



Panel Builders

Complete solutions for LV Panels and MV Switchgears manufacturing
2023

se.com

Life Is On

Schneider
Electric

About our Company

Sustainability is at the core of our purpose, culture and business as we accelerate our contributions to a sustainable and inclusive world.



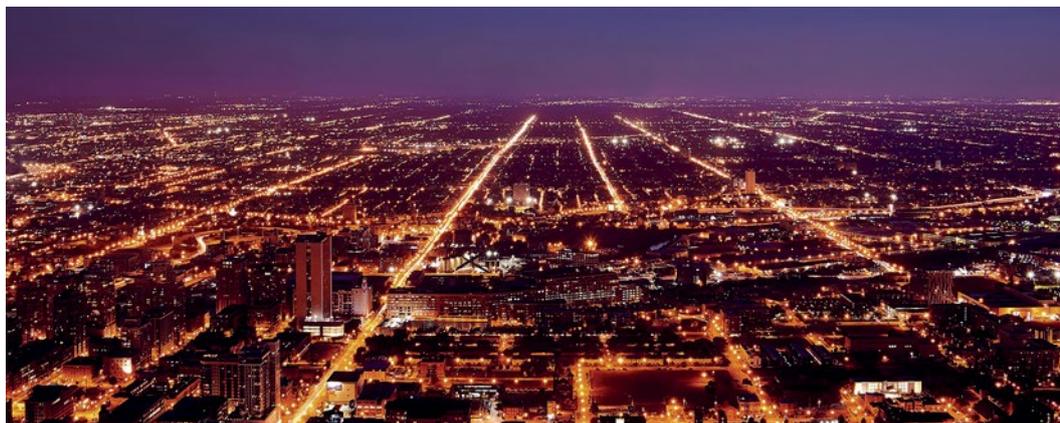
Schneider Electric in figures

€28,9 bn

2021 revenues

128.000

employees in 100+ countries



We empower our 650,000+ strong partner ecosystem to expand our coverage, and we arm our 4,200+ EcoXpert program partners to drive new digital business opportunities.

We provide end-point to cloud intergration connecting products, controls, software and services.

Our mission is to be your digital partner for sustainability and efficiency.

Targets by 2025

80%
green revenue

800
million tons
of CO₂ emissions
savings for our
customers (since 2018)

1,000
top suppliers
to reduce CO₂ emissions
by 50%

On our way to
net-zero by
2030 **THE Paris...
CLIMATE
PLEDGE 10 years
Early**



Pioneering the future of intelligent buildings and the iot for shared customers

+2.5B

Urban population growth by 2050

Building digitization

X3 in 6 years

+60%

Electricity consumption planned for 2035



One program.
One network.
Endless opportunities.



A global program with local support no matter where you are:

3,000
certified partners

40
countries

By becoming an EcoXpert business partner, you gain the strength behind our global brand, our expertise in building control, power management, and energy efficiency, as well as exclusive benefits that include competency development, favorable rewards, and continuous coaching on cutting-edge technology and solutions.



Grow your business

Collaborate with Schneider Electric and the EcoXpert network for innovative solutions that win new opportunities and improve your hit rate.



Maximise your margin

Gain a competitive edge with tested, validated, and documented technologies and solutions.



Differentiate yourself

Rise above the competition with co-branding and co-marketing initiatives for business partners.



Improve employee talent

Increase retention rates and decrease the time it takes to onboard new hires through a comprehensive training and certification process.



Save time

Access the tools you need to optimize the integration of third-party systems and minimize engineering and commissioning time.



Capture new market share

Rely on the support of Schneider Electric at every turn of your expansion as a business partner.

[More information on se.com](#)

Discover the EcoXpert Certifications

Power Distribution and Management



Digital Panel
Proven expertise in building of smart panel with smart offers and digital architecture and deliver a tested smart panel.



Power Upgrade
Proven expertise in digital commissioning of connected panels and perform essential level of maintenance service.



Power Automation
Proven expertise in deploying high- and medium-voltage substation automation systems using LEDs and software tools, EPAS or Power Operation SCADA system to improve observability, controllability, and reliability of the customer's ED.



Power Distribution
Proven expertise in power distribution and motor control, manufacturing certified and smart ready, low-voltage or medium-voltage switchboards.



Power Management
Proven expertise in integration and commissioning of electrical systems to drive energy management & operational efficiency using on-premise or cloud-based solutions.



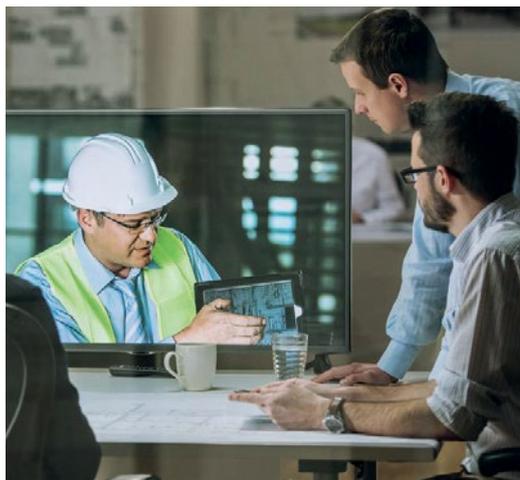
Power Services
Proven expertise in maintaining the availability and durability of electrical distribution installations with field and digital services.



Giving you more to get more done with our software and tools



Search and select



Discover our products, software and services. Select the offer that best suits you.



Explore our products for panel builders



mySchneider Panel Builder program
The program designed to help you access the resources and training you need



Find your sustainability solution



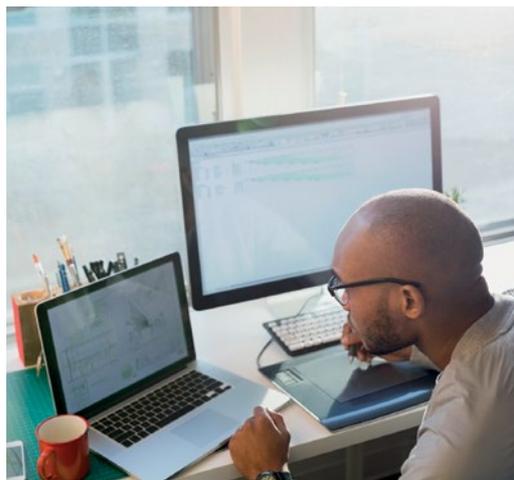
mySchneider App
Access our catalog online and offline, personalize your service and talk to our experts directly with the mySchneider app.



Schneider Electric Exchange
Find digital solutions for solving energy and automation challenges



Configure, quote and build



Get your quote and find your contract



SEE Electrical 3D Panel+
Design and manufacture electrical panels in 3D



EcoStruxure Power Build - Rapsody
Configuration and quotation software for PrismaSeT switchboards



EcoStruxure Power Build - Medium voltage
All-in-one online configuration and quotation software dedicated to MV switchgear



EcoStruxure Motor Control Configuration
Build your complete motor control solution for protection and control of your motors



CanBrass
Design and quotation software for Canalis busbar trunking system



Where to buy ?
Find a distributor in your location



Check price and availability at mySE



Discover our program benefits, resources for your business, digital tools to help you design and build best in class equipment, and learn about our innovative offers.

✓ Operate and maintain

✓ Optimize



Find anything you need for the maintenance of your products

Stay connected to Schneider Electric



EcoStruxure Power Device app Single app to operate and maintain MV and LV connected devices from your mobile



EcoStruxure Power Discover the benefits of digitized power distribution



EcoStruxure Power Monitoring Expert Power monitoring software for reliable electrical networks



Facility management software Our comprehensive solutions to help carry out timely maintenance, manage building systems, supervise power supply systems, and optimize energy consumption.



EcoStruxure Facility Expert Software Software and app to help you deliver valuable services to optimize operation, monitor energy and control HVAC equipment remotely in single or multi-site buildings



EcoStruxure Power Advisor Optimize power system performance with analytics and expertise



Cybersecurity services Holistic cybersecurity programs to help maintain your defenses over time at your location

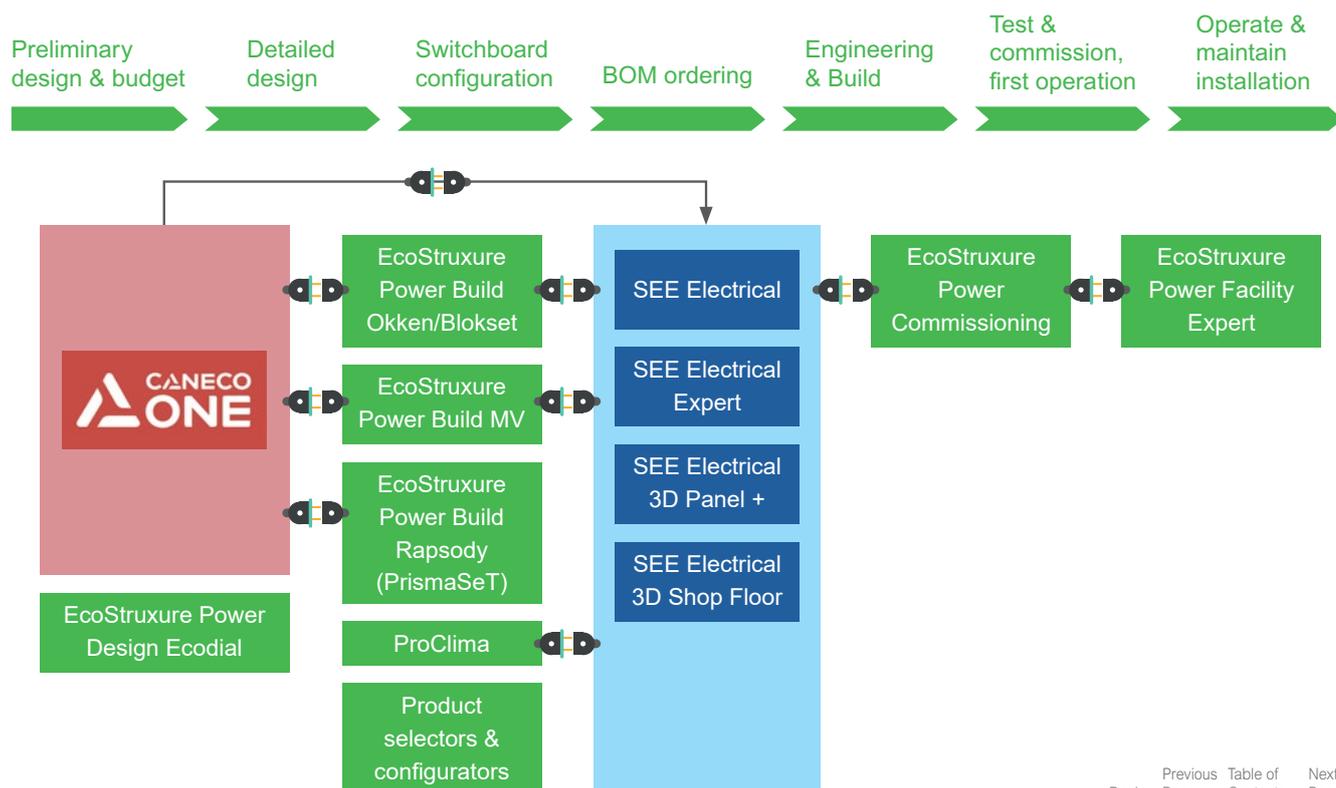


Software



Improve your Engineering & Production efficiency

A dedicated software for each step



Design Optimization

Caneco BT is a **software** for automated calculations, sizing, and diagrams of low voltage electrical installations.



Design optimization for Competitive alternatives

Challenge the Specs to optimize your panels and win your projects.

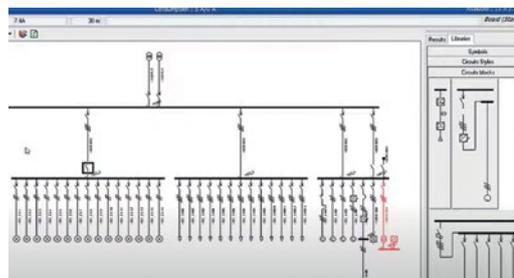
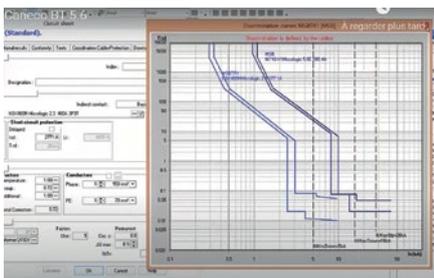
Service opportunities for your Customers!

Propose dimensioning Services to your customers in a hurry with a professional / Multi brand tool.

Save > 2h engineering per panel!

To transfer pre-design to your:

- Tendering Software: direct link to EPB Okken/ Blokset/MV
- Schematics/Detailed design: direct link to SEE Electrical Expert.



Features

Calculations and sizing

- Caneco BT performs all the calculations (Ik, du, If, ...) in compliance with the applicable standards and the electrical constraints of your installation
- It also determines the most economical equipment to protect the installation and the individuals

Discrimination and backup

- Caneco BT provides a diagnosis based on tripping curves, calculation and manufacturer tables
- It takes into account the currents, as well as the chronometrical and differential aspects to ensure discrimination that can also be reinforced by coordination

Automated diagrams

- Caneco BT automatically produces the diagrams of the electrical installation based on 3 dynamic data entry interfaces: network single-line diagram, board single-line diagram and spreadsheet

Effective data exchange

- Caneco BT allows data import/export from an Excel file
- The electrical data recovered from Revit®, is used for the automated production of the diagrams and the integration of the circuit data into Caneco BT
- Caneco BT converts the diagrams and the technical documentation of the project into a dxf file (an AutoCAD® file)

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Software

Switchboard configuration and quotation Efficiency

EcoStruxure Power Build Rapsody

Configuration and quotation software for Schneider Electric LV & MV cubicles

Software supporting panel builders and electrical contractors, all across configuration and quotation of power distribution switchboard



Reduce your quotation time!

- <1h per panel thanks to intuitive interface and project libraries
- Direct links to your pricing software.

Professional tendering documents

- Realistic 2D Front/Side/Top views
- Main Electrical & Mechanical BOM.

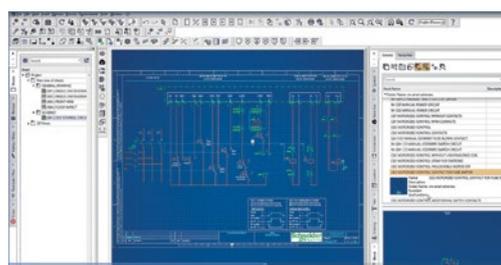
Reduce quotation risks!

> 95% accuracy.

Save > 2h engineering per panel !

To transfer tendering data to your Schematics/ Detailed design:

- Direct link EPB MV/LV → SEE Electrical Expert.



Features

You can find different version depending of the Switchboard offer or Country of commercialization as.

- EcoStruxure Power Build – Rapsody for PrismaSeT Low Voltage Switchboard in Western Europe
- EcoStruxure Power Build – MV for all Medium Voltage Switchboard
- EcoStruxure Power Build – Okken/Blokset for Okken & Blokset Low Voltage Switchboard
- EcoStruxure Power Build – easyprisma for PrismaSeT international Low Voltage Switchboards.

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Switchboard configuration and quotation Efficiency

EcoStruxure Power Build MV

Online Configuration and quotation software for Schneider Electric MV switchboards, dedicated to EcoXpert Panel Builders (Master and Certified)

Software supporting EcoXpert Panel Builders to save time, reduce effort and do more business, across configuration and quotation of primary and secondary distribution switchboards and components (transformer, protection relays)



Quick configuration

Save, re-use and customize project, optimize configuration with a guided interface, last minute changes.

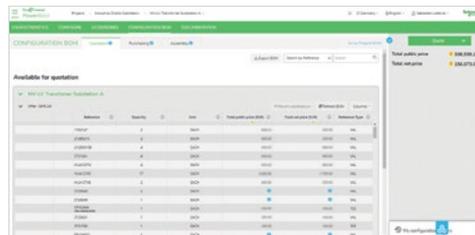


Peace of mind

Get always updated offers, accurate and error free assets.

Easy and accurate ordering

Access all the documents needed for ordering, ready to export.



Integrated Offers

- Switchboard ranges PIX Easy FR, PIX Easy MR, PIX 24, MCSet 1-2-3 et MCSet Marine, GM AirSeT (2024)
- Circuit breakers: SF, LF, Evolis, SF1 kit
- Contactors & Switch Disconnectors: Rollarc, LBS kit
- Protection relays: Micom, Sepam, PowerLogic P3 & P5 (previously Easergy P3 & P5), Easergy T300, VAMP.



Features

- Configuration & Quotation: Automatically generate a Bill of Material with **Net Prices from Front-Office**
- Generation of documents: Access & Export documents for Management Software
- Import & export of documents for Management Software
- Prepare Ordering:
 - Bill of Material (BOM): Entire Project BoM and each Cubicle BoM, BoM for Assembly, BoM for Quotation, BoM for Purchasing
 - Technical Bid
 - Single Line, Diagram (SLD), Global layout, Cubicle layout one by one

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Software

Engineering Efficiency

SEE Electrical

Electrical CAD software for creating wiring diagrams in a few clicks



Reduce drastically your engineering time!

>50% vs mechanical CAD (AutoCAD,...) thanks to electrical functions automation (cross refs, checks,...).

Quality - Error-free design

Eliminate many of the errors caused by repetitive manual tasks.

Saving set-up time

With >1 Million Multi-brand database:

- Schneider Electric LV/MV full database with >100k articles.

Forget dedicated workers for label production!

Direct export from Schematics to printers and engraving machines

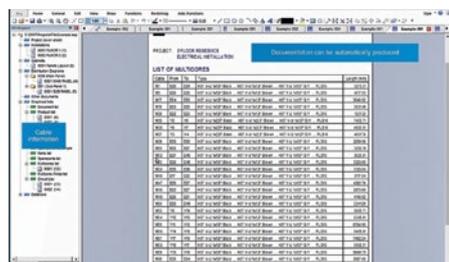
- To cancel typing errors
- To save drastically time to prepare stickers, labels, etc.



Exports to Production process made so easy!

Fully customizable reports for production available in a mouse-click

- Cables lists with connection information
- Material lists with label information
- ...



Features

- Editable hardware database (manually or via file imports) with over 1 million references
- Real-time editing of material lists
- Synchronisation of PLC card attributes in real time
- Increase the legibility and quality of your documents (generation of graphic terminal block plans, automatic wire numbering according to different formats, orientation of connections, hierarchisation of folders according to the functions and locations of your components, etc.)
- Reduction in the number of errors

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Production Efficiency to next level

SEE Electrical 3D Panel + / SEE Electrical 3D Shop Floor

3D Panel+ bridges the gap between the schematic and the manufacturing of the electrical cabinet.

SEE Electrical 3D Shop Floor: a mounting and wiring assistant dedicated to shop floors.



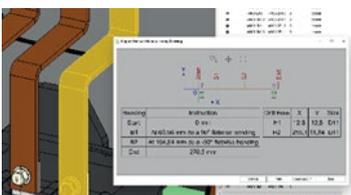
Anticipate collisions with 3D

Doors, Busbars, ..., on complex panels.

Save time & errors for doors, plates and busbars

Drillings & cuttings

- Export perfect plans to CNC machines (Steinhauer,..).

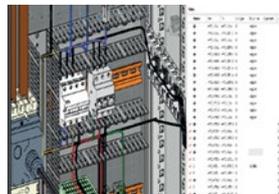


80% cabling time reduced!

Thanks to **automatic wire routing and wire calculation** in 3D & direct import in Cable preparation machines (Komax, ...).

Mounting & wiring learned in no more than 15 min!

Fully guided step by step mounting & wiring instructions on a 3D digital twin.



Features: 3D panel +

Electrically enabled 3D Engine

- Intelligent snapping system for components and enclosures
- Wire, net, cable routing and optimal length management algorithm
- Mechanical collision and Channel filling check
- STEP import/export with mechanical CAD software

Ready for manufacturing

- Mechanical processing data export
- Wire processing data export

Features: 3D panel Shop Floor

- Clear view on devices which need to be mounted and on their position
- Wire list provides clear information on involved devices and route to take
- Selected devices are highlighted and user can validate the mounting with a finger touch
- User can select wire in the list with mouse, finger or even by flashing barcodes engraved on wires
- Possible to filter by device, color, wire size, etc.

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Software

Efficient Tests & Easy to build Digital Twin

EcoStruxure Power Commission



Reduce your Communication testing time!

Automatic devices recognition & test report generated automatically.

Service opportunities to End User through Digital Twin!

- Create your full panel document on-line in a few mouse-clicks

One tool for all devices settings!

Breakers & communication settings easily done & stored.

Easy access & update of panel technical data through a digital logbook

Easy access & update on the field for the maintenance teams.

EcoStruxure



Features

Easy setup

- Discover all the smart devices in your electrical panel
- Easily check firmware compatibility to install upgrades as required
- View communication architecture to adjust communication settings
- Get the complete list of devices in the switchboard to configure electrical settings for breakers and meters

Reliable testing

- Easily test the communication wiring, troubleshoot issues, and generate reports as part of the Factory Acceptance Tests (FAT) or Site Acceptance Tests (SAT)
- Test Low voltage circuit breakers and their trip curve behavior during installation and maintenance and generate a report (paid feature).

Fast commissioning

- Generate a comprehensive project report that lists your switchboard and related devices, firmware version, and serial numbers.
- Use batch operations feature to speed up settings configuration for several devices at the same time (paid feature)

Digital collaboration

- Create a unique QR code for your switchboard and upload relevant documentation, including important CAD drawings, user guides, bills of materials, single line diagrams, and photos, to our secure cloud repository.
- Effortlessly initiate preventive maintenance plans by simply exporting your data to the digital logbook feature in EcoStruxure Facility Expert, our cloud-based software for facility and building management.
- The digital logbook functionality simplifies the project handover, enables faster and easier access to historical information and collaboration with all project partners



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About mySchneider app

Discover mySchneider app which offers tailored services, 24/7 access to our catalog, expert support and information. Download and register now to get access to recommended services and more.

✓ Top features at a glance



Access the Schneider Electric catalog on your device to see our complete range of offers, including public prices, FAQs, documents and more.



Register in the app to receive real-time notifications on updated technical documents, product news, and more.



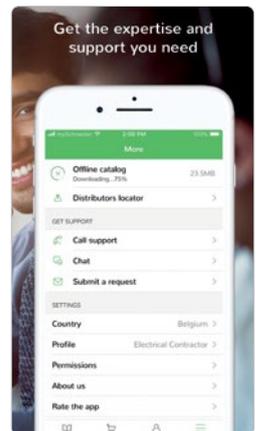
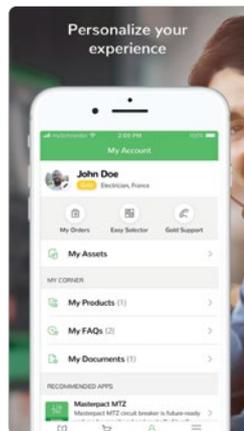
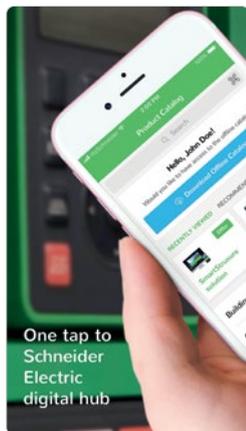
Find product information by using the built-in barcode/QR code scanner to save time.



Bypass long automated prompts: access key contact numbers through a call menu with one, simple tap.



Find the nearest distributor to help you get Schneider Electric product right away.



Download on the **App Store** | Get it on **Google play**

Download mySchneider for iOS > | Download mySchneider for Android >



Scan or click on QR code





Green Premium™

An industry leading portfolio of offers delivering sustainable value

More than 75% of our product sales offer superior transparency on the material content, regulatory information and environmental impact of our products:

- RoHS compliance
- REACH substance information
- Industry leading # of PEP's*
- Circularity instructions



Discover what we mean by green
Check your products!

The Green Premium program stands for our commitment to deliver customer valued sustainable performance. It has been upgraded with recognized environmental claims and extended to cover all offers including Products, Services and Solutions.

CO₂ and P&L impact through... Resource Performance

Green Premium brings improved resource efficiency throughout an asset's lifecycle. This includes efficient use of energy and natural resources, along with the minimization of CO₂ emissions.

Cost of ownership optimization through... Circular Performance

We're helping our customers optimize the total cost of ownership of their assets. To do this, we provide IoT-enabled solutions, as well as upgrade, repair, retrofit, and remanufacture services.

Peace of mind through... Well-being Performance

Green Premium products are RoHS and REACH compliant. We're going beyond regulatory compliance with step-by-step substitution of certain materials and substances from our products.

Improved sales through... Differentiation

Green Premium delivers strong value propositions through third-party labels and services. By collaborating with third-party organizations we can support our customers in meeting their sustainability goals such as green building certifications.

*PEP: Product Environmental Profile (i.e. Environmental Product Declaration)



Contents

Medium Voltage Switchgears components



Vacuum Circuit breakers

SF6 Circuit breakers

Contactors

Switches and Disconnectors

Cradle

Fuses

A

Incoming Protection



PowerLogic P1

PowerLogic P3

PowerLogic P5

Vamp 125

B

Switchboards and Enclosures



Okken

BlokSet

PrismaSet G & P

Spacial

Thalassa

ClimaSys

C

Power circuit breakers and switches



MasterPact MTZ

ComPact NSX & NSXm

ComPact INS & INV

TransferPact

EasyPact MVS

EasyPact EZC & CVS

D

Power monitoring and power quality



PowerLogic™ range

Panel Server

HeatTag

EasyLogic Power Meters

EasyLogic PFC

E

Motor control



Tesys Power

Tesys Control

Tesys Protect

Tesys Active

F

Control and signaling, Automation relays & Power supply



Push buttons

Cam switches

Tower lights

Control and time relays

Modicon Power supply

Linerger-TR

G

Electrical protection and control



Acti9 Active

MCBs

RCDs

SPDs

iCT

iTL

Auxiliaries - Accessories

Easy9

H

Critical Power



Galaxy™ V Series

Easy UPS Series

I





Medium Voltage Switchgears components

Ready-to-Customize and general overview A-20

Medium Voltage switching devices

Vacuum & SF6 Circuit-Breakers A-26

Vacuum and SF6 Contactors A-28

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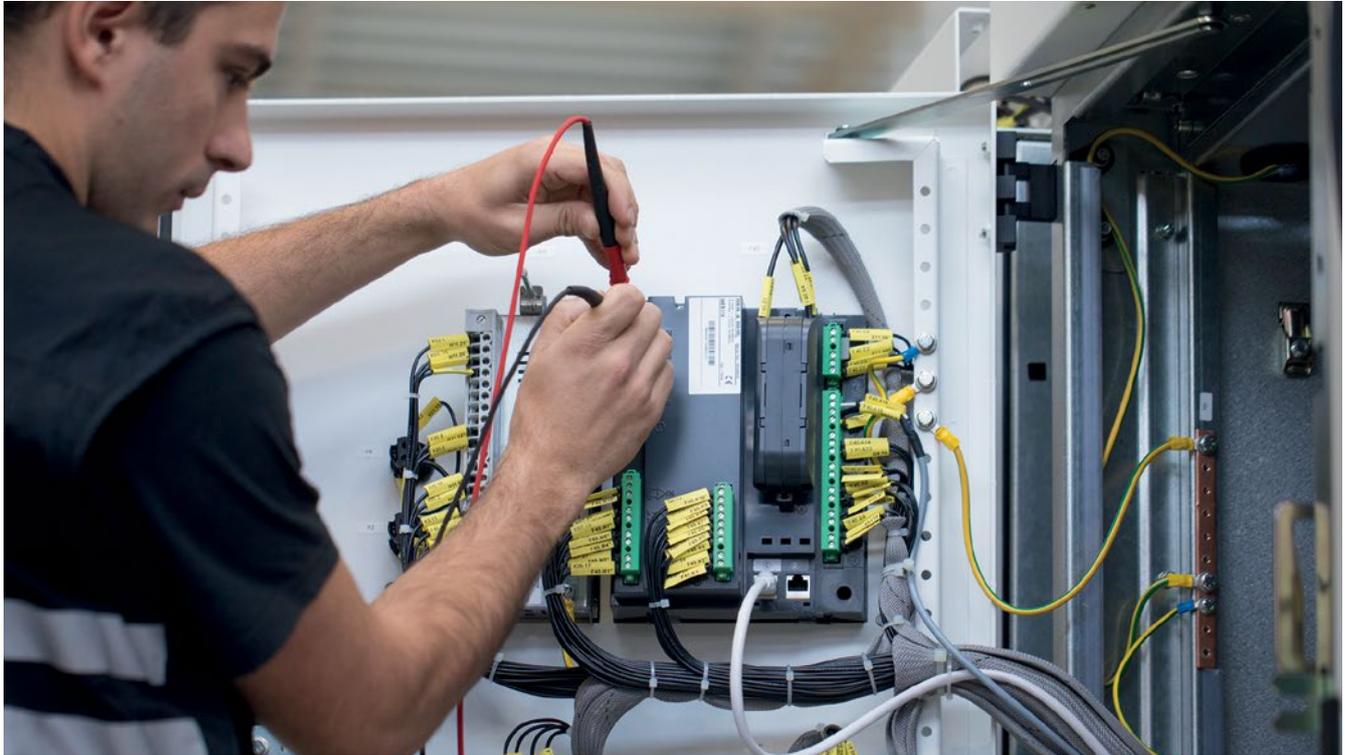
Medium voltage Cradle..... A-30

Medium voltage Fuses..... A-31



Ready-To-Customize

A



B

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E

Grow your expertise, opportunities, and revenues

With our Ready-To-Customize MV Switchgear, you'll receive a complete, pre-assembled, pre-tested, and certified MV switchgear. The switchgear will include a LV cabinet, ready to be customized by your team to meet the unique requirements of your customer.

Unique features

- Pre-assembled, certified, and tested Medium Voltage (MV) switchgear
- Low Voltage (LV) cubicle ready-to-customize to perfectly fit end user needs
- Cost-effective, well-proven designs from worldwide MV leaders
- Fast and committed delivery
- Schneider Electric quality and performance
- Possibility to offer **Connected EcoStruxure™ ready** solution

F

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Learn more 

Benefits

- For LV panel builder or OEM: access new MV opportunities
- No investment in R&D: low risk
- Limited and low investment in Medium Voltage industrial set-up: fast implementation
- Gain competitive edge: extend offers and technical know-how
- Packaged solution: save time and cost, "one stop shop" for your customers: LV and MV package
- Leveraging your
 - Project management capabilities
 - Control & commands expertise
 - Commercial approach



Schneider Electric's commitments

A

High quality components

Based on our expertise in building Medium Voltage cubicles, all the proposed components are designed to be fully consistent with the others. This assures complete interoperability, which has been tested in our own Medium Voltage cubicles equipped with these components.

B

Moreover, our industrialized processes and quality controls guarantee the highest level of component quality to meet your most demanding expectations.

C

Easy to integrate

As industrial manufacturer, we value simplicity and thus we put as priority to always increase your product knowledge and ensure easy integration with our tools and training package, allowing you to be more efficient in your business.

All necessary information on mounting and assembly is supplied with each component.

D

Digital transformation and connectivity

We innovate to bring more values to our partners and customers helping them to get the most of their equipment and installation. We develop connected product contributing to improved safety and efficiency and offering modern remote monitoring simplifying operation and maintenance for a more profitable and long time of service duration.

E

Medium Voltage switchboards demand more remote measurement and control capabilities.

You will find a whole range of modern monitoring and control devices acting in full complementarity with Medium Voltage switching devices.

F

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Our purpose is to empower all to make the most of our energy and resources

- Act for a climate positive world
- Be efficient with resources
- Live up to our principles of trust
- Create equal opportunities
- Harness the power of all generations
- Empower local communities



Schneider Electric: A brand you can trust

Schneider Electric’s policy has always been to provide its customers with very close support in their daily activities to enable them to achieve operational excellence.

There are always Schneider Electric experts to support you!

Locally or on demand, our team of experts accompanies you during integration and discovering of our products.

We will add value:

- To **SPEED UP** adoption of our offers
- To **SIMPLIFY** components integration
- To **PROVIDE** technical knowledge/solutions.

We will add value:

- Support on integration of Schneider Electric components
- Simulation of Panel Builder’s cubicles into CAE tool by our core experts, before going for extensive type testing
- Support to prepare Panel Builder’s switchgears for type testing
- Training on our products
- And welcome you in our factories!

Our common values

- Quality
- Safety
- Professionalism

5% of sales devoted to R&D

Local support all over the world

160,000 people in more than **100** countries

Over **100 years** of protection relay **experience**



- A
- B
- C
- D
- E
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Electricity is getting more Digital & Sustainable, will you be ready?

A

Better connectivity and data analytics bring great benefits

Connectivity combined with IoT, brings more value in power management.

More than remote control facilities, digital offers better versatility, especially when it comes to adapt or setup products quickly and to answer your customers specific needs.

B

Analytics and operational data allow enhanced asset management, and thus optimized operating conditions for end users that can now anticipate maintenance needs.

Digitization benefits don't end at interoperability, data or predictive maintenance. It permits you to enhance safety, reliability and efficiency of the solution provided.

C

Adding more connectivity, practicality and analytics will allow you to provide smarter switchgear and get a step ahead in a more competitive world.

