

ACTIVE

Set a new standard
for electrical safety

Active Safety System

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Life Is On

Schneider
Electric

Acti9 Isobar P with Active Safety System

Advanced visibility and protection simplified

- Simplicity around new Active technologies
- Simple electrical design
- Simple install & integration
- Simple operations
- Enhanced maintenance

Innovation Supporting five key pillars Acti9 Isobar P Distribution Board



Efficiency

- Optimized system with Active AFDD
- Simple, Quick & Easy to install with PoN RCBOs
- Modular - Ready to install distribution boards



Safety

- Safe and Reliable connections
- Fully insulated construction
- Compliant with BS EN 61439-3



Remote Everything

- Simple Wireless System
- Easy remote Monitoring
- Detailed visibility at final circuits



Resilience

- Complete integration with circuit protection
- Gateway and power monitoring
- Enhance operation resilience



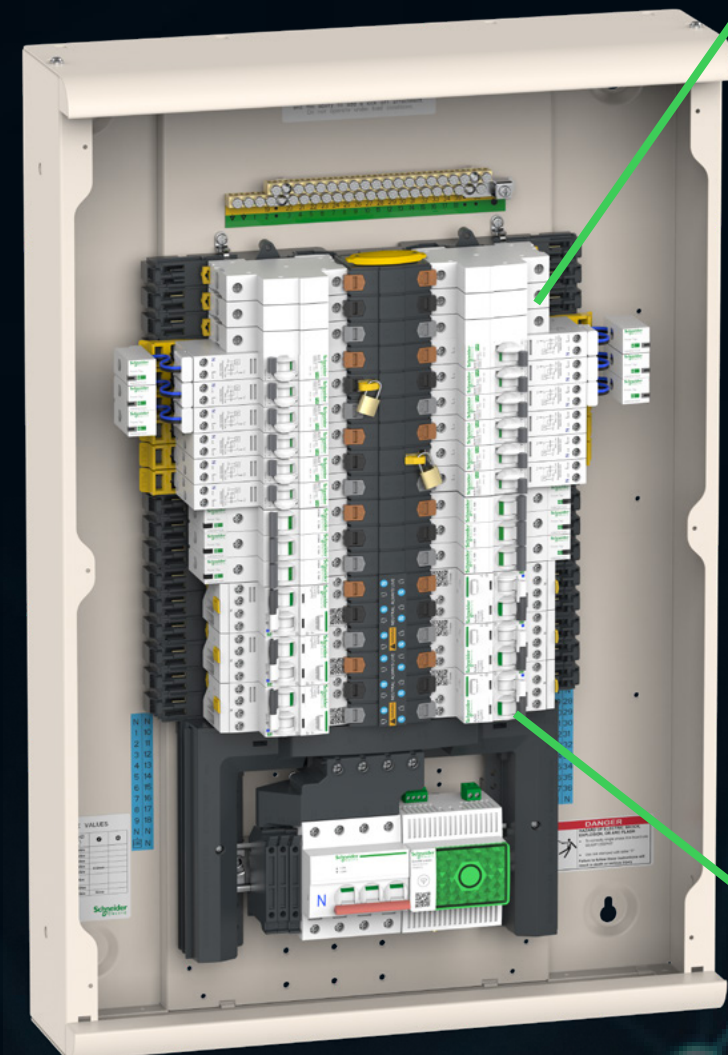
Sustainable

- Suitable energy targets
- Green Premium offer
- sustainable packaging



Best-in-class connectivity in a simplified form

To realize the full potential of visibility and advanced protection, the Active Safety System brings together a connected device, a gateway, and power monitoring software.



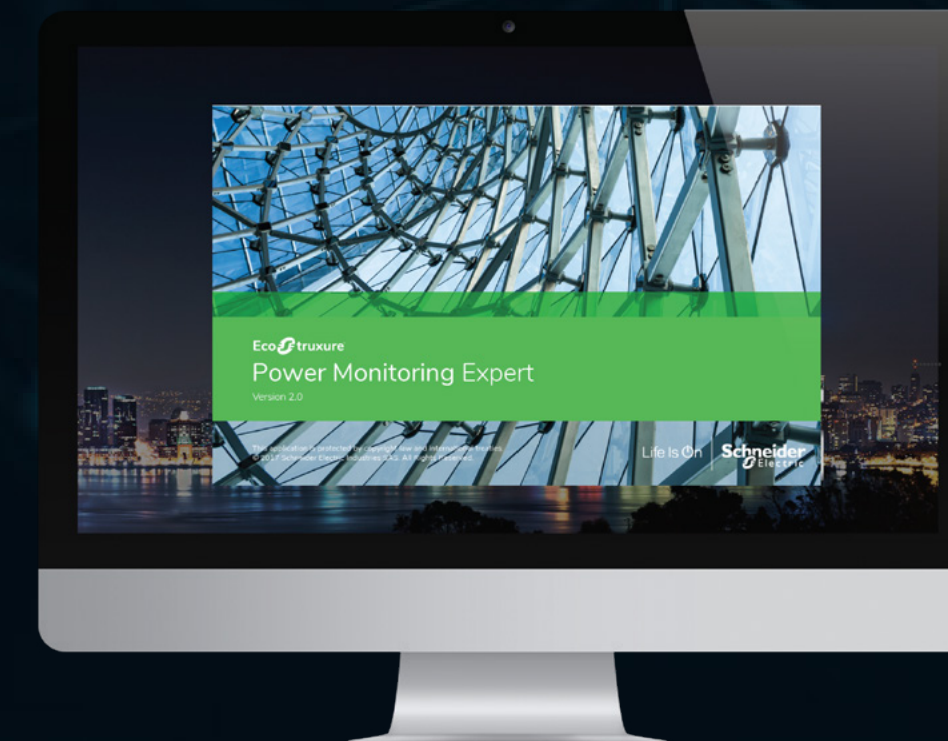
Acti9 Active

A range of devices providing advanced safety functions and in-built connectivity. They connect wirelessly to the gateway and send data to enable monitoring, diagnostics, pre-alarming, and alarming.



EcoStruxure Panel Server (the gateway)

One of the most advanced gateways for modern-day wireless systems. It's simple to commission and cost-efficient.



EcoStruxure Power Monitoring Expert

Intuitive-to-use software that aggregates installation data for greater visibility and displays actionable insights. It alerts facility managers to problems as they occur as well as to predicted issues.

