

# Smart three-phase switching reliable to its core

Utilizing industryleading technology, Eaton's Cooper Power series DAS three-phase switch and iDC control featuring the ProView™ platform, host a complete set of switching, automation, metering and data acquisition functionality to maximize system performance and reduce customer outages while optimizing the grid via real-time data.

Add metering and sectionalizing to existing or future automated smarter grids when fault interruption is not needed.

#### **Dependability in all conditions**

The DAS switch is not affected by weather conditions—including ice storms. The simple, compact solid dielectric package includes integral sensors, vacuum interrupters and integrated control system, creating a smaller footprint and allowing simplified installation versus other types of switches.

The switch design provides positive confirmation and manual operability with these standard features:

- Mechanical trip and close handles for easy access to local emergency trip when needed
- Mechanical contact position indicator for positive indication of switch OPEN or CLOSED

## Improve customer reliability and lower total life-cycle costs

The DAS switch is designed and manufactured with Eaton's Cooper Power series field-proven insulation and interruption technology. The encapsulated load break vacuum interrupter and a lightweight, solid cycloaliphatic epoxy design make the DAS switch a durable and flexible three-phase choice in comparison to air, gas, or oil switching alternatives.

## Integrate with distribution automation systems

The DAS switch is an excellent choice for use in conjunction with DA solutions such as Eaton's Yukon™ Feeder Automation (YFA) software. With its intelligent control, this switch is an ideal enabler for lower cost sectionalizing points or throw over schemes as part of a self-healing grid.

# Eliminate environmental concerns while reducing maintenance costs

DAS switch technology provides durable service and reliability by utilizing:

- Solid outdoor cycloaliphatic epoxy—no SF<sub>6</sub> gas or oil to check and maintain and no noxious by-products to dispose
- Vacuum interruption with load-break "button" type contacts—extended contact and mechanical life
- Magnetic-actuator operated mechanism—low power mechanism provides reliable operation, year after year, with over 120 dead line operations using the back up power source provided.







Adding intelligent three-phase Eaton's Cooper Power series DAS switches and iDC controls to distribution lines can help meet today's system reliability needs and easily transition to future Smart Grid applications.

#### Multiple configuration options

The DAS switch can be configured in several voltage classes and current ratings. Optional encapsulated current transformers (CTs) and internal voltage sensors (IVS) are available for enhanced distribution system monitoring and operational flexibility.

#### iDC switch control with **ProView 5.0 software**

The new microprocessor-based DAS iDC switch control runs the new ProView 5.0 application software, including an Application Launcher that features a common interface for both iDC and Form 6 recloser controls. The iDC control integrates real-time valuable grid and outage data to be ported to your SCADA or feeder automation system. Complete with a separate regulated power supply, the control is automation-ready for your choice of radio. Multiple communications ports are available including serial and Ethernet with wire or fiber options. Also, tailor your digital communications performance with the user-configurable mapping of DNP3 protocol. The control can be easily configured through the simple front panel display or with a laptop through an RS-232 serial port on the front panel.

- · Smart Grid ready
- · Improve customer reliability
- Easy operation
- · Greater application flexibility
- · Full meterina
- Data acquisition
- · Remote monitoring
- · Simple, intuitive programming
- · Uses the ProView platform widely familiar in Form 6 recloser controls and Edison™ Idea™ relays

#### Switching flexibility

Two settings groups available:

- Switch mode
- Sectionalizer mode

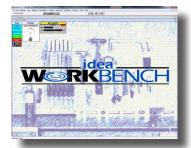
Advanced fault targeting with inrush restraint including:

- Phase
- Ground
- Negative sequence

#### Metering data

The iDC control has instantaneous and demand metering with programmable integration intervals for system loading and planning:

- · Instantaneous voltage, current and power
- Symmetrical components voltage and current
- Energy
- · Demand current and power
- Phase voltage and current harmonics
- THD and True RMS



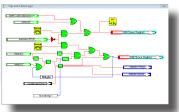
#### **Data acquisition**

To prevent future outages and improve grid performance, numerous data acquisition features are standard:

- Data Profiler, user configurable with multiple analog and digital data points
- Event Recorder with 18 factory default events and a combination of up to 32 user defined analog and digital events
- Oscillography feature allows event-triggered capture, storage and display of voltage and current waveforms

#### Idea Workbench™

With the powerful Idea Workbench™ development platform, users can create custom-engineered logic for hardware control, status, communications and front panel operation and indication. What's more, the Idea Workbench platform provides the flexibility to modify analog and binary data per customer's specific automation applications. An intuitive drag-and-drop graphical programming interface allows even complicated algorithms to be easily constructed.



**Table 1. DAS Switch Ratings** 

Voltage - kV	Continuous - A	Loadbreak - A	BIL - kV
15	630/800*	630/800*	110/125**
27	630/800*	630/800*	125/150**
38	630/800*	630/800*	150

<sup>\*</sup>Available optional ratings

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<sup>\*\*</sup>Optional BIL ratings available with internal CT