SF6-free switchgear and apparatus are available for our Partners

Our approach and commitment to more sustainable and efficient electricity is now available to our partners for the benefit of end users. Compact and innovative AirPacT features Shunt Vacuum Interruption (SVI)TM technology combining pure air for insulation and vacuum for breaking, without SF6 greenhouse gas contained in a sealed-for-life tank.

D

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Simplicity

- Pure air to go SF6-free and future proof against regulatory considerations on gases
- Reduce assembly time
- New technology allows narrow space for panel builders switchgear
- End-to-end digital ecosystem from selection to delivery ease project management
- Easy selection and ordering
- Off-the-shelf availability for fast deliveries
- IOT-connected thermal monitoring available for simple and affordable fire prevention
- Service enabler for Partners
- No impact on existing switchgear structure

Flexibility

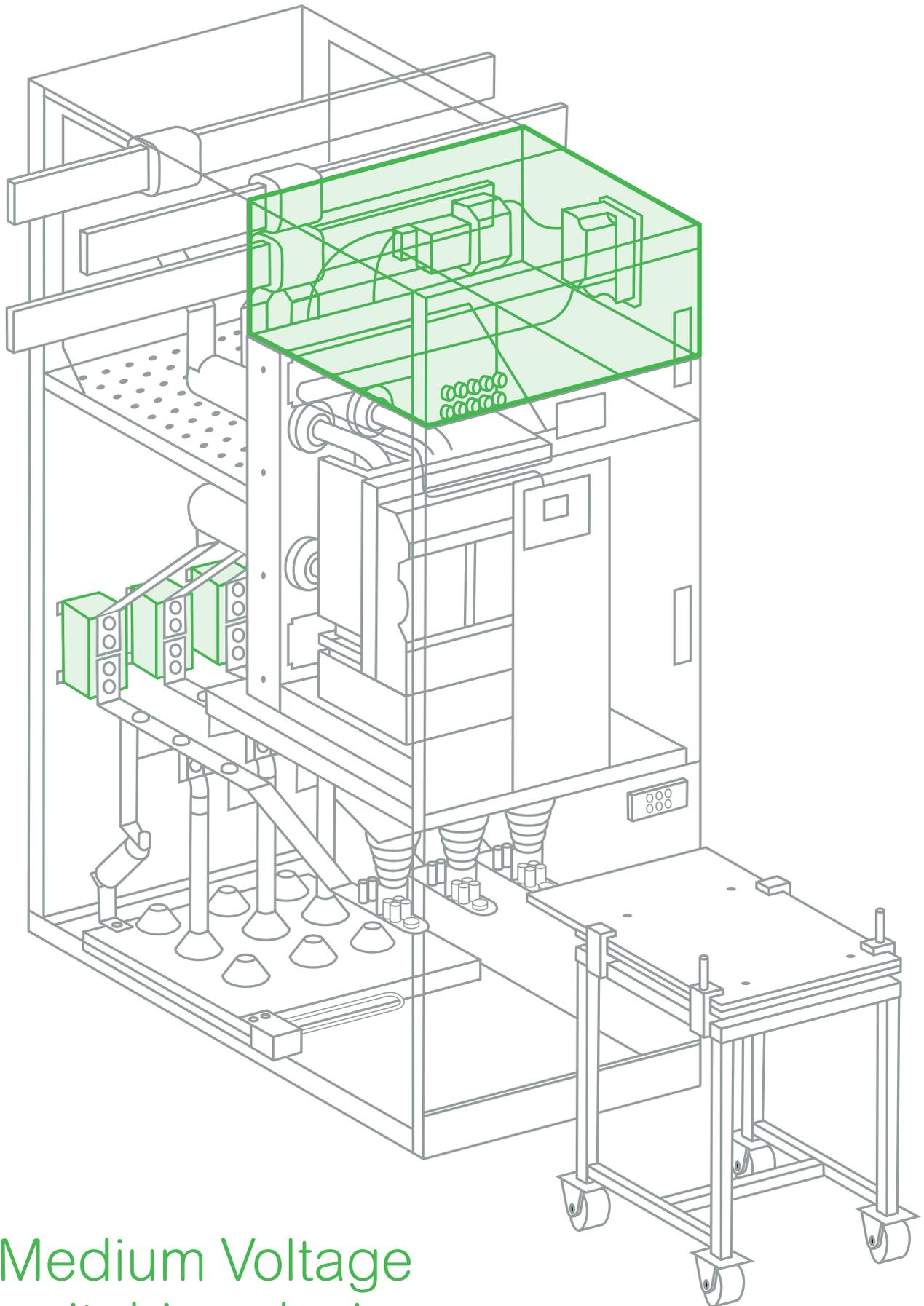
- Easy & flexible to upgrade to
- Easy to adopt for panel builders familiar with LBSKit
- Modular kits for a wide choice of customizations including thermal monitoring
- Ecostruxure ready digital solutions and services

Efficiency

- Pure air and vacuum are tested & proven solutions
- Cutting-edge CompoDrive mechanism
- Embedded IoT connectivity with advanced sensors
- Designed for greater safety
- Fast delivery, less stock, more productivity

 [Click to access to the product range](#)





A

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Medium Voltage switching devices

Medium Voltage switching devices

Circuit-Breakers

Vacuum Circuit-Breakers

Protection and operation of network

A

B

C

D

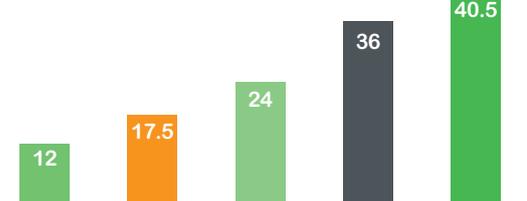
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	EasyPact EXE 	HVX - Embedded pole 					Evolis 		
	 New  								
Rated voltage (kV)									
Max. rated short-circuit current	31.5 kA 31.5 kA	50 kA 50 kA 31.5 kA 31.5 kA 31.5 kA	25 kA						
Max. rated current	2 500 A	3 150 A / 4 000 A ⁽¹⁾ 3 150 A / 4 000 A ⁽¹⁾ 2 500 A 2 500 A / 3 150 A ⁽¹⁾	1 250 A						
Versions	<ul style="list-style-type: none"> Fixed Withdrawable 	<ul style="list-style-type: none"> Fixed Withdrawable 	<ul style="list-style-type: none"> Fixed 						
Number of poles	3 P	3 P	3 P						
Mechanical switching cycles (ON/OFF)	10 000	10 000	10 000						
Mounting	Frontal	Frontal	Lateral						
Mechanism	Conventional spring	Conventional spring	Conventional spring						
Standards	<ul style="list-style-type: none"> IEC GOST 	<ul style="list-style-type: none"> IEC GB (Chinese) GOST⁽²⁾ 	<ul style="list-style-type: none"> IEC GOST 						
Benefits									
	<ul style="list-style-type: none"> Kit and web ordering Attractive price Better safety Opex optimization (thermal sensors replace infrared thermography) See video  	<ul style="list-style-type: none"> Embedded pole for better dielectric & environmental pollution withstand 	<ul style="list-style-type: none"> Compact dimensions Reliable spring mechanism for open pole technology 						

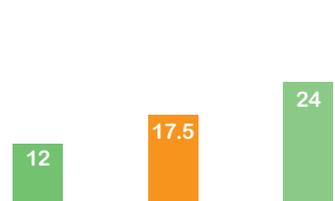
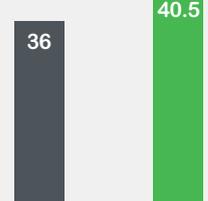
(1) Need forced cooling
(2) Only 36 kV & 40.5 kV

 Click to access to the product range

Circuit-Breakers

SF6 Circuit-Breakers

Protection and operation of network

	EvoPact LF 	EvoPact SF1 	EvoPact SF2 
			
Rated voltage (kV)			
Max. rated short-circuit current	50 kA 40 kA	25 kA 25 kA 25 kA 25 kA	40 kA 31.5 kA
Max. rated current	3 150 A	1 250 A	3 150 A 2 500 A
Versions	<ul style="list-style-type: none"> • Fixed • Withdrawable 	<ul style="list-style-type: none"> • Fixed • Withdrawable 	<ul style="list-style-type: none"> • Fixed • Withdrawable
Number of poles	3 P	3 P	3 P
Mechanical switching cycles (ON/OFF)	10 000	10 000	10 000
Mounting	Frontal	Frontal and lateral	Frontal
Mechanism	Conventional spring	Conventional spring	Conventional spring
Standards	<ul style="list-style-type: none"> • IEC • GOST 	<ul style="list-style-type: none"> • IEC 	<ul style="list-style-type: none"> • IEC
Benefits			
	<ul style="list-style-type: none"> • Referenced product for Nuclear Power plants • Marine solutions certified • Seismic version available 	<ul style="list-style-type: none"> • Integrated VIP trip unit (without auxiliary power supply) in SFset up to 24 kV • Well suited for capacitor bank and inductive load applications 	<ul style="list-style-type: none"> • Particularly adapted for high voltage ratings and harsh environment • Well suited for capacitor bank and inductive load applications



Click to access to the product range



Contactors

Vacuum and SF6 Contactors

Protection and control of network

SF6 Contactor

	CBX 		CVX 		Rollarc 	
						
Rated voltage (kV)	7.2	12	7.2	12	7.2	12
Max. rated short-circuit current	6 kA	4 kA	6 kA (50 kA in conjunction with fuses)	4 kA (50 kA in conjunction with fuses)	10 kA	8 kA
Max. rated current	400 A (AC4)	315 A (AC4)	400 A (AC4)	315 A (AC4)	400 A (AC4)	
Versions	<ul style="list-style-type: none"> Fixed 		<ul style="list-style-type: none"> Fixed Withdrawable version equipped with DIN or BS fuses Optional on board auxiliary voltage transformer 		<ul style="list-style-type: none"> Basic Fixed Withdrawable 	
Number of poles	1 P - 3 P		3 P	3 P	3 P	3 P
Mechanical switching cycles (ON/OFF)	<ul style="list-style-type: none"> 300 000 (mechanical latch) 1 000 000 (magnetic held) 		<ul style="list-style-type: none"> 300 000 (mechanical latch) 1 000 000 (magnetic held) 		<ul style="list-style-type: none"> 100 000 (mechanical latch) 300 000 (magnetic held) 	
Mechanism	Magnetic holding or mechanical latch		Magnetic holding or mechanical latch		Magnetic holding or mechanical latch	
Standards	<ul style="list-style-type: none"> IEC GB (chinese) 		<ul style="list-style-type: none"> IEC GB 		<ul style="list-style-type: none"> IEC 	
Benefits						
	Version available for capacitor banks: <ul style="list-style-type: none"> 1 pole version available for neutral Earthing Specific version available for capacitor banks 		<ul style="list-style-type: none"> LV supply thanks to optional on board VT High short circuit breaking capacity in combination with fuses Cradle available (consult us) 		<ul style="list-style-type: none"> Reference product in SF6 contactor market Nuclear powerplant & Marine applications Soft breaking, suited for capacitor bank, power transformers and motors applications 	

 Clic to access to the product range

Medium Voltage switching devices

Switches and Disconnectors

SF6 and Air - Indoor load break switch

Disconnecter and earthing switch

SF6-free switch & disconnecter

SF6 switch & disconnecter

Earthing switch

AirPacT  **LBSkit**  **EISC** **Earthing switch 17/24 kV**

New



Function	Indoor load break switch, disconnecter and accessories			Earthing switch				Earthing switch		
Rated voltage (kV)	24	24	36	12	17.5	24	36	12	17.5	24
Max. rated short-circuit current	25 kA/1 s	25 kA/1 s	25 kA/1s	31.5 kA	31.5 kA	31.5 kA	25 kA	31.5 kA	50 kA	31.5 kA
Max. rated current	1 250 A	1 250 A	1 250 A							
Pole center distance				165	210	165	350	160	200-240	240
				175		210	370			
				210		215	400			
				215		250	460			
				250		275				
						300				
Mechanical switching cycles (ON/OFF)		1 000 O/C cycles (Class M1)						1 000 cycles		
Standards		IEC						IEC 62271-102		
Benefits	<ul style="list-style-type: none"> • Green Premium • Insensitive to environment • Reduced maintenance • Easy & flexible integration 			<ul style="list-style-type: none"> • Insensitive to environment • Reduced maintenance 			Earthing switch for a wide range of rated voltages		Simple and robust design easy to adapt with a large choice of options	

 Click to access to the product range

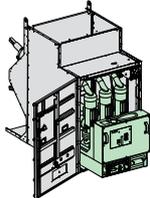
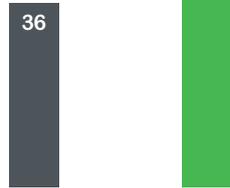


Medium Voltage switching devices

Cradle

- A
- B
- C
- D
- E
- F
- G
- H
- I

Cradle

	L-Frame Cradle	M1-M2 Cradle	MC Cassette
			
Function	Integration of switching device	Integration of switching device	Integration of switching device
Rated voltage (kV)			
Max. rated short-circuit current	50 kA 31.5 kA	40 kA 31.5 kA	50 kA
Max. rated current	3 150 A 2 500 A	2 500 A 1 250 A	3 150 A
Recommended cubicle width	650 - 1 000 mm 800 - 1 000 mm	1 100 mm	570 - 900 mm
Integration of switching device	HVX Embedded Pole + EasyPact EXE	SF	LF + EasyPact EXE
			
Version	With and without earthing switch	Without earthing switch	With earthing switch in option
Benefits	Fully assembled by Schneider Electric	Two different arrangements for HV connection using the upper and lower bushings	Full type tested solution including internal arc protection with MV door

 Click to access to the product range

Function

Protection to Medium Voltage distribution devices (from 3.6 to 36 kV) from both the dynamic and thermal effects of short-circuit currents



	Fusarc CF	Solefuse	Tepefuse	MGK
Rated voltage (kV)	3.6, 7.2, 12, 17.5, 24, 36	7.2, 12, 24, 36	12, 24	7.2
Max. rated short-circuit current	Up to 63 kA	Up to 50 kA	Up to 40 kA	Up to 50 kA
Max. rated current	Up to 250 A	Up to 125 A	Up to 0.3 A	Up to 250 A
Applications	<ul style="list-style-type: none"> • Motors • Power Transformers • Capacitors • Metering Transformers 	<ul style="list-style-type: none"> • Power Transformers • Capacitors 	<ul style="list-style-type: none"> • Voltage Transformers 	<ul style="list-style-type: none"> • Motors
Standards	<ul style="list-style-type: none"> • IEC 60282-1 • DIN 43625 • VDE 0670-402 	<ul style="list-style-type: none"> • IEC 60282-1 • UTE C64200, C64210 	<ul style="list-style-type: none"> • IEC 60282-1 • UTE C64200, C64210 	<ul style="list-style-type: none"> • IEC 60282-1
Benefits	<ul style="list-style-type: none"> • High breaking capacity • High current limitation • Low I²t values • Low breaking overvoltage • Low dissipated power • For indoor and outdoor applications • With a thermal striker 			

For additional information consult our MV fuses catalogue (ref: AC0479EN)

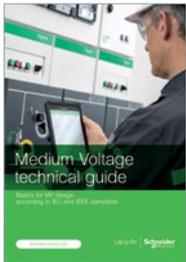
Clic to access to the product range



A

Learn more on our Medium Voltage products and technology to extend your business opportunities

B



Helping you design MV products according to IEC standards

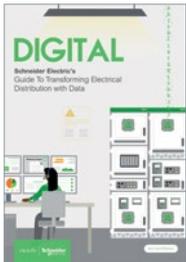
- Our talented electrical distribution experts share their industry-leading knowledge of technological developments and evolving medium-voltage standards.



MV Technical Guide

C

D



Understand the digital transformation of electrical distribution

- To understand how electrical installation can benefit from digital, download the Guide To Transforming Electrical Distribution with Data.



DIGITAL Guide

E

F



Connect your LV & MV installation and digital functionalities

- Go further than to deliver traditional switchboard by adding digital capabilities to your electrical equipment. Download this catalog to modernize MV & LV installations.



EcoFit™ Life Extension Essential for Power

G

H

I



Panel builders

Learn more about Medium Voltage Switchgear range here



Offer



Catalogue

Scan or click on QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



Incoming Protection

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PowerLogic P1

Network protection relays

F

PowerLogic P1 at a glance

Built on over a century of experience in medium-voltage protection relays, the new PowerLogic P1 is designed to meet your customers' needs for electrical protection, connectivity and everyday ease-of-use.

G

PowerLogic P1 is designed to be an effective solution for simple applications like overcurrent, earth-fault, voltage and frequency. Suited for basic distribution applications in commercial and industrial buildings, industrial settings or distribution utilities or as LV applications when ANSI functions are required. Ideal for back-up protection in new installations or in retrofit applications when replacing legacy relays. Reduce time and costs with simple installation, setting and configuration.

H

Get more benefits with digital, reliable and efficient PowerLogic P1:

- Single function voltage or current protection
- Incomer, feeder or transformer applications
- Simple to order, install and operate.

I



Simple, reliable,
and easy-to-use
protection relays

The PowerLogic P1 relays are suitable for the applications where overcurrent and/or earth-fault and voltage protection are required.

PowerLogic P1F and P1V models can be applied to medium and low voltage electrical systems.

PowerLogic P1 relays provide features for easy adaptation to different applications and operation conditions. The P1F and P1V models can be fully configured manually, without using setting software.

Alternatively, eSetup Easergy Pro (or Easergy Studio) setting software allows configuration parameters to be modified for a specific application via the USB port.

IEC 60870-5-103 and Modbus RTU integrated communication protocols are available for flexible integration into most substation control or DCS systems.

Close and trip commands can be executed via functional key on the front panel, default menu window, DCS/SCADA system (RS485) or configured binary input.

Three level password gives proper access rights for secure maintenance of the relay.

As a device housed in a small sized flush-mountable case, the P1V and P1F models can be easily installed in all modern, dimension-focused switchgear panels, up to IP54 ingress protection degree.

The relay can be also considered as a cost-effective answer to retrofit demands of older substations.

In P1F we have, for overcurrent protection functionally, selectable measuring criteria: True RMS and/or fundamental frequency (Fourier) current measurements allow to increase selectivity and adapt to the application.



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Take Easergy protection relays further with EcoStruxure™

EcoStruxure, Schneider Electric's IoT-enabled, open and interoperable architecture and platform, brings together Connected Products, Edge Control, and Apps, Analytics & Services. EcoStruxure connected products deliver enhanced value around safety, reliability, efficiency, sustainability, and connectivity.

450 000

EcoStruxure systems deployed since 2007 with the support of our 9,000 system integrators

EcoStruxure ready



Efficient asset management

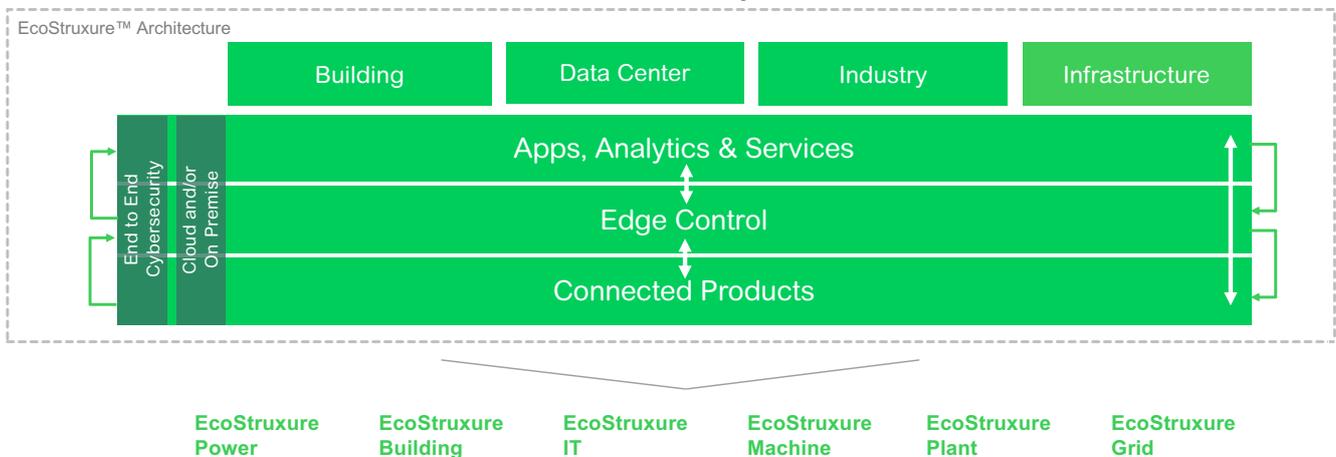
Help boost your efficiency and participate to reduce downtime using predictive maintenance tools

24/7 connectivity

Make better informed decisions with real-time data that's available everywhere, anytime

Enhanced safety

Advanced features designed-in based on well-known designs, experience and technology



ANSI or IEC

Ideal for industrial buildings, distribution utilities and LV applications
(if ANSI functions are needed)



CE markings as per Directive 93/98/CEE

ISO/EHS/OHSAS certified manufacturing facility reinforces product quality and reliability. Independent lab reports available for CE.



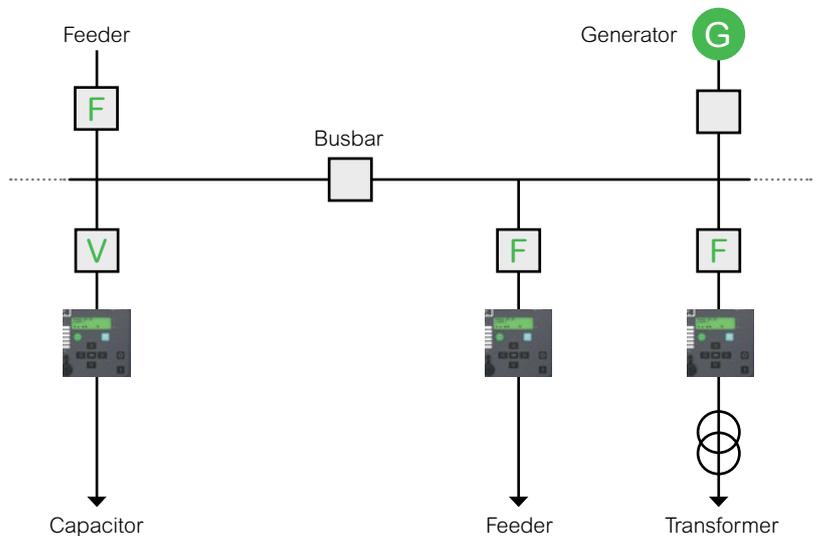
Green Premium eco-mark:

Schneider Electric commits to disclose reliable, comprehensive information on the environmental impacts of our products.

Features and options

	 P1F	 P1V
Current	3CT + 1CT	–
Voltage	1VT (option)	3VT or 4VT ^[*]
Overcurrent protection	✓	✓
Directional earth-fault protection	✓ ^[*]	–
Voltage protection	–	✓
Frequency protection	–	✓ ^[*]
Inputs	Up to 8	Up to 6
Outputs	Up to 8	Up to 8
Programmable LEDs	6	6
CB control keys	✓	✓
Communications	USB ^[*] & RS485 ^[*]	USB ^[*] & RS485 ^[*]
Records	✓ ^[*]	✓ ^[*]
Display	LCD 32 x 2	LCD 32 x 2

[*] Depending on the model



PowerLogic P1

Selection guide

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Protection functions	ANSI code	PowerLogic P1F							PowerLogic P1V		
		P1F1L	P1F1L+	P1F1N	P1F1B	P1F1A	P1F1E	P1F1E+	P1V1L	P1V1N	P1V1A
Undervoltage	27	-	-	-	-	-	-	-	3	3	3
Positive sequence undervoltage	27P	-	-	-	-	-	-	-	-	-	2
Negative sequence overcurrent	46	-	-	-	-	-	1	1	-	-	-
Cur. unbalance, broken conductor	46BC	-	-	-	-	-	1	1	-	-	-
Negative sequence overvoltage	47	-	-	-	-	-	-	-	-	2	2
Thermal overload	49	-	-	1	1	1	1	1	-	-	-
Phase overcurrent	50/51	3	3	3	3	3	3	3	-	-	-
Earth fault overcurrent	50N/51N	2	2	2	2	2	3	-	-	-	-
Breaker failure	50BF	1	1	1	1	1	1	1	-	-	-
Switch On To Fault (SOTF)	50HS	-	-	-	1	1	1	1	-	-	-
Overvoltage	59	-	-	-	-	-	-	-	3	3	3
Neutral voltage displacement	59N	-	-	-	-	-	-	-	-	3	3
Derived Vo sequence overvoltage	59N	-	-	-	-	-	-	-	3	3	3
VT supervision	60FL	-	-	-	-	-	-	-	-	1	1
Directional earth-fault o/c	67N/21Y ^[*]	-	-	-	-	-	-	2	-	-	-
Magnetizing inrush detection	68F2	-	-	-	-	1	1	1	-	-	-
Auto-recloser	79	-	-	-	-	-	4	4	-	-	-
Over or under frequency	81	-	-	-	-	-	-	-	-	-	6
Lockout	86	1	1	1	1	1	1	1	1	1	1
Cold load pick-up		1	1	1	1	1	1	1	-	-	-
Blocking logic		-	-	-	1	1	1	1	-	1	1
IDMT curves		21	21	21	21	21	21	21	15	15	15
Setting groups		2	2	2	2	2	2	2	2	2	2

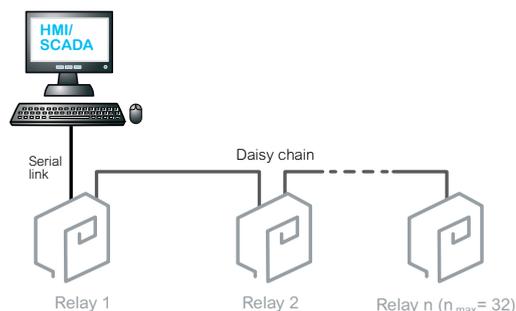
[*] E/F Protection can be set as directional E/F protection or admittance protection



	PowerLogic P1F							PowerLogic P1V		
Hardware	P1F1L	P1F1L+	P1F1N	P1F1B	P1F1A	P1F1E	P1F1E+	P1V1L	P1V1N	P1V1A
Phase current inputs	3	3	3	3	3	3	3	-	-	-
Residual current inputs	1	1	1	1	1	1	1	-	-	-
Phase voltage inputs	-	-	-	-	-	-	-	3	3	3
Neutral voltage inputs	-	-	-	-	-	-	1	-	1	1
Digital inputs	-	-	-	4	4	8	8	-	2	6
Digital outputs	3+WD	3+WD	5+WD	3+WD	7+WD	5+WD	5+WD	3+WD	5+WD	7+WD
USB front port	-	-	1	1	1	1	1	-	1	1
RS485 rear port	-	1	1	1	1	1	1	-	1	1
Control functions										
Local/remote function	-	■	■	■	■	■	■	-	■	■
Local control with I/O keys	■	■	■	■	■	■	■	■	■	■
Remote control with RS485	-	■	■	■	■	■	■	-	■	■
Remote control with digital inputs	-	-	-	■	■	■	■	-	-	■
Time Synchronisation with digital input	-	-	-	-	-	■	■	-	-	■
Measurement										
RMS current values	■	■	■	■	■	■	■	-	-	-
Fundamental voltage values	-	-	-	-	-	-	-	-	-	■
Frequency	■	■	■	■	■	■	■	-	-	■
Positive sequence of voltage	-	-	-	-	-	-	-	-	-	■
Negative sequence of voltage	-	-	-	-	-	-	-	-	■	■
Thermal overload	-	-	■	■	■	■	■	-	-	-
Inrush current ratio	-	-	-	-	■	■	■	-	-	-
Positive sequence of current IS1	-	-	-	-	-	■	■	-	-	-
Negative sequence of current IS2	-	-	-	-	-	■	■	-	-	-
Relative IS2/IS1	-	-	-	-	-	■	■	-	-	-
Phase Peak Demand Current Values	■	■	■	■	■	■	■	-	-	-
Logs and Records										
Tripping context record	20	20	20	20	20	20	20	20	20	20
Sequence of event record	-	200	200	200	200	200	200	-	200	200
Disturbance record	-	-	-	-	4 sec	4 sec	3 sec	-	-	4 sec
Monitoring functions										
Trip circuit supervision (ANSI 74)	1	1	1	1	1	1	1	1	1	1
Circuit breaker monitoring & diagnostics	-	-	-	-	1	1	1	-	-	1
Counters	-	-	-	-	1	1	1	-	-	1
Self-supervision (WD)	■	■	■	■	■	■	■	■	■	■

Technical characteristics

PowerLogic P1 Communication



Connection to SCADA using serial line

This architecture allows you to connect HMI/SCADA to a set of Easergy protection relays using a multi-drop serial communication link with master-slave communication.

Available protocols: Time synchronisation protocol:

- Modbus RTU
- IEC 60870-5-103
- Minute pulse

Connection to SCADA using serial lines and legacy protocols

This architecture allows you to connect HMI/SCADA to a set of Easergy protection relays using a multi-drop serial communication link with master-slave communication protocols such as Modbus-RTU or IEC 61870-5-103.

The RS485 serial communication port of the Easergy protection relay enables simple daisy chaining suited for 2-wire. A termination module is plugged into the last connection.

Data exchanged between PowerLogic P1F / P1V and SCADA

Protocol	Modbus	IEC 60870-5-103
Real time data		
Measurement	■	■
Alarms and status	■	■
Controls	■	■
Time-stamped events	■	■
Historical data		
Disturbance records	■	-
Sequence of event record files	■	-
Setting management		
Setting group change	■	■
Settings	■	-

Engineering system

eSetup Easergy Pro

eSetup Easergy Pro (or Easergy Studio) can be connected to a single Easergy protection relay on the front USB port.

eSetup Easergy Set allows you to prepare the configuration of the relay without having any physical relay. For this purpose, eSetup Easergy Pro provides the latest version of the configuration description file directly from the web.





Main features

The following functions are generally available in all devices:

- Operate in 1, 2, or 3-phase arrangement
- Two setting groups, selected from the relay menu, binary input or SCADA/DCS
- Flush mounted case
- Fundamental and True RMS (within a frequency range from 10 Hz to 1 kHz) phase current value measurement
- 9 button keypad to input settings, configure the relay and close and trip command and display (graphical)
- Fault record for most recent trips.

The P1F protection relays are comprised of a suite of protection functions as well as auxiliaries. Each function can be individually configured or disabled to suit every kind of application.

All available functions, including protection, automation, communication, LEDs, inputs and outputs, are easily programmable through the user-friendly human machine interface and/or the eSetup Easergy Pro software interface.

+ Customer benefits

The graphical LCD provides the user with key information (faults, measurements, settings, etc). The menus have a pull-down structure for easy use and quick access to any data. User can switch HMI language directly through the front panel.

8 LEDs (6 freely configurable) indicate the correct operation of the relay as well as other information regarding the protection of the electrical system.

The hardware architecture and software algorithms have been designed to operate on very short failure detection times. Tripping occurs typically within 40 ms.

Application

PowerLogic P1F numerical overcurrent protection relay provides an optimized solution. Typical applications are:

- Utility and industrial substation fitted with cost-optimized MV switchboards
- Retrofit relays of old technology, particularly during installation of DCS systems
- Transformers, incomers, bus couplers, overhead lines and underground cables on MV systems
- Neutral system protection (insulated, solid and resistance earthed)
- LV substations.

Protection function overview

IEEE device no.	PowerLogic P1F functions	Model L & L+	Model N	Model B	Model A	Model E	Model E+
49	Thermal overload (true RMS) 2 independent thresholds (Alarm, Trip)		■	■	■	■	■
50BF	Circuit breaker failure	■	■	■	■	■	■
50/51	Three-phase non directional overcurrent 3 independent thresholds (21 groups of IDMT curves)	■	■	■	■	■	■
	Switch on to fault (SOTF)			■	■	■	■
	Inrush blocking (2 nd harmonic)				■	■	■
	Selective relay scheme logic					■	■
	Blocking logic			■	■	■	■
	Cold Load Pick-Up	■	■	■	■	■	■
50N/51N	Phase-earth non directional overcurrent 2 independent thresholds (21 groups of IDMT curves)	■	■	■	■	■	■
67N/21Y ^[1]	Directional earth-fault protection (2 stages)						■
46	Negative phase sequence overcurrent					■	■
46BC	Broken conductor detection (I2 / I1)					■	■
79	Auto reclose (4 shots)					■	■
86	Output relay latching	■	■	■	■	■	■
	Binary inputs	0	0	4	4	8	8
	Output relays	3	5	3	7	5	5
	Watchdog contact	1	1	1	1	1	1
	Phase current inputs (0.1-40 In)	3	3	3	3	3	3
	Neutral current input (0.01-2 IN or 0.05-12 IN)	1	1	1	1	1	1
	Neutral voltage input (5-130 V)						1
	Circuit breaker supervision				■	■	■
	Trip circuit supervision				■	■	■
	Event recording	■ ^[2]	200	200	200	200	200
	Fault recording	20	20	20	20	20	20
	Disturbance recording				4s	4s	3s
	CB condition monitoring and Counters				■	■	■
	Setting groups	2	2	2	2	2	2
	Time synchronisation (via binary input)					■	■
	LCD display	Back-lit	Back-lit	Back-lit	Back-lit	Back-lit	Back-lit
	Mini-USB front port		■	■	■	■	■
	Powering thru mini-USB front port		■	■	■	■	■
	Remote communication (RS485)	■ ^[2]	Modbus / IEC103				
	Measurements	■	■	■	■	■	■
	CB control via front keys / RS485 / Binary input	■ / - / -	■ / - / -	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■

[1] E/F Protection can be set as directional E/F protection or admittance protection

[2] If the relay is equipped with RS485



+ Customer benefits

Main features

PowerLogic P1V is a basic numerical relay that helps to provide reliable and effective voltage and frequency protection with automation, control and measurement functions. It may be applied to all low voltage or medium voltage applications as a primary or back-up protection device.