Hybrid or standalone Acti9 Active Distribution boards



Wireless connection with the gateway



No add-ons required, in-built connectivity



Fast installation



Compact size (all in 36 mm)



Easy integration with EcoStruxure Power Monitoring Expert

Acti9 Isobar P – Active distribution board

Modular – Ready to Install

Flexible to build your configuration suiting all applications

Optimized System

With AFDD integration in Hybrid & standalone enclosure

Simple, Quick & Easy to design / install

Reduce number of devices, cabling & screw connections

Acti9 Active – combination device

All-in-one combination protection

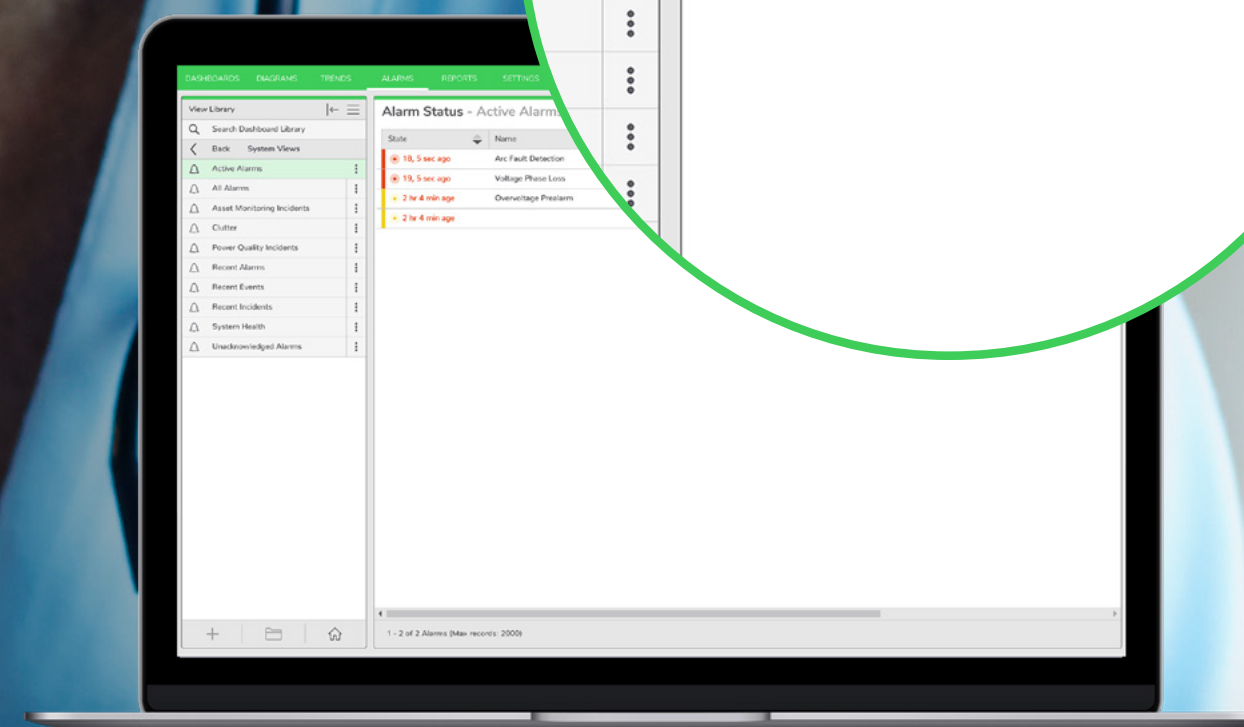
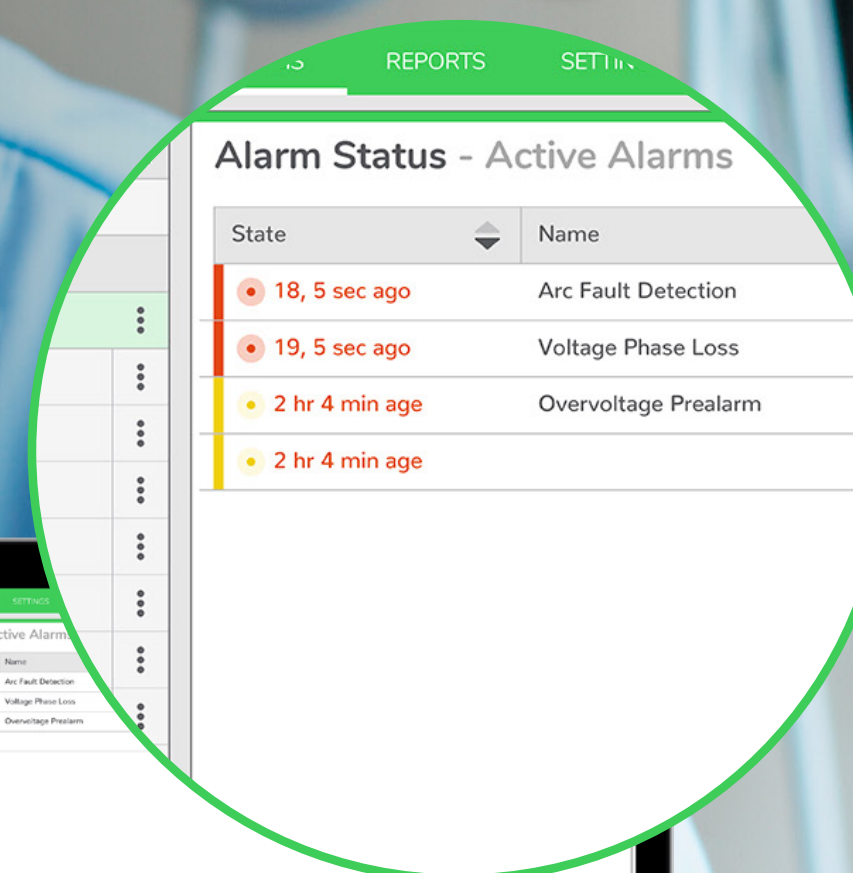




Monitoring critical loads to protect power availability

Electrical safety is one of the most important considerations in any building. But, as the name implies, in critical buildings it's even more vital... and could even be a case of life and death. With modern buildings, such as hospitals, requiring multiple electrical loads the chance of an overload or power disruption is increased.

In most cases, the only way for a facility manager to spot circuit overload in advance is to regularly, physically inspect all installation areas. An **Active Safety System** makes it much easier to monitor and predict faults. With Acti9 Active at the core of the system, a pre-alarm is sent when electrical faults such as an overload are detected. The alarm thresholds can be individually customized, for example at 70% installation capacity, so there is enough time to take preventive actions.





Detecting an arc fault to help avoid electrical fire risk

AFDD alarm

An **Active Safety System** is essential in buildings where visitors and guests bring in electrical devices of their own. This equipment, such as mobile and laptop chargers, could already have faults, or an improper installation or wiring could also cause an issue.

This could result in an electrical fire due to an arc fault. An **Active Safety System** can prevent this from happening. Acti9 Active has an integrated arc fault detection device (AFDD), which will trip as soon as it detects the fault and can immediately send an email or a text message to the facility manager. The alert provides the exact reason for tripping, so the facility manager can take appropriate corrective measures.

Energy	
Status	
Residual Current Prealarm	Inactive
Residual Current Detection	Inactive
Arc Fault Detection	Inactive
Overvoltage 120%	Inactive
Overload Prealarm	Inactive
Overload	Inactive
Voltage Phase Loss	Inactive
Break Status	Closed

