MVS3 Switch with 120 VAC or 12-24 VDC Motor Operator and SCADA Interface Provides Low Cost Alternative Without Padmounted Real Estate

Background
To upgrade existing subsurface distribution (true underground) systems with desired remote sectionalizing, the only acceptable method was to cut-in a padmounted Distribution Automation (DA) switchgear. Typically this involved a padmounted unit due to the lack of space in manholes. This could involve acquiring the easement for a padmounted unit, installing a duct system, placing or pouring a pad, setting padmounted switchgear, and splicing in cable to the padmount. This is a very expensive and disruptive situation.

Automated Molded Vacuum Switch

Motor Controller with SCADA Interface
Solution
The MVS3 with a 120 VAC or 12-24 VDC motor operator is a perfect fit to solve a real world dilemma of upgrading service reliability in below grade distribution systems. The submersible Molded Vacuum Switch with motor operator can be easily installed in existing manholes and connected to radio controlled Remote Terminal Units (RTUs) to provide both automatic sectionalizing as well as SCADA operation. Typically, an existing feeder with a “normal open” (N/O) tie to another existing feeder is split near the mid-point with the MVS3 switch. If a fault is encountered, the station breaker will open to clear the fault. Scenario:

1. If the fault is between the MVS switch and the N/O tie, the SCADA control will sense the fault and open the switch. The station breaker will re-close and restore service to the section of the feeder up to the open MVS switch.

2. If the fault is between the breaker and the MVS, the breaker will re-close and the fault will still be present, tripping the station breaker again, locking out the breaker. The RTU will flag the problem so that the dispatcher can open the MVS, close the tie switch, and dispatch trouble personnel to the outage area.

The MVS is available with a variety of IEEE 386 interfaces for cable terminations.

- 120 VAC or 12-24 VDC, DA Motor Operator
- Compact & Submersible
- EPDM Solid Dielectric Insulation
- 27kV
- 125kV BIL
- 600 Amps
- 20kA Asym.
- 600 A Bushing Interface