

COOPER POWER SYSTEMS

Underground Distribution Switchgear
Powered by Design.



COOPER Power Systems



WELCOME TO COOPER POWER SYSTEMS KYLE® DISTRIBUTION SWITCHGEAR



Cooper Power Systems' Kyle® Distribution Switchgear has long been recognized as the industry leader in the manufacture of distribution switchgear products, protecting electric power distribution systems and improving service reliability.

Since 1942, we've designed, tested and manufactured the world's highest quality distribution switchgear. With over 2 million units operating worldwide, we remain committed to enhancing and improving our products, facilities and quality standards.

Cooper manufactures both padmount and sub-surface (vault) switchgear products for utility, industrial and commercial applications ranging from 15 to 35kV, and available with various insulation media. We'll have a Cooper product that meets your needs. We invite you to take a closer look at what makes Cooper the industry leader in underground distribution.



Technical expertise from various fronts within Cooper Power Systems has contributed to the development and manufacturing of a superior line of Underground Distribution Switchgear products.

Product Development

Advanced materials and manufacturing processes are pioneered at our Thomas A. Edison technical center. This "skunkworks" has enabled Kyle and Cooper Power Systems to bring to industry innovations such as our environmentally safe, and edible seed-oil based insulating fluids. Besides the selection of rubber, metal, paint, and other materials, our labs verify that our products perform to industry standards—resulting in performance that you and your customers will come to rely upon.

Vacuum Technology

Kyle's patented vacuum interrupters are the most advanced in the industry, and ensure dependable, maintenance-free operation for the lifetime of the switchgear.

Deadfront Construction

Deadfront construction offers a high safety factor for your operations personnel, and the general public. All internal parts are completely sealed to reduce maintenance and eliminate the problems

of moisture, dirt, and wildlife commonly associated with air-insulated switchgear.

Durable Paint Finish

Cooper Underground Switchgear products are painted with the most advanced coating in the industry, extending the operational life of the product, and having a favorable impact on your maintenance budget.

Electrical Components

Cooper Power Systems is an international leader in supplying electrical components to several switchgear manufacturers. Cooper can be trusted to deliver components you can rely on – every time.

Our knowledge of underground systems is based on decades of experience in the field. From product application and selection assistance to field installation and operation support, Cooper Field Sales Engineers, as well as Factory Technical Support, are with you every step of the way. With factories and sales offices throughout the United States and around the world, there is always a knowledgeable Cooper Power Systems representative nearby.



We've designed this Reference Guide to help you choose the right Cooper Power Systems switchgear product for your specifications. Once you've found what you need, you'll find a brief overview on that product in the pages to follow, or you can get more in-depth with the information provided in that product's sell sheet located in the back pocket of this brochure.

Application/Product Reference Guide

Application	Nominal Voltage (kV)	Installation Type	Max. Continuous Current (Amps)	Load-Switching Rating (A)	Interrupting Medium	Insulation Medium (1)	Product Type (2)
Sectionalizing (Switching)	15kV	Padmount	600 600	600 600	Oil Vacuum	Oil SF ₆ , Fluid	MOST RVAC
		Sub-Surface	600	600	Vacuum	SF ₆	VACPAC
	25kV	Padmount	300 600	300 600	Oil Vacuum	Oil SF ₆ , Fluid	MOST RVAC
		Sub-Surface	600	600	Vacuum	SF ₆	VACPAC
	35kV	Padmount	200 600	200 600	Oil Vacuum	Oil SF ₆ , Fluid	MOST RVAC
		Sub-Surface	600	600	Vacuum	SF ₆	VACPAC

Application	Nominal Voltage (kV)	Fault Protection Device	Installation Type	Max. Continuous Current (Amps)	Interrupting Rating (kA) (3)	Interrupting Medium	Insulation Medium (1)	Product Type (2)
Fault Protection	15kV	Fuses	Padmount	600	50 50	Oil Vacuum	Oil Oil	MOST fused RVAC fused
		Electronically Controlled Vacuum Interrupters	Padmount	600	12 or 16 12	Vacuum Vacuum	SF ₆ , Fluid Oil	VFI PWVE recloser
			Sub-Surface	600	2 or 12	Vacuum	SF ₆	VACPAC
	25kV	Fuses	Padmount	300 600	20 - 50 20 - 50	Oil Vacuum	Oil Oil	MOST fused RVAC fused
		Electronically Controlled Vacuum Interrupters	Padmount	600	12 12	Vacuum Vacuum	SF ₆ , Fluid Oil	VFI PWVE recloser
			Sub-Surface	600	2 or 12	Vacuum	SF ₆	VACPAC
	35kV	Fuses	Padmount	200 600	12.2 - 50 12.2 - 50	Oil Vacuum	Oil Oil	MOST fused RVAC fused
		Electronically Controlled Vacuum Interrupters	Padmount	600	12	Vacuum	SF ₆ , Fluid	VFI
			Sub-Surface	600	0.6 or 10	Vacuum	SF ₆	VACPAC
Source Transfer (*)	15kV	Electronically Controlled	Padmount	600	12 or 16	Vacuum	SF ₆ , Fluid Oil	VFI PST
			Sub-Surface	600	2 or 12	Vacuum	SF ₆	VACPAC
	25kV	Electronically Controlled	Padmount	600	12	Vacuum	SF ₆ , Fluid Oil	VFI PST
			Sub-Surface	600	2 or 12	Vacuum	SF ₆	VACPAC
	35kV	Electronically Controlled	Padmount	600	12	Vacuum	SF ₆ , Fluid Oil	VFI PST
			Sub-Surface	600	0.6 or 10	Vacuum	SF ₆	VACPAC

(1) Fluid options include oil, R-Temp®, and Envirotemp® FR3™.