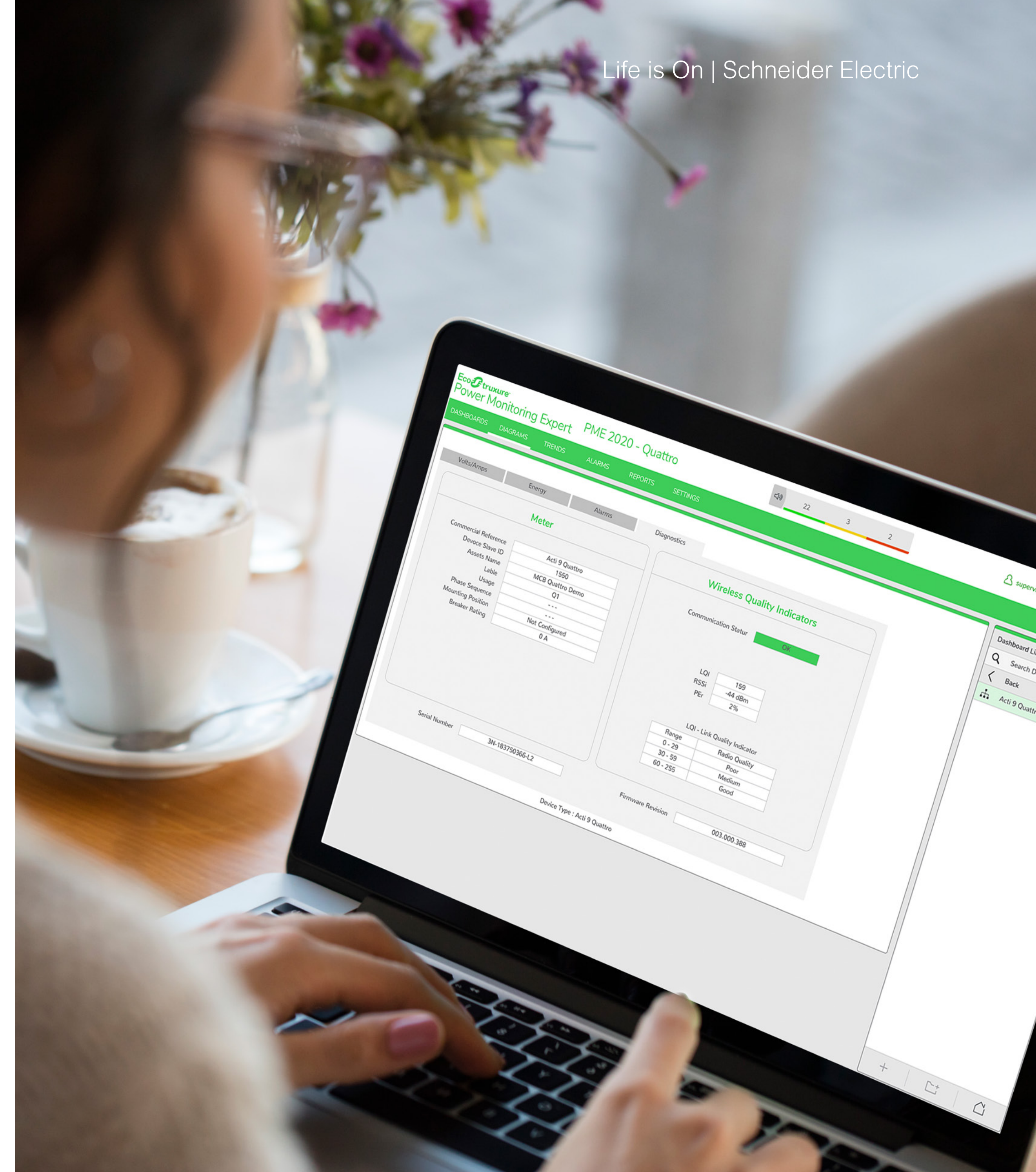
Make active safety your new standard for resilient businesses

In today's world, electrical system health is critical to ensuring the continuity of services. A malfunction can cause huge financial losses or, in some cases, even threaten human life.

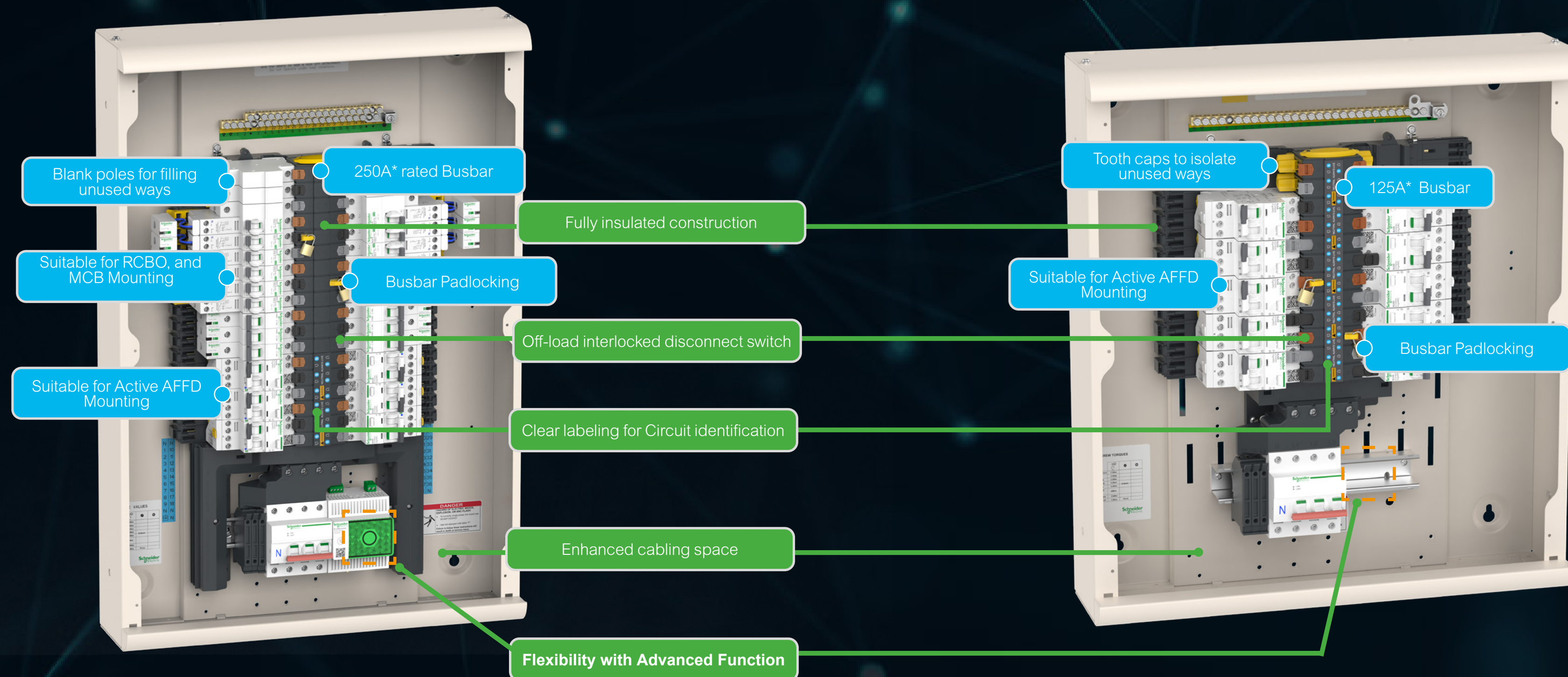
To help you maximize the protection of your customers' operations, Schneider Electric has developed a new proactive approach to electrical safety. It helps enhance power reliability and availability through monitoring and anticipating threats rather than waiting for them to occur.

An **Active Safety System** is an all-in-one solution combining the safety features of miniature circuit breakers, residual current devices, and arc-fault detection devices along with monitoring, pre-alarming, alarming, and diagnostic capabilities. This combination enables early detection of installation issues and electrical faults to help avoid or mitigate their consequences.

At the core of the system, **Acti9 Active** enables detection and alarming thanks to its integrated earth leakage protection, overload, over-voltage, and arc-fault protection capabilities, as well as in-built connectivity. All this in one compact breaker of just 36 mm.



