

A man wearing a yellow hard hat and safety glasses is looking at a tablet in an industrial setting. In the background, another worker is visible near some machinery.

EcoStruxure™ Power

Arc Fault Detection eGuide



Life Is On

Schneider
Electric



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EcoStruxure Power digitizes electrical distribution

EcoStruxure Power helps facilities ensure protection from arc fault incidents

You need to operate electrical equipment safely, without affecting facility operations. In the past, much of the focus was directed toward shock prevention. But today, as [NFPA 70E](#) and [NEC](#) have evolved, significant effort has been invested in designing and producing equipment that mitigates the risk associated with arc fault.

EcoStruxure Power delivers this value to our customers, with digital architectures that address key business challenges and help make facilities safer, more reliable, and more efficient. Address these key dimensions of electrical safety with [arc fault detection](#).

[Read the white paper](#)



Digitizing Electrical
Distribution

Challenges and
Opportunities

Application
Overview

Digital
Architecture



Challenges and Opportunities



Digitizing Electrical
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Challenges and
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Arc fault protection

Arc faults can happen at any time

Arc faults can be generated by a variety of factors: an operator error during installation or maintenance, deterioration of electrical equipment, or even from a conductive tool, air, water, or animal. Wrong tightening torque on a connection or a misaligned washer or clamp have also been known to cause arc faults.

The air will be ionised and ready for the electrical, leading to a huge discharge when a new electrical path is created. The consequences of the resulting arc flash can be dramatic – including destruction of switchgear or severe injury to personnel.

Today an arc flash analysis for switchgear with incomers greater than 600A is mandatory ([NFPA70A](#)).

5-10

arc flash
incidents
occur every
day in the US

Read the blog



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Arc fault detection

The benefits of mitigating arcs with a digital solution

A digital arc fault solution:

- Protects personnel if the fault occurs during maintenance or the commissioning
- Reduces arc fault impacts and protects equipment against complete destruction
- Allows fast intervention through fault event location and quickly informs maintenance people
- Detects installation weaknesses via fault history logging
- Allows remote configuration at a safer position
- Provides maintenance personnel with indication of ERMS mode via the mobile app for digital low voltage circuit breakers

25%
of all fires
worldwide
are caused
by electrics



IoT enabled applications for optimizing arc fault detection

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Arc fault protection

How can you save money by maximizing uptime?

Arc fault protection

I want to protect personnel as well as electrical rooms and equipment from arc flash. And, I want to reduce the downtime that results from arc flash.

Avoid electrical fires and ensure protection

- Causes of internal arc, such as environmental conditions, faulty/old equipment, forgotten tools, and intrusion of animals can be numerous and difficult to track
- Supplement proper safety policies by resisting internal arc both at MV and LV by tripping fast to limit internal arc
- MV cubicles provide internal arc withstand to align with IEC standards, and relays provide instantaneous or time-delay tripping
- At low voltage, improve safety of personnel through digital adjustment to protection settings to trip faster when internal arc occurs

[Read the blog](#)

MV



LV



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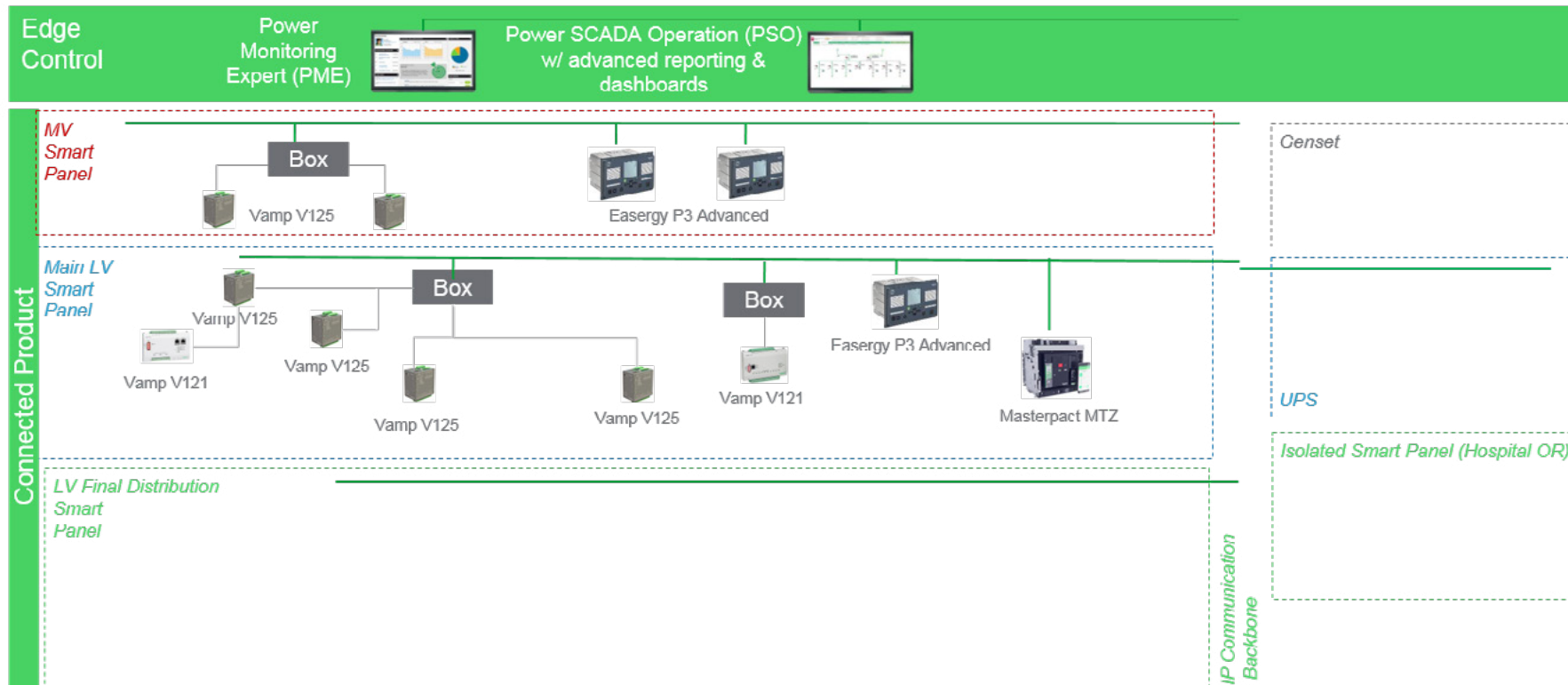


Architectures

Architecture 1

Arc fault mitigation (IEC and NEMA)

Avoid electrical fires and ensure protection for your facility and your personnel.



Learn more



Find Your Switchgear Modernization and Upgrade Solution



Video: EcoStruxure Power and EcoXPerts deliver clean power



White paper: Bringing critical power distribution out of the dark




Contact us to start your journey.

This document presents general, non-binding information regarding the potential value that digitized power distribution products and solutions can bring to the user. Due to varying user situations and goals, Schneider Electric does not warranty or guarantee that the same or similar results represented in this document can be achieved. Please refer to Schneider Electric product and solution catalogs for actual specifications and performance.

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