(2) RVAC and VFI are also available for vault installation. They can be used in floodable or contaminated environments.

(3) Interrupting rating for fused gear depends on the fuses selected, and the application voltage.

(*) Total transfer time varies by product type.

VFI

Vacuum Fault Interrupter

Ready. Reset. Go.

Forget about unnecessary maintenance. Forget about conventional fuses. Instead, remember the Kyle VFI Vacuum Fault Interrupter. It's the switchgear that gives you a break. Literally.

The VFI's resettable breaker mechanism speeds up restoration, eliminating additional downtime and the expense of fuse replacement. VFI also serves as a vacuum load-break switch; the tap can be switched with a simple push-pull of the operating handle.

VFI padmounted switchgear is simple, economical and ideally suited for 15, 25 and 35kV underground systems. In addition to having a low profile and unobtrusive design, the VFI compares

favorably with much larger, more bulky air-insulated equipment.

The modular design of VFI Vacuum Fault Interrupter switchgear allows the system to be tailored to your specific requirements, but without the price tag you might expect for custom construction.

The VFI also features a Visible-Break accessory with ground switch for fast, easy verification of a break, and deadfront construction for added safety.

Add its versatility in both utility and commercial/industrial applications and its years of field-proven reliability and you've got the perfect padmounted switchgear that meets your needs.

VFI from Cooper Power Systems. What a break.



COOPER Power Systems

VACpac[®]
Vacuum Switchgear
The Building Blocks of Protection.

Here's a switch. A real switching solution, in fact, for a wide array of system applications – VACpac[®] from Cooper Power Systems.

VACpac is a versatile, compact, lightweight alternative to sectionalizing and protection of underground systems. Welded construction, combined with vacuum interruption and gas insulation, help make VACpac the perfect answer when it comes to switching or sectionalizing load, looping underground systems, performing source transfers, providing tap overcurrent or transformer network protection, or for co-generation applications, among other things.



VACpac is ideally suited for applications up to 35kV. Externally mounted operators allow flexibility to upgrade over time. Besides being very lightweight, VACpac is not position sensitive so it can be mounted in any direction or orientation. It installs in half the time of typical oil switches. The entire system is hermetically sealed within a corrosion-resistant 300 series stainless steel enclosure and is essentially maintenance-free

throughout its lifetime. By operating within a self-contained, fireproof medium, it's safe and it's even submersible.

VACpac from Cooper Power Systems. It's a real switch – to something better.



PST

Automatic Source Transfer Switchgear The Ability In Reliability.

When trust in source transfer reaches the critical stage, transfer to PST from Kyle Distribution Switchgear. Critical customer loads, such as health, education, finance and manufacturing, depend on optimum power quality and reliability. That's why they depend on PST.

And so can you.

With Kyle PST (Padmount Source Transfer), a load can be transferred between a preferred and an alternate source of power. When the preferred source is lost, the source transfer package switches the load to the alternate source, and then back again when power is restored – automatically.



PST provides fault interruption and source transfer for 15, 25 and 35kV underground systems, and combines several time-proven Kyle products: S control, which performs the automatic transfer based on loss of voltage detection; TPG control, which provides fault protection; and CI vacuum fault interrupters, which perform the three-phase switching and/or fault interruption. PST is available

in two configurations: PST Model 6, the industry standard; and PST Model 9, which can serve two critical loads independently.

PST from Cooper Power. It's a very smart switch.



COOPER Power Systems

MOST

Oil-Insulated Switchgear

Wide Selection on a Narrow Budget.

It's quite possible that there's never been a more appropriate name for an oil-insulated switchgear system.

Kyle Distribution Switchgear's MOST is the simple, economical answer to 15, 25 and 35kV underground systems needs. It's perfect for both utility and commercial/industrial applications. It's also impressively versatile with a wide selection of fuse ratings that make it easily adaptable to pretty much any distribution system.

To make it even more impressive, MOST switchgear fits the majority of standard pads and it's compatible with

the same kinds of tools and techniques that your operators are familiar with.

Deadfront construction offers a distinct safety factor for your personnel. There's also MOST's non-ventilated, tamper-resistant, low-profile construction and Cooper's long history of field-proven components to add to the MOST mix.

And, like all Cooper Power Systems products, your MOST switchgear carries the most advanced paint and coating system in the business, ensuring a like-new life on the outside, as well as the inside.

