground vaults, so it is suitable to a variety of environments.

VFIs can be applied for the following ratings:

- *Up to 10 MVA*
- *35kV – 150kV BIL primary voltages*
- *600A continuous*
- *HV radial or loop feed arrangements*
- *Padmount or Substation design*
- *Fault interruption Ratings*
 - *12.5kA Standard*
 - *16kA, 20kA at 15kV Optional*
 - *25kA at 38kV Mag Actuated*
- *Fault Close Rating – 20kA Symmetrical Momentary*

Features

- **DEADFRONT CONSTRUCTION**
For safer operation utilizing IEEE 386 standards for separable connectors & bushing interfaces.
- **CURRENT SENSING**
Integrated for electronic trip control.
- **SELF-POWERED CONTROLS**
So no battery or external power is required.
- **FIELD PROGRAMMABLE**
Trip setting & TCC curves while the unit is energized.
- **SEALED RELIABILITY**
Using EPDM rubber as the solid dielectric, making it suitable for all environments.
- **HERMETICALLY SAFE**
Interruption of load break and fault current using vacuum bottles.
- **MAINTENANCE FREE**
Components that require no gas or dielectric fluid for operation.
- **MANUAL RESET**
Mechanism with lineman hot stick provisions.
- **SPRING-ENERGY MECHANISM**
Initiated by electronic trip - maximum 3 cycles interrupting time.

Options

- *Dead front 600A or 200A interface.*
- *Motor drive for remote operation & position indication.*
- *Direct interface for voltage sensors & surge arresters.*
- *Visual break indication.*
- *SEL relay to provide an additional level of protection to the interrupter & transformer such as over-current, under-voltage, over-pressure trip, or thermal trip protection.*
- *Current limiting fuses for additional protection.*

Additional Characteristics

- Spring energy closed, store energy opening operation - capable of making, carrying, and automatic interruption at 12,500 amps symmetrical.
- Trip-free mechanism preventing the possibility of holding the mechanism closed under a faulted circuit.
- Self-powered - including current sensing and electronic control.
- The control module (Model 80) is field programmable with a wide range of Time Current Characteristics (TCC) curves and trip settings that provide basic overcurrent trip capability.
- TCC curves provide predictable tripping for ease of coordination with upstream and downstream protection devices. The controller monitors the circuit conditions and sends a signal to the VFI tripping mechanism if the programmed parameters are exceeded.