Ready to install Acti9 Active AFDD distribution boards



Hybrid
Distribution System

Standalone
Distribution System

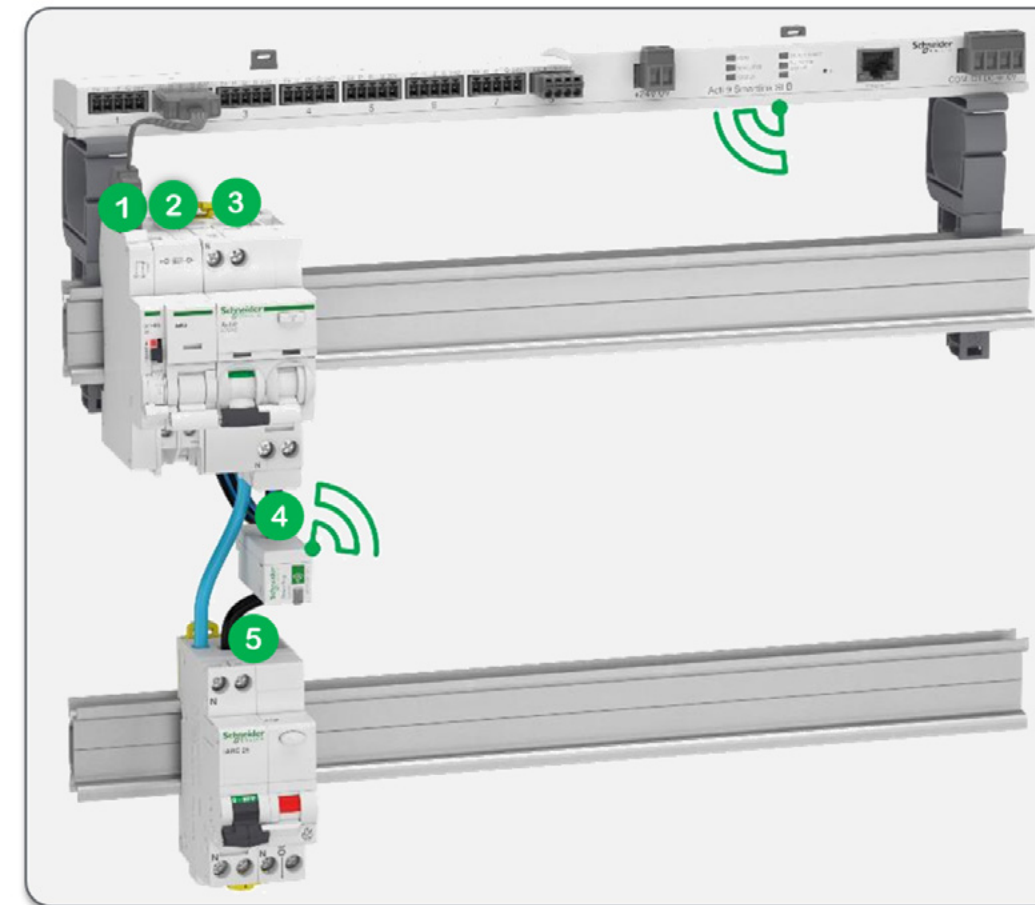
Advanced visibility and protection in a simple compact system

An **Active Safety System** doesn't only give you advanced protection and control, it also makes everyday life simpler for you and your customers.

For you, it's a simple offer giving you all types of protection. At its core, Acti9 Active replaces the need to have separate devices or add-ons for connectivity. With one device instead of five, it achieves an even wider range of protection and visibility.

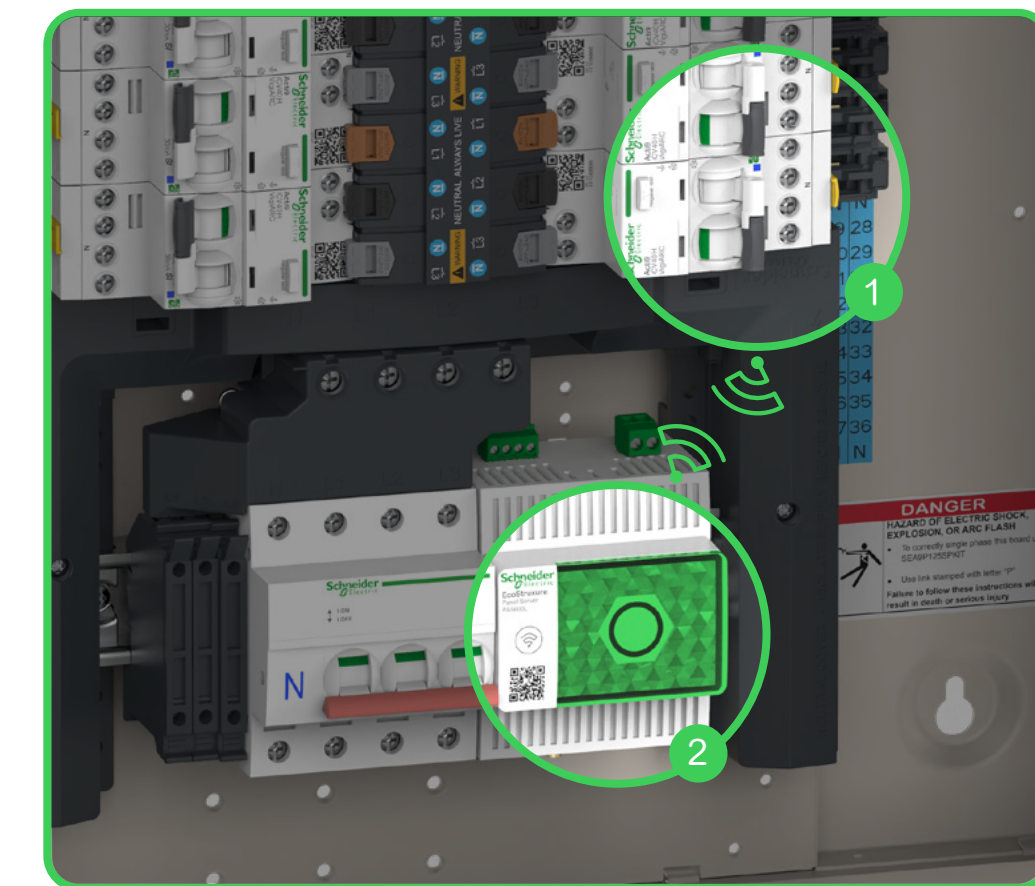
As a result, you also save your customers space in the electrical panel without making any compromises to the overall system.

Existing connected system



- 1 OF/SD (open/closed status)
- 2 MSU (protection with over-voltage release)
- 3 RCBO (MCB + RCD)
- 4 PowerTag (power measurement) for connectivity
- 5 iARC (arc-fault protection)