PowerLogic P1V has always been strongly linked to flexible and easy-to-use protection relays. It inherits the well known MiCOM Px10 and VAMP 11V series. With attention to simplicity and cost effectiveness, the PowerLogic P1V becomes the reference for the most efficient devices for standard protection applications.

Thanks to the cost to functionality ratio, the PowerLogic P1V is an innovative solution that is tailored to user's needs and can be applied in any type of low or medium voltage network where voltage or frequency protection is required.

Many selectable options embedded in the relay offer a high level of flexibility in terms of application and maintenance. VT ratio, communication protocol, HMI language or independent settings of hysteresis for under or over-voltage protection are all selectable in the menu. Moreover, only 3 relay models are used to accommodate specific applications and operating conditions. This approach helps optimise the protection to the requirements and helps minimize wasted functionality and cost. A unique list of only 10 model variants (type designations) cover all model, voltage input range and auxiliary power supply options, meaning that ordering and spares holding is simplified for ease of use.

Switchable serial communication (IEC 6087-5-103 or Modbus) allows the device to connect to almost any kind of scada system. A front USB port and multilingual HMI makes PowerLogic P1V user-friendly with reduced maintenance costs.

PowerLogic P1V is housed in a standard flush mounting case which can be complemented by two optional accessories:

- Wall mounting adaptor
- Transparent plastic front cover to limit unauthorized access.

Application

PowerLogic P1V is a basic numerical relay provides reliable and effective voltage or voltage and frequency protection with automation, control and measurement functions. Typical applications are:

- LV or MV applications
- Primary or back-up protection device
- Retrofit of electromechanical relay.

Protection function overview

IEEE device no.	PowerLogic P1V functions	Model L	Model N	Model A
	Phase-to-neutral or phase to phase voltage protection	■	■	■
27	Phase under voltage (AND/OR logic)	■	■	■
59	Phase over voltage (AND/OR logic)	■	■	■
59N	Neutral voltage displacement		■	■
59N	Derived Vo sequence over voltage	■	■	■
47	Negative sequence over voltage		■	■
27D	Positive sequence under voltage			■
81U/81O	Under/Over frequency			■
86	Output relay latching	■	■	■
	Blocking logic		■	■
	Settable hysteresis	■	■	■
	Binary inputs	0	2	6
	Output relays	3	5	7
	Watchdog contact	1	1	1
	Phase voltage inputs	3	3	3
	Neutral voltage		1	1
	Remote communication (RS485)		Modbus / IEC103	Modbus / IEC103
	Mini-USB front port		■	■
	Powering thru mini-USB front port			■
	Event recording		200	200
	Fault recording	20	20	20
	Disturbance recording			4s
	Counters			■
	Setting groups	2	2	2
	Time synchronisation (via binary input)			■
	VT Supervision		■	■
	CB Supervision		■	■
	CB control via front keys / RS485 / Binary input	■ / - / -	■ / ■ / -	■ / ■ / ■



Learn more about PowerLogic P1 range here



Offer



Catalogue

Scan or click on QR code



If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



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PowerLogic P3

Network protection relays

PowerLogic P3 at a glance

What is PowerLogic P3?

PowerLogic P3 is a complete range of protection relays for medium voltage applications, including feeder, motor, transformer, and generator protection. It embeds all the latest communication protocols on serial or Ethernet links.

Based on more than 100 years of experience in network protection relays, PowerLogic P3 benefits from the reliability of Sepam, MiCOM and Vamp.



Unparalleled Efficiency



Better Connectivity



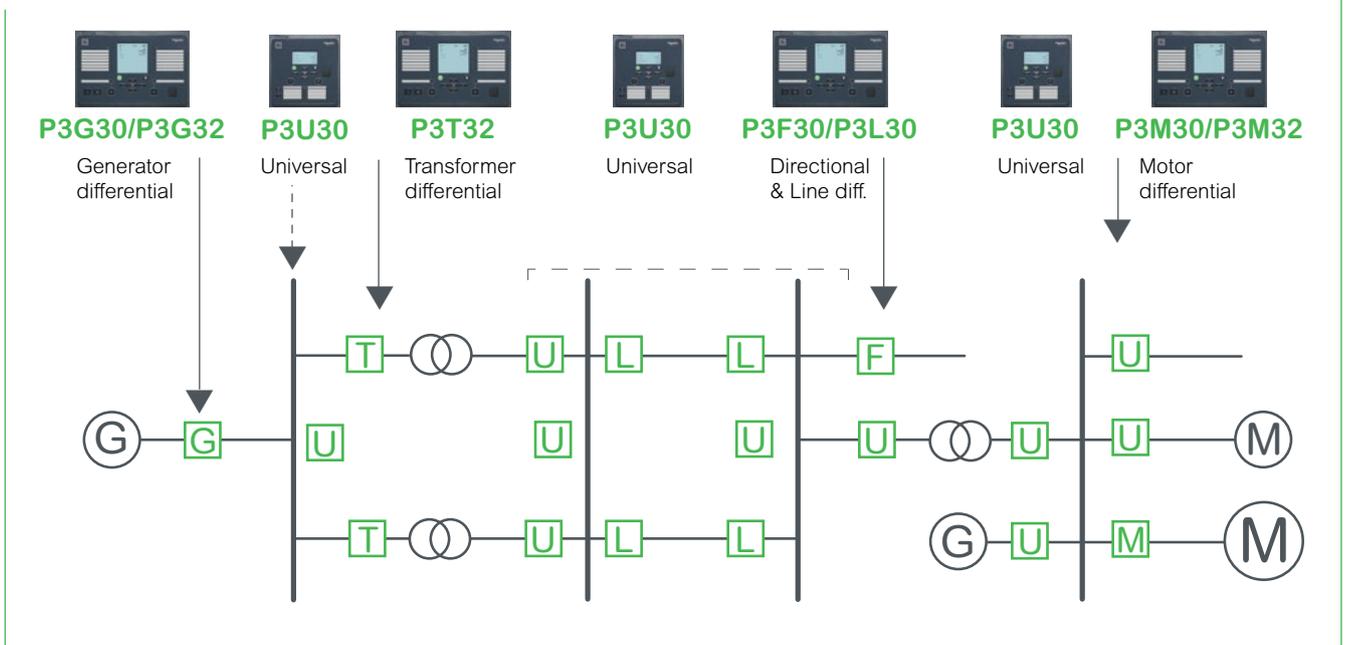
Enhanced Safety

- Simple selection and ordering with EcoReal MV
- Simplified configuration with the new eSetup Easergy Pro setting tool
- Faster delivery with on-the-shelf availability of standard configurations.

- Simpler operation and maintenance with the EcoStruxure™ Power Device app
- 9 communication protocols in one box, including IEC 61850
- Increased number of inputs and outputs for more possibilities.

- Embedded arc protection
- Built-in virtual injection testing
- Compliant with international standards (i.e. IEC 60255-1).

Range overview



General overview

PowerLogic P3



PowerLogic P3 Standard



PowerLogic P3 Advanced

PowerLogic P3 is a family of digital protection relays for distribution networks dedicated to:

- Buildings and Industry:
 - Retail
 - Hotels
 - Healthcare
 - Education and research
 - Transportation
 - Industrial buildings
 - Data Center.
- Utilities - Energy distribution.
- Large sites:
 - Oil and Gas
 - Mining
 - Mineral and Metals
 - Water.

PowerLogic P3 protection relay is based on proven technology concepts and developed in close cooperation with customers, so it's built to meet your toughest demands. It's available in two sizes to best fit your needs:

- The PowerLogic P3 Standard combines protection functions such as directional earth fault for feeder and motor protection in a one-box solution
- The PowerLogic P3 Advanced features a modular design that allows user-defined conventional protection and arc flash protection solutions in both new and existing power distribution systems.

Easergy products are designed to be user friendly, a feature that is proven in our customer reports day after day. You'll benefit from features that include:

- A complete set of protection functions, related to the application
- Arc detection (PowerLogic P3 Advanced)
- Dedicated circuit breaker control with single-line diagram, push buttons, programmable function key and LEDs, and a customizable alarm
- Multilingual HMI for customized messaging
- Settings tool relay management software for setting parameters, configuring, and network fault simulation
- Both serial and Ethernet communication, including redundancy
- IEC 61850 standard Ed.1 & Ed.2.

Take the PowerLogic P3 further with EcoStruxure™

EcoStruxure, Schneider Electric's IoT-enabled, open and interoperable architecture and platform, brings together Connected Products, Edge Control, and Apps, Analytics & Services. EcoStruxure connected products deliver enhanced value around safety, reliability, efficiency, sustainability, and connectivity.

450 000

EcoStruxure systems deployed since 2007 with the support of our 9,000 system integrators

EcoStruxure ready



Efficient asset management

Help boost your efficiency and participate to reduce downtime using predictive maintenance tools



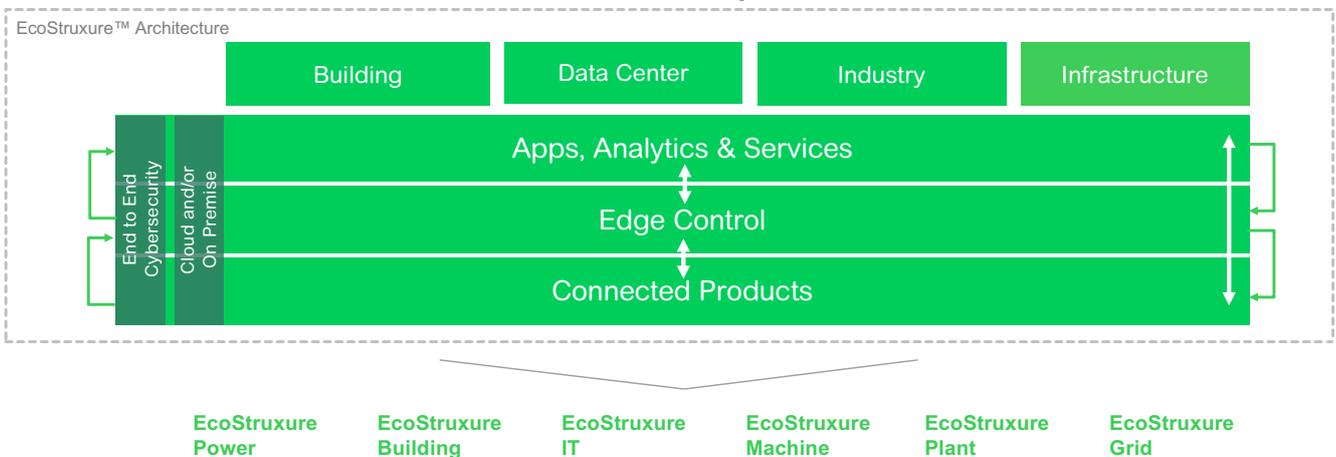
24/7 connectivity

Make better informed decisions with real-time data that's available everywhere, anytime



Enhanced safety

Advanced features designed-in based on well-known designs, experience and technology



General characteristics

PowerLogic P3 Standard

A

The PowerLogic P3 Standard protection relay has been developed to meet your standard protection needs for building, distribution utilities, and industrial applications.

Thanks to its optimized and flexible design, the PowerLogic P3 Standard provides an excellent solution for various protection applications.

B

The user-friendly PowerLogic P3 Standard brings greater efficiency to your operations by enabling rapid ordering, configuration, and operations for an unparalleled digital experience

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PowerLogic P3 Standard at a glance

Universal

- All-in-one box with feeder, transformer, and motor protections
- All communication protocols embedded on serial and Ethernet links including IEC 61850 ed.1 and ed. 2.

Robust

- Best-in class reliability based on 100+ years of experience in Sepam, MiCOM and Vamp relays
- Strong tests performed in international laboratories
- Compliant to IEC electro-mechanical standards
- Designed for demanding industrial conditions with conformal-coated printed circuit boards.

Efficient and connected

- Easy to order with 10 standard configurations delivered off the shelf in less than 7 days (location dependent)
- Easy to configure with the unique eSetup Easergy Pro setting software
- Easy to test with the virtual simulation test for direct injection of current and voltage from eSetup Easergy Pro
- Easy to install with withdrawable rear connectors with CT shortening
- Easy to use and maintain with the embedded web-HMI and EcoStruxure™ Power Device app for direct access on site via your laptop, smartphone, or tablet.

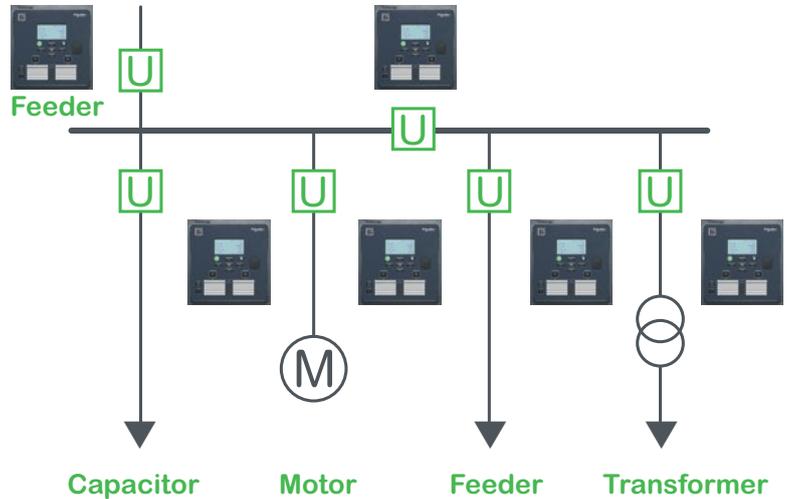


PowerLogic P3 Standard with panel seal cover REL52833

General characteristics

PowerLogic P3 Standard

PowerLogic P3 is designed to cover all the standard applications with only one device: the Universal Protection.



PowerLogic P3 Standard is available in 3 models:

Model	Communication	Main advantages
PowerLogic P3U10		
<ul style="list-style-type: none"> ■ 4 CT / 1VT ■ 2 DI / 5 DO / WD 	Stand-alone device, without communication ports	Simplicity , while allowing the latest features, like single-line diagrams (mimics), programmable protection stages, logics and function keys
PowerLogic P3U20		
<ul style="list-style-type: none"> ■ 4 CT / 1VT ■ 10 DI / 5 DO / WD ■ 8 DI / 8 DO / WD 	Open communication protocols on serial or Ethernet links, with IEC 61850	Openness to IEC 61850 , while keeping the core functionalities of PowerLogic P3 Standard relay
PowerLogic P3U30		
<ul style="list-style-type: none"> ■ 4 CT / 4VT ■ 16 DI / 8 DO / WD ■ 14 DI / 11 DO / WD 	Open communication protocols on serial or Ethernet links, with IEC 61850	Wide scope of possibilities , with the directional protection, synchro-check, fault location, and increased number of input and outputs

A common set of functions extends the possibilities of protection and control:

- Single-line diagrams (mimic) in the display
- Programmable protection stages
- Programmable logics
- 2 programmable function keys
- Synchro-check function
- Direct-access USB port
- Up to 6 objects controlled.

General characteristics

PowerLogic P3 Advanced

A

The PowerLogic P3 advanced is a protection relay developed to satisfy the protection needs for buildings, distribution utilities, and industrial applications. Thanks to a wide scope of functionality and Ethernet communication, PowerLogic P3 advanced provides a cost-effective solution for the upper end of protection requirements in these applications.

B

Protect your staff and equipment and ensure safer operations with PowerLogic P3 Advanced's built-in arc flash detection and protection functions.

You will experience greater operational efficiency with rapid ordering, configuration, and operations for an unparalleled digital experience provided with PowerLogic P3.

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PowerLogic P3 Advanced at a glance

Extended capabilities

- Extended protection functions, including differential of line, transformer, motor, and generator
- Arc flash detection
- All communication protocols embedded on serial and Ethernet links, including IEC 61850 ed.1 and ed. 2
- Increased number of inputs and outputs.

Robust

- Best-in class reliability based on 100+ years of experience in Sepam, MiCOM and Vamp relays
- Strong tests performed in international laboratories
- Compliant with IEC electro-mechanical standards.

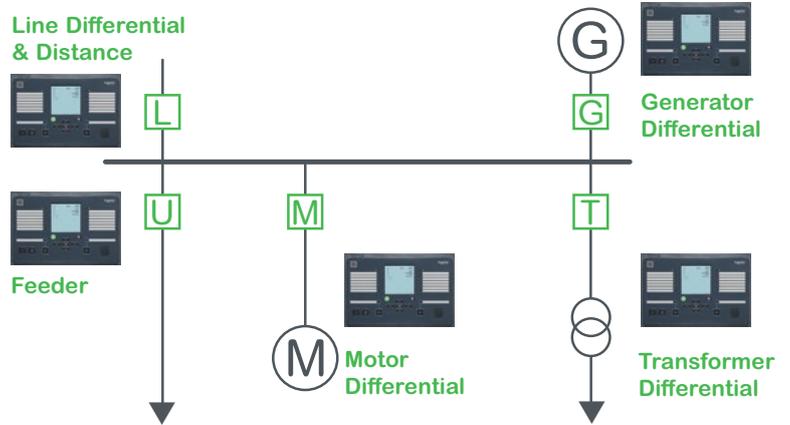
Efficient and connected

- Easy to configure with the unique eSetup Easergy Pro setting software
- Easy to test with the virtual simulation test for direct injection of current and voltage from eSetup Easergy Pro
- Easy to use and maintain with the embedded web-HMI and EcoStruxure™ Power Device app for direct access on site via your laptop, smartphone, or tablet.



General characteristics PowerLogic P3 Advanced

PowerLogic P3 is designed to cover a large scope of applications.



PowerLogic P3 Advanced is designed in **7 models, per application:**

Model	Function	
PowerLogic P3F		
30	Feeder	Protection
PowerLogic P3L		
30	Line	Differential and Distance
PowerLogic P3M		
30	Motor	Protection
32	Motor	Differential
PowerLogic P3G		
30	Generator	Protection
32	Generator	Differential
PowerLogic P3T		
32	Transformer	Differential

A common set of functions extends the possibilities of protection and control:

- Single-line diagrams (mimic) in the display
- Programmable protection stages
- Programmable logics
- 2 programmable function keys
- Synchro-check function
- Direct-access USB port
- Up to 6 objects controlled
- Arc flash protection.



Learn more about
PowerLogic P3
range here



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PowerLogic P5

Network protection relays

F

The PowerLogic P5 at a glance

The PowerLogic P5 is a protection relay for demanding medium-voltage applications. It offers users industry-leading dedicated protection relay functionality to reduce risks, improve reliability, all with advanced connectivity. Additionally, it can be used with a range of digital tools that make everyday operations simpler for users. The PowerLogic P5 is part of the PowerLogic range of power monitoring and control solutions and has been built on more than 100 years of experience in protection relays, including Sepam, MiCOM, and Vamp ranges, renowned for their reliability and performance.

G

Industry-leading protection functions

- Built-in arc-flash protection function (optional)
- Nearby control with a mobile application
- Latest cybersecurity built in, certified according to IEC 62443 4-2 Security Level 1 and Achilles Level 2.

H

Best-in-class reliability

- Withdrawable design for quicker maintenance
- Backup memory function enabling industry-leading 10 minute recovery time!
- Condition monitoring for reduced risk of power outages and maximized equipment life
- Extended equipment lifetime when used with EcoStruxure Asset Advisor.

I

Maximized everyday simplicity

- Easier operation with digital tools including the EcoStruxure Power Device app
- Powerful communication with plug and play ports and seven protocols supported
- Scalable hardware making it easy to upgrade as your applications evolve.



Enjoy a package of sought-after features in one device



The PowerLogic P5 is a major step forward for protection relays, combining best-in-class features together in one device.

Built-in arc-flash protection functions

Arc-flashes will always exist when switching or during unexpected conditions.

If the protection function detects an arc-flash, it isolates the connected circuit breaker within milliseconds, preventing a growing arc-flash energy and thus an unexpected risk of outage.

Advanced cybersecurity

With its optional cybersecurity package the PowerLogic P5 is one of the first protection relays to be third-party certified according to IEC 62443 4-2 standard at Security Level 1. This means reduced exposure to cyber threats and improved operational security.

By default, the PowerLogic P5 includes important features such as password management, port hardening and secured communication compliant to the latest standards.

Intuitive withdrawable design

With a handle built in as part of the design, the P5 can be quickly disconnected or exchanged to speed up maintenance. Wiring, data, communication, and settings (including backup) can be stored with the panel and will be there when the relay is reconnected.

Improved recovery time

When maintenance or testing is required, PowerLogic P5 helps dramatically decrease your outage recovery time. The backup memory can automatically restore settings, you can continue your operations in as little as 10 minutes.^[*]

[*] Result of mean time to repair (MTTR) calculation conducted by Schneider Electric

Greater connectivity

The protection relay features seven communication protocols. This includes compliance with IEC 61850 Edition 1 and Edition 2, Modbus (serial/TCP), IEC 60870-5-103, IEC 60870-5-101, Ethernet/IP, and DNP3 (serial/TCP). PowerLogic P5 can support up to 3 Ethernet protocols simultaneously, including offering dual redundancy with PRP/HSR and RSTP protocols. Moreover, all communication modules can be added at any time, including on-site, during the product life cycle to allow you to upgrade your device in line with future network evolutions.



Make everyday operations easier with digital tools



The PowerLogic P5's industry leading protection features are complemented by a comprehensive set of tools available on mobile devices such as smartphones or tablets, and desktop computers. This means you get simpler installation, configuration, and maintenance, enabling you to save time and money. Nearby control and monitoring allows users to fully operate the device via wireless communication, from a safer distance.

Digital tools for the PowerLogic P5 include:

- **EcoStruxure Power Build** – Medium Voltage online ordering tool enables quicker and easier ordering
- **eSetup Easergy Pro** software with virtual injection testing
- Embedded web server, allowing easy and fast setting changes from a web browser
- **EcoStruxure™ Power Device app** for simpler and safer operation and maintenance
- **mySchneider app**, a simple way to access support and product data by flashing the QR code on the device.

As an EcoStruxure-ready solution, the PowerLogic P5's digital benefits can be taken even further with best-in-class monitoring of substation equipment health. For example, when paired with EcoStruxure Asset Advisor, users get data for predictive maintenance, which helps them reduce OpEx, speed up processes, and boost efficiency.

Take the PowerLogic P5 further with EcoStruxure™

EcoStruxure, Schneider Electric's IoT-enabled, open and interoperable architecture and platform, brings together Connected Products, Edge Control, and Apps, Analytics & Services. EcoStruxure connected products deliver enhanced value around safety, reliability, efficiency, sustainability, and connectivity.

450 000

EcoStruxure systems deployed since 2007 with the support of our 9,000 system integrators

EcoStruxure ready



Efficient asset management

Help boost your efficiency and participate to reduce downtime using predictive maintenance tools



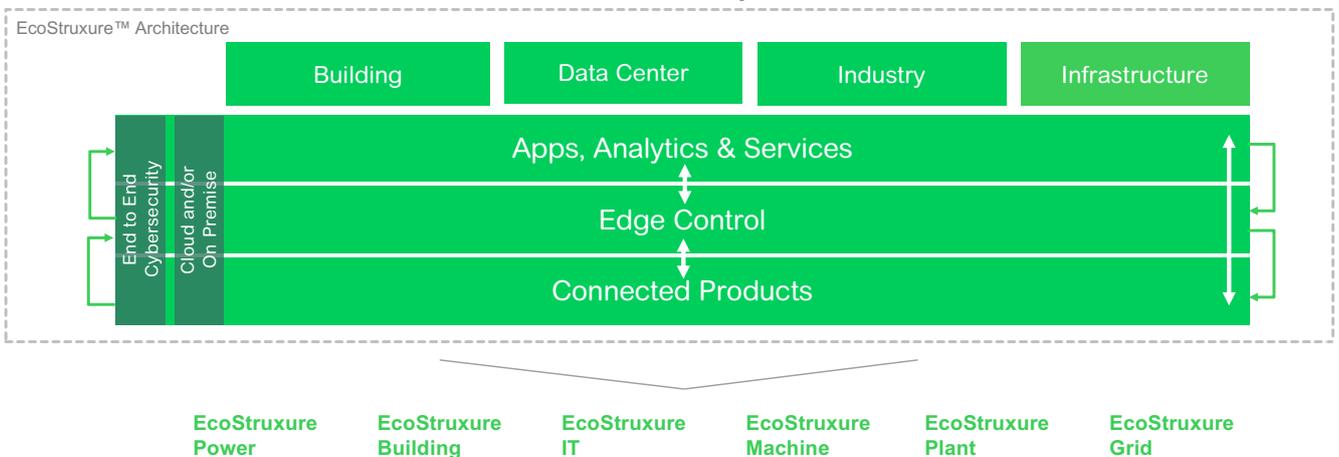
24/7 connectivity

Make better informed decisions with real-time data that's available everywhere, anytime



Enhanced safety

Advanced features designed-in based on well-known designs, experience and technology



General characteristics

PowerLogic P5

A

PowerLogic P5 protection relay is based on proven technology concepts and developed in close cooperation with customers, so it's built to meet your toughest demands:

- Modular design that allows user-defined conventional protection and arc-flash protection solutions
- Compatible with conventional CTs/VTs or low power instrument transformers LPCT/LPVT compliant to IEC 61869-10 and IEC 61869-11
- Embeds latest cybersecurity functionality to help prevent intentional mis-use and cyber-threats
- Fast replacement with enhanced safety thanks to withdrawability and back-up memory that automatically restore parameters without using any configuration tools
- Advanced logic engine (option) supports the most complex automation & control schemes.

B

Easergy products are designed to be user friendly, a feature that is proven in our customer reports day after day. You'll benefit from features that include:

- A complete set of protection functions, related to the application
- Arc-flash detection in PowerLogic P5x30 models
- Dedicated circuit breaker control with single-line diagram, push buttons, programmable function keys, LEDs, and customizable alarms
- Multilingual HMI for customized messaging
- Settings tool relay management software for setting parameters, configuring, and network fault simulation
- Both serial and Ethernet communication, including redundancy
- IEC 61850 communication protocol including flexible product naming for smooth multi-vendor integration.

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PowerLogic P5 is available in two sizes to best fit your needs:



PowerLogic P5x20



PowerLogic P5x30

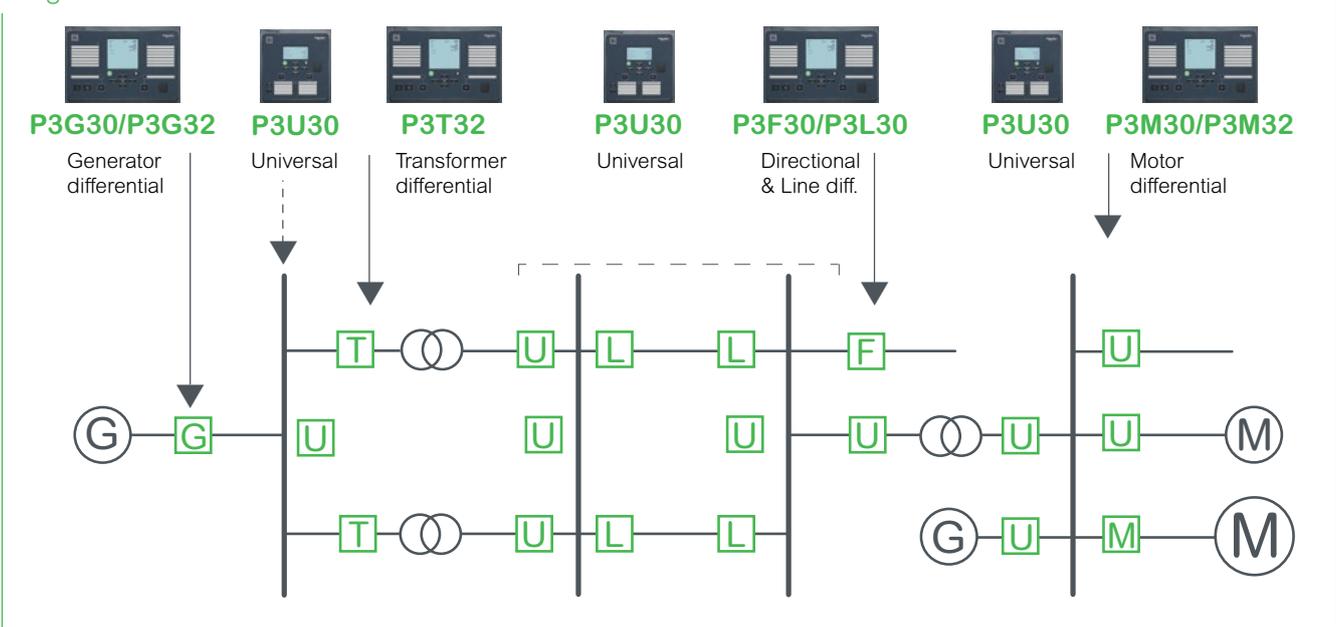
PowerLogic P5 digital protection relays are designed for power distribution networks in:

- Utilities - Energy distribution.
- Critical buildings and Industry:
 - Data Center
 - Healthcare
 - Transportation
 - Industrial buildings.
- Large industrial processes:
 - Oil and Gas
 - Mining
 - Mineral and Metals
 - Water.

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Range overview



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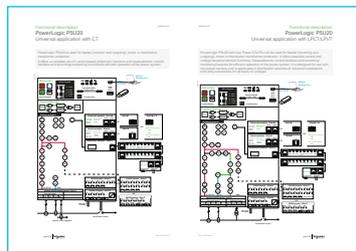


PowerLogic P5



[CLICK HERE TO SEE THE FUNCTIONAL DESCRIPTIONS](#)

PowerLogic P5U20



[CLICK HERE TO SEE THE ELECTRICAL CHARACTERISTICS](#)



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VAMP 125

Unit for flexible arc flash protection

Modern society heavily depends on an uninterrupted supply of electric power. Prolonged power outages may cause loss of business to the power supplier and loss of production to the power consumer.

An arc flash protection unit is a protective device used to enhance the environment of the installation in different situations.

Schneider Electric's Vamp range is the pioneer in the field of arc flash protection with close to 15,000 arc flash systems and 300,000 sensors in service worldwide.

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We can supply an arc flash protection system tailored to your application

An arc flash protection unit is a protective device used to enhance the environment of your installation.



VAMP 125 at a glance

Dedicated unit for each bay

- VAMP 125 Arc flash protection units are versatile and independently operating devices for bay based protection.

Designed for partners

- They offer optimized and cost effective solution for panel builders and OEMs.

Hardware

- Interface for 4 Arc flash sensors.
- 2 output relays:
 - 1 relay output,
 - 1 high speed output.
- 1 change-over output for self-supervision.
- Wide range auxiliary power supply.
- External inputs for remote control.
- External input for current criteria.



User benefits

Suitable product

- Fit to various customer segments like utilities, commercial and industrial buildings, mining, steel, cement and other industry, OEMs

Easy to integrate

- QR code for registration
- One type designation only: various documented protection schemes

Easy to use

- Easy entry to arc flash protection
- One variant with wide-range power supply
- Optimized for standard switchgear configurations
- Standard solution for panel builder

VAMP 125

Why arc flash protection?

A

Traditional time-grading or blocking based system may not be suitable to address fast answer in the event of a detected error in the installation. Further, high-impedance type earth-faults may cause prolonged operation times of earth-fault relays leading to the significant release of arcing energy.

B

These facts pose a considerable risk to operation personnel and economical assets.

Highest risk for the arc flash phenomena occurs during commissioning and maintenance of the power system and after possible recommissioning of the power distribution boards.

C

Arc flash protection, utilizing detection of the arc flash, is designed to operate faster than traditional protection relays hence their performance enhance electrical installation's availability.