Need more? You need MOST. From Cooper Power Systems.



COOPER Power Systems

RVAC

Vacuum Switchgear
Better Switch to Better Protection.

Do you require advanced fuse protection? You require RVAC. It's made by Cooper Power Systems' Kyle Distribution Switchgear. And you know how tough our requirements are.

RVAC is perfect for applications like shopping malls and industrial parks where frequent 600-amp main line switching and fuse protection are required.

RVAC incorporates vacuum interruption (which has had an excellent performance record for decades) and an interrupter mechanism that has been designed specifically for repetitive switching duty. It's ideally suited for 15, 25 and 35kV applications.



RVAC padmounted switchgear features deadfront construction for optimum safety, low-profile design that doesn't "stick out," and is available with various insulation materials that make it environmentally friendly and suitable for indoor/outdoor applications.

RVAC also features a wide range of current-limiting fusing options for simple, easy coordination. It's available in both single- or three-phase units and in 15, 25 and 35kV ratings. And, as with every Cooper switchgear product, its years of field-proven reliability make RVAC that much more attractive.

Better switch. Much better. RVAC from Cooper Power.



COOPER Power Systems

PWE/PWVE

Three-Phase Padmounted Reclosers The Three Phases of Reliability.

Reliability is as easy as one, two, three with Kyle PWE and PWVE reclosers.

These three-phase reclosers provide the ultimate in reliable and economical overcurrent protection for distribution systems utilizing UD cable. They're the automatic, electronically controlled answer for your underground distribution needs. And best of all, they're backed by over 60 years of field-proven performance by Cooper Power.

PWE and PWVE reclosers are designed for 15 and 27kV applications, including feeder protection, circuit and loop sectionalizing, and transformer high-side protection.



Available with all Kyle electronic recloser controls, application flexibility is second to none. And you'll be happy to know that same flexibility applies to your budgetary concerns, too.

PWE and PWVE feature weatherproof and tamper-resistant enclosures, providing an attractive, compact, and secure package for use in substations, commercial and

residential areas, and other applications where advanced protection capabilities are required.

PWE and PWVE three-phase reclosers from Cooper Power Systems. As easy as one, two, three.

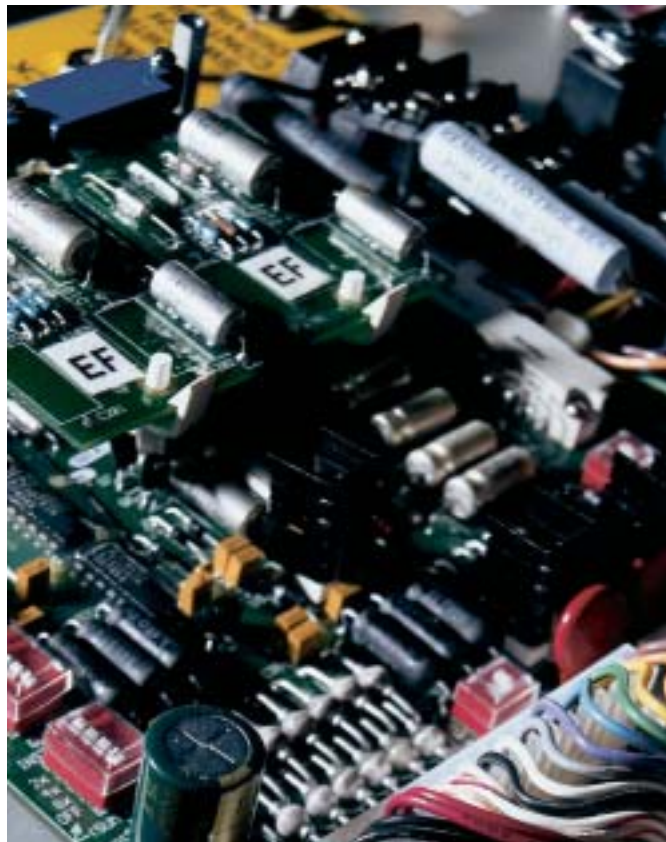


D.A.

Distribution Automation Tools Get Your System Under Control.

Performance. That's what Cooper Power Systems is all about. And it's never been more obvious than in Kyle Distribution Automation tools.

The growth of D.A. is rapidly accelerating. At the same time, utilities and industrial/commercial customers are taking a closer look at reliability, power quality, and operation, training, and maintenance costs. Our goal is to provide the solutions that meet your budget and system performance objectives. Cooper Power Systems offers source transfer packages, loop sectionalizing and reconfiguration controls, and remote control and communications tools for application in



underground distribution systems up to 35kV.

With our wide variety of Distribution Automation tools and applications, you're assured of finding the best, most efficient solutions to enhancing system performance and monitoring, facilitating circuit/load reconfiguration, reducing outage frequency and duration, and improving restoration time. It's all the

result of decades of experience in distribution system and electronic controls technology.

Distribution Automation from Cooper Power Systems. The way to get your system under control.



 **COOPER** Power Systems



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The Quality System at
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Kyle Distribution Switchgear
is ISO 9001 Certified.



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