New Active Safety System



- 1 Acti9 Active
- 2 EcoStruxure Panel Server

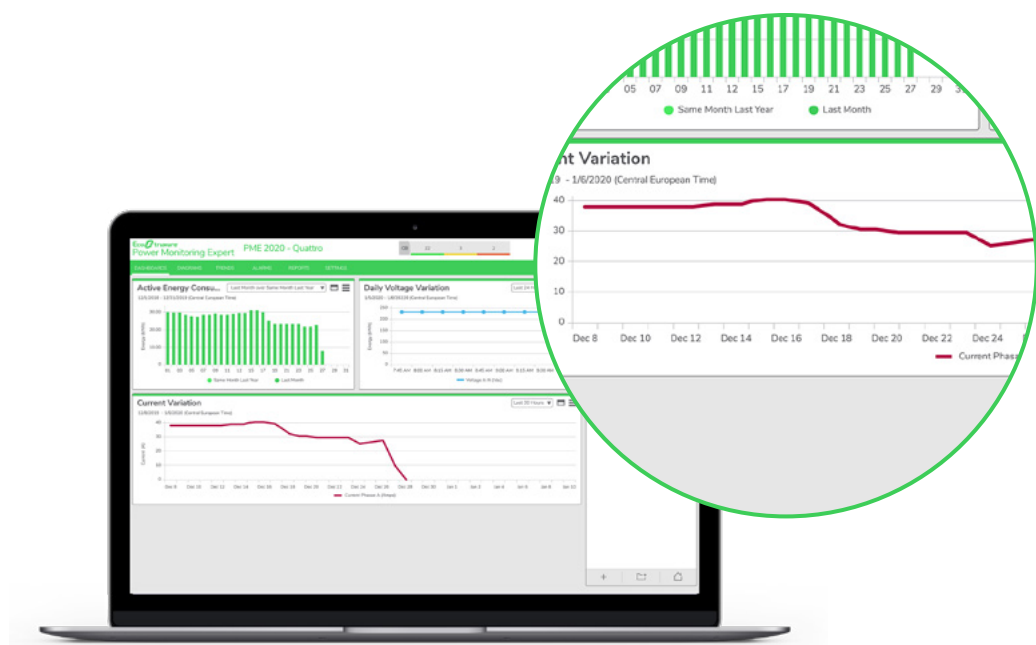
All-in-one protection in a single 36 mm device

A core part of the **Active Safety System**, the Acti9 Active with integrated residual current device (RCD), miniature circuit breaker (MCB), AFDD, and over-voltage protection delivers an exceptional level of protection for people, appliances, circuits, from fire risks – enabled by a compact all-in-one device. Available in both connected and non-connected versions, Acti9 Active supports a variety of safety and connectivity requirements.

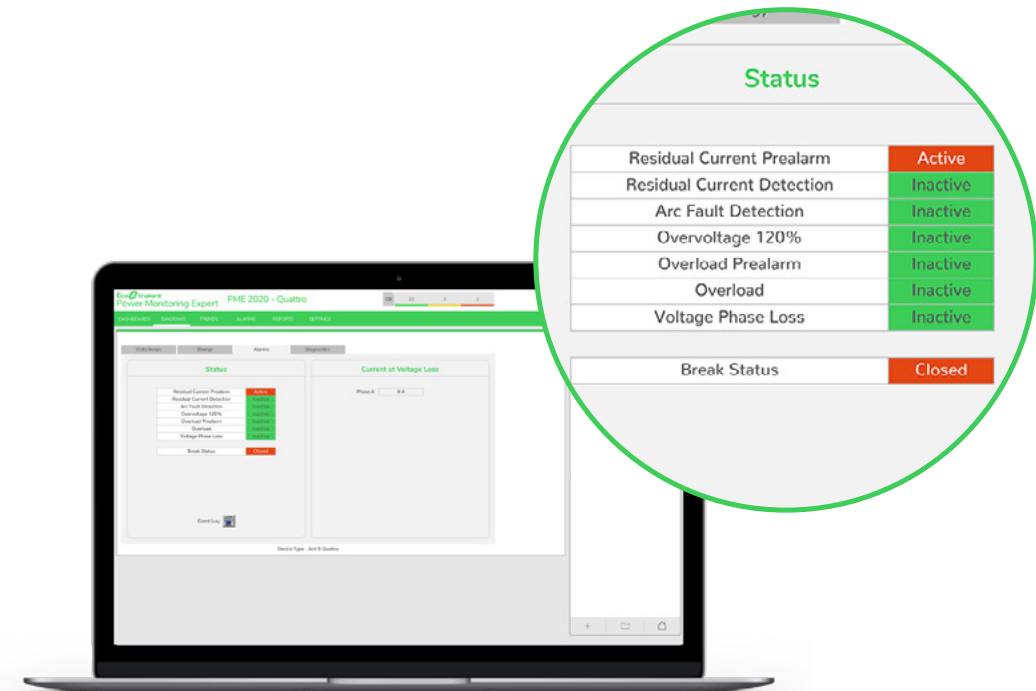


Adding layers of visibility on top of advanced protection

Our innovative EcoStruxure™ software puts you in control of your electrical panel and how you respond to any potential issue.



See trends and historical data



Get alerts and see the exact nature of the fault

Alarms & pre-alarms:

- Customizable thresholds for pre-alarms
- Overload
- Earth leakage
- Overvoltage

Measuring & remote monitoring:

- U, I & P measuring
- Load monitoring



Diagnostics & analytics:

- Indication for nature of electrical fault
- Historical data
- Protection logs

Advanced protection:


- Protection for people, appliances, circuit, and against fire
MCB+MSU+RCD+AFDD

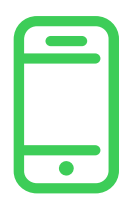
Achieving greater resiliency and reliability through active safety

Through advanced notifications, diagnostics, analytics, and a compact integrated device, an **Active Safety System** gives business owners and maintenance personnel greater control over their building's electrical health and, in turn, enhances service continuity.


Enhanced protection, power availability, and reliability

 **Increased service continuity:** fewer breakdowns with pre-alarms and alarms

 **Advanced safety:** all-in-one solutions covering a wide-range of faults, with in-built MCB, MSU, RCD, and AFDD

 **Enhanced efficiency:** easy remote monitoring, diagnostics, and analytics mean fewer disruptions and more efficiency gains

Simplified installation and wireless connectivity

 **Simple installation and upgrade** Acti9 Active Distribution boards with integrated devices and wireless connectivity with the gateway make the system easy to install and upgrade


 **Compact, requiring no extra space:** an integrated device in 36 mm makes it suitable for even small spaces

 **Easy maintenance:** with diagnostics, analytics, and reminders for health checking, it's simple to stay on top of the panel's condition and maintain it

Understand technical features of all-in-one and advanced protection devices

Connected Acti9 AFDD devices provide advanced protection. The all-in-one protection device integrates MCB, RCD, and AFDD, with in-built connectivity capabilities.

Offer Specifications

Connectivity	 Inbuilt Connectivity
Current ratings	6 A – 32 A
Breaking capacity	10,000 A
Poles	1P + N
Curve	C
RCD sensitivity & type	30 mA, A SI

Acti9 Active

An all-in-one device with integrated connectivity



AFDD+MCB+RCD+MSU

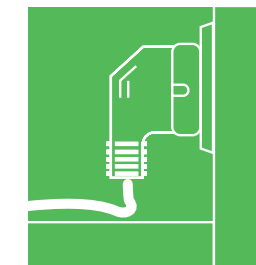
Advanced protection from fire with integrated Arc Fault Protection Device



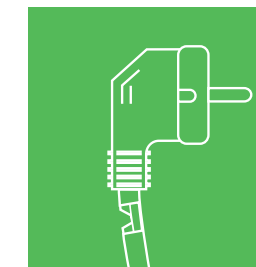
An electrical arc fault occurs when there is a damage in the insulation of a wire due to gradual wear and tear. Electrical arcs get formed through these damaged surfaces which spread gradually damaging the insulation even further, resulting in fire eventually.

Such small arc can not be detected by traditional protection devices and need specialized devices called “Arc Fault Protection Devices (AFDD)”. These devices trip and break the circuit open as soon as they detect arc. With inbuilt connectivity along with AFDD in all-in-one “Acti9 Active”, the protection is further reinforced as an alarm is triggered as soon as AFDD trips thereby alerting professionals to take suitable action.