D

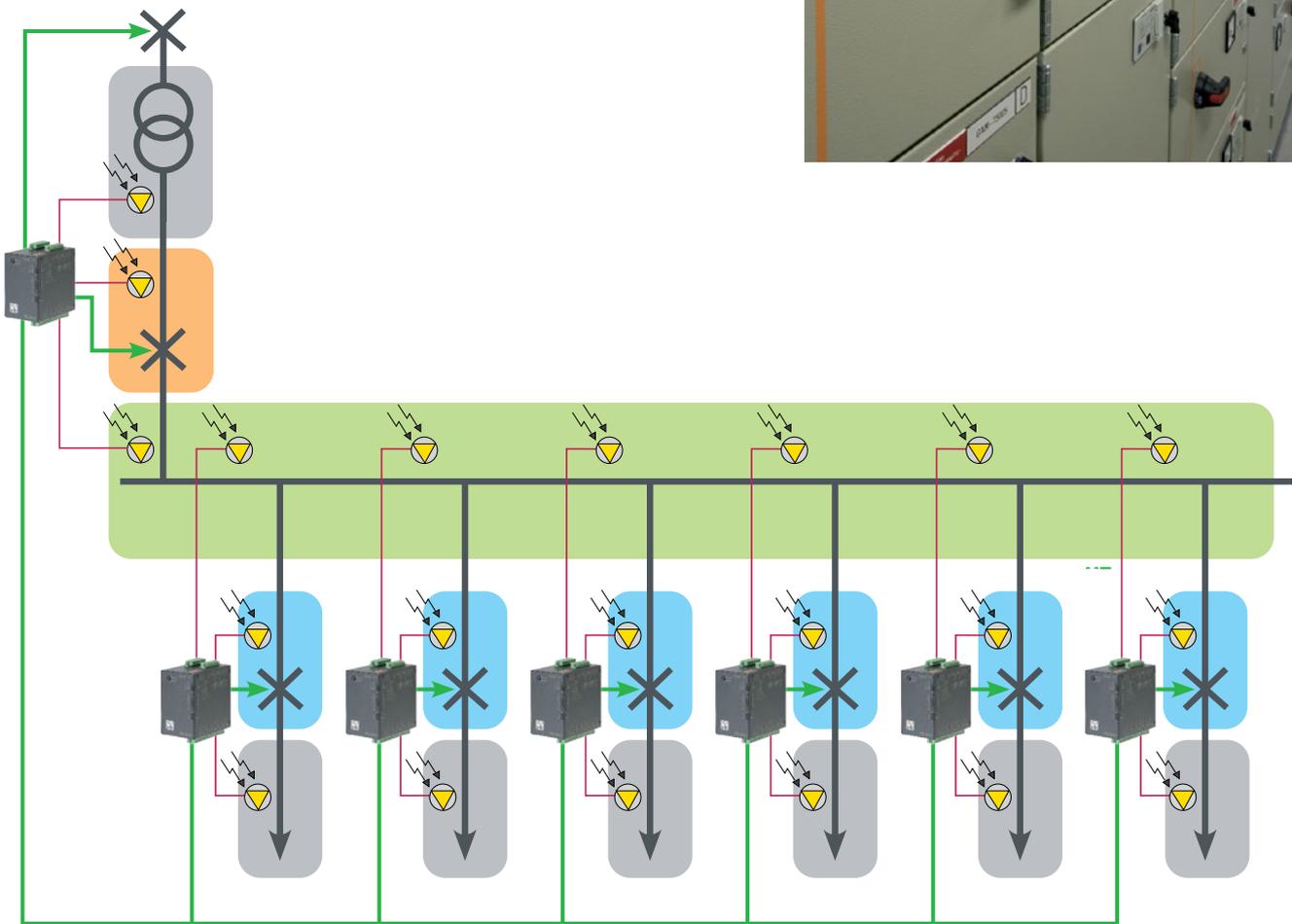
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VAMP 125 user interface



VAMP 125 - arc flash protection made compact, easy and effective

Operating status indications

- Power
- Blocking
- Service required

Sensor and trip output status

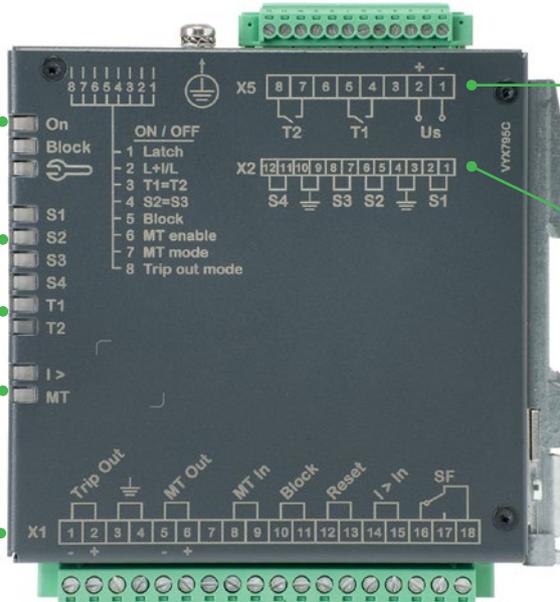
- Sensors S1, S2, S3 and S4
- T1 and T2

Binary input status

- External current
- External master trip

Terminal X1 and label texts

- Binary trip out
- Binary output ground
- Binary master trip output / input
- Block input
- Reset input
- Current status input
- Service status output



Terminal X5 label texts

- T1 and T2
- Auxiliary power

Terminal X2 label texts

- Sensors S1, S2, S3 and S4

Reset / Install push button



QR code

- Documentation tracking and product registration

Panel mounting

Optional door mounting bracket supports installation to a door for easy access of system status data.

Mounting bracket

- Order code REL52901
- Depth dimension behind door 126 mm
- Depth dimension can be reduced another 10 mm down to 115 mm in case the DIN rail mounting bracket is removed from the device.



One or two incomers and several outgoing feeders

The following applications are typically used for arc flash protection in MV power distribution in commercial buildings and light industries. The arc flash protection is commercialized using VAMP 125 arc flash protection units, VA1-DAX type point sensors and appropriate wiring between the units.

Operation

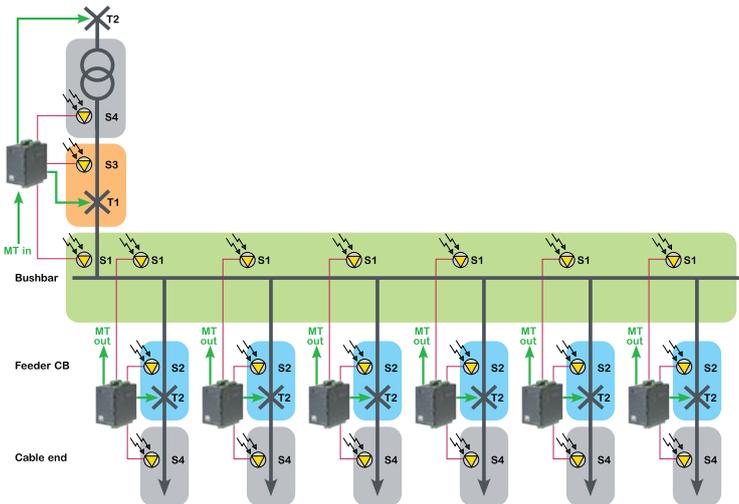
Incomer

Incomer cubicle has three sensors. Activation of sensor S1 operates T1 output. Should the arc fault happen in the CB compartment sensor S3 activates and controls upstream CB via T2 output. Equally, if the arc fault happens in the power transformer bushings, an upstream CB is tripped through T2.

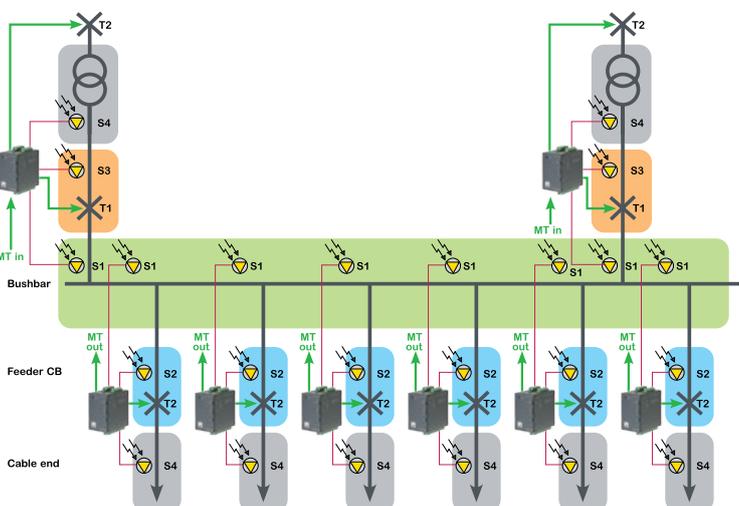
Outgoing feeder

All outgoing feeders have similar operation. Should the sensor S1 activate in the busbar compartment, the pick-up signal is transferred via MT out to VAMP 125 located in the incomer feeder and trips incoming feeder CB through T2 output. Equally, should the sensor S2 activate a pick-up, signal is transferred to incomer feeder CB. Possible arc fault in the cable termination is tripped by T2.

Single incomer feeder application



Operation of two incomer feeder application



Operation of the arc flash protection scheme is identical to the single incomer feeder application, except the activation of the arc flash fault in the bus bar or in outgoing feeder breakers are connected to both incomers.

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Auxiliary power supply

Uaux	24 – 240 (-20% +10%) V AC/DC
Power consumption	8 W

Hybrid output, T1

Number of contacts	1, NO
Rated voltage	250 V AC/DC
Continuous carry	5 A
Minimum making current	-
Typical operation time	≤ 1 ms
Make and carry, 0.5 s	30 A
Make and carry, 3 s	15 A
Breaking capacity, AC	2 000 VA
Breaking capacity, DC (L/R = 40 ms)	At 48 V DC: 1.15 A At 110 V DC: 0.5 A At 220 V DC: 0.25 A
Contact material	AgNi 90/10
Terminal block: MSTB2.5 - 5.08	<ul style="list-style-type: none"> ■ Wire dimension: □ Maximum 2.5 mm² (13 - 14 AWG) □ Minimum 1.5 mm² (15 - 16 AWG)

Trip contact, T2

Number of contacts	1, NO
Rated voltage	250 V AC/DC
Continuous carry	5 A
Minimum making current	100 mA @ 24 V DC
Typical operation time	≤ 8 ms
Make and carry, 0.5 s	30 A
Make and carry, 3 s	15 A
Breaking capacity, AC	2 000 VA
Breaking capacity, DC (L/R = 40 ms)	At 48 V DC: 1.15 A At 110 V DC: 0.5 A At 220 V DC: 0.25 A
Contact material	AgNi 90/10
Terminal block: MSTB2.5 - 5.08	<ul style="list-style-type: none"> ■ Wire dimension: □ Maximum 2.5 mm² (13 - 14 AWG) □ Minimum 1.5 mm² (15 - 16 AWG)

Self-supervision contact; SF

Number of contacts	2, NC/NO
Rated voltage	250 V AC/DC
Continuous carry	5 A
Minimum making current	100 mA @ 24 V DC
Make and carry, 0.5 s	30 A
Make and carry, 3 s	15 A
Breaking capacity, AC	2 000 VA
Breaking capacity, DC (L/R = 40 ms)	At 48 V DC: 1.15 A At 110 V DC: 0.5 A At 220 V DC: 0.25 A
Contact material	AgNi 90/10
Terminal block: MSTB2.5 - 5.08	<ul style="list-style-type: none"> ■ Wire dimension: □ Maximum 2.5 mm² (13 - 14 AWG) □ Minimum 1.5 mm² (15 - 16 AWG)

Binary outputs; Trip Out, MT Out

Number of outputs	2
Rated output voltage	+24 V DC SELV (max +32 V DC unloaded)
Rated output current	20 mA
Terminal block: MSTB2.5 - 5.08	<ul style="list-style-type: none"> ■ Wire dimension: □ Maximum 2.5 mm² (13 - 14 AWG) □ Minimum 1.5 mm² (15 - 16 AWG)

Binary inputs; MT In, Block, Reset, I> IN

Number of inputs	4
Voltage withstand	250 V AC/DC
Nominal operation voltage	24 – 240 V AC/DC (max. 250 V AC/DC)
Typical switching threshold	12 V DC ±5%
Current drain	approx. 3 mA
Terminal block: MSTB2.5 - 5.08	<ul style="list-style-type: none"> ■ Wire dimension: □ Maximum 2.5 mm² (13 - 14 AWG) □ Minimum 1.5 mm² (15 - 16 AWG)

Arc sensor inputs; S1 – S4

Number of inputs	4
Supply to sensors	8 V DC
Grounding	4 pcs. ground termination on connector
Terminal block: MC 1.5 - 3.5	<ul style="list-style-type: none"> ■ Wire dimension: □ Maximum 1.5 mm² (15 - 16 AWG) □ Minimum 0.14 mm² (25 - 26 AWG)



Learn more about
Vamp 125
range here



Offer



Technical brochure

Scan or
click on
QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>

Switchboards and Enclosures

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Okken: intelligent switchboard solutions

With safety and reliability within reach, why settle for less?

Embodying decades of expertise, Okken™ solutions are complete and customized low-voltage (LV) power distribution, motor control, and integrated power control centres. Okken switchboards contribute to answer the need for operational safety in today's high-performance LV power applications. Versatile and durable, Okken switchboards have the comprehensive capabilities and intelligence you need to keep your business competitive.

Industry-leading features, design, and support make implementation and operation quick, easy, and reliable, so you can lower costs and realize a faster return on investment.

Okken solutions combine high level of safety and reliability with an optimized footprint, modular architecture, and smart devices.

A global player with local capabilities

Schneider Electric is present in more than 100 countries, delivering reliable products and solutions around the world. Our global reach helps us ensure high quality and local project and service capabilities, no matter your location.

Smart grid ready

Our broad expertise in electrical network management makes us a partner who knows what the smart grid means for your business, and how best to keep you at the forefront of technology.

15%

Okken solutions can provide up to 15% energy savings^[1]

150 k

More than 200,000 cubicles installed. Customers worldwide trust Okken LV switchboard solutions

[1] Based on previous data, 2015. This is not a guarantee of future performance or performance in your particular circumstances.

Electrical safety for personnel

Tested and certified by independent ASEFA and LOVAG labs

With Okken, protection is never left to chance

With high modularity and total insulation, safety is engineered into every Okken switchboard, from conception, through design, installation, and everyday operation.

Network management applications

Full type tests as per IEC 61439-1&2 confirm high level of electrical installation and operational safety. Insulation and provided screening of all live parts enhance service life and provide outstanding protection.

- Forms of internal separation up to 4b
- Embedded interlock systems to secure on-load disconnection
- Live-part protection up to IPxxD
- Fully insulated busbars
- Padlockable with three different locks
- Protection with optional doors and accessories
- Closed door racking drawers for extra operator protection in all drawer positions, particularly in case of internal short-circuit or arc event, and even during connecting and disconnecting.

Internal arc withstand and short-circuit protection

- Fully type tested in compliance with IEC TR 61641 edition 3
- Internal arc withstand up to 100 kA/0.5 s
- Arc-free zone with encapsulated active parts in the whole switchboard: incomer, horizontal busbar, withdrawable cubicle
- Active optical arc-flash detection with VAMP system
- Operator protection at three levels:
 - Horizontal and vertical busbars
 - Functional units on all three positions of withdrawable drawers
 - Outgoing cable connections
- Internal arc risk reduction thanks to our unique Polyfast™ system
- Partitioned terminals for electrical insulation between the upstream circuit breaker and the double contact clamps on the main busbar
- Rated conditional short-circuit current (Isc) up to 150 kA.



Note: In working environment, full operator safety measures should always be adopted.

Reliability and continuity of service

An "install-and-forget" level of dependability

Tough enough for Oil & Gas applications

 [CLICK FOR MORE DETAILS](#)

 [CLICK FOR MORE DETAILS](#)

Thermal monitoring

Resistance to corrosive environment



 [CLICK FOR MORE DETAILS](#)

 [CLICK FOR MORE DETAILS](#)

Optimized for marine installations

Durability for seismic areas

 [CLICK FOR MORE DETAILS](#)

 [CLICK FOR MORE DETAILS](#)

Customized solutions for any application and severe environment



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Oil & Gas



Offshore Platforms



Mining, Metals, Minerals



Marine



Nuclear



Water and Wastewater Treatment



Healthcare



Data Centres

General overview

Okken

A High performance and superior efficiency

Compact, modular design - the right fit for your organization

A

B

Industry-leading capabilities

- Maximum busbar rating up to 7300 A
- Maximum rating of Power Control Centre (PCC), up to 6300 A
- Maximum rating of Motor Control Centre (MCC), up to 250 kW
- Smart communicating devices for connected switchboards
- Compact design for higher stacking density and optimized footprint
- Upgradeable energized equipment.

C

D

A disconnectable design for power distribution

The Polyfast system reinforces the electrical isolation of power distribution switchboard.

E

Power distribution

PCC including protection and power factor correction:

- Main busbar up to 7300 A
- Incomers up to 6300 A (Masterpact™ circuit breakers)
- Feeders up to 6300 A (Masterpact circuit breakers), and up to 630 A (Compact™ circuit breakers)
- Power factor correction up to 540 kVAR.

F

G

> Electrical distribution up to 7300 A.

> Incomer and feeder up to 6300 A.

> Motor control up to 250 kW.

H

I

A flexible, withdrawable design for motor control and power distribution

Compact and powerful Okken switchboards answer the needs of the most demanding motor control and power distribution applications. Combining continuity of supply and performant operational services.

Motor control

MCC including protection, starters, and drives:

- Conventional starters up to 250 kW
- Soft starters up to 315 kW
- Drives up to 160 kW.



Improved versatility and flexibility

24/7 visibility of energy use and power quality

A compact and modular design for every function

Okken is a simple and modular solution that is easy to choose, intuitive to use, cost effective, and simple to install or upgrade.

Fast, easy installation, upgrading, and maintenance

Single front or double front access thanks to back-to-back configuration, top or bottom direct power connections, rear or side power connections for easy installation. Plus, standardized dimensions and an optimized footprint save time and money during installation.

- Fixed, disconnectable, or withdrawable functional units
- Withdrawable drawer size optimization: full and half-widths, different heights from 100 to 600 mm
- Direct power plug connection to the vertical busbar (50 mm pitch)
- Drawer position indicators on front faces and drawer stop
- Withdrawable Masterpact and plug-in
- Compact circuit breaker modules
- Current transformers inside.

Upgrade Okken while under load

Easily modify and upgrade your Okken solution and add new functions as your needs change: scalability while under load, equipping of additional slots in reserved spaces, association of cubicles, fast interchangeability without special tools.

- Degree of protection up to IPxxD on busbar with automatic shutters, and on connections on busbar by plug-in clamps
- Customer connection separate from the functional unit (form up to 4b).



General overview Okken

A

iPMCC by Okken: built-in intelligence

Our digital solution for power distribution and motor control

B

The intelligent Power and Motor Control Centre (iPMCC) by Okken is a highly capable and advanced smart solution for application fault prevention, protection, and automatic restart in continuous and critical processes. It helps you boost productivity and optimize the energy management and efficiency of your assets while enhancing continuity of service, and reducing downtime.

C

Energy savings up to 15%

- Integration of all your equipment to lower electrical energy consumption
- Synchronizing motors to loads with progressive starters and variable speed drives and reducing peak consumption by 50% or more¹
- Managing reactive power compensation (capacitors) and thermal withstand control to reduce costs and increase energy availability.

Enhanced control and monitoring

- Better traceability and control
- Local or remote real-time information access
- Motor operating status and time monitoring (alarms and tripping)
- Parameter monitoring and management of status, measurements, diagnostics, trends, and energy consumption.

D

Optimized motor performance

- Motor monitoring and protection in accordance with IEC/EN 60947-7-1
- Motor and protection device configuration accessible at all times
- Associated with TeSys T, iPMCC by Okken enables the detection of electrical loads faults like no-load running, shaft bearing seizure, abnormal starting or heating, pump cavitations, and pulsating torque.

Smart-grid integration

- Pretested communication architectures offering leading industry protocols engineered to optimize asset energy efficiency (Ethernet/IP, Profibus®-DP, Modbus, TCP/IP)
- Seamless integration with energy management and control systems and process automation management systems
- Complete range of design assistance tools.

E

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A complete range to match your toughest needs

For power distribution and motor control including variable speed drives, motor starters, power factor correction, and harmonic filtering

Enhanced efficiency and productivity

PCC ^[1]		230 Very high-power incomers and feeders up to 6300 A	PCC/MCC		115/70-2 Mixed incomers and feeders
		115 High-power incomers and feeders up to 4000 A		MCC and PCC	
		Single Masterpact MTZ-NW Single incomer or feeder (width 650 mm)	MCC ^[2]		
		Single Masterpact MTZ-NT-NS Single incomer or feeder (width 450 mm)		PFC ^[4]	
		70-F Fixed feeders			PFC ^[4] Capacitors
		185 Fixed feeders			

[1] PCC = Power Control Centre
 [2] MCC = Motor Control Centre
 [3] VSD = Variable Speed Drive
 [4] PFC = Power Factor Correction and harmonic filtering



Okken

Okken intelligent switchboard specifications

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General data

Applications	Power distribution, motor control
MCC (Motor Control Centre)	Up to 250 kW
VSD (Variable Speed Drive)	Up to 160 kW
PCC (Power Control Centre)	Incomer & feeder up to 6300 A
PFC (Power Factor Correction)	Up to 690 kVAR
Standards	IEC 61439-1 & 2, IEC TR 61641, IEC 60529
Certifications	EAC (Gost), CCC, AS

Electrical data

Voltage	Up to 690 V AC (50/60 Hz)	
Main busbar rating	Up to 7300 A	
Distribution busbar rating	Up to 2100 A	
Rated short-time current (Icw)	Horizontal main busbar	Up to 150 kA rms - 1 s (peak current Ipk up to 330 kA)
	Vertical distribution busbar	Up to 100 kA rms - 1 s (peak current Ipk up to 220 kA)
Conditional short-circuit current (Isc)	Up to 150 kA	
Internal arc withstand current	100 kA – 0.5 s (IEC TR 61641 edition 3)	
Earthing system	TT-IT-TNS-TNC	

Communication

Protocols	Ethernet/IP, Modbus, TCP/IP, Profibus DP
-----------	------------------------------------------

Mechanical data

Form	2b/3b/4a/4b
Withdrawability	FFF/WFD/WFW/WWW
Seismic withstand	IBC 2006/AC 156 (site class B-C-D, floor level only), IEC68-3-3 (equivalent to Richter scale up to level 9), AS1170, EAK-2000, ENDESA-1986, GOST 17516.1-90 (civil market, all seismic intensity, up to installation level 2), IEEE 693-1997, EDF CRT 91 C 112 00 (Okken 5G only for nuclear applications)
Installation	Indoor environment type 2
Degree of protection	IP20, IP31, IP41, IP54
Operating temperature	-5°C to 35°C/50°C

Okken
Low voltage switchboards for power distribution motor control up to 7300 A.
Part of Set Series
High dependability low voltage switchboards for power distribution a

Learn more about Okken range here



Scan or click on QR code

Offer

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



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E

BlokSet, the switchboard solution

F

Enhanced safety and reliability within your reach

Embodying decades of expertise, BlokSet™ solutions are engineered to be complete and personalized low-voltage (LV) switchboards for power distribution and motor control. BlokSet switchboards answer the need for operational safety in today's high performance LV power applications. Versatile and durable, BlokSet switchboards have the comprehensive capabilities and intelligence you need to keep your business competitive.

G

Greater reliability, flexibility, and intelligence

BlokSet solutions combine industry-leading features and designs with Schneider Electric™ support to make implementation and operation quick and reliable so that you can lower costs and realize a faster return on your investment. A fully functional switchboard with built-in intelligence for energy efficiency, BlokSet is a simple and modular solution. It is easy to choose, intuitive to use, cost effective, and simple to install and upgrade.

H

I

Benefits at a glance

- High quality design for safety and performance
- High continuity of supply, even in severe environments
- Smart solutions for energy savings and optimized operation
- Pre-engineered modular architecture for easy implementation
- Quick return on investment
- Localized support and services for ease of ownership.

700 k

More than 500,000 cubicles installed. BlokSet LV switchboards are trusted by customers worldwide



SEE THE VIDEO 



Electrical safety for personnel

Tested and certified by independent ASEFA and LOVAG labs

Type-tested for high electrical installation and operational safety

With IEC 61439-1&2 and full type-testing by independent ASEFA, LOVAG and ASTA certified laboratories, you can have the peace of mind that safety is engineered into every BlokSet switchboard.

With BlokSet, protection is never left to chance

From conception through design, installation, and everyday operation, you can count on our commitment to maximize safety

Withdrawable drawers have three interlocked positions - connected, test, and disconnected, plus drawer stop - to improve operator safety when connecting and testing.

Smart engineering and user-friendly operation

- Built-in intelligence for energy efficiency and continuity of service
- Smart-grid ready for enhanced control and monitoring
- Fully interoperable switchboards, functional units, and devices
- Compact footprint allows more equipment and functions
- Withdrawable functional units for high availability and continuous processes
- Fixed functional units for economical applications.



Note: In working environment, full operator safety measures should always be adopted.

Improved safety measures

- Forms of internal separation up to 4b
- Embedded interlock systems to secure on-load disconnection
- Live-part protection up to IP xxB
- Fully insulated bus bars (optional)
- Padlockable with three different locks
- Protection with optional doors and accessories.

Internal arc withstand

- Fully type-tested in compliance with IEC 61641 (internal arc) to increase safety for personnel and equipment
- Internal arc containment up to 100 kA/0.4 s
- Operator protection at three levels:
 - Horizontal and vertical busbars
 - Functional units, including withdrawable drawers
 - Outgoing cable connections.

BlokSet

A

Superior reliability and high performance

B

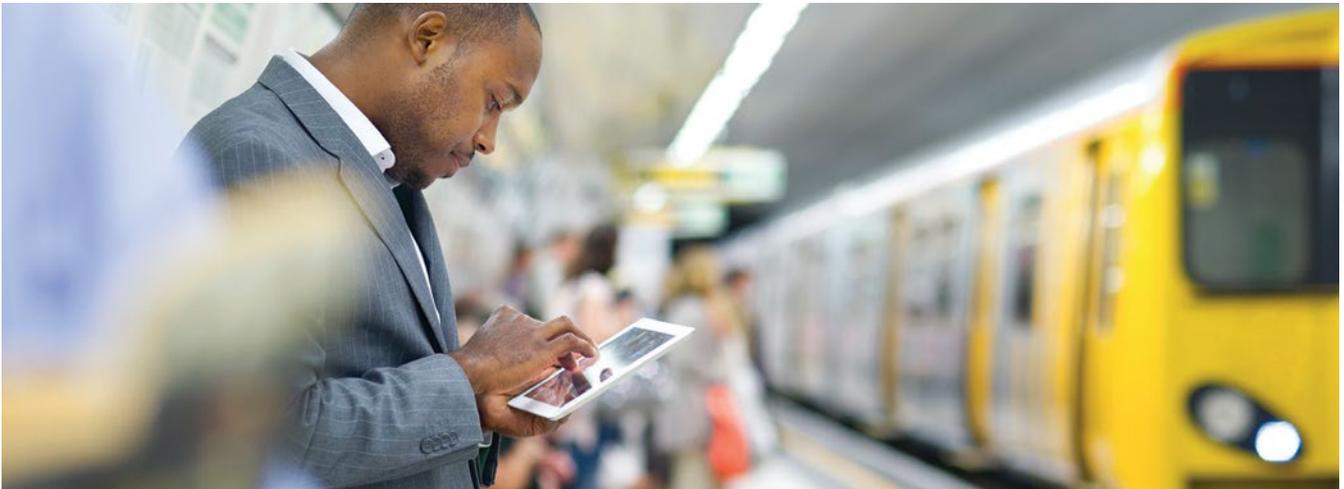
Outstanding safety and personalized solutions for diverse applications

Trusted worldwide for diverse industrial and infrastructural applications, BlokSeT solutions are personalized to fully satisfy different performance and harsh environmental requirements.

Durability in difficult environments

- Anti-corrosion: surface treatments on metallic sheets against corrosion and salt-spray
- Tin or nickel busbar coating on copper conductive parts for H2S and SO2 atmosphere withstand
- 2G version for seismic or high vibration environment.

C



Subway and railway systems

D

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F



Mining, metals and minerals industry

Schneider Electric inside: quality and compatibility

A robust architecture, type-tested, standardized modules devices work together to improve functionality, safety, continuity of supply and installation reliability even in the most difficult conditions.

- All components and accessories are designed by Schneider Electric and manufactured to rigorous quality standards
- Compatibility between switchboards, functional units, and built-in devices is tested and validated
- Schneider Electric components have outstanding electrical and mechanical consistency and electromagnetic compatibility (EMC).

H

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Mining, metals, minerals industry



Petrochemicals



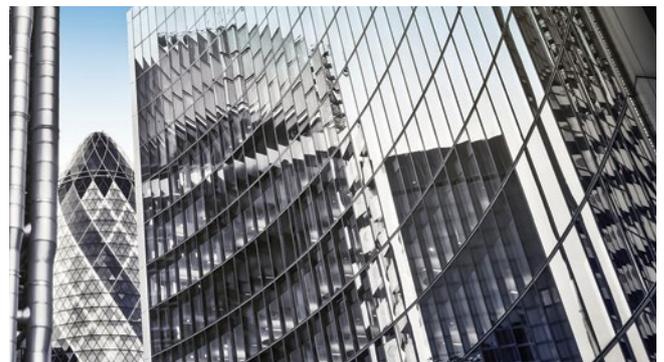
Airport



Data centers



Healthcare facilities



Commercial buildings

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BlokSet

A

High performance and superior efficiency

Compact, modular design - the right fit for your organization

B

Industry-leading capabilities

- Maximum busbar rating up to 7000 A
- Maximum rating of Power Control Center (PCC) up to 6300 A
- Maximum rating of Motor Control Center (MCC) up to 250 kW
- Smart communicating devices for connected switchboards
- Compact design for higher stacking density and optimized footprint
- Upgradeable energized equipment.

C

A disconnectable design for power distribution

The high-security power distribution switchboard offers maximum reinforced electrical isolation.

D

Power distribution

Power Control Center (PCC) including protection and power factor correction:

- Incomers up to 6300 A (MastePact™ circuit breakers)
- Feeders up to 6300 A (MasterPact™ circuit breakers) and 630 A (ComPacT™ circuit breakers)
- Power factor correction up to 646 kVAR.

F

G

7000 A

Electrical distribution up to 7000 A

6300 A

Incomer and feeder up to 6300 A

250 kW

Motor control up to 250 kW

H

I

A flexible, withdrawable design for motor control and power distribution

Compact and powerful switchboards answer the needs of the very demanding motor control and power distribution applications. Combining continuity of supply and reliable operational services.

Motor control

Motor Control Center (MCC) including protection, starters, and drives:

- Conventional starters up to 250 kW
- Soft starters up to 250 kW
- Drives up to 160 kW.



iPMCC by BlokSet

Smart panel - built-in intelligence for efficient control and monitoring

Greater efficiency and enhanced productivity

iPMCC (intelligent Power and Motor Control Center) is a highly capable and advanced smart solution for fault prevention, protection, and automatic restart. It helps improve energy efficiency and reduce down time for continuous and critical processes.

Optimize motor performance

Motor monitoring and protection with failure activities in accordance with IEC/EN 60947-7-1

- Motor and protection device configuration accessible at all times
- Associated with TeSys T, iPMCC by BlokSet enables the detection of faults like no-load running, shaft bearing seizure, abnormal starting or heating, pump cavitations, and pulsating torque.

Enhance control and monitoring

Easy access to real-time information

- Better traceability and control
- Local or remote real-time information access
- Motor operating status and time monitoring (alarms and tripping)
- Parameter monitoring and management of status, measurements, diagnostics, trends, and energy consumption.

Boost smart-grid integration

Pretested communication architectures offering leading industry protocols engineered to optimize asset energy efficiency (Ethernet TCP/IP, Ethernet/IP, Profibus®-DP, DeviceNet™, Modbus, CANopen®, etc.)

- Seamless integration with energy management and control systems, and process automation management systems
- Complete range of design assistance tools.

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BlokSet

A complete range for diverse applications

For power distribution and motor control including variable speed drives, motor starters, power factor correction, and harmonic filtering

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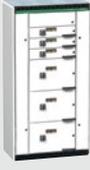
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PCC ^[1]		D High-power incomers and feeders up to 6300 A Withdrawable, disconnectable, fixed
MCC / PCC		Mw2 Power and Motor feeders Withdrawable
MCC ^[2]		Mf Motor feeders Fixed
MCC		Ms Variable speed drives and soft starters Fixed/ Withdrawable
PFC ^[3]		Dc Capacitors/ Harmonic Filters Fixed

[1] PCC = Power Control Centre
 [2] MCC = Motor Control Centre
 [3] PFC = Power Factor Correction and harmonic filtering



BlokSet switchboard specifications

General data	
Standards	IEC 61439-1/-2, IEC 61921, IEC TR 61641, IEC 60529, IEC 60068-2-11, IEC 60721-3-3 & IEC 61000-x-x
Certificate	Certified by recognized certification bodies ASEFA, ASTA, Dekra, and tested by independent laboratories
Electrical data	
Rated insulation voltage Ui	1000 V 3~
Rated operating voltage Ue	690 V 3~
Rated impulse withstand voltage Uimp	Up to 12 kV
Overtoltage category	Up to IV
Degree of pollution	3
Rated frequency	50/60 Hz
Main Busbar:	
Rated current Ie	Up to 7000 A
Rated peak withstand current Ipk	Up to 220 kA
Rated short-time withstand current Icw	Up to 100 kA rms - 1 s ^[1]
Distribution busbar:	
Rated current Ie	Up to 3200 A
Rated peak withstand current Ipk	Up to 220 kA
Rated short-time withstand current Icw	Up to 100 kA rms - 1 s ^[2]
Arc fault containment:	
Prospective short-circuit current	Up to 100 kA
Duration	0.4 s
Criteria (IEC TR 61641)	1 to 7
Earthing system	TT-IT-TNS-TNC
Mechanical data	
Form of separation	Up to Form 4b
Withdrawability	FFF/WWW
Seismic	UBC 97, IBC 2006 / AC 156 (site class B-C-D, floor level only), IEC 68-3-3 (equivalent to Richter scale up to level 9) / IEEE 693, GOST 17516.1-90 (civil market, all seismic intensity, up to installation level 2) 2G, zone 4
Installation	Indoor - environment type 2, EMC – Type A as per IEC 61439
Degree of protection	Up to IP54
Operating temperature	-5°C to 50°C
Vibration	IACS E10 0.7G
Corrosive atmosphere	H2S and SO2 (IEC 60721-3-3) Up to 3C2

[1] For Main Busbar Icw = 150 kA rms - 1S and 86 kA rms - 3 s contact Schneider Electric

[2] For VBB Icw = 65 kA rms - 3 s contact Schneider Electric



BlokSet
Low voltage switchboards for power distribution
motor control up to 7000 A
Part of Set Series
High dependability low voltage switchboards for power distribution

Learn more about
BlokSet
range here



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If you need more details about product references and availability, please check your local Schneider Electric contact
<https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



PrismaSeT G and P

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PrismaSeT G



PrismaSeT P

Panel building system for power distribution switchboards, up to 4000 A

To respond to increasing building requirements

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Improve the continuity of service



Ensure the safety of life and property



Control deadlines and costs



PrismaSeT:

the optimised, tested and IEC compliant solution,
for low voltage electrical distribution and control switchboards.



