



## TWICE THE PROTECTION IN HALF THE SPACE

### Cooper Power Systems' Shrubline VFI Pad-mounted Transformer with Vacuum Fault Interrupter

Get the best transformer and overcurrent protection for underground residential distribution systems in the least amount of space. Cooper Power Systems has combined a single-phase pad-mounted deadfront transformer with a vacuum fault interrupter in one low-profile enclosure for resettable fault protection through 25 kV. Ideal for residential applications where real estate is limited; where in-line fault, tap or "branch line" protection is difficult or impossible to coordinate; or where minimization of outage area and duration are critical.



The Shrubline VFI Transformer is a complete protection package that can be properly coordinated and strategically located to effectively minimize both outage area and outage duration. The VFI breaker, complete with the Tri-phase electronic breaker control, offers over 100 minimum trip settings and an assortment of time-current curves. This makes coordination with upline and downline protective devices easy and adaptable as changes in the system occur. The VFI breaker has an interrupting rating that far exceeds the rating of standard riser pole fuses, enabling better fault clearing coordination, and thereby minimizing outage area. In addition, the VFI breaker provides sectionalizing capabilities. And because it is resettable, it reduces outage time as well. The 2-position loadbreak switch provides additional sectionalizing capabilities for maximum flexibility. The Bay-O-Net<sup>®</sup> and under-oil back-up current-limiting ELSP fuses provide transformer overcurrent protection, while under-oil arresters complete the transformer package with overvoltage protection.



The Shrubline VFI Transformer package delivers the best of both voltage transformation and system protection, in half the space.

# RESETTABLE FAULT PROTECTION WITH SAFE, DEADFRONT CONSTRUCTION

- Reduces real estate requirements: one pad, one enclosure
- Superior overcurrent and fault protection
- Deadfront construction offers a high safety factor for utility personnel and the general public.
- Minimizes outage duration, outage area, and field failure rates
- Easily coordinated with upline and downline protection devices
- Reduces installation, maintenance, and inventory costs
- Low profile – aesthetically pleasing

## VFI Transformer Features

- Special Tri-phase electronic breaker control offers over 100 minimum trip settings and an assortment of time-current curves
- Overcurrent protection in the high-voltage loops, taps or open points
- Resettable in-line fault protection to 25 kV
- Resettable breaker mechanism allows immediate service restoration
- Trip free operation prevents the breaker mechanism from being held in the closed position if a fault condition is present
- VFI breaker eliminates the need for riser pole fuses while offering a higher interrupting rating and better fault clearing coordination
- Eliminates the added down-time and expenses associated with changing out conventional fuses
- Loadbreak switch with operating handle; no need to pull loadbreak elbow
- Enhanced sectionalizing capability

## Product Scope

- Single-phase pad-mounted transformer with VFI breaker in one unit
- 25 – 100 kVA, deadfront
- Maximum 25 kV, 125 kV BIL and below
- VFI rating: 200A continuous; 12,000 A RMS interrupting rating (1 $\phi$ ) with Tri-phase control
- Shrubline construction meeting ANSI/NEMA and CSA/CEA standards
- Low profile sealed construction
- 2-position loadbreak switch
- Bay-O-Net expulsion fuse with drip guard
- Under-oil back-up ELSP current-limiting fuse
- Under-oil primary arrester
- Under-oil secondary arrester