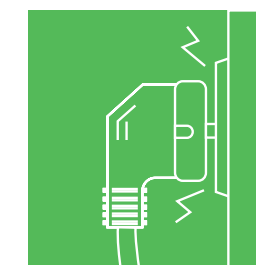
Situations that can damage cable insulation causing arcs



Power supply cord subjected to excessive forces (by furniture or a position)



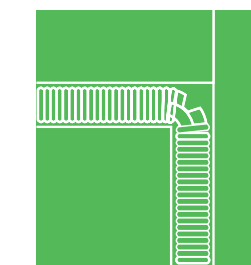
Power supply cord defective following inappropriate or excessively numerous operations



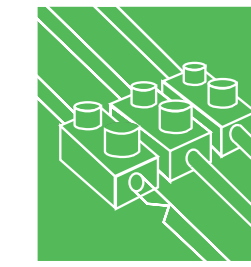
Power sockets in poor condition



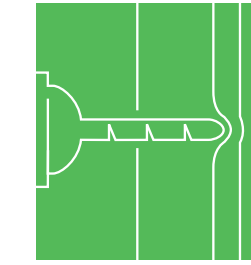
Loose connections



Ageing of cables and protective devices



Cables weakened at connection



Accidental damage to a cable



Cable damaged by the environment, UV, vibrations, moisture, rodents and power sockets in poor condition

Integrated Arc Fault protection supporting regulatory standards

Applications for an Active safety System

The wiring regulations (Requirement for Electrical Installations BS7671) already recommends installing arc-fault detection devices.



Sleeping accommodation,
e.g. bedrooms
(in residential),
hotels, nursing homes



Locations with re risks
due to the nature of
processed or stored
materials, e.g. barns,
woodworking shops,
stores of combustible
materials



Locations with combustible
constructional materials,
e.g. wooden buildings




Fire propagating
structures, e.g. high-rise
buildings

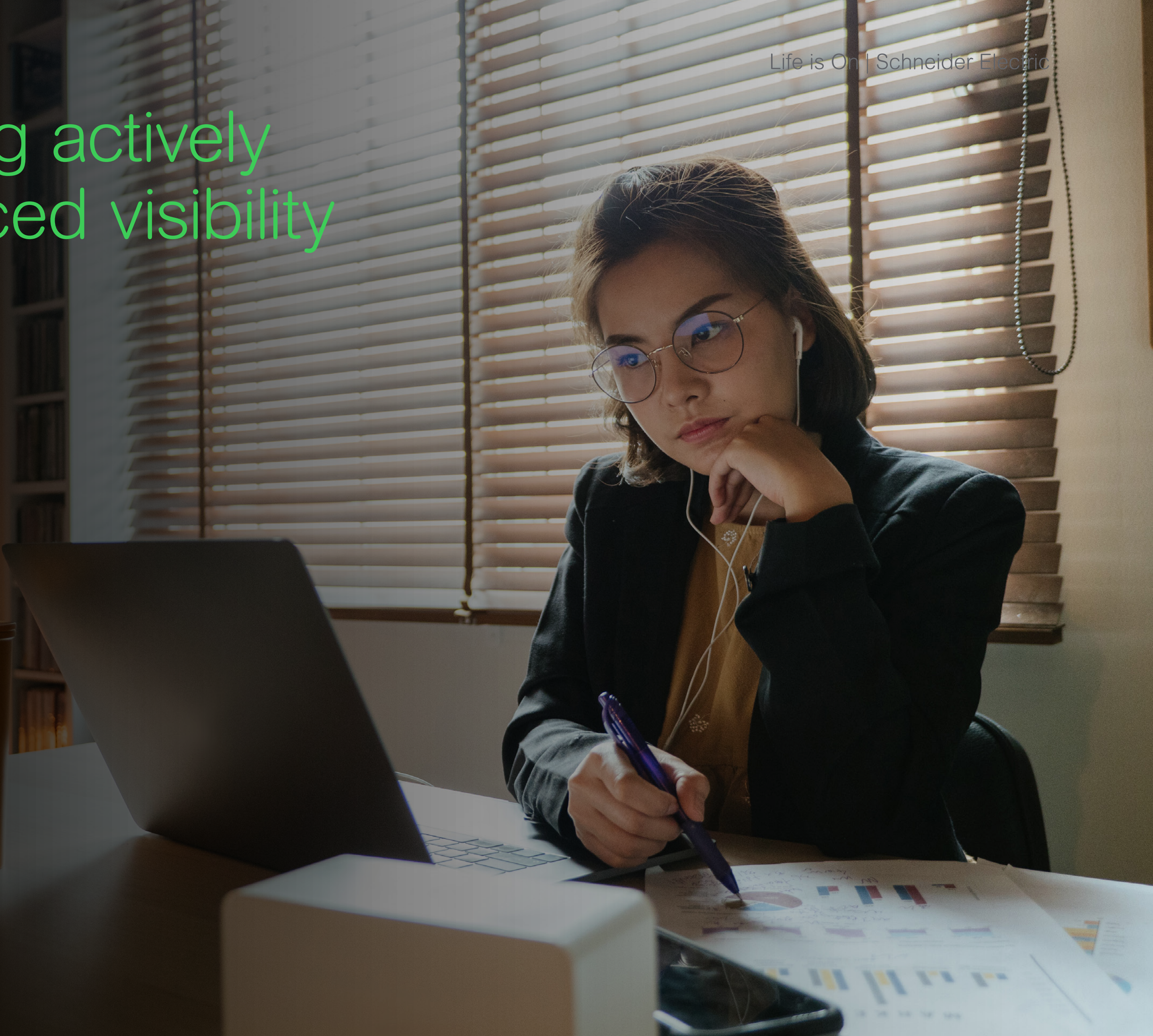


Locations with
endangering of
irreplaceable goods,
e.g. museums

Resilience is all about being actively notified and having advanced visibility



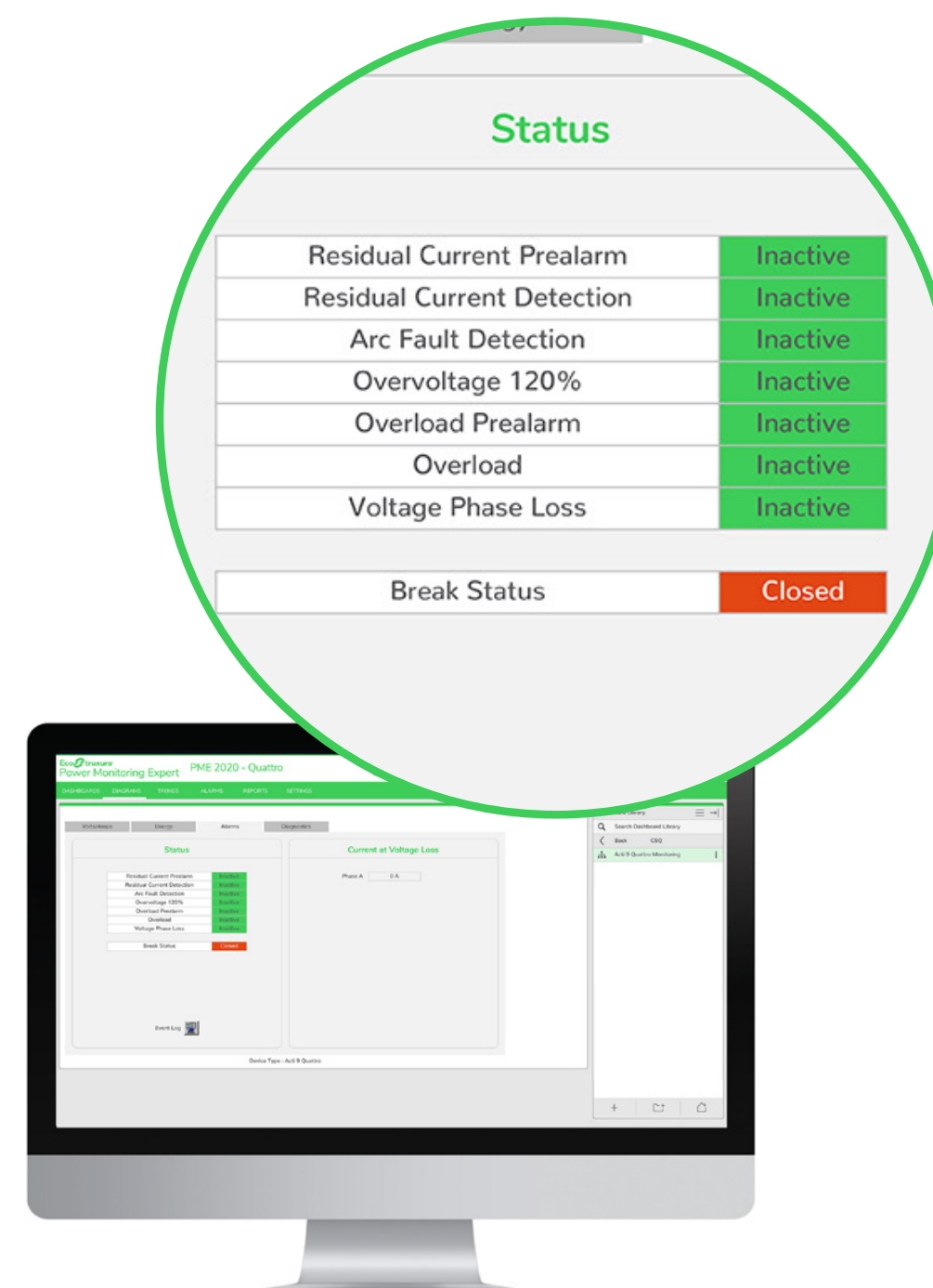
Energy	
Status	
Residual Current Prealarm	Inactive
Residual Current Detection	Inactive
Arc Fault Detection	Active
Overvoltage Prealarm	Inactive
Overvoltage 120%	Inactive
Overload Prealarm	Inactive
Overload	Inactive
Voltage Phase Loss	Inactive
Breaker Status	Open



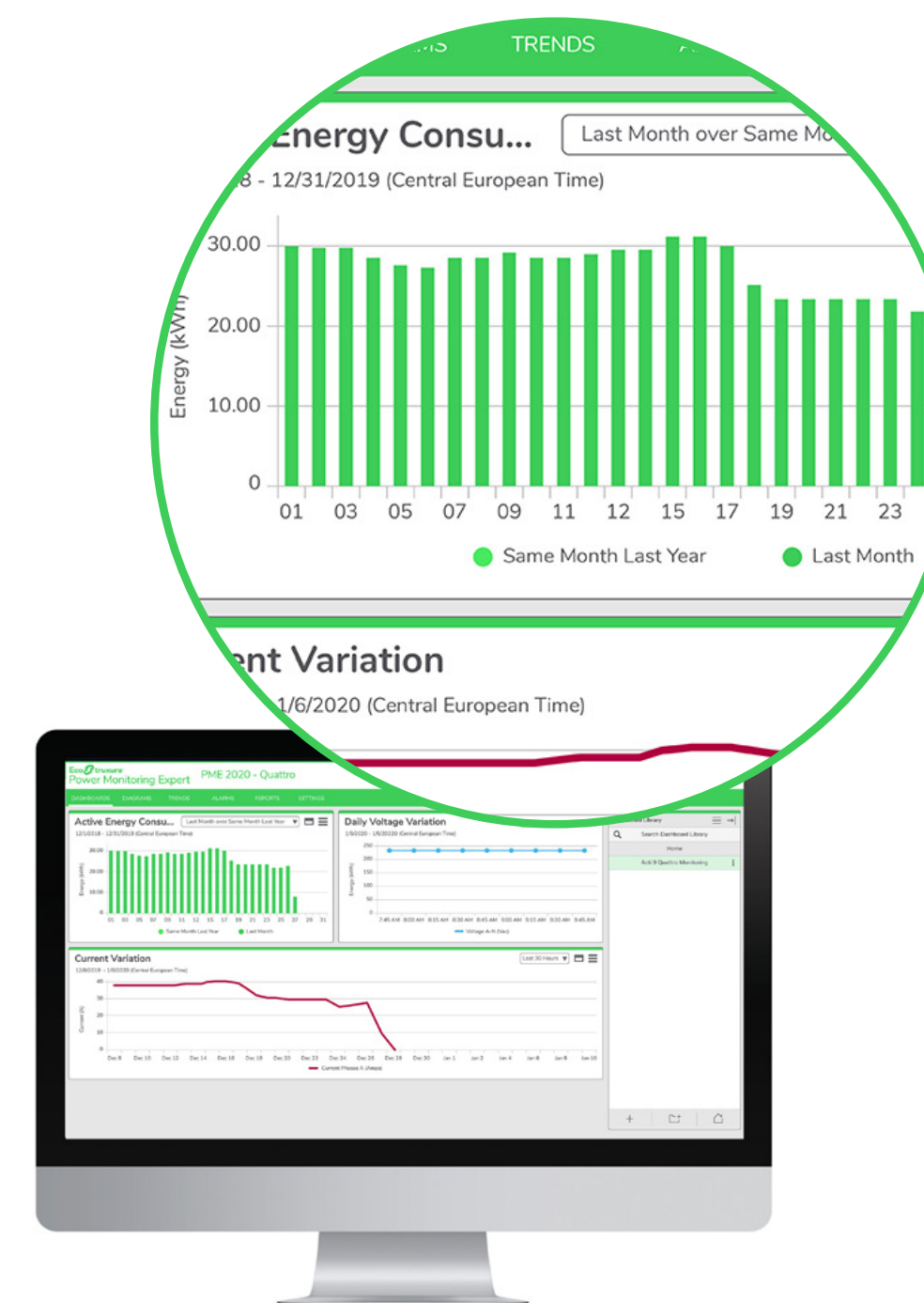
EcoStruxure Power Monitoring Expert for full visibility

EcoStruxure Power Monitoring Expert (PME) is the go-to web-app for visualizing insights, notifications, and diagnostics of an **Active Safety System**. It brings new capabilities that protect people and assets, keeps operations running, and saves time and money.

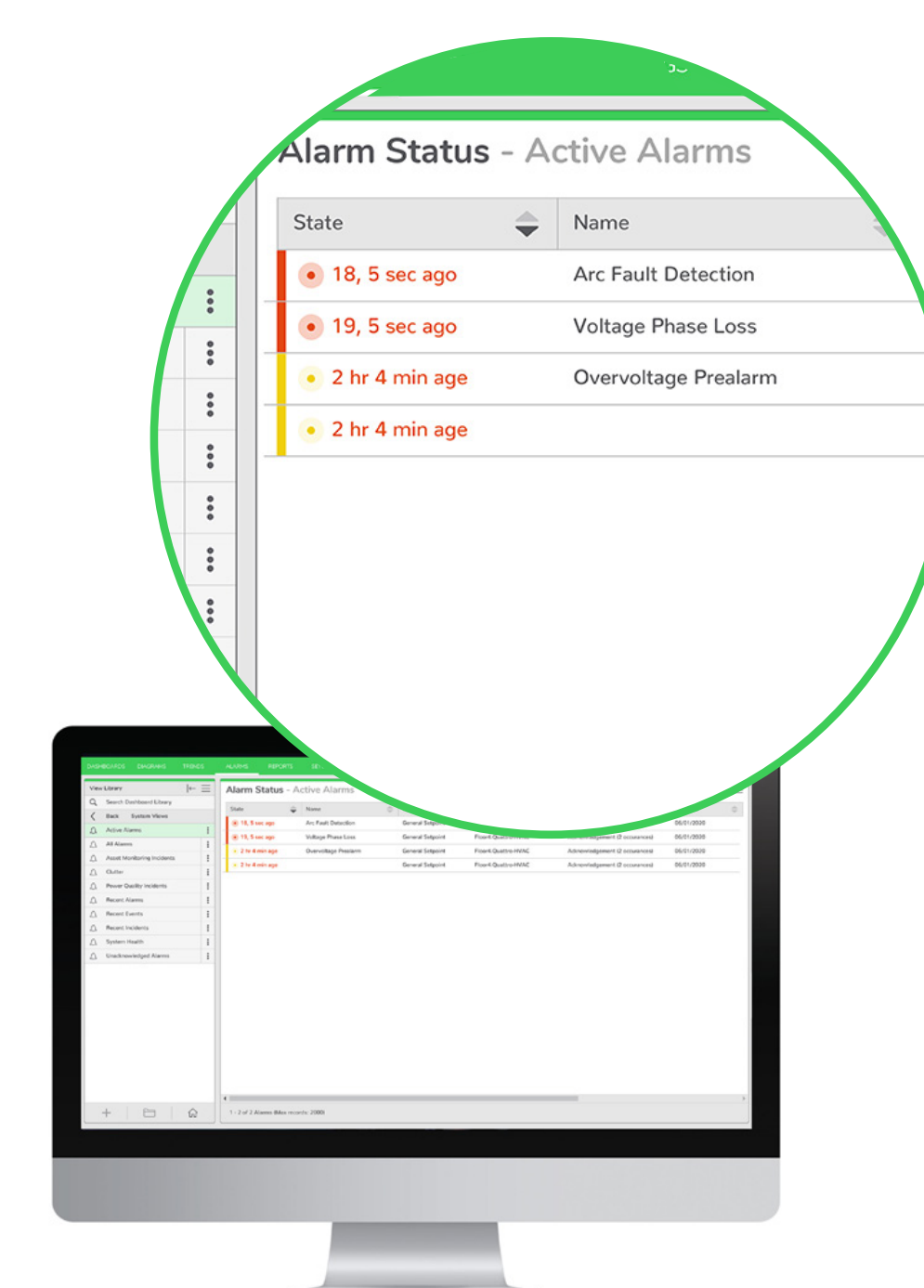
As part of EcoStruxure Power, EcoStruxure PME takes advantage of IoT connectivity and distributed intelligence to help maximize your customers' uptime, power availability, and operational efficiency. It's compliant with IEC 62443 cybersecurity standards, and provides your customers with a simple UI to see data, trends, and notifications.



Smart alarm clustering for easy search, filter, and categorization



Graphic timelines to easily locate events and alarms, and advanced energy visualization to calculate, forecast, and track performance indicators (EnPIs)



Identification of fault type, enabling quick and effective fixes

An advanced gateway for simplified connectivity

Meet EcoStruxure Panel Server, a high performance gateway that enables cloud connectivity in an **Active Safety System**.

A high-performance, future-ready gateway, EcoStruxure Panel Server provides convenient connection to edge control software programs, BMS systems, and cloud applications. It enables you to retrieve data from your wireless sensors and Modbus devices, and optimize your energy management solution, with:

- Ease of commissioning with the EcoStruxure Power Commission tool, enabling device plug & play and auto-discovery features.
- Ease of operation with user-friendly embedded webpages, and data contextualization for more relevant analytics.
- Greater security, designed through a secured development lifecycle in accordance to IEC 62443-4-1 and certified for IEC 62443 SL1.
- More connectivity, with robust communication protocols, including Ethernet, wireless communication, Bluetooth, WiFi, and optional cellular routers.



Active Safety System within EcoStruxure



Make active safety your new standard

Give your customers greater control over their electrical installations with an **Active Safety System**. Its advanced safety and connectivity features enable condition monitoring, improve visibility, power availability, and reliability, and enhance protection, service continuity, and efficiency.

The system enables you to offer more than just a safety solution. The insights it provides, along with its remote-monitoring capabilities, support business owners' efforts to ensure the continuity and quality of services and help achieve greater peace of mind.

Innovative, yet compact and functional, an **Active Safety System** will help you differentiate as a forward-looking professional and bring you new opportunities to develop your business.

Acti9 Active AFDD distribution boards

Part Number	Description	No. AFDD ways	No. TP ways	Height (mm)	Width (mm)
SEA9BPN8AFD6	A9 Isobar B Board 8 TPN , 6 Active AFDD ways Hybrid Enclosure	6	8	700	470
SEA9BPN14AFD6	A9 Isobar B Board 14 TPN, 6 Active AFDD ways Hybrid Enclosure	6	14	862	470
SEA9BPN10AFD12	A9 Isobar B Board 10 TPN, 12 Active AFDD ways Hybrid Enclosure	12	10	862	470

PoN + ACTIVE



Part Number	Description	No. AFDD ways	No. TP ways	Height (mm)	Width (mm)
SEA9BPNAFD12	A9 Isobar B Board Standalone enclosure 12 Active AFDD ways	12	N/A	538	470
SEA9BPNAFD24	A9 Isobar B Board Standalone enclosure 24 Active AFDD ways	24	N/A	808	470
SEA9BPNAFD36	A9 Isobar B Board Standalone enclosure 36 Active AFDD ways	36	N/A	1024	470

Available from July 2022

ACTIVE

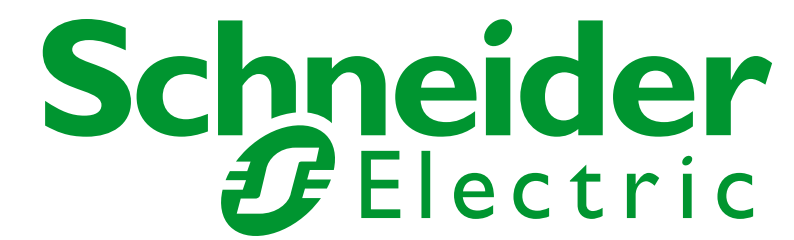


Acti9 Active AFDD devices

Part Number	Description	Function
A9TDFD606	6A 30 mA A SI C 1P+N	MCB+RCD+AFD+Connectivity
A9TDFD610	10A 30 mA A SI C 1P+N	MCB+RCD+AFD+Connectivity
A9TDFD616	16A 30 mA A SI C 1P+N	MCB+RCD+AFD+Connectivity
A9TDFD620	20A 30 mA A SI C 1P+N	MCB+RCD+AFD+Connectivity
A9TDFD625	25A 30 mA A SI C 1P+N	MCB+RCD+AFD+Connectivity
A9TDFD632	32A 30 mA A SI C 1P+N	MCB+RCD+AFD+Connectivity



Life Is On



To learn more about our
Active Safety System, visit:

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