PrismaSeT, a comprehensive range of enclosures and cubicles

- A solution based on more than **30 years of experience** in low voltage switchboards.
- Integrating Schneider Electric switchgear offerings and ensuring electrical, mechanical and communication **functions complete consistency**.
- Quality production, **certified ISO 9001** and manufactured in Montmélian (France).

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PrismaSeT G and P

Develop your business efficiency

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Switchboards that are safe...

With PrismaSeT you can be sure to build 100% Schneider Electric switchboards that are safe, optimised:

- All components (switchgear, distribution blocks, prefabricated connections, etc.) are perfectly rated and coordinated to work together.
- All switchboard configurations, even the most demanding ones, have been tested.

You can prove that your switchboard meets the current standards, at any time.

You can be sure to build a reliable electrical installation and give your customers full satisfaction in terms of dependability and safety for people and the installation.



Tested low voltage switchboard, IEC 61439-1&2 compliant.



- > Available power.
- > Safety of people and property.
- > Controlled costs and delivery times.
- > Upgradeability.

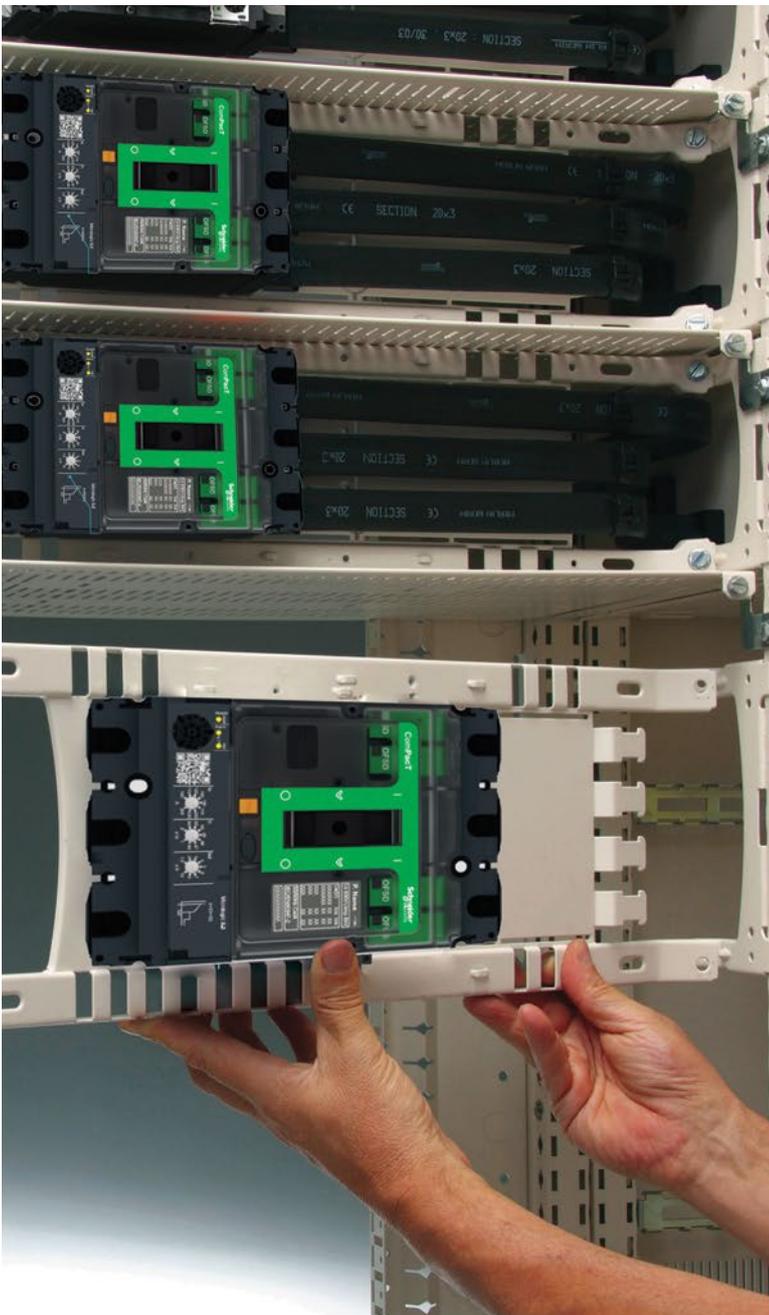


With our functional LV systems

...optimised and upgradeable

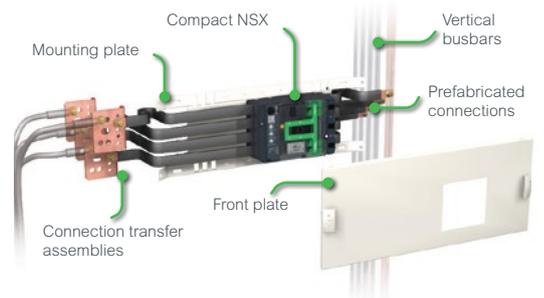
With PrismaSeT you can build just the right switchboard for your customer, sized precisely to fit costs and needs. With this complete, prefabricated and tested system, it's easy to upgrade your installation and still maintain the original performance levels.

- The cubicles combine easily with switchboards already in service.
- Devices can be replaced or added at any time.



Straightforward organisation to make your job easier

The switchboard is structured by zones dedicated to switchgear, busbars, cables, etc.



The functional units are naturally stacking in the switchboard.

Each configuration is tested for improved safety.



Temperature rise test in laboratory.

Readily available close by

The kit concept makes handling and transport easier and you get to benefit from Schneider Electric's efficient international logistics. Your distributor, selected by Schneider Electric, can give you the very best advice.



PrismaSeT G and P

Prisma**SeT** Pack 250 A enclosures

Prisma**SeT** G enclosures

IP30 / IP4X. IP55. up to 630 A

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160 A

250 A

630 A

- Schools
- Small shops
- Hotels, etc.

Pack



- Small companies
- Buildings
- Offices
- Laboratories
- Healthcare centres
- Hotels
- Supermarkets
- Malls, etc.

PrismaSeT G



PrismaSeT P cubicles up to 4000 A IP30, IP31, IP55

The optimised, tested and IEC compliant solution, for low voltage electrical distribution and control switchboards.



- Hospitals
- Data centres
- Logistics centres
- Shopping centres
- Offices buildings
- Medium industrial solutions

PrismaSeT P



Energy management has never been simpler

Smart Panels connect you to energy savings in three steps.

1. Measure

Embedded and stand-alone metering & control capabilities

- Embedded and stand-alone metering
- Control capabilities

2. Connect

- Integrated communication interfaces
- Ready to connect to energy management platforms

3. Act

- Data-driven energy efficiency actions
- Real time monitoring and control
- Access to energy and site information through on-line services



Tested, Validated,
Documented Smart Panels architecture
Smart Panels have been certified via
Schneider Electric's "TVDA" quality process
Tested in performance labs by experts, in the most
common configuration
Validated full functional compatibility of devices
Documented, with user guide, predefined CAD
panel designs & wiring diagrams



Technical characteristics

PrismaSeT G

Electrical switchboards up to 630 A

The PrismaSeT G functional system can be used for all types of low voltage distribution switchboards up to 630 A, in commercial and industrial environments.

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Switchboard design is very simple



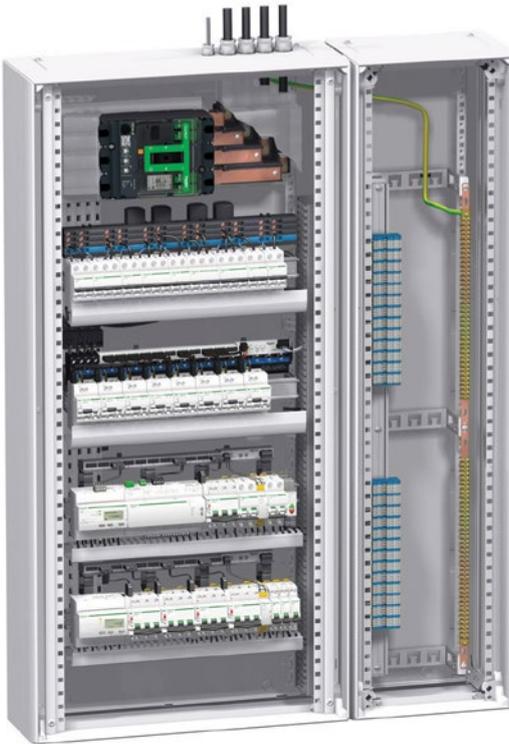
Assets of PrismaSeT switchboards



PrismaSeT G

Electrical switchboards up to 630 A

System design has been validated by type tests as per standard IEC 61439-1 & 2 and benefits from the combined experience of Schneider Electric over many years.



Electrical characteristics

Comply with IEC 62208 and EN 62208 standards:

- rated insulation of main busbars at rear of enclosure: 1000 V
- InA: 630 A
- rated peak withstand current Ipk: 53 kA
- short-circuit current Icc: 70 kA
- frequency: 50/60 Hz.



Mechanical characteristics

- Steel sheet metal.
- Electrophoresis treatment + hot-polymerised polyester epoxy powder, white colour RAL 9003.
- Enclosures supplied in kit form, totally dismantlable, designed to be assembled and wired horizontally on a work station.
- Can be combined side by side and one on top of another.
- Degree of protection:
 - IP30: without door
 - IP40: with door
 - IP41: with door + canopy
 - IP43: with door + gasket + canopy
 - IP55: IP55 PrismaSeT G offer, supplied in kit form.
- degree of protection against mechanical impacts:
 - IK07: without door
 - IK08: with door (transparent)
 - IK10: with plain door
 - IK10: for PrismaSeT G IP55.
- Seismic characteristics: 2.5G without accessories.
- Enclosure dimensions:
 - 3 widths:
 - W = 300: ducts
10 modules width
 - W = 600: Wall-mounted and floor-standing enclosures,
24 modules width
 - W = 850: Floor-standing enclosures
36 modules width
 - depth with door:
 - enclosures G IP30: 250 mm
 - enclosures G IP55: 260 mm
 - heights:
 - PrismaSeT G IP30: 12 heights: 330 mm to 1980 mm
 - PrismaSeT G IP55: 7 heights: 450 mm to 1750 mm.
- Inside switchboards.



Readily available close by

The kit concept makes handling and transport easier and you get to benefit from Schneider Electric's efficient international logistics.

Your distributor, hand-picked by Schneider Electric, can give you the very best advice.



Electrical switchboards built using the PrismaSeT functional system and Schneider Electric recommendations fully comply with international standard IEC 61439-1&2.

A

B

C

D

E

F

G

H

I



PrismaSeT P - Reliable, Easily connected

The new PrismaSeT P switchboard is the market forerunner with built-in cloud connectivity, allowing instant access to smart alarm system, energy usage analysis, trends, and preventative maintenance plans. Built-in cloud connectivity allows users to be notified of the round-the-clock electrical distribution as well as voltage loss if any. This maximizes efficiency and power availability, while creating the basis for future innovations. The PrismaSeT P switchboard also allows easy wireless integration of sensors.



Offer values

-  **Simplicity**
 - Deliver connectivity without any complexity
-  **Easy installation**
 - Simple-to-install connected solution
-  **Robustness and Design**
 - New design with new structure color, increased frame and door robustness
-  **Win more business**
 - Increase the service business opportunities while offering an affordable connected panel
-  **Protection**
 - Deliver greater peace of mind



Digital journey

-  **Peace of mind on the Cloud**
 - Electrical Fire Prevention
 - Power availability at no cost
 - Energy awareness
-  
-  **Built-in connectivity**
 - Voltage loss alert free of charge
 - Connection to cloud in less than 5 min without any IT skill
-  **Easy-to-install 100% wireless communication solutions**
 - User friendly installation instructions
 - Independent from customer IT
-  **Easy installation and commissioning**
 - Less than 30 minutes for setting up the communication devices



PrismaSeT P - Reliable, Easily connected

New design with sustainable packaging

Enhance buildings with in-built connectivity and efficient design

The new design of PrismaSeT P increases the robustness of the panels, helps to gain efficiency on every level and provides peace of mind to the panel builders, electrical contractors and facility managers.

In addition, the new 100% green packaging decreases the quantity of waste and its disposal cost by using only cartons.

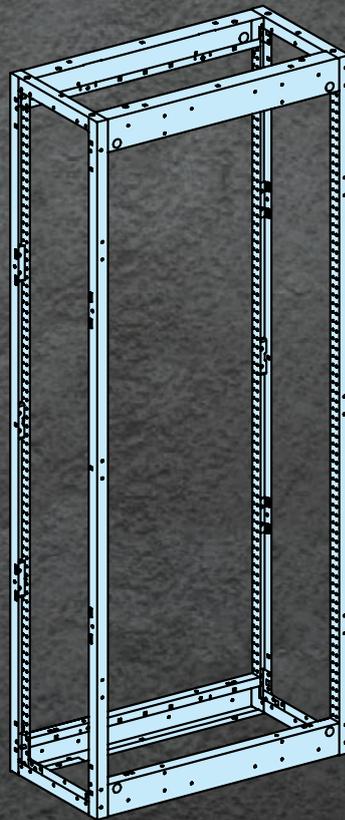
Green Packaging

- Progressive cancellation of plastic and polystyrene of packaging.
- 100% recyclable cardboards.
- Time & money saving to sort waste.
- New cross beam in cardboard for a more robust packaging.



Reinforced Frame

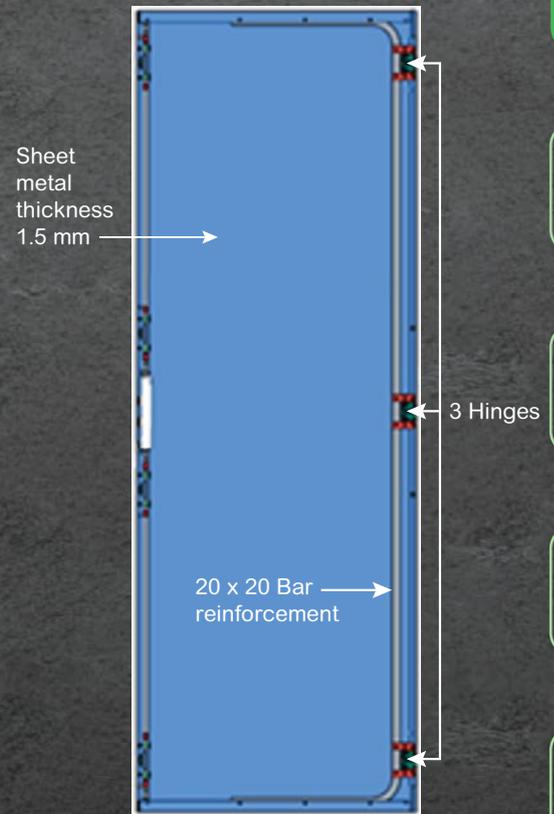
- Easier transportation and perception during assembly.
- Reinforcement on the lower angle levels using additional accessories.



Reinforced Plain Door

- 3 hinges
- Sheet metal thickness 1.5 mm
- 20 x 20 bar reinforcement

IP 30/31 Plain Door



New Improved Handle

- More robust handle.
- Keyless entry door.
- Ergonomic and Aesthetically handle design.



Digital Instruction Sheets

- Cancellation of systematic printed instruction in each packaging.
- 1 printed 'Super Leaflet' with all instructions (available to order once).
- 1 systematic QR code to link to the right instruction sheets.



PrismaSeT P

Electrical switchboards up to 4000 A

A

The PrismaSeT P functional system can be used for all types of low-voltage distribution switchboards (main, subdistribution and final) up to 4000 A, in commercial and industrial environments.

B

C

D

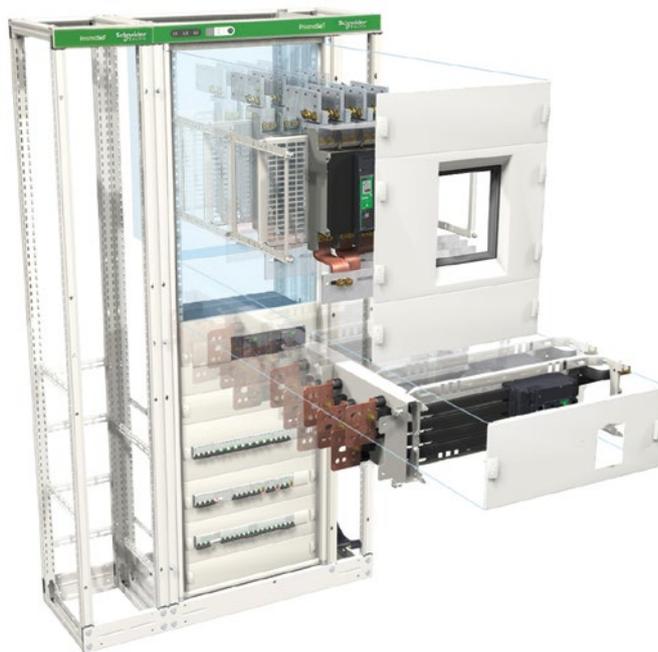
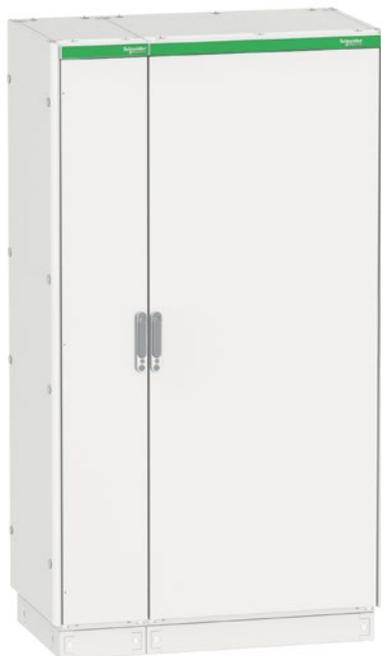
E

F

G

H

I



Switchboard design is very simple



Assets of PrismaSeT P switchboards

PrismaSeT P

Electrical switchboards up to 4000 A

System design has been validated by type tests as per standards IEC 61439-1 and 2 and benefits from the combined experience of Schneider Electric customers over many years.



Electrical characteristics

- Complying with standards IEC 62208 and EN 62208:
- rated insulation level of main busbars: 1000 V
- InA: 4000 A
- rated peak withstand current I_{pk}: 220 kA
- rated short-time withstand current I_{cw}: 100 kA rms / 1 second
- frequency: 50/60 Hz
- voltage U_e = 690 V under conditions.



Mechanical characteristics

- Steel sheet metal.
- Cathaphoresis treatment + hot-polymerised polyester epoxy powder, white colour RAL 9003.
- Can be dismantled.
- Can be combined side-by-side and back-to-back.
- Degree of protection:
 - IP30: with IP30 cover panels including a door or a cover frame
 - IP31: with IP30 cover panels including a door + gasket
 - IP55: with IP55 cover panels.
- Degree of protection against mechanical impacts:
 - IK07: with cover frame
 - IK08: with IP30 door
 - IK10: with IP55 door.
- Framework dimensions:
 - four widths:
 - W = 300: cable compartment
 - W = 400: cable compartment or device compartment
 - W = 650: device compartment or cable compartment
 - W = 800: device compartment with busbar compartment or cable compartment
 - two depths: 400, 600 mm
 - height: 2000 mm.
- Indoor cubicles.



See "How to assemble an electrical switchboard"
Guide DESW043EN



Electrical switchboards built using the PrismaSeT P functional system and Schneider Electric recommendations fully comply with international standards IEC 61439-1 and 2.

Learn more about PrismaSeT range here



PrismaSeT P offer



PrismaSeT G offer



Catalogue PrismaSeT P



Catalogue PrismaSeT G

Scan or click on QR code



A

B

C

D



E

Spacial, Thalassa, ClimaSys

F

More than 60 years protecting your equipment

Spacial, Thalassa, ClimaSys, ranges are solutions that simplify and enhance the work of electricians and automation engineers. Electrical equipment is installed in a controlled, secured, qualitative, and protected environment.

G

Benefits

H



Protection

Keep people, controls, and electronic components protected in all environments.

I



Installation

Best in the class installation system. Personalization of our standard enclosures and with a specialized tailored solutions.



Thermal management

Maintain equipment running reliability and efficiency.

How to define an enclosure solution?

Invariables

Switchgear and Controlgear are the cornerstone of any electrical system - in industry, infrastructure, building, energy, transport or any other segment. The correct enclosure and thermal management selection is crucial to guarantee the targeted performance. Safeguards of equipment installed inside ensure service continuity.

Correct selection of enclosure and thermal solution

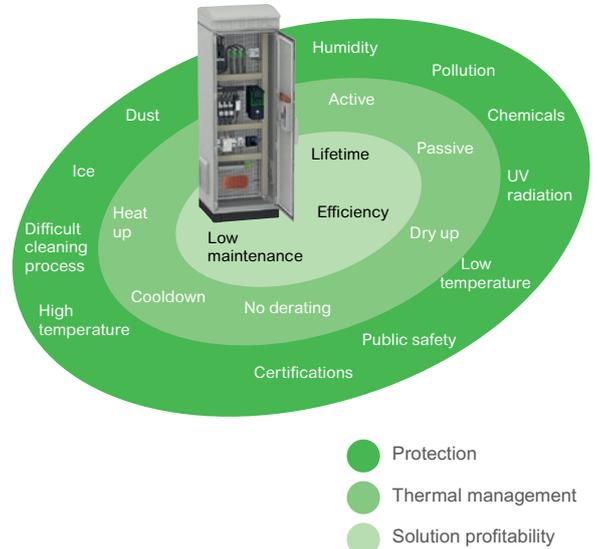
Many influences must be considered when defining an enclosure system. Three groups may be distinguished:

- Protection (equipment and people)
- Thermal management
- Solution profitability.

Ambient conditions and enclosure

The table below is only indicative and not binding. It shows, in a general concept, the optimized performance of the ranges of Universal Enclosures according to the ambient conditions, taking into account technical and commercial criteria:

- ■ ■ Highly recommended
- Recommended
- Not suitable



Ambient condition	Enclosure material						
	Steel	Steel Heavy-Duty	Stainless-steel 304L	Stainless-steel 316L	Stainless-steel 316L Paint	Polyester	Polyester Heavy-Duty
Indoor clean environment ^[1]	■ ■ ■	■	■	■	■	■	■
Difficult cleaning process ^[2]	-	-	■ ■ ■	■ ■ ■	-	-	-
Outdoor (no public access)	-	■ ■ ■	■	■	■	■ ■ ■	■ ■ ■
Outdoor (public access)	-	■	■	■	■	■	■ ■ ■
Harsh chemicals	-	■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Solar radiation	-	■ ■ ■	-	■ ^[4]	■ ^[4]	■ ■ ■	■ ■ ■
Sand storms	-	-	■ ■ ■	■ ■ ■	-	■	■
Temperature > 40 °C ^[3]	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Temperature < 5 °C ^[3]	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Salty environment	-	-	-	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Sea water splashes	-	-	-	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Humidity > 70% ^[3]	-	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Impact	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Vandalism	-	■ ■ ■	■	■	■	■	■ ■ ■
Burglary	-	■ ■ ■	■	■	■	■	■ ■ ■
Strong pollution	■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
Vibration (marine application)	■ ■ ■	-	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	-
Seismic activity	■ ■ ■	-	-	-	-	-	-
Electro-magnetic interference	■ ■ ■	-	-	-	-	-	-

[1] Not considering F&B process.
[2] e.g. F&B process.

[3] Always using ClimaSys solutions.
[4] Marine solar plants.

Thermal management

The thermal management system must ensure the temperature and humidity controlled inside the enclosure.

The correct solution must be based on a robust process starting with the diagnosis of the ambient conditions, going to the parameters calculations and defining the best architecture (enclosures + equipment installed + thermal solution).

ClimaSys is the perfect Thermal solution based on data logbook and ProClima web outputs.



Universal enclosures

Our ranges, solutions for each application

A

B

C

D

E

F

G

H

I



Metal enclosures and boxes

Spacial

From our small boxes to large suitable floor-standing enclosures, the range of Spacial products offers the perfect fit for your applications.

Our extensive range of easy-to-use accessories helps you save time during your projects. Select between steel or stainless-steel to better suit the installation environment.

Our stainless-steel products represent the optimal solution where cleanliness is required, or for highly corrosive environments.



[SEE THE VIDEO](#)



Insulated enclosures

Thalassa

Operating the equipment under adverse ambient conditions may expose your installation to chemical or aggressive substances.

Our Thalassa range, from boxes to floor-standing enclosures, has been developed to efficiently protect your equipment.

The products are made of fiberglass-reinforced polyester to resist harsh conditions and outdoor use.

The Thalassa industrial boxes in ABS or polycarbonate are strong, easy to install and designed to be used in highly demanding environments.



[SEE THE VIDEO](#)





Thermal management

ClimaSys

Maintaining the right temperature inside your enclosure is vital for maximising the lifetime of your installed devices.

Our ClimaSys range offers you the right solution: airing, cooling or heating, including control units for temperature, humidity and many other parameters.



[SEE THE VIDEO](#)



ProClima, control panel thermal optimization software

Find the best thermal solution for your enclosure

Select and calculate your thermal management requirements according to the environment and the electrical/electronic devices installed in the enclosure.



90% savings on filter maintenance

The concept of the ClimaSys Smart Airing System (CSVS)

The ClimaSys Smart Airing System is a smart, closely integrated network that makes your life easier.



[SEE THE VIDEO](#)

Use corrective and predictive maintenance of the airing system to:

- Improve CAPEX and OPEX of the installation
- Improve maintenance and operation of the installation
- Improve peace of mind.

Reduce maintenance cost for new and existing installations.

Functions of the CSVS systems

Detect general poor health of the enclosure by monitoring:

- Input/output temperature.

Detect fan issues by monitoring:

- Air flow temperature
- Current level, consumed energy
- Blade speed measurement
- Used and remaining (approximate) lifespan.

Detect grid filter issues:

- Air flow temperature
- Dust level (0% clean – 100% dirty)
- Number of replacements
- Remaining time to next replacement.

Universal enclosures

Thermal Management System



Thermal problems in enclosures

Evolution of the electrical switchboard

An electrical switchboard is an assembly formed of the following components:

- The enclosure
- Switchgear and controlgear
- Electrical conductors and Miscellaneous functions (displays, controls, information processing).

It has evolved in three directions:

- Enclosures increasingly made of insulated materials
- Switchgear and controlgear incorporating more and more electronics which concentrates a growing number of functions in an increasingly small volume
- An increasingly high filling rate.

Industrial safety studies, a concept which covers:

- The safety of personnel and equipment
- The availability of electric power.

These two aspects are the critical point of all industrial and service-sector activities.

Operation must therefore be perfectly under control; and this control must concern not only the operation of the components but also their operating conditions in a given environment.

Temperature and humidity in the enclosure

Analysis of the malfunctions and downtimes of an electrical installation shows that they are mostly of thermal origin: Temperature too high or too low inside the enclosure.

The rise of the average temperature above the limits tolerated by the equipment is often caused by changes to the electrical switchboard:

- Use of insulated materials for the enclosure impairing heat dissipation
- An increasing number of electronic devices and a higher filling rate increase the temperature.

Such overheating may only occur at certain points of the installation called 'hot spots'.

Excessively low temperatures occur when the electrical switchboard is installed in a very cold environment. This can cause the formation of condensate which is harmful to the equipment.

Consequences

The presence of humidity or excessively high temperatures inside the enclosure can cause numerous malfunctions:

- Nuisance tripping of protective devices
- Fire inside the enclosure
- Burns for the users
- Premature equipment ageing.

These malfunctions lead to an increase in the installation's operating costs:

- Maintenance costs
- Costs entailed by installation downtimes.

Solution: Thermal management

Objective

The thermal management solution adopted shall:

- Maintain the temperature and humidity level inside the enclosure at values corresponding to normal operation of the equipment
- Establish a uniform temperature to prevent hot spots.

Choice of solution

The products constituting the thermal management solution are selected to obtain a thermal balance of the installation. This comprises 2 parts:

- Thermal balance inside the enclosure
- Evaluation of the climatic conditions (temperature, humidity level) or environmental conditions (pollution) of the location of the electrical switchboard.

The Schneider Electric solutions

With the ClimaSys range, Schneider Electric proposes a comprehensive offer meeting all needs:

- Airing
- Cooling
- Heating
- Regulating
- Homogenizing (air circulation).

Schneider Electric also proposes a thermal design software program, ProClima, which produces the thermal balance and proposes one or more thermal management solutions.

Characteristics	Smart Climasys	Climasys
Cooling	 <p>Smart airing systems</p>	 <p>Forced-airing systems Air-to-air exchangers Air-to-water exchangers Cooling units</p>
Heating		 <p>Resistance heaters</p>
Controlling	 <p>Smart thermal control accessories</p>	 <p>Thermal control accessories</p>



Universal enclosures

A

Industry and Infrastructure Offer

A material for every environment

B

Steel

304L - 316L stainless-steel

C



D

Indoor non-clean industrial environment

The industrial environment in mechanical plants is especially demanding as regards the protection of electric and electronic components against dust, splashing with oil and impacts.

Such ambient conditions require a range that is suited to the application and easy to implement.

- Standard range for industrial applications
- E.M.C. just available for WM (S3HF)
- Range of ATEX enclosures, for potentially explosive atmospheres.

Demanding industrial environment

Food and beverage, pharmaceutical, petrochemical and infrastructure industries are particularly demanding in terms of hygiene and resistance to corrosion.

Our products are available with two grades of stainless-steel:

- 304L stainless-steel: Corrosion resistance and cleanability (often used in food production)
- 316L stainless-steel: Also known as "marine stainless-steel". Very high resistance to corrosion (saline or chlorinated environment).

E

F

Solution

- The Spacial range in steel (Industrial boxes, wall-mounted, monobloc and suitable floor-standing enclosures).

Solution

- The Spacial range in stainless-steel (Industrial boxes, wall-mounted, monobloc and suitable floor-standing enclosures).

G

H

I



Insulated polyester and plastic materials (ABS, polycarbonate)



Infrastructures and industrial environments

Outdoor infrastructures and electrical installations are exposed to direct sunlight, rain, saline mist, extreme temperatures, oil splashes, chemical and corrosive agents.

- Standard range for industry and infrastructures.

Solution

- The Thalassa range (boxes, wall-mounted and floor-standing enclosures).

Heavy-Duty materials



Severe outdoor environments, generally requested by OEMs, the telecommunication, water treatment and transportation industry

Heavy-Duty polyester units are suitable for outdoor public areas thanks to its multiple benefits:

- Resistant against pressure and shock (IEC 61439-5: 2010)
- Door with ribbed surface against posting
- Insulated (prepared for Class II according to IEC 61439-1: 2011)
- Heavy-Duty steel enclosures are designed for outdoor private areas:
 - Resistant against aggressive environments (anti-corrosion certification class C4H, ISO 12944:2018).

Solution

- The Thalassa PHD and Spacial S3HD and SFHD ranges (wall-mounted and floor-standing).

Universal enclosures

A

The Customized Solutions

Over 60 years of experience, knowledge and expertise to give you the best enclosure for your needs.

B

Two offer levels to cover your different requirements



C

Configured to order (CTO)

The enriched standard offer

Feasibility is automatically guaranteed when using the Spacial.conf configurator, giving you autonomy and flexibility to quickly define your customized enclosure.

D

Delivery date information.

E



Engineered to Order (ETO)

The co-developed offer

For all your custom dimensions, accessories and logistic needs. Participate in the entire development process of your tailor-made solution.

F

According to joint development specifications.

G

	Steel	Stainless-steel	Insulated material
Boxes	● ○	○	● ○
Wall-mounted	● ○	● ○	● ○
Compact floor-standing	● ○	● ○	● ○
Modular floor-standing	● ○	● ○	● ○

● CTO: Configured To Order

○ ETO: Engineered To Order

H

I



Time-saving

Delivered with cut-outs and painting: no waste of time



Logistics

Flexible management of your logistic option (scheduled delivery service for on-going orders), special packaging)



Simplified installation

Enclosures delivered with cut-outs: No special tools required



Ergonomic design

Customized project dedicated to your personal requirements



Extended lifetime

Cut-outs done before painting ensures better corrosion protection and sealing, painting enhances protection



Higher quality level

No burrs on edges or cut-outs, guaranteed machining tolerances



Aesthetics

Large choice of colors, external surfaces with no scratches



Higher performances

Adapted thermal management, upgraded stainless-steel type



Configure your enclosures entirely online

Specify settings and get a quote in a single tool, and email your order in.

For routine customization work (see next page for advanced customization), the **Custom Enclosure Configurator** allows you to adjust the enclosure to your specifications in a couple of minutes.



And it provides you with a price quote and delivery lead time.

It's a convenient, simple-to-use tool that gives you a wide variety of options to choose from, from different cutout shapes to paint colors and accessory fittings.



Scan or click

Create customized enclosures with the help of our experts

For non-standard projects requiring advanced customization, a dedicated team of Schneider Electric experts will guide you through the process.

Here's how advanced customization process looks:

- Provide your specifications
- Get a feasibility study and quotation
- Confirm and place your order
- Manufacturing process gets started
- Quality assessment is performed
- Your product is delivered.

Discover how Otech, a French agricultural machine builder, takes advantage of Spatial and Thalassa customization services.



Scan or click



Time-saving

Delivered with cut-outs and painting: no waste of time



Simplified installation

Enclosures delivered with cut-outs: No special tools required



Higher quality level

No burrs on edges or cut-outs, guaranteed machining tolerances



Aesthetics

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Logistics

Flexible management of your logistic option (scheduled delivery service for on-going orders), special packaging)



Higher performances

Adapted thermal management, upgraded stainless-steel type



Universal enclosures

- A
- B
- C
- D
- E
- F
- G
- H
- I



www.se.com

Our web site allows you to access all Schneider Electric products with just two clicks with direct links to:

- A complete library of technical documents, catalogues, FAQs brochures, etc
- Certificates
- 2D and 3D drawings
- Selection Guides from the e-catalogue
- Product discovery sites.



Scan or click

You may also find illustrated overviews, news to which you can subscribe, a list of contacts in your country and other useful information.

Product Selector

Find the accessories that suit your enclosure

The Product Selector allows you to select the best components from the current product range.

There will be no risk of mistake since product and accessory selection take place automatically, saving you time and money.



Spacial.Conf

Get your enclosure pre-engineered for your special needs

The Spacial.Conf software gives you total autonomy to configure and quote enclosures with services (cut-outs, painting, accessory mounting) in less than 3 minutes. Spacial.Conf is designed to create orders quickly and conveniently, without any errors.



Have a smartphone or a tablet? Scan this:



Scan or click



Circuit breakers and switches

MasterPact MTZ

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EasyPact CVS

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A

B

C



D

NOW, YOU'RE READY...

E

Built on the legendary performance and reliability of the MasterPact range

MasterPact MTZ circuit breakers prepare you for the future of power distribution with smart connectivity, remote monitoring, and easy customization via digital modules.

F

- Intuitive EcoStruxure™ Power Device App smartphone app for easy operation and maintenance
- Precise Class 1 power meter built in for energy-saving capabilities
- Easy customization with digital modules.

- Intuitive MicroLogic™ X control unit
- Easy installation using established architectures
- Seamless integration with building and energy management systems with EcoStruxure™ architectures
- Designed and tested to applicable standards for ANSI, UL, and IEC
- Low migration cost from MasterPact NT/NW to MasterPact MTZ.

G



With MasterPact MTZ breakers, enhanced performance and connectivity equip you for the future of power distribution.

Available from 630 A to 6300 A.

H

I



SEE THE VIDEO



...FUTURE READY

With MasterPact MTZ air circuit breakers, you're ready for all the ways power distribution is changing. Smart connectivity gives you real-time data to help avoid downtime. Digital modules allow you to customize the circuit breaker to your specific needs. And proven durability gives you the assurance that you're placing your power distribution on a reliable foundation.

MasterPact MTZ circuit breakers are available in three sizes:

MTZ1

From 630 to 1600 A



MTZ2

From 800 to 4000 A



MTZ3

From 4000 to 6300 A

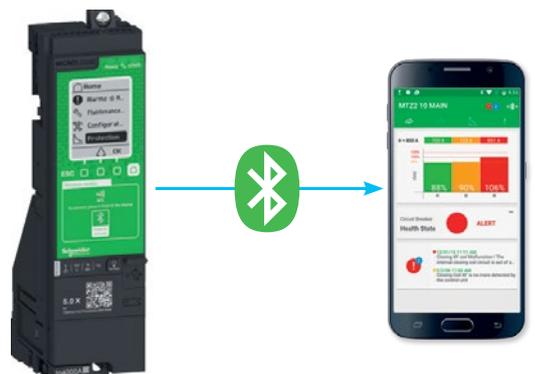


Now featuring digital modules to customize MicroLogic X control units

2.0 X (LI) | 5.0 X (LSI) | 6.0 X (LSIG) | 7.0 X (LSIV)

Downloadable digital modules provide enhanced:

- Protection: Energy Reduction Maintenance Settings, Ground-fault alarm, Under/Over voltage protection, Under/Over frequency protection, Reverse active power protection, IDTML overcurrent protection, Directional overcurrent protection
- Measurement: Energy per phase, Individual harmonics analysis
- Maintenance & Diagnostics: Power restoration assistant, MasterPact operation assistant, Wave form capture on trip event, Modbus legacy dataset, IEC 61850 for MasterPact MTZ.



MasterPact MTZ

A

Innovation at every level

Whether you're a panel builder or a contractor, MasterPact MTZ circuit breakers offer the innovative features you need to streamline system design, construction, and operation.

B

I build



Install and retrofit easily

The transition from MasterPact NT/NW to MasterPact MTZ air circuit breakers merges installation ready design with future ready evolutions in smart connectivity, remote monitoring and easy customization. It doesn't require switchboard modification or IEC 61439-1 and -2 recertification.

Commission quickly

With EcoStruxure™ Power Commission software, you can integrate smart devices, commission connected switchboards, and generate comprehensive reports as part of factory and site acceptance tests.

Provide better service

Our partner programs offer tools, software, support, and loyalty awards to help you grow your business and meet your customers' needs with high-quality pre- and post-sale services.

C

D

E

F

I operate



Improve customer loyalty

MasterPact MTZ circuit breakers allow you to provide commissioning and maintenance reports to demonstrate your reliability and value to your customers or employer.

Make maintenance easier

MasterPact MTZ circuit breakers send alerts to your smartphone, helping you to diagnose problems quickly and avoid downtime. In case of a power outage, the Power Restoration Assistant digital module guides you to the root cause and helps you restore power quickly.

Increase safety

Because MasterPact MTZ circuit breakers can be operated remotely via Bluetooth, operations can occur outside of the arc flash zone. Plus, NFC allows access to stored breaker data even when the power is off.

G

H

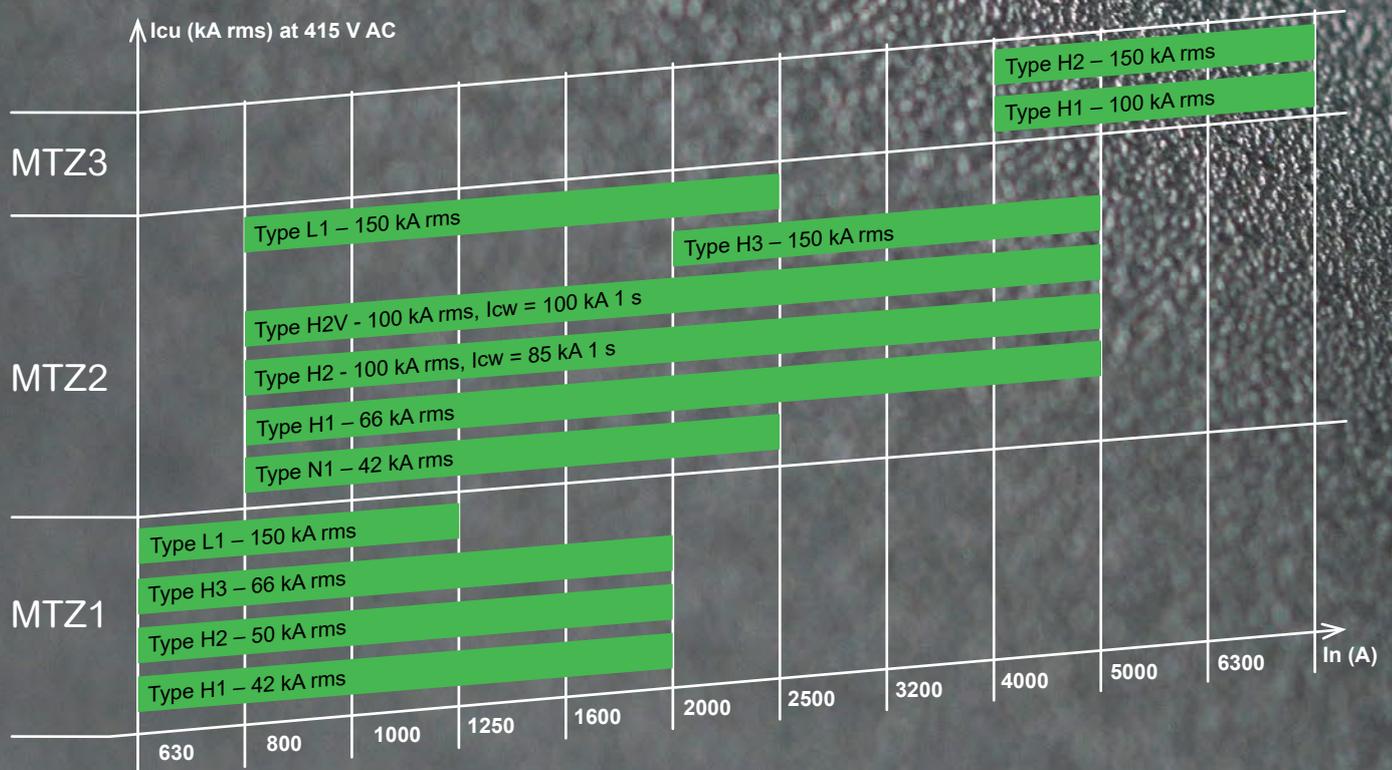
I



The MasterPact MTZ range covers your protection needs.

Masterpact

Five performance levels
N1 | H1 | H2 | H3 | L1



MasterPact MTZ

Selection guide

Circuit breakers

Selection criteria

MasterPact MTZ front face provides reinforced insulation (Class 2) according to IEC 60664-1. It allows Class 2 installation with breaker control from outside.



MasterPact **MTZ1**
From 630 to 1600 A

Safety of operation

Type	H1	H2	H3 ^[8]	L1
Rated current (A) at 40/50°C ^[1]				
MTZ1 06	630	630	630	630
MTZ1 08	800	800	800	800
MTZ1 10	1000	1000	1000	1000
MTZ1 12	1250	1250	1250	
MTZ1 16	1600	1600	1600	

Selectivity category ^[2]

			B	B	B	A
Ultimate breaking capacity V AC 50/60 Hz	I _{cu} (kA rms)	At 440 V	42	50	66	130
		At 1150 V	-	-	-	-
Rated service breaking capacity	I _{cs} (kA rms)	At 440 V	42	50	50	130
		At 1150 V	-	-	-	-
Rated short-time withstand current V AC 50/60 Hz	I _{cw} (kA rms)	0.5 s	42	42	50	10
		1 s	42	42	50	-
		3 s	24	24	30	-
Compliant with IEC/EN 60947-2 Annex H			Yes	Yes	Yes	Yes
Position of neutral (Left: L, Right: R)			L	L	L	L
Type of control unit: MicroLogic X			<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Installation characteristics

Type	H1	H2	H3	L1
------	----	----	----	----

Connection

Drawout, front	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Drawout, rear	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Fixed, front	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Fixed, rear	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Dimensions (mm) H x W x D

Drawout 3P	322 x 288 x 291
Drawout 4P	322 x 358 x 291
Fixed 3P	301 x 276 x 209
Fixed 4P	301 x 346 x 209

Weight (kg) approximate

Drawout 3P/4P	30/39
Fixed 3P/4P	14/18

[1] 50°C for rear vertical connected only, refer to temperature derating tables for other connection types.

[2] For details on selectivity category A and B, see MTZ Catalogue reference LVPED216026EN.

[3] No front connection for 4000 A.

[4] No horizontal rear connection for 6300 A.

[5] To be specified when ordering.

[6] MTZ2-H10 dedicated to 1250 V systems.

[7] For MasterPact MTZ2-H10 circuit breaker the MicroLogic X control unit cannot be directly connected to the internal voltage pick-up on the downstream terminal. The external voltage pick-up option PTE associated with external voltage transformer shall be used, see MTZ Catalogue reference LVPED216026EN.

[8] For MasterPact MTZ1 H3 and MTZ2 H2V the rated operational voltage is limited to 440 V AC - 50/60 Hz.

MasterPact MTZ

Selection guide

Circuit breakers



MasterPact **MTZ2**
From 800 to 4000 A

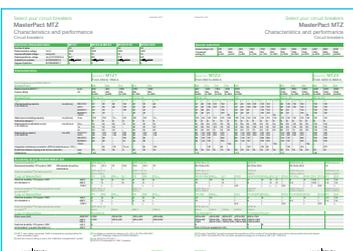


MasterPact **MTZ3**
From 4000 to 6300 A

Type	N1	H1		H2		H2V ^[6]		H3	L1	H10 ^[6]	
MTZ2 08	800	800		800		800		800	800	800	
MTZ2 10	1000	1000		1000		1000		1000	1000	1000	
MTZ2 12	1250	1250		1250		1250		1250	1250	1250	
MTZ2 16	1600	1600		1600		1600		1600	1600	1600	
MTZ2 20	2000	2000		2000	2000	2000	2000	2000	2000	2000	
MTZ2 25			2500	2500	2500	2500	2500	2500		2500	
MTZ2 32			3200	3200	3200	3200	3200	3200		3200	
MTZ2 40			4000	4000	4000	4000	4000	4000		4000	
	B										
	42	66	100	100	150	150	-	50		100	150
	-	-	-	-	-	-	-	50		-	-
	42	66	100	100	150	150	-	50		100	150
	-	-	-	-	-	-	-	50		-	-
	42	66	66	85	85	100	65	30	50	100	100
	42	66	66	85	85	100	65	30	50	100	100
	22	36	66	50	75	75	65	30	50	100	100
	Yes	No	Yes	Yes	Yes						
	L	L or R ^[5]	L	L	L	L or R ^[5]	L or R ^[5]	L or R ^[5]			
	<input checked="" type="radio"/>										

	N1	H1	H2	H2V	H3	L1	H10		H1	H2
	<input checked="" type="radio"/>	<input checked="" type="radio"/> ^[3]	<input checked="" type="radio"/>	<input checked="" type="radio"/>		<input type="radio"/>	<input type="radio"/>			
	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/> ^[4]	<input checked="" type="radio"/> ^[4]
	<input checked="" type="radio"/>	<input checked="" type="radio"/> ^[3]	<input checked="" type="radio"/> ^[3]	<input checked="" type="radio"/> ^[3]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input checked="" type="radio"/> ^[4]	<input checked="" type="radio"/> ^[4]

439 x 441 x 403	479 x 786 x 403
439 x 556 x 403	479 x 1016 x 403
352 x 422 x 300	352 x 767 x 300
352 x 537 x 300	352 x 997 x 300
90/120	225/300
50/65	120/160



[CLICK HERE TO SEE THE CHARACTERISTICS AND PERFORMANCE](#)



MasterPact MTZ

Overview of functions

A

Measurement

B

Maintenance & Diagnostics

C

 [CLICK FOR MORE DETAILS](#)

D

Protection

[CLICK FOR MORE DETAILS](#) 

E

 [CLICK FOR MORE DETAILS](#)



F

14 Optional 24/7 downloadable digital modules dedicated to upgrading MicroLogic X

G

- Undervoltage and overvoltage
- Underfrequency and overfrequency
- Reverse active power
- IDMTL overcurrent protection
- Directional overcurrent
- Ground-fault alarm
- Energy Reduction Maintenance Settings
- Energy per phase
- Individual harmonics analysis
- Power restoration assistant
- MasterPact operation assistant
- Waveform capture on trip event
- IEC 61850 for MasterPact MTZ
- Modbus legacy dataset.

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Communication

- It is now common practice to make available most of the information processed by a Protection Control Unit, locally for network operation and maintenance, as well as remotely for higher functions of control, monitoring, energy efficiency and assets management
- To comply with this requirement, MicroLogic X control units **incorporate several channels of communication, including Ethernet, Modbus SL and wireless communication facilities.**



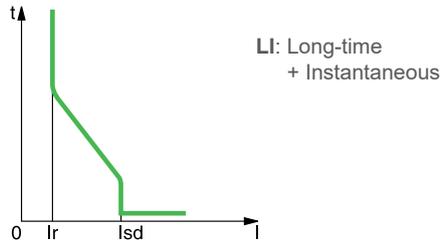
Select your MicroLogic X control unit

MasterPact MTZ

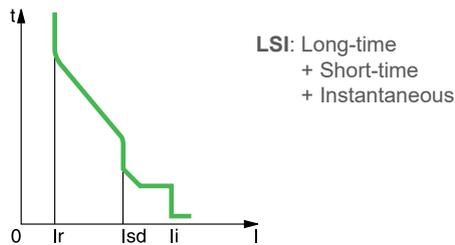
Overview of functions

> Protection for ...

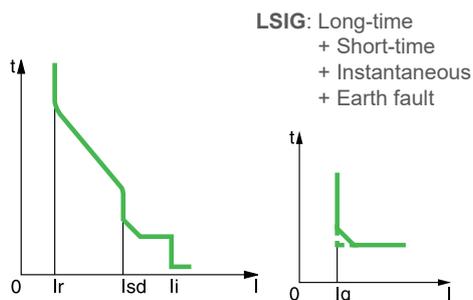
... MicroLogic 2.0 X



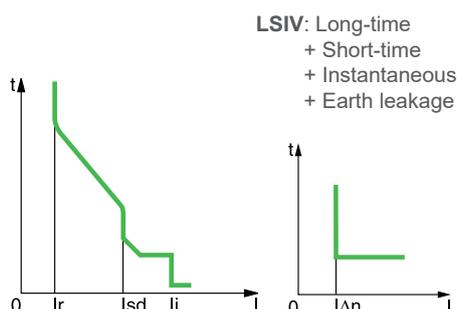
... MicroLogic 5.0 X



... MicroLogic 6.0 X



... MicroLogic 7.0 X



> Additional features of protections

Along with the LSIGV protections, new additional features and facilities allow to improve the protection performance of a system when difficulties are met such as low values of the short-circuit current or the need to limit the thermal constraints to the equipment: dual settings, fine settings, zone selective interlock, tripping mode (Standard/Fast).

> Measurement

MicroLogic X measures all electrical parameters of an electrical network: currents, voltages, frequency, power, energy, power factor, current and power demand. Min/Max and average values are calculated for most of the parameters.

Optional digital modules allow the measurement of energy per phase, and to perform Waveform capture.

> Maintenance & Diagnostics

Diagnostic features are intended to limit the risk of power interruptions and to re-energize the installation as quickly as possible after a trip.

They provide alarms and messages to help the user in scheduling both preventive and predictive maintenance, and device replacement.

> Communication

New generation MicroLogic X control units incorporate wireless technology (Bluetooth and NFC) that allows the transfer of a wide selection of critical information (protection, measurements, Maintenance & diagnostics) to your mobile device, by means of Ecostruxure Power Device App app. Alternatively, MasterPact MTZ can be equipped with ETHERNET communication through either the IFE module or the new embedded EIFE that includes webpages. Modbus SL communication is available through the IFM interface module.

> Optional digital modules

Optional digital modules can be purchased and downloaded to extend the performance of MicroLogic X control units. They are dedicated to Protection, Measurement, and Maintenance & diagnostics, and are available through Go Digital on the Schneider Electric website, open 24/7.

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MasterPact MTZ

A

> MasterPact MTZ Catalogue



LVPED216026EN_WEB

B

> MasterPact MTZ Catalogue numbers and spare parts



COM-POWER-LVMKT215EN

C

D

> Complementary technical information



LVPED318033EN

E

F

> Substitution guide MasterPact MTZ



LVPED516027EN

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Learn about more MasterPact MTZ range here

Scan or click on QR code

Offer

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



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ComPacT NSX & NSXm

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E

Meet the new face of connected breaker technology

F

70 years of innovative and reliable protection

The Schneider Electric™ ComPacT™ range is built on 70 years of expertise and leadership in industrial circuit breakers.

Today Schneider Electric is launching its new generation of ComPacT molded case circuit breakers.

The comprehensive, optimized ComPacT range covers your protection and has been redesigned with a superior customer experience in mind.

The range combines wireless intelligent metering and monitoring, along with advanced protective functions.

This range can be connected to Schneider Electric's open, interoperable, IoT-enabled EcoStruxure™ Power architecture. Through this platform we deliver enhanced value in terms of safety, reliability, efficiency, sustainability, and connectivity.

We leverage technologies in IoT, mobility, sensing, cloud, analytics, and cybersecurity to deliver Innovation at Every Level. This includes connected products, edge control, apps, analytics and services.

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[SEE THE VIDEO](#)



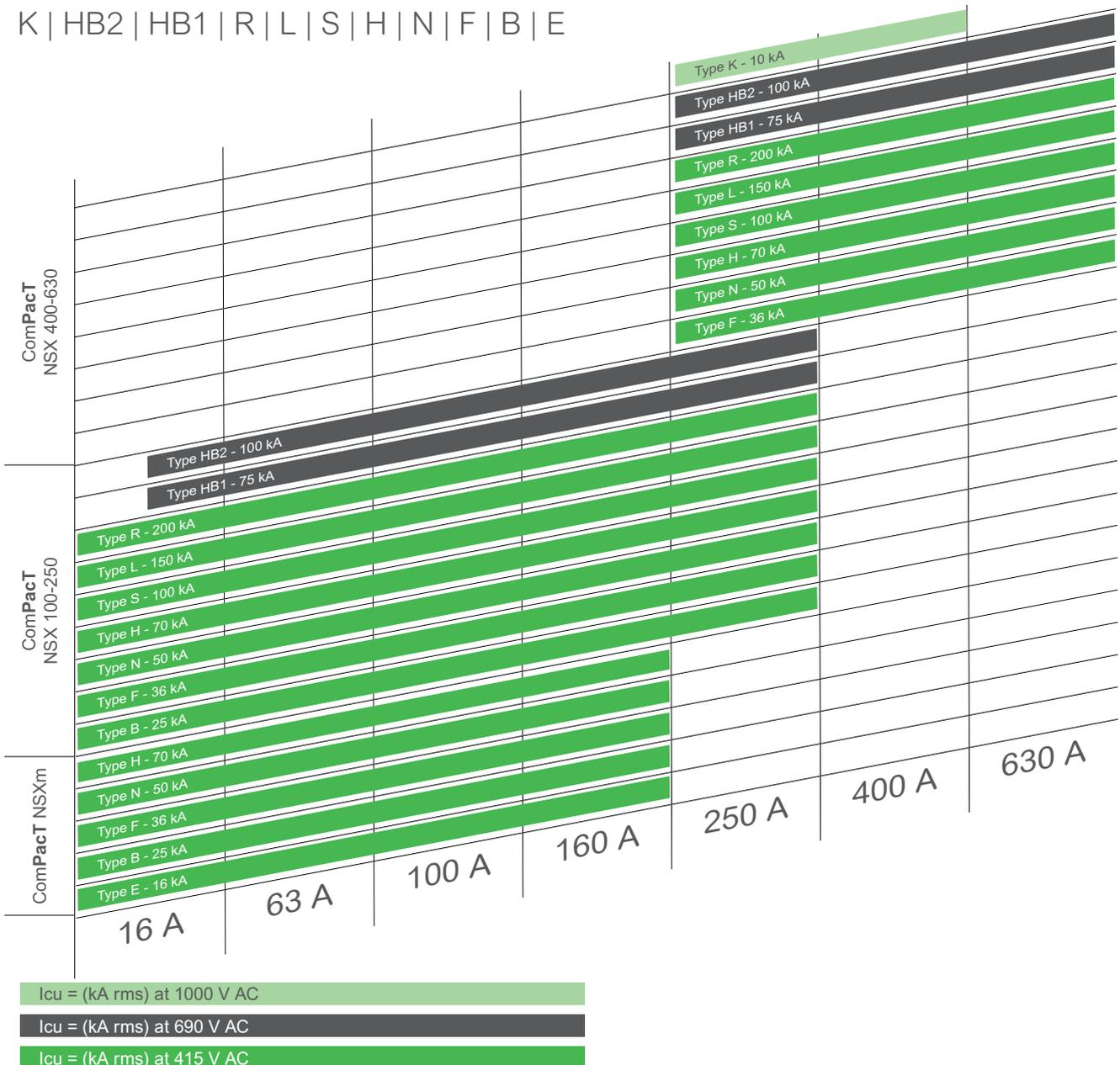
ComPacT NSX and NSXm, even more innovative and efficient

ComPacT circuit breakers feature Schneider Electric's exclusive Roto-Active Breaking System; it reduces the effects of short circuits of your installation.

Today, the ComPacT range is optimized with a high level of breaking capacities, outstanding selectivity and cascading. It offers more advanced functions and ergonomic designs for easy installation and operations.

Eleven performance levels

K | HB2 | HB1 | R | L | S | H | N | F | B | E



ComPacT NSX & NSXm

Schneider Electric is proud to introduce the new generation of ComPacT MCCBs. These breakers talk to you, wherever you are, in all transparency. New design complements new wireless connectivity capabilities with our latest wireless auxiliary contact.

New

New

ComPacT Design

Wireless Auxiliary Contact



New signature design

Wireless breaker status

While we are launching a new generation of ComPacT breakers, we are building upon the very latest innovations that made the success of the range in the first place. The following innovations were launched recently and are still very much applicable to the new generation of ComPacT breakers.

New

ComPacT NSXm



Smallest size in the range

New

MicroLogic Vigi



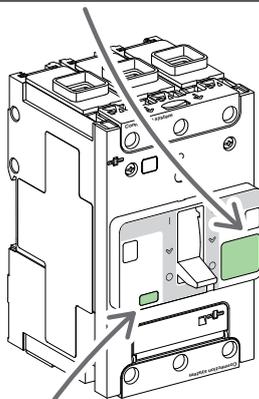
Integrated earth leakage protection

- A
- B
- C
- D**
- E
- F
- G
- H
- I

ComPacT NSX & NSXm

General characteristics

A	NSXm 160H		B
C	C12H3TM160L		B
D	Ui 800V	Uimp 8kV	E
	Ue(V)	Icu(kA) Ics(kA)	F
	220-240 ~	100 100	
	380-415 ~	70 70	
	440 ~	65 65	
G	50/60Hz	40°C	
	IEC/EN 60947-2	Cat A	



Ir(A) 63/160
In=60A

Standardized characteristics indicated on the rating plate:

- A** Type of device: frame size and breaking capacity class
- B** Circuit breaker/switch-disconnector symbol
- C** Commercial reference
- D** Ui: rated insulation voltage
- E** Uimp: rated impulse withstand voltage
- F** Ue: operational voltage
- G** Reference standard
- H** Circuit breaker rating

Note: When the circuit breaker is equipped with an extended rotary handle, the door must be opened to access the rating plate.



Compliance with Standards

ComPacT NSX and NSXm circuit breakers and switch-disconnectors comply with the following:

- International standards
 - IEC 60947-1: general rules
 - IEC 60947-2: circuit breakers
 - IEC 60947-3: switch-disconnectors
 - IEC 60947-4-1: contactors and motor starters ^[1]
 - IEC 60947-5-1 and following: control circuit devices and switching elements; automatic control components
- European standards (EN 60947-1, EN 60947-2, EN 60947-3, EN 60947-4-1 and EN 60947-5-1)
- China CCC
- EAC (Customs Union)
- The specifications of the marine classification companies (Bureau Veritas, Lloyd's Register of Shipping, Det Norske Veritas, etc.), recommendations issued by the CNOMO organization.

Pollution Degree

ComPacT NSX and NSXm circuit breakers and switch-disconnectors are certified for operation in pollution degree 3 environments as defined by IEC standards 60947-1 and 60664-1 (industrial environments).

Climatic Withstand

ComPacT NSX and NSXm circuit breakers have successfully passed the tests defined by the following standards for extreme atmospheric conditions.

Dry cold and dry heat

- IEC 60068-2-1: dry cold at -55°C
- IEC 60068-2-2: dry heat at +85°C.

Damp heat (tropicalization)

- IEC 60068-2-30: damp heat (temperature + 55°C and relative humidity of 95%)
- IEC 60068-2-52: severity 2 - Cycling salt mist.

Environment

ComPacT NSX and NSXm respects the European environment directive 2011/65/EU (amendment 2015/863/EU) concerning the restriction of hazardous substances (RoHS) and is Green Premium.

Product environment profiles (PEP) have been prepared, describing the environmental impact of every product throughout its life cycle, from production to the end of its service life.

All ComPacT production sites have set up an environmental management system certified ISO 14001.

Each factory monitors the impact of its production processes. Every effort is made to prevent pollution and to reduce consumption of natural resources.

Ambient Temperature

- ComPacT NSX and NSXm circuit breakers may be used between -25°C and +70°C. For temperatures higher than 40°C, (for ComPacT NSX: +65°C for circuit breakers used to protect motor feeders) devices must be derated
- Circuit breakers should be put into service under normal ambient, operating-temperature conditions. Exceptionally, the circuit breaker may be put into service when the ambient temperature is between -35°C and -25°C
- The permissible storage temperature range for ComPacT NSX and NSXm circuit breakers in the original packing is -50°C ^[2] ^[3] and +85°C.

[1] For ComPacT NSX

[2] For ComPacT NSXm: -40°C for ComPacT NSXm MicroLogic Vigi 4.1

[3] For ComPacT NSX: -40°C for Micrologic Vigi 4, MicroLogic 5, MicroLogic 6 and MicroLogic Vigi 7

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ComPacT NSX & NSXm

General characteristics

Electromagnetic Compatibility

ComPacT NSX and NSXm devices are protected against:

- Overvoltages caused by circuit switching (e.g. lighting circuits)
- Overvoltages caused by atmospheric disturbances
- Devices emitting radio waves such as mobile telephones, radios, walkie-talkies, radar, etc.
- Electrostatic discharges produced by users.

Immunity levels for ComPacT NSXm comply with the standards below.

- IEC/EN 60947-2: Low-voltage switchgear and controlgear, part 2: Circuit breakers:
 - Annex F: Immunity tests for circuit breakers with electronic protection
 - Annex B: Immunity tests for residual current protection.
- IEC/EN 61000-4-2: Electrostatic-discharge immunity tests.
- IEC/EN 61000-4-3: Radiated, radio-frequency, electromagnetic-field immunity tests.
- IEC/EN 61000-4-4: Electrical fast transient/burst immunity tests.
- IEC/EN 61000-4-5: Surge immunity tests.
- IEC/EN 61000-4-6: Immunity tests for conducted disturbances induced by radio-frequency fields.
- IEC/EN 61000-4-8: Power frequency magnetic field immunity test.
- IEC/EN 61000-4-11: Voltage dips, short interruptions and voltage variations immunity tests.
- CISPR 11: Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement.

Suitable for Isolation with Positive Contact Indication

All ComPacT NSX and NSXm devices are suitable for isolation as defined in IEC standard 60947-2:

- The isolation position corresponds to the O (OFF) position
- The operating handle cannot indicate the OFF position unless the contacts are effectively open
- Padlocks may not be installed unless the contacts are open.

Installation of a rotary handle or a motor mechanism does not alter the reliability of the position-indication system.

The isolation function is certified by testing:

- The mechanical reliability of the position-indication system
- The absence of leakage currents
- Overvoltage withstand capacity between upstream and downstream connections.

The tripped position does not insure isolation with positive contact indication.

Only the OFF position confirms isolation.

Installation in Class II Switchboards

All ComPacT NSX and NSXm devices are class II front face devices. They may be installed through the door of class II switchboards (as per IEC standards 61140 and 60664-1) without downgrading switchboard insulation. Installation requires no special operations, even when the circuit breaker is equipped with a rotary handle or a motor mechanism.

Degree of Protection

The following indications are in accordance with standards IEC 60529 (IP degree of protection) and IEC 62262 (IK protection against external mechanical impacts).

Bare Circuit Breaker with Terminal Shields

- With toggle: IP40, IK07.
- With direct rotary handle: IP40, IK07.

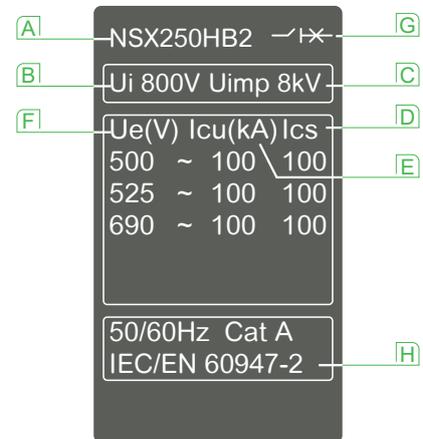
Circuit Breaker Installed in a Switchboard

ComPacT NSXm

- With toggle: IP40, IK07.
- With direct rotary handle: IP40, IK07.
- With extended rotary handle: IP54 or IP65, IK08.
- With side rotary handle: IP54 or IP65, IK08.

ComPacT NSX

- With toggle: IP40, IK07.
- With direct rotary handle:
 - Standard/VDE: IP40, IK07
 - MCC: IP43, IK07
 - CNOMO: IP54, IK08.
- With extended rotary handle: IP55, IK08.
- With motor mechanism: IP40, IK07.



Standardized characteristics indicated on the rating plate:

- A** Type of device: frame size and breaking capacity class
- B** Ui: rated insulation voltage
- C** Uimp: rated impulse withstand voltage
- D** Ics: service breaking capacity
- E** Icu: ultimate breaking capacity for various values of the rated operational voltage Ue
- F** Ue: operational voltage
- G** Circuit breaker/switch-disconnector symbol
- H** Reference standard

Note: When the circuit breaker is equipped with an extended rotary handle, the door must be opened to access the rating plate.

Characteristics and Performance

ComPacT NSX & NSXm

A

ComPacT NSXm circuit breakers from 16 to 160 A up to 690 V

The screenshot displays two columns of technical data for ComPacT NSXm circuit breakers. Each column includes a small image of the breaker and a table with multiple rows and columns of specifications, likely including current ratings, breaking capacity, and voltage ratings.

[CLICK HERE TO SEE THE CHARACTERISTICS AND PERFORMANCE](#)

B

C

D

ComPacT NSX circuit breakers from 100 to 250 A up to 690 V

The screenshot displays two columns of technical data for ComPacT NSX circuit breakers. Each column includes a small image of the breaker and a table with multiple rows and columns of specifications, likely including current ratings, breaking capacity, and voltage ratings.

[CLICK HERE TO SEE THE CHARACTERISTICS AND PERFORMANCE](#)

E

F

ComPacT NSX circuit breakers from 100 to 250 A up to 690 V

The screenshot displays two columns of technical data for ComPacT NSX circuit breakers. Each column includes a small image of the breaker and a table with multiple rows and columns of specifications, likely including current ratings, breaking capacity, and voltage ratings.

[CLICK HERE TO SEE THE CHARACTERISTICS AND PERFORMANCE](#)

G

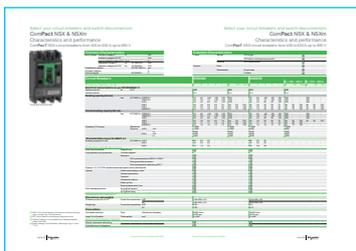
H

I



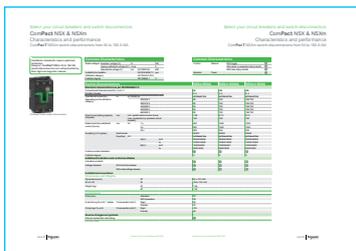
Characteristics and Performance ComPacT NSX & NSXm

ComPacT NSX circuit breakers from 400 to 630 A up to 690 V



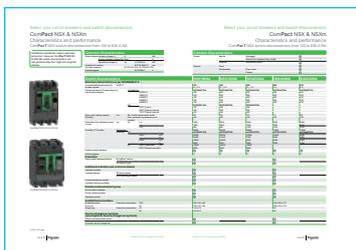
[CLICK HERE TO SEE THE CHARACTERISTICS AND PERFORMANCE](#)

ComPacT NSX switch-disconnectors from 50 to 160 A NA



[CLICK HERE TO SEE THE CHARACTERISTICS AND PERFORMANCE](#)

ComPacT NSXm switch-disconnectors from 100 to 630 A NA



[CLICK HERE TO SEE THE CHARACTERISTICS AND PERFORMANCE](#)



Learn more about ComPacT NSX & NSXm ranges here



NSX offer



NSXm offer



Catalogue

Scan or click on QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



A

B

C

D



E

Optimize your solution with field-proven & high-performance switch-disconnectors

F

Switch-disconnectors INS/INV40 to 2500 A



G

Standards

ComPact INS/INV Switch Disconnectors comply with:

- International Standards:
 - IEC/EN 60947-1: General rules
 - IEC/EN 60947-3: Switch-disconnectors.
- Marine certifications:
 - American Bureau of Shipping
 - Bureau Veritas
 - Det Norske Veritas - Germanischer Lloyd
 - Lloyd's Register of Shipping
 - Nippon Kaiji Kyokai
 - China Classification Societies
 - Registro Italiano Navale
 - Korean Register of shipping
 - Russian Maritime Registers of Shipping.
- UL489 and CSA C22.2 N°5-02 & N°5-13 standards. INSE and INSJ versions only.

H

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High performances

No derating for all performances in accordance with IEC60947-3 criteria:

- $I_{th} = I_{the} = I_e$ up to 60°.

www.schneider-electric.com

www.schneider-electric.com

Functions and characteristics

Switch-disconnector selection

ComPact INS40 to 160



P0111462_31100

ComPact INS40 to 80 switch-disconnector.

ComPact INS switch-disconnectors			INS40
Number of poles			3-4
Electrical characteristics as defined by IEC 60947-1 / 60947-3 and EN 60947-1 / 60947-3			
Conventional thermal current (A)	I_{th}	at 60 °C	40
Conventional thermal current in enclosure	I_{the}	at 60 °C	40
Rated insulation level (V)	U_i	AC 50/60 Hz	690
Impulse-withstand voltage (kV)	U_{imp}		8
Rated operational voltage (V)	U_e	AC 50/60 Hz	500
		DC	250
Rated operational voltage AC20 and DC20 (V)		AC 50/60 Hz	690
Rated operational current (A)	I_e	Electrical AC 50/60 Hz	AC22A
		220-240 V	40
		380-415 V	40

Total coordination with MasterPact MTZ, NT, NW, ComPact NS, ComPact NSX and ComPact NSXm

The switch must be chosen according to:

- the characteristics of the network on which it is installed
- the location and the application
- coordination with the upstream protection devices (in particular overload and short-circuit).

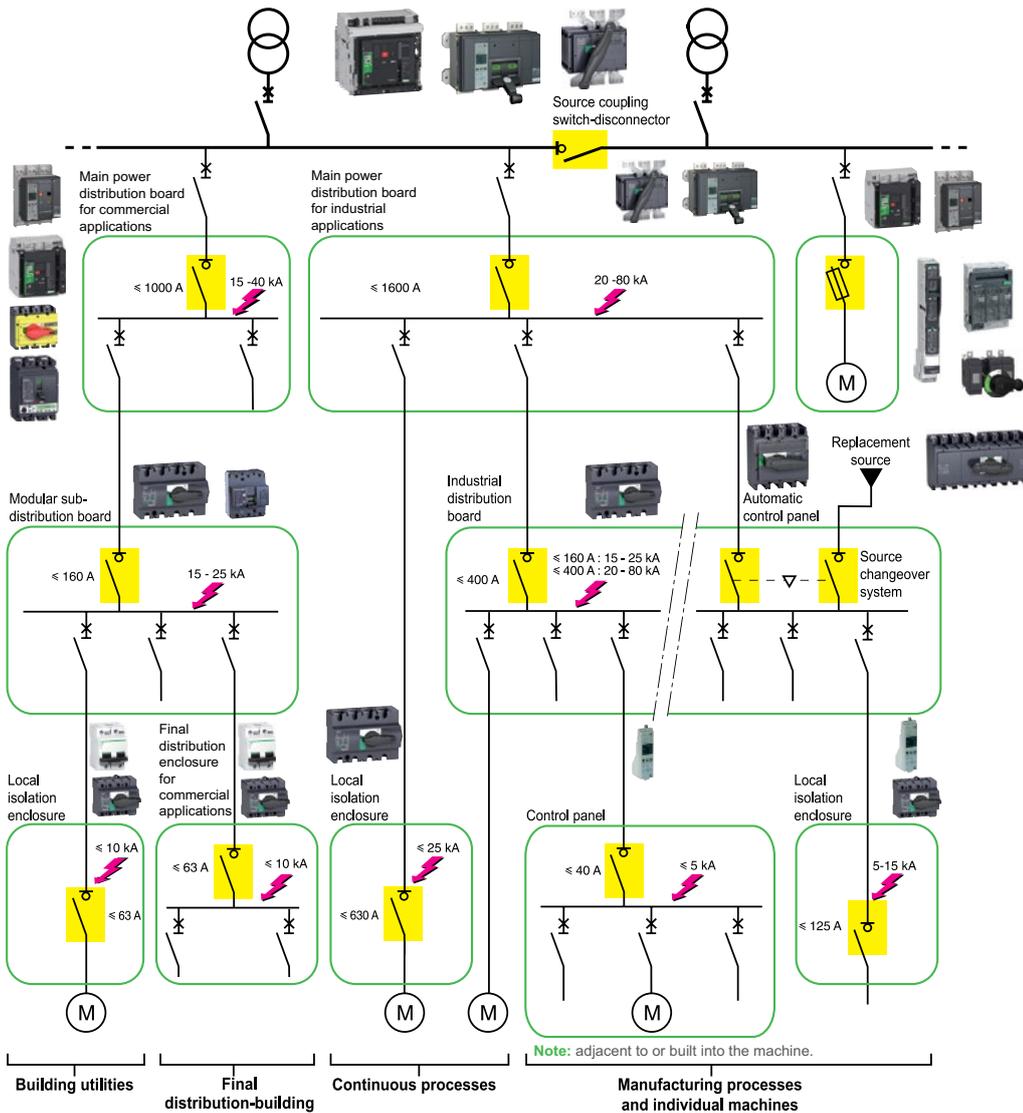
PNBCONTR0223EN

Life Is On |  Schneider Electric

129

Grow your business with better solutions

Choose the installation that best suits your needs



Less stock space needed

- Common accessories for ComPacT INS/INV and ComPacT NSX
- Less product references.

Energy availability thanks to the power-system protection

- Isolation of components under fault.

General overview ComPacT INS & INV

A

B

C

D

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General overview

ComPacT INS & INV

A

The complete range	40 A	63 A	80 A	100 A	125 A	160 A	200 A	250 A
Modular profile	INS40	INS63	INS80PV	INS100	INS125	INS160		
				INS250-100		INS250-160	INS250-200	INS250
	INSE 40-80							

B

ComPacT INS

Switch-disconnectors with positive contact indication



C

Emergency-off switch-disconnectors with positive contact indication



D

Mounting on backplate				INV100		INV160	INV200	INV250
-----------------------	--	--	--	--------	--	--------	--------	--------

E

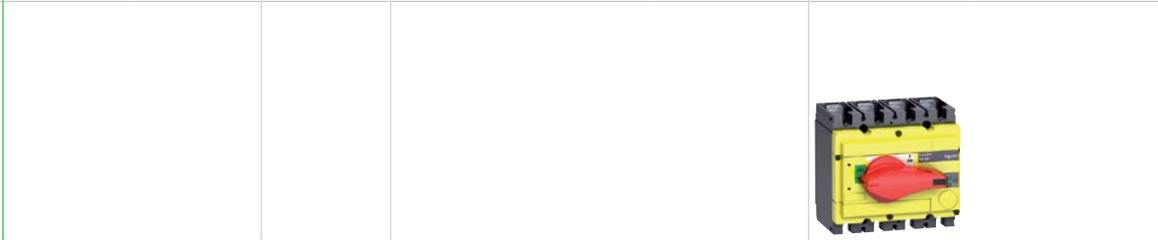
ComPacT INV

Switch-disconnectors with visible break



F

Emergency-off switch-disconnectors with visible break



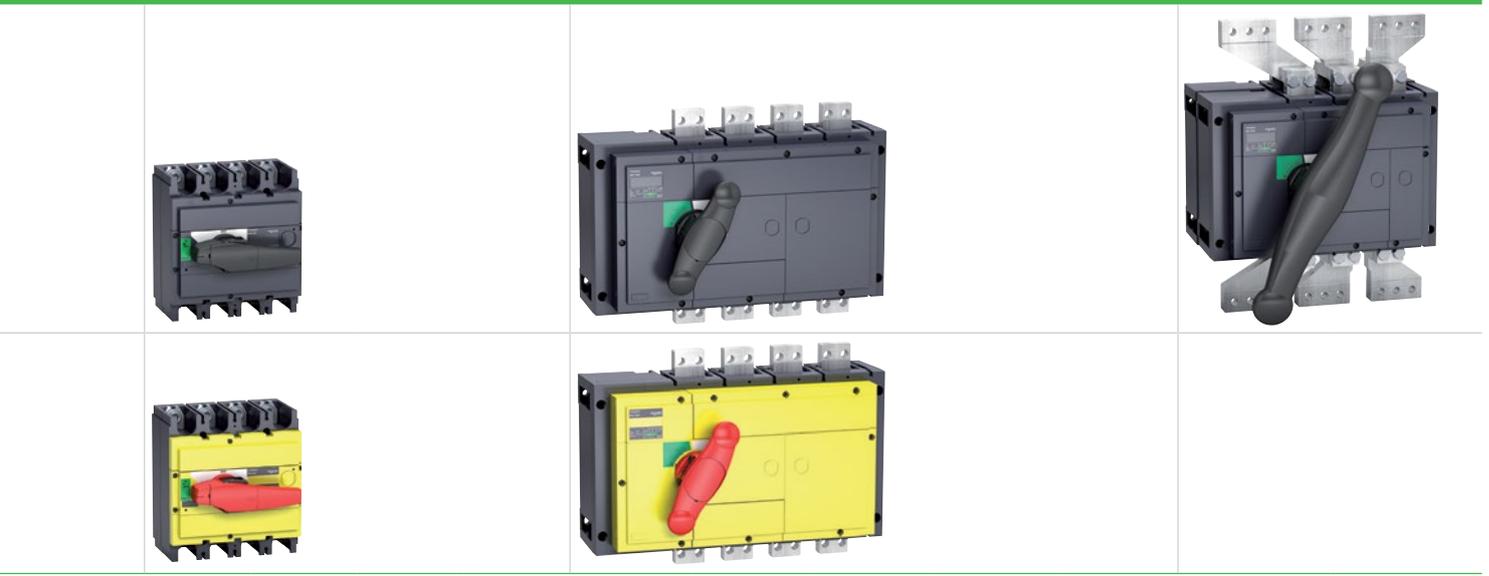
G

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General overview ComPacT INS & INV

320 A	400 A	500 A	630 A	630b A	800 A	1000 A	1250 A	1600 A	2000 A	2500 A
INS320	INS400	INS500	INS630	INS630b	INS800	INS1000	INS1250	INS1600	INS2000	INS2500
INSJ400										



- A
- B
- C
- D
- E
- F
- G
- H
- I

Functions and characteristics

ComPacT INS & INV

A



[CLICK HERE TO SEE FUNCTIONS AND CHARACTERISTICS \(PART 1\)](#)

B

C

D



[CLICK HERE TO SEE FUNCTIONS AND CHARACTERISTICS \(PART 2\)](#)

E

F

G

H

I



Learn more about ComPacT INS/INV ranges here



Offer



Catalogue

Scan or click on QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



A

B

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I



Transfer
Switching Equipment
Source-changeover systems



3 ways to switch the load to meet your needs

- A
- B
- C
- D
- E
- F
- G
- H
- I



① Automatic Source-Changeover System (or ATSE: Automatic Transfer Switching Equipment)

An automatic controller may be added to a remote-operated source-changeover system. It is possible to automatically control source transfer according to programmed (dedicated controllers) or programmable (PLC) operating modes. These solutions ensure optimum energy management.

System

Derived ATSE: Two or three circuit breakers that may have different configurations, linked by an electrical interlocking system. A mechanical interlocking system protects against electrical malfunctions or incorrect manual operations, with an automatic control system (dedicated controllers or PLC).

Non-derived ATSE: Specifically designed ATSE with a specific controller for the system. A mechanical interlocking system is standard for product which protects against electrical malfunctions or incorrect manual operations.



② Manual Source-Changeover System (or MTSE: Manual Transfer Switching Equipment)

A very simple way to switch the load. It is controlled manually by an operator. The time required to switch from the 'N' source to 'R' source can vary.

System

Two or three mechanically interlocked manually-operated circuit breakers or two switch-disconnectors.



③ Remote-Operated Source-Changeover System (or RTSE: Remote Transfer Switching Equipment)

The most commonly used system for devices with high ratings. No direct human intervention is required. Source-changeover is controlled electrically.

System

Derived RTSE: Two or three circuit breakers that may have different configurations, linked by an electrical interlocking system. In addition, a mechanical interlocking system protects against electrical malfunctions or incorrect manual operations.

Non-Derived RTSE: Specifically TSE that is electrically operated and not self-acting. A mechanical interlocking system is standard for product which protects against electrical malfunctions or incorrect manual operations.



Applications

A



- **Commercial and service sector** (operating rooms in hospitals, safety systems for buildings, computer rooms for banks and insurance companies, lighting and emergency lighting systems in malls, etc.), **industry and infrastructure.**

B

C



- Buildings and infrastructure where the need for continuity of service is significant but not a priority: offices, small and medium-sized businesses.

D

E



- **Industry** (assembly lines, engine rooms on ships, critical auxiliaries in thermal powerstations, etc.)
- **Infrastructure** (port and railway installations, runway lighting systems, control systems on military sites, etc.).

F

G

H

I

Whatever the system,
you benefit from our expertise!

Benefits

For many years Schneider Electric's source changeover system have proved their reliability everywhere around the world, in most power dependable buildings. Switching is performed by ComPacT or MasterPacT circuit breakers, the ultimate references in industrial switchgear.

Maximized continuity of service

- Energy availability is ensured whatever the external requirements (e.g. high power demand)
- Maintenance and replacement of the sources (N or R) can be done with no interruption of service
- You can maintain a continuous level of service and customer satisfaction

Maximized safety

For LV electrical installations where safety and continuity of service are critical for people and/or equipment such as hospitals, airports, banks, malls, etc

Optimized energy management

- Transfer the load to a replacement source according to external requirements
- Manage power sources according to power quality and power costs
- Perform system regulation
- Switch to an emergency replacement source

You are no longer dependent on your power supply (and supplier)!

Simplicity and reliability

- **Simple installation** on LV switchboard
- **Optimized size** of the switchboard
- System **based on pre-tested components**
- Compliance with **IEC 60947-6-1**

A

B

C

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TransferPacT Class PC

A

Transfer**PacT** is a high speed, com**PacT**, modular design intelligent automatic transfer switch that provides maximum scalability and robust performance. It is a Class PC ATSE designed according to IEC 60947-6-1, available through 32 A to 630 A, 2, 3, 4 pole with rated operating voltage through 208 V to 440 V^[*].

[*] Voltage varies depending on different frame. For more information, see general feature section.

B

Power availability

Maximized uptime

Innovative technology ensuring transfer in less than 500 ms.

Vast application

Utilization category AC-33B without derating, fits the most complicated load types.

Reliable under extreme condition

Short circuit capabilities including short time withstand current for your power continuity.

Robust design – Extreme Environment Proof

- Best-in-class electromagnetic protection, exceeding industry standards on class B
- Designed to perform in harsh environments with operating temperature -25...+70°C
- Successfully passed testing in compliance with IEC 60068-2-6 and IEC 60068-2-27.



D

Efficiency

Easy installation

- Built-in DPS and sensing wire, 30% of commissioning time saving
- Multiple installation adapted. E.g. DIN rail for 32 A ~160 A (TA10, TA16).

Enhanced scalability

10 function modules plug and play, non-disruption upgrading.



E

F

Connectivity

Natively connected – Integrated in EcoStruxure™ Power

- 24/7 precise power monitoring on voltage, frequency, voltage unbalance, phase rotation
- Predictive maintenance with hands-on approach and cloud-based monitoring software that synthesizes and analyzes performance and alert data into proactive recommendations. Transfer**PacT** enables wherever-you-go visibility.



G

H

Cyber security

Designed according to cyber security standard IEC 62443 at the level of SL1



I

Sustainability

Green premium ecolabel

- Green Package for full product range
- Saving trees - Scan QR code for full version for technical documents.



A

B

C

D

E

F

G

H

I

A



TransferPacT Active Automatic

B

C

D

E

F



TransferPacT Automatic

G

H

I

TransferPacT Automatic / TransferPacT Active Automatic

Frame		
Conventional Thermal Current	I _{th}	At 60°C
Rated operating current (A)	I _e	AC-33B
		AC-32B
Number of poles		
Operating positions		
Control types		

Electrical characteristics as defined by IEC 60947-1 / 60947-6-1 and EN 60947-1 / 60947-6-1

Rated insulation voltage (V)	U _i	
Rated impulse withstand voltage (kV)	U _{imp}	
Rated operating voltage (V)	U _e	AC50/60 Hz
Rated operating frequency (Hz)	F	
Rated short-time withstand current (kA/60 ms)	I _{cw}	
Rated short-circuit making capacity (400 V, 50 Hz)	I _{cm}	Switch alone
		With upstream circuit breaker
Rated duties		Uninterrupted duty
Contact Transfer Time ^[2] (I -> II or II -> I)		
I -> II or II -> I transfer time ^[2] , after power loss		
Mechanical durability		
Suitability for Isolation		

Installation and connection- Fixed, front connection

Installation
Wiring
Position feedback (Auxiliary contact)

Terminal cover
Rail buckle
Terminal Shield
Load extension bars
Interphase barrier
Tightening torque for electrical connections (Nm)
Degree of pollution

Upstream protection	Refer to Complementary technical information
---------------------	----------------------------------------------

Dimensions and weights	
Overall dimensions H x W x D (mm)	2 P
	3 P
	4 P
Approximate weight (kg)	2 P
	3 P
	4 P

■ Standard □ Optional

[1] Default 230 V/400 V.

[2] Transfer times are at rated voltage, excluding time delays when applicable.

[3] Suitable for normal and upside down installation.



TA10D	TA16D
100	160
100	160
32, 40, 50, 63	80, 100, 125, 160
80, 100	
2/3/4	3/4
3	3
Active Automatic HMI / Automatic HMI	Active Automatic HMI / Automatic HMI

TA10D	TA16D
800	800
6	8
2P: 220/230/240/250 V ^[1] 3P, 4P: 380/400/415/440 V ^[1]	3P, 4P: 380/400/415/440 V ^[1]
50/60 Hz	50/60 Hz
5 kA/0.1 s	10 kA/0.1 s
15 kA	20 kA
75 kA	154 kA
■	■
≤ 200 ms	≤ 200 ms
≤ 500 ms	≤ 500 ms
8,000	10,000
■	■

TA10D	TA16D
Rail / Base plate ^[3]	Rail / Base plate ^[3]
Busbar / Cable	Busbar / Crimp lug

TA10D	TA16D
□	□
■	■
■	■
□	□
□	□
-	□
3.5 ±0.3 N•m 30.97 ±2.65 lb-in	8 ±0.8 N•m 70.8 ±7.08 lb-in
3	3
155 x 310 x 94	
155 x 310 x 94	164 x 351 x 95
155 x 310 x 94	164 x 351 x 95
3.4	-
3.4	5.6
3.4	5.6

TransferPacT

A



TransferPacT Active Automatic

B

C

D



TransferPacT Automatic

E

F

G

H

I

TransferPacT Automatic / TransferPacT Active Automatic

Frame		
Conventional Thermal Current	I _{th}	At 60°C
Rated operating current (A)	I _e	AC-33B
Number of poles		
Operating positions		
Control types		

Electrical Characteristics as Defined by IEC 60947-1 / 60947-6-1 and EN 60947-1 / 60947-6-1

Rated insulation voltage (V)	U _i	
Rated impulse withstand voltage (kV)	U _{imp}	
Rated operating voltage (V)	U _e	AC50/60 Hz
Rated operating frequency (Hz)	F	
Rated short-time withstand current (kA/60 ms)	I _{cw}	
Rated short-circuit making capacity (400 V, 50 Hz)	I _{cm}	Switch alone With upstream circuit breaker
Rated duties		Uninterrupted duty
Contact Transfer Time (I -> II or II -> I)		
I -> II or II -> I Transfer Time, after power loss		
Mechanical durability		
Suitability for Isolation		

Installation and Connection - Fixed, Front Connection

Installation	
Wiring	

Switch Accessories

Position feedback (Auxiliary contact)	
Terminal cover	
Rail buckle	
Terminal Shield	
Connection accessories	Crimp lug Connector Terminal Extension
Interphase barrier	
Tightening torque for electrical connections (Nm)	
Degree of pollution	
Upstream protection	Refer to Complementary technical information
Dimensions and weights	
Overall dimensions	3 P
W x H x D (mm)	4 P
Approximate weight (kg)	3 P
	4 P

■ Standard □ Optional



TA25D	TA63D
250	630
250	630
100, 200, 250	320, 400, 500, 630
3/4	3/4
3	3
Active Automatic HMI / Automatic HMI	Active Automatic HMI / Automatic HMI
TA25D	TA63D
800	800
8	12
208/220/230/240 V 380/400/415/440 V	208/220/230/240 V 380/400/415/440 V
50/60 Hz	50/60 Hz
15 kA/0.1 s 10 kA/0.5 s	25 kA/0.1 s 20 kA/0.5 s
30 kA	40 kA
330 kA	330 kA
■	■
≤ 200 ms	≤ 200 ms
≤ 500 ms	≤ 500 ms
10,000	10,000
■	■
TA25D	TA63D
Base Plate	Base Plate
Busbar / Crimp lug / Cable	Busbar / Crimp Lug / Cable
TA25D	TA63D
■ Maximum 3 sets	■ Maximum 3 sets
-	-
-	-
□	□
□	□
□	□
□	□
□	□
15 ±1.5	50 ±5
3	3
370 x 341 x 186	467 x 341 x 186
370 x 341 x 186	467 x 341 x 186
13.1	20.8
13.3	22.1

A

B

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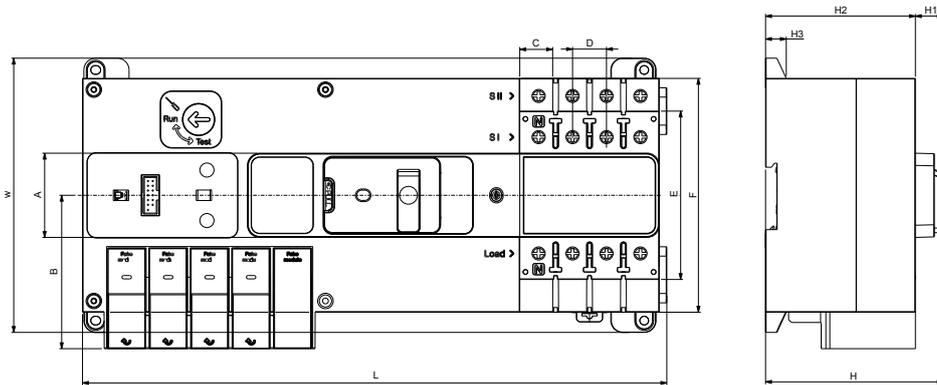
I

TransferPacT

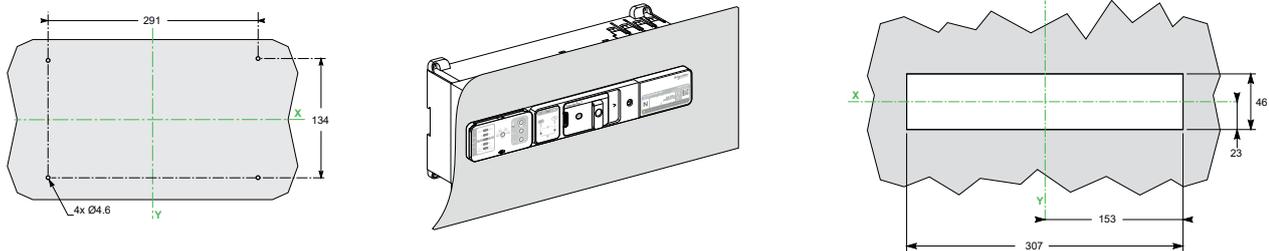
Automatic Transfer Switching Equipment - Class PC

TransferPacT Active Automatic and Automatic Frame 100 / 2P, 3P, 4P

Dimensions



Panel and Front panel cut



Frame	L	W	H	A	B	C	D	E	F	H1	H2	H3
100	310	147	94	45	82	17.5	18	90	125	15	79.5	11

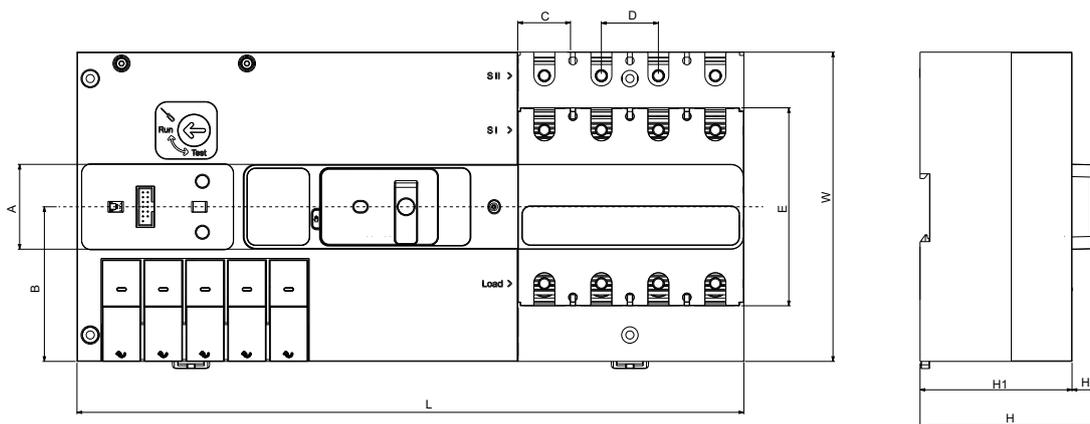
Note: Minimum Electrical Clearance must be followed according to the instructions shown in document reference: LVPED216028EN.

TransferPacT

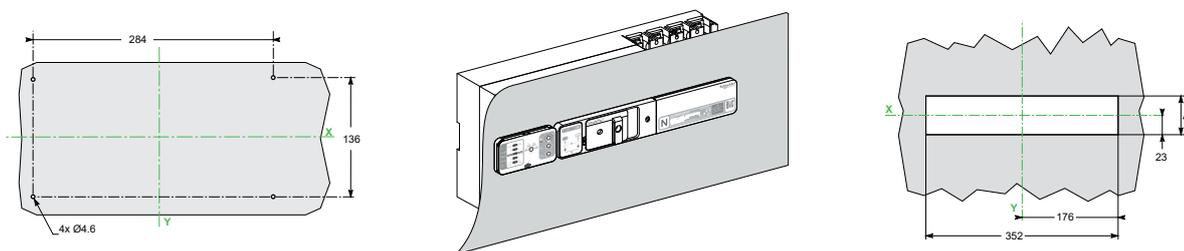
Automatic Transfer Switching Equipment - Class PC

TransferPacT Active Automatic and Automatic Frame 160 / 3P, 4P

Dimensions



Panel and Front panel cut



Frame	L	W	H	A	B	C	D	E	F	H1	H2	H3
160	351	164	95	45	82	28	30	105		80	15	

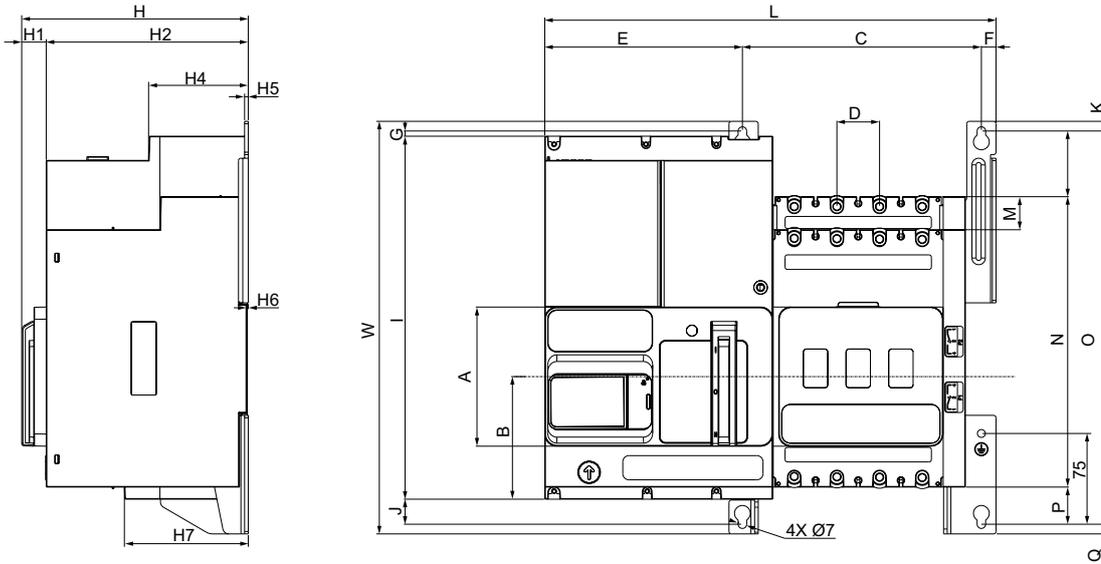
Note: Minimum Electrical Clearance must be followed according to the instructions shown in document reference: LVPED216028EN.

TransferPacT

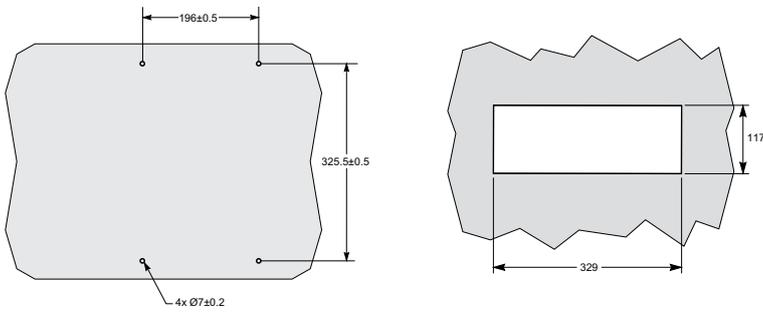
Automatic Transfer Switching Equipment - Class PC

TransferPacT Active Automatic and Automatic Frame 250 / 3P, 4P

Dimensions



Panel and Front panel cut



Frame	L	W	H	A	B	C	D	E	F	H	H1	H2
250	370	341	185.8	115	101.3	196	35	162	12	185.8	20.1	185.7

Frame	H4	H5	H6	H7	I	J	K	M	N	O	P	Q
250	81.75	3	0.7	101.7	300	20.7	8	27.3	240	325	30.7	8

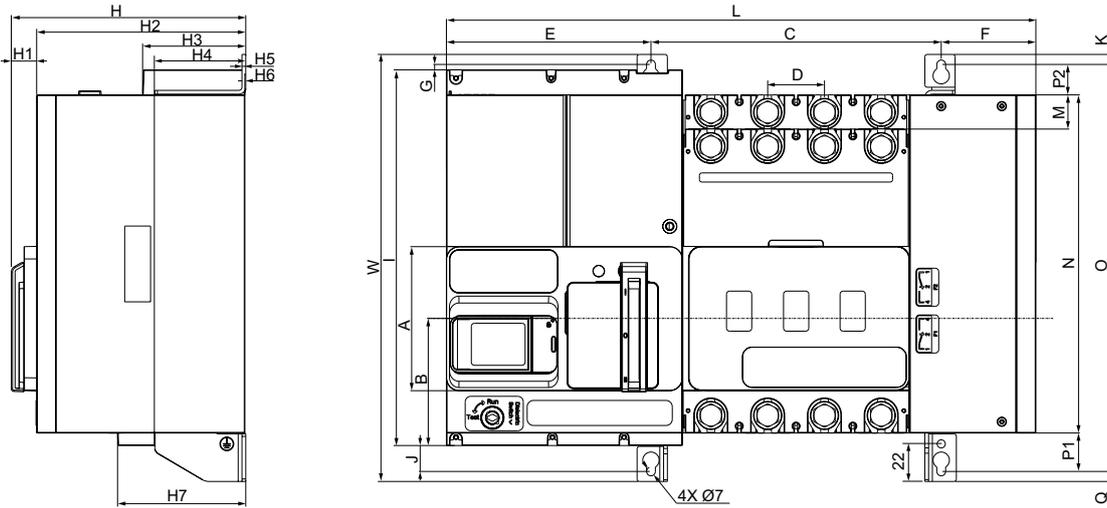
Note: Minimum Electrical Clearance must be followed according to the instructions shown in document reference: LVPED216028E.

TransferPacT

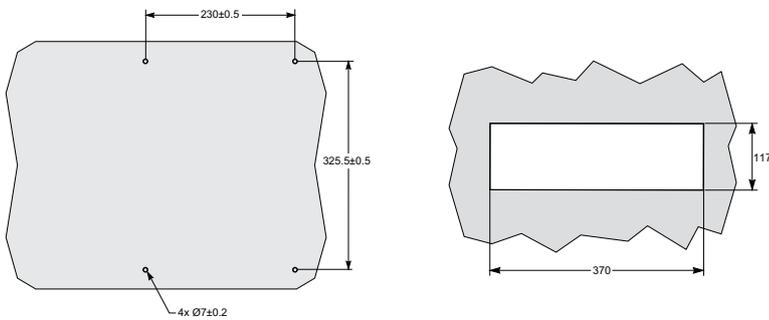
Automatic Transfer Switching Equipment - Class PC

TransferPacT Active Automatic and Automatic Frame 630 / 3P, 4P

Dimensions



Panel and Front panel cut



Frame	L	W	H	A	B	C	D	E	F	G	H1	H2	H3
630	467	341	185.8	115	101.3	230	45	162	75	4.3	20.1	165.7	72.45
Frame	H4	H5	H6	H7	I	J	K	M	N	O	P1	P2	Q
250	81.7	3	0.7	101.6	300	20.7	8	27.3	270	325	30.7	24.3	8

Note: Minimum Electrical Clearance must be followed according to the instructions shown in document reference: LVPED216028EN.



Learn more about
TransferPacT
range here



Offer



Catalogue

Scan or
click on
QR code

If you need more details about product references and availability, please check your local Schneider Electric contact
<https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



A

EasyPact MVS range

The easy choice for reliable performance

B

One family and two frame sizes

- Performance without compromise
- Assured quality and safety you can trust
- Deliver exceptional reliability and flexibility in its class
- Outstanding value for an optimized feature set
- Precision engineered to meet your needs
- Unbeatable value throughout its lifecycle
- Simple to choose and easy to install.

C

2 sizes:

D

MVS Frame 1:
 630 to
 1600 A

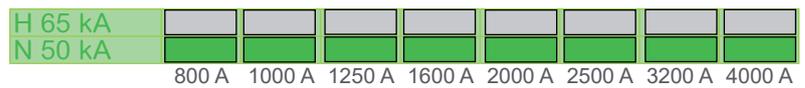


Performances



E

MVS Frame 2:
 800 to
 4000 A



G



H

I

Choose the leader



- 630 to 4000 A ratings
- Breaking capacity: 50 & 65 kA
- Suitable for 690 V applications
- Complete selectivity with $I_{cs} = I_{cu}$
- Intelligent ET range of trip system with display
- Fully protected neutral on 4 pole breakers
- Full accessories with modular design
- Conforms to IEC 60947- 2 & 3.

Performance Level

- Ratings:
 - Frame 1: 630 to 1600 A,
 - Frame 2: 800 to 4000 A.
- Breaking capacity: 50 & 65 kA.
- Suitable for 690 V applications.
- Complete selectivity with $I_{cs} = 100\% I_{cu}$.
- Circuit breakers type C, N, H.
- Switch-disconnectors type CA, NA, HA.
- 3 or 4 poles.
- Fixed or drawout versions.
- Conforms to IEC 60947- 2 & 3.

ET range of trip system

Type of measurement

- ET for basic protection.
- ETA for "current".
- ETV for "Energy".

Type of protection

- 2.0 for basic protection.
- 5.0 for selective protection.
- 6.0 for selective + earth-fault protection.



Communication

Eco COM

- EasyPact in a communication network.
- BCM-ULP COM option inside breaker.
- IFM: Modbus interface module.
- I/O application module.

Transmission signal

- Breaker signal: OF, SDE, PF and CH.
- Cradel signal: CD, CT, CE.
- Measurements ways: instantaneous, maximum/minimum, demand.
- Measurements value: current, voltage, power, power factor, energy.
- Protection settings.
- Trip causes.



EasyPact MVS communication module

- Independent Modbus interface module.
- Digital Input: 3 sets of OF, SDE, PF.
- Digital output: 3 sets of MX & XF.
- Analog Input: 1 set of 4-20 mA.



M2C programmable contacts

- Two programmable contacts.
- Signal events: Ir, Isd, Alarm Ir, Alarm Ig, Igv.



EasyPact MVS

Benefits for every Panel Builder and Contractor

A

EasyPact MVS06 to MVS40



B

Panel builders / Contractors

- Suitable for copper & Aluminium termination with the pole pitch of 70 or 115 mm
- Terminal orientation can be converted from horizontal to vertical and vice-versa at workshop
- Direct mounting Door frames (escutcheon) without drilling any holes
- Front fitted accessories like under-volt release, shunt release & closing coil for complete range
- Conversion of manual operated breaker in to electrical operated, with single bolt fixing.

C

D



EasyPact MVS with modular design helps to increase the shop floor efficiency, enabling faster delivery of switch boards.

E

F

The Key values

G

90%

of applications are covered



The performance you need

EasyPact MVS provides the ideal level of capability for your installation from 630 to 4000 A.

H

30%

Reduce stock by up to



At a cost-effective investment

Pay for what you need: Get outstanding durability with the features you need, with the benefit of easy to order and stock.

I

100%

Commitment to quality



With the quality you demand

Designed and manufactured by Schneider Electric using advanced manufacturing methods and premium materials.



Gain peace of
mind and
optimised cost
for every
installation



EasyPact MVS

General overview

This overview describes all the functions offered by **EasyPact MVS** devices.

A



B

C

D



ET21 trip system



ET5S trip system



ET6G trip system

E

F

G

H

I

Circuit breakers and switch-disconnectors

- Ratings:
 - **EasyPact MVS** 630 to 4000 A.
 - Circuit breakers type C, N, H.
 - Switch-disconnectors type CA, NA, HA.
 - 3 or 4 poles.
 - Fixed or draw-out versions.

ET trip system

- 2I basic protection.
- 5S selective protection.
- 6G selective + earth-fault protection.
- Standard long-time rating plug:
 - current setting (A) 0.4 to 1 x I_n.

ETA trip system with current measurement

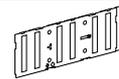
- 2I basic protection.
- 5S selective protection.
- 6G selective + earth-fault protection.
- Standard long-time rating plug:
 - current setting (A) 0.4 to 1 x I_n.
- External power-supply module.

ETV trip system with energy measurement

- 2I basic protection.
- 5S selective protection.
- 6G selective + earth-fault protection.
- Standard long-time rating plug:
 - current setting (A) 0.4 to 1 x I_n.
- External power-supply module.

Connections

- Rear connection:
 - horizontal,
 - vertical.
- Optional accessories:
 - interphase barriers,
 - safety shutters and shutter locking blocks.



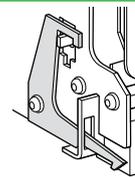
Safety shutters



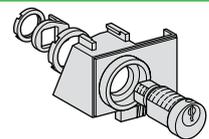
Interphase barriers

Locking

- Push button locking by padlockable transparent cover.
- OFF-position locking by keylock.
- Chassis locking in disconnected position by keylock.
- Chassis locking in connected, disconnected and test positions.
- Door interlock (inhibits door opening) with breaker in "connected" or "test" position.



Door interlock



Chassis key lock

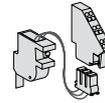
EasyPact MVS

General overview

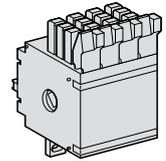


Indication contacts

- Standard:
 - ON/OFF indication (OF),
 - "Fault" trip indication (SDE).
- Optional:
 - additional ON/OFF, indication (OF),
 - ready-to-close contact (PF),
 - carriage switches for connected (CE) disconnected (CD) and test (CT) positions.



Ready-to-close contact

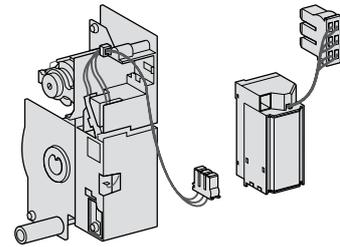


OF contact



Remote operation

- Remote ON/OFF:
 - gear motor,
 - XF closing or MX opening voltage releases.
- Remote tripping function:
 - MN voltage release
 - standard,
 - adjustable or non-adjustable delay.

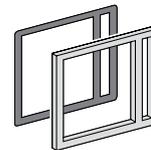


Gear motor

MX, XF and MN voltage releases

Accessories

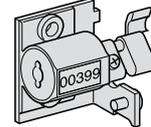
- Auxiliary terminal shield.
- Operation counter.
- Escutcheon (Door sealing frame).
- Transparent cover for escutcheon.
- Escutcheon blanking plate.



Escutcheon



Transparent cover

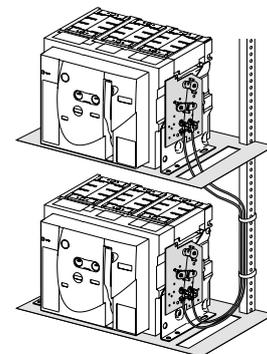


Mechanical operation counter



Source-changeover systems

- Mechanical interlocking using cables:
 - interlocking between two devices,
 - interlocking between three devices.



Interlocking of two devices



A

B

C

D

E

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G

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A

B

C

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Easy choice for total Simplicity

So easy, so simple

EasyPact™ EZC:

Build your complete solution with Schneider Electric

With just three sizes of circuit breakers, Schneider Electric's **EasyPact™ EZC** system is the simple, universal solution to fit all low-voltage protection needs.

- > The fixed version is particularly adapted to the OEM and Building markets, offering optimum performance at a competitive price.
- > The plug-in version offers an additional function dedicated to the Marine market.

EasyPact™ EZC range complies with worldwide standards:

- IEC 60947-2
- EN 60947-2
- JISC8201-2-1 / C8201-2-2 (annex 1 and 2)
- GB 14048.2
- UL508 ^[1]
- CSA22-2 ^[1]
- IACS for Merchant Marine (International Association of Classification Societies: ABS, BV, CCS, DNV, GL, KRS, LR, NK, RINA).

[1] Only for the 100 A model

With international certifications and approvals by independent laboratories:

- ASEFA, KEMA, TILVA, TÜV, UL.

And compliance with RoHS Directive

- Restriction of Hazardous Substances.



Buildings



Marine

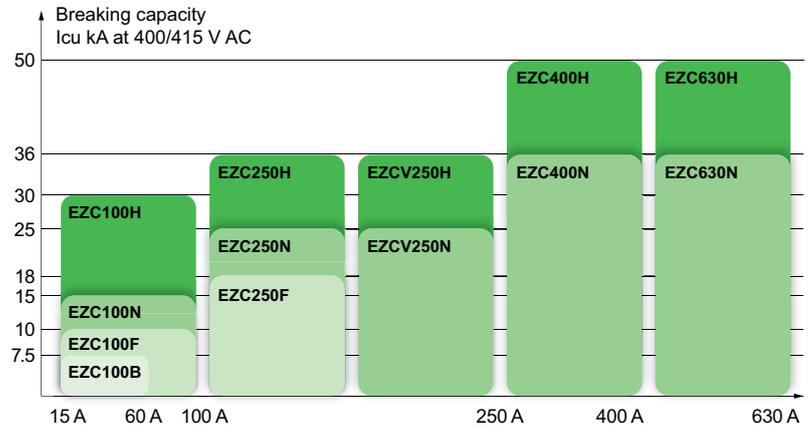


OEM

Easy to choose

EasyPact™ EZC brings you easy solutions

- From 15 A to 630 A
- Up to 50 kA at 415 V
- Up to 4 poles
- In only three frame sizes
- With a complete range of auxiliaries: rotary commands, auxiliaries, shunt trip, phase barrier, terminal cover, undervoltage trip.



Easy to install

- Fixed front mounting
- Plug-in mounting
- Front connections
- Bare cables connected through cable lugs, screwed inside the breaker
- Field-installable auxiliaries and accessories
- Built-in earth-leakage protection
- Interchangeable MCCB and ELCB.

EasyPact™ EZC 250 ELCB

Built-in Integrated Earth-Leakage Circuit Breaker (ELCB) function

- > Fully interchangeable with MCCB.
- > Same MCCB footprint and panel cut.

Easy to use

- A thermal calibration suitable for MCCB use at 50°C without derating (up to 250 A)
- Positive contact indication for safety and reliability
- A smaller case optimized for tight spaces.

EasyPact EZC

A



B

UI	690V~		
Uimp	6kV	Icu(kA)	Ics(kA)
230/240~	85	43	
400/415~	36	18	
440~	25	13	
550~	10	5	
250~	30	15	

50/60Hz
IEC 60947-2
Cat. A

C

Standardised characteristics indicated on the rating plate:

- Ui: rated insulation voltage
- Uimp: rated impulse withstand voltage
- Ue: rated operational voltage
- Icu: ultimate breaking capacity, for various values of the rated operational voltage Ue
- Ics: service breaking capacity
- In: rated current
- suitability for isolation

D

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EasyPact EZC circuit breakers and auxiliaries comply with the following international standards:

- IEC 60947-1 - general rules
- IEC 60947-2 - low-voltage switchgear and controlgear, part 2 (circuit breakers)
- European (EN 60947-1 and EN 60947-2) and the corresponding national standards
- GB 14048.2
- JIS C8201-2-1 Annex 1 and Annex 2, for moulded case circuit breakers
- JIS C8201-2-2 Annex 1 and Annex 2, for earth-leakage circuit breakers
- UL 60947-4-1(old UL508)/CSA 22-2 no. 14.

Approvals and Certifications

- IEC certification by independent laboratories (ASEFA, KEMA, TÜV).
- marking.
- certified by third-party Tilva.
- UL 60947-4-1(old UL508) certified by third party Underwriter Laboratories as a “Manual Motor Controller” (EZC100/EZC250/EZCV250).

Vibration and shock withstand test

EasyPact EZC circuit breakers resist mechanical vibrations and shocks. Tests are carried out in compliance with standard IEC 60068-2-6 for the levels required by merchant-marine inspection organisation IACS: International Association of Classification Societies up to 250 A (ABS, BV, DNV, LR, KRS, RINA, NK):

- 2 to 13.2 Hz: amplitude ± 1 mm
- 13.2 to 100 Hz: acceleration 0.7 g.

Pollution degree

EasyPact EZC circuit breakers are certified for operation in pollution-degree III environments as defined by IEC standard 60947 (industrial environments).

Tropicalization

EasyPact EZC circuit breakers have successfully passed the tests prescribed by the following standards for extreme atmospheric conditions:

- IEC 60068-2-1 - dry cold (-55°C)
- IEC 60068-2-2 - dry heat (+85°C)
- IEC 60068-2-30 - damp heat (95% relative humidity at 55°C)
- IEC 60068-2-52 - salt mist (severity level 2).

Positive contact indication

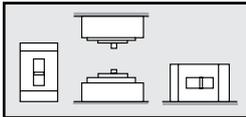
All EasyPact EZC circuit breakers are suitable for isolation as defined in IEC standard 60947-2:

- the isolation position corresponds to the O (OFF) position
- the operating handle cannot indicate the O (OFF) position (“green colour” visible) unless the contacts are effectively open
- padlocks may not be installed unless the contacts are open
- installation of a rotary handle does not alter the reliability of the position-indication system.

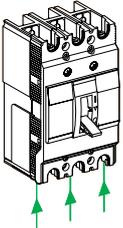
The isolation function is certified by tests guaranteeing:

- the mechanical reliability of the position indication system
- the absence of leakage currents
- overvoltage withstand capacity between upstream and downstream connections.

EasyPact EZC circuit breakers take into account important concerns for environmental protection. Most components are recyclable and the parts are marked as specified in applicable standards.



Installation positions.



Reverse feeding.



Earth-leakage protection

EasyPact EZC circuit breakers have a specific version including earth-leakage protection. This protection is fully integrated inside the breaker and does not require any additional space.

EasyPact EZC circuit breakers and earth leakage circuit breakers are fully interchangeable.

Ambient temperature

- EasyPact EZC circuit breakers have been particularly designed to hold 100% In at 50°C without tripping in normal condition (up to 250 A, except earth leakage circuit breakers).
- EasyPact EZC circuit breakers may be used between -25°C and +70°C.
- The permissible storage-temperature range for EasyPact EZC circuit breakers in the original packing is -35°C to +85°C.

Installation

EasyPact EZC circuit breakers are designed for easy installation in the various types of switchboards. They may be mounted vertically, horizontally or flat on their back without any derating of characteristics.

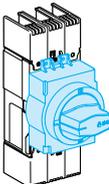
Power supply

EasyPact EZC circuit breaker can be supplied from either the top or the bottom (reverse feeding) without any reduction in performance. For earth-leakage circuit breakers, reverse feeding is possible only up to 240 V AC. This capability facilitates connection when installed in a switchboard.

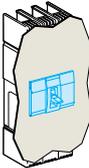
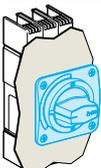
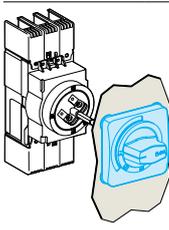
Degree of protection

As per standards IEC 60529 (IP degree of protection) and EN 50102 (IK degree of protection against external mechanical impacts).

Bare circuit breaker with terminal shields

	With toggle	IP20	IK07
	With direct rotary handle standard	IP40	IK07

Circuit breaker installed in a switchboard

		With toggle	IP40	IK07
	With direct rotary handle standard/VDE MCC	IP54	IK07	
	With extended rotary handle	IP54	IK08	



Functions and characteristics

EasyPact EZC

A

[CLICK HERE TO SEE THE SELECTION GUIDE \(PART 1\)](#)

B

C

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[CLICK HERE TO SEE THE SELECTION GUIDE \(PART 2\)](#)

E

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I

Learn more about
EasyPact EZC
range here



Scan or
click on
QR code

Offer

Catalogue

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



A

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EasyPact CVS MCCBs

E

Low voltage circuit breakers from 100 to 630 A

F

EasyPact CVS is packed with world class features and designed especially to meet technical and commercial needs of customers

G

- Conforms to IEC 60947-1 and 2
- Breaking Capacities:
 - 25 kA (100 A - 250 A), 36 kA (100 A - 630 A),
 - 50 kA (400 A and 630 A)
- Complete range with Service breaking capacity, $I_{cs} = 100\%$ Ultimate breaking capacity, I_{cu}
- Two frame sizes for complete range helps is faster design and delivery of distribution systems
- Thermal magnetic trip units (100 A - 630 A) and electronic trip units (400 A and 630 A)
- Fault current limitation technology helps to reduce the thermal stresses and thus increases the life of cables and installation.

H

- Front accessible common snap fit auxiliaries simplifies the installation procedures and reduces inventory costs
- Suitability for Isolation ensures that the circuit is isolated from the remainder of the system thus the personnel carry out work with complete safety
- Class 2 front face reinforces safety with unique modular construction where the auxiliaries are isolated from the main current path
- MCCB's can be either pad locked or key locked, thus ensuring safety and better control on installation
- High electrical and mechanical endurance.

I



Easy choice for Quality and Value:
Safe, reliable and simple

Safe



Isolation

- **EasyPact CVS** circuit breakers are suitable for Isolation as defined in IEC 60947-2 standards. The aim of isolation is to separate a circuit or apparatus from the remainder of a system which is energized in order that personnel may carry out work on the isolated part in perfect safety
- MCCB locking with external padlocks enables a user to isolate and undertake maintenance with utmost safety.

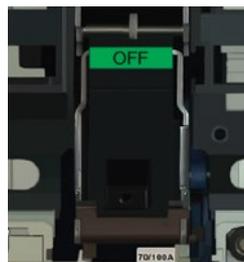
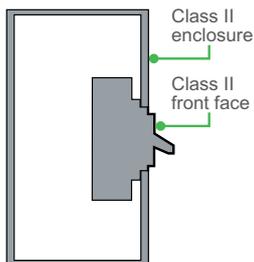


Isolation



Class II front Face

- All **EasyPact CVS** MCCBs are class II Front face devices, they may be installed through the door of class II switchboards without downgrading the switchboard insulation. Installation requires no special operation, even when the Circuit Breaker is equipped with a rotary handle.



Class II panel with circuit breaker having a class II front face

Locking in OFF position

- Key locks enable to lock the breaker in OFF position ensuring safety and better control on installation
- It also helps in interlocking multiple circuit breakers in an installation.



A

Reliable

Conforms to IEC 60947-2 for circuit breaker

- Tested at renown international laboratories like KEMA
- Complete range with $I_{cs} = 100\% I_{cu}$.



High electrical & Mechanical endurance

- 30000 mechanical operations for 100 A
- 12000 electrical operations for 100 A.



Reliable accessories

- Continuous rated shunt coils
- Multifunctional Aux./Alarm contact
- Unique electrical fault trip indication (SDE).

EasyPact CVS offer protection for human as well as Electrical installation

Earth leakage protection through Vigi Module to protect human against leakage current.



D

EasyPact CVS Double break Roto mechanism

Current limitation technology

The diagram illustrates the internal components of the EasyPact CVS circuit breaker, including the double break mechanism and the current limitation technology. The graph shows the relationship between current (Isc) and time (t) during a fault. It compares the prospective current (dashed line) with the limited current (solid line). Key points on the graph include the prospective Isc peak, limited Isc peak, actual current, and limited current Isc. The time to clear the fault (tc) is also indicated.

Fault current limitation technology

- **EasyPact CVS** Double break mechanism ensures high fault current limitation
- Reduces thermal stresses on the electrical distribution network
- Increases the life of cables and installation.

E

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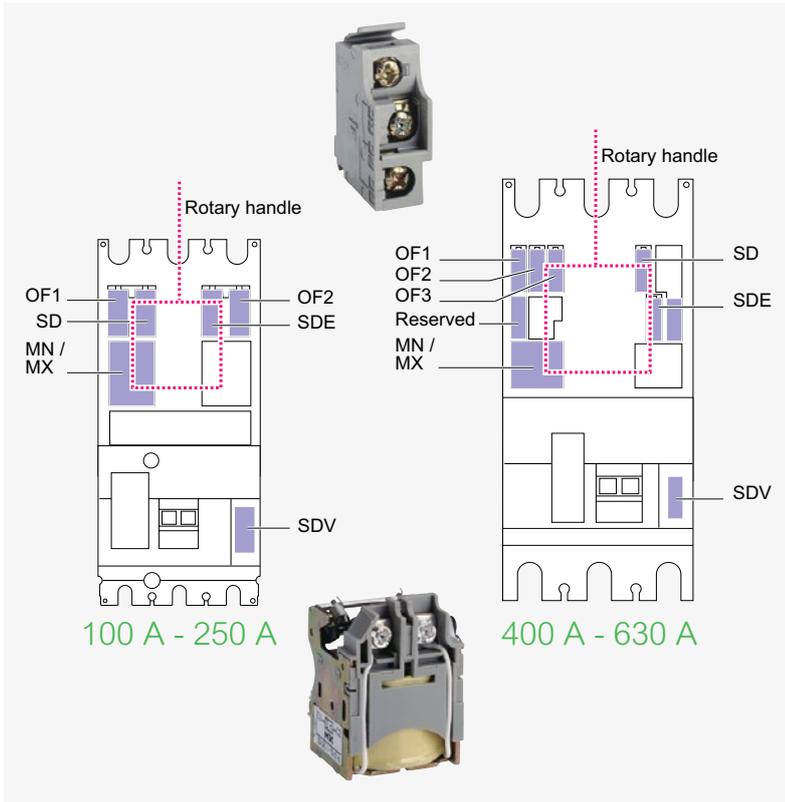


Simple

Only two frame sizes up to 630 A

Frame - I: 100 - 250 A

Frame - II: 400 - 630 A



- Common and snap-fit accessories up to 630 A
- Single OF contact for ON/OFF, Trip indication
- Single Shunt coil for remote tripping
- Single Under Voltage coil
- **EasyPact CVS** share same footprint of ComPacT Family MCCBs
 - mounting dimensions
 - easy retrofitting
 - system upgradeability.

Stands for customer value



Panel builders

- Only two frame sizes up to 630 A
- Common accessories for complete range (ON/OFF/Trip Auxiliaries/Shunt/UV etc)
- Line load reversibility for entire range
- Suitable for class II switchboards.

Contractors

- Sufficient pole pitch helps to terminate Copper and Aluminum busbars or cables
- Easy availability of the product due to less number of frame size
- Designed to perform in demanding applications.



Gain peace of mind,
quality, and value for
your installations



Characteristics and Performance

EasyPact CVS

The screenshot shows a technical table for EasyPact CVS circuit breakers. It includes columns for 'Type', 'Rating', 'Pole', 'Frame', 'Breaking capacity', 'Short-circuit capacity', 'Energy capacity', 'Mechanical life', and 'Electrical life'. The table is organized into sections for different breaker types and ratings.

CLICK HERE TO SEE THE CHARACTERISTICS AND PERFORMANCE

- A
- B
- C
- D**
- E
- F
- G
- H
- I

EasyPact CVS
Molded-case circuit breakers from 16 to 630 A, with adjustable settings.

Part of Easy Series

Molded-case circuit breakers (MCCB) with adjustable settings, rated from small for applications in small to medium-sized buildings.

Product Search | Contact support

Learn more about EasyPact CVS range here

Offer | Catalogue

Scan or click on QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>

Power monitoring and power quality

PowerLogic™	
General overview	E-172
Panorama of the PowerLogic™ range	E-176
EcoStruxure™ Panel Server	
General overview	E-184
Architecture overview	E-186
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HeatTag	
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Functions and characteristics	E-194
EasyLogic Power Metering	
General overview	E-196
Functions and characteristics	E-199
EasyLogic PFC Capacitors	
General overview	E-204
Technical characteristics	E-208



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E



F

Energy management, revenue metering and power quality monitoring

Electrical network management

G

EcoStruxure Panel Server is the next generation of gateway, providing a seamless connection of wired or unwired smart IoT devices to your edge control software or advisor. It is a foundational enabler for Schneider Electric EcoStruxure solutions.

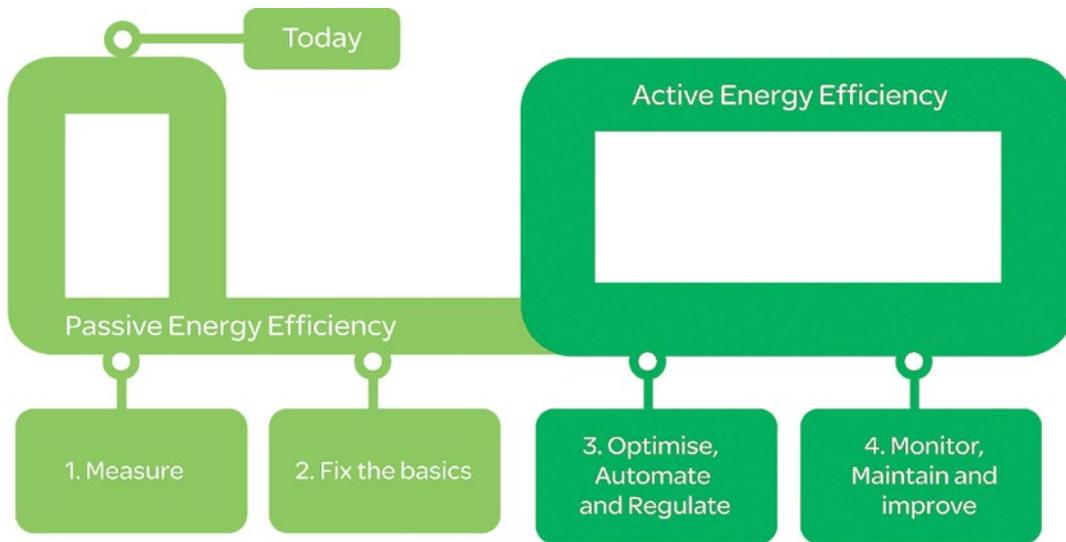
H

I



PowerLogic™ System is...

Schneider Electric believes every business can increase productivity while consuming less and achieving energy savings of 10% to 30%.



PowerLogic technology forms one part of your total energy management solution from Schneider Electric. As the global energy management specialist, we offer end-to-end power, building and process management solutions that help you optimize energy use and costs, improve performance, enhance comfort and safety, and deliver uninterrupted service while taking responsible care of our planet.

Our expert services can help you audit your energy use and build your energy action plan. From power factor correction systems, harmonic filtering and variable speed drives to HVAC and lighting controls, we offer a complete range of energy efficient technologies.

- Saving energy reduces costs and pollution, but you need the tools to uncover all opportunities, avoid risks, track progress against goals, and verify success. Schneider Electric provides these tools via the world's most advanced energy intelligence technology: PowerLogic.
- A PowerLogic system of meters, software and power quality solutions help manage all energy assets, every second of the day. A PowerLogic system enables all stakeholders, from CEO to facility and engineering managers, to respond quickly to potential problems and manage energy in financial and environmental terms.
- PowerLogic technology delivers the key performance indicators and analytics that you need to strategically balance emissions, efficiency, reliability and cost.



A

Gain energy insight and control with PowerLogic™ systems

B

Cutting-edge technology to increase profitability

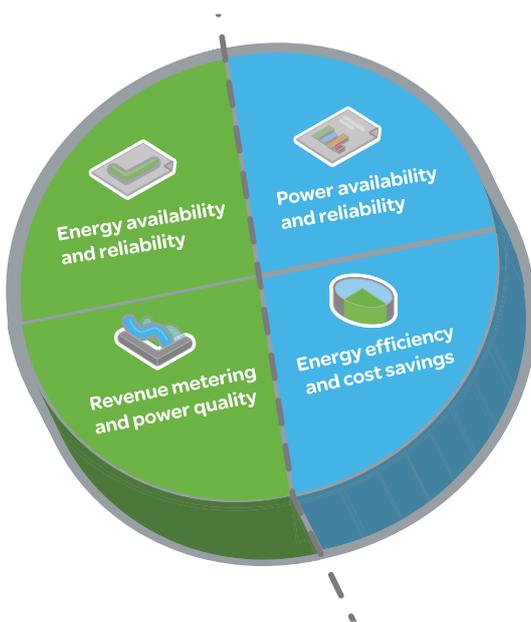
PowerLogic technology converts the complex dynamics governing the relationship between power generation and distribution on the utility side, and energy consumption, cost and reliability on the consumer side, into timely, easily understood information. Businesses can use this powerful to improve tactical actions and strategic decision making.

C

From a single facility to an entire enterprise, PowerLogic meters monitor key distribution points 24 hours a day. Whether from generators, substations, service entrances, mains, feeders, loads or 3rd party equipment and systems, PowerLogic technology tracks, records and reports all real-time conditions and historical performance data. Intuitive web-based interfaces give stakeholders access to this data as well as advanced analytics, alarm annunciation and control capabilities. It supports comprehensive energy management programs by tracking performance and empowering you to make effective decisions.

D

E



F

Supply

G

Energy availability and reliability

- Improve T&D network reliability
- Enhance substation automation
- Maximize the use of your existing infrastructure

H

Revenue metering and power quality

- Maximize metering accuracy at all interchange points
- Verify compliance with new power quality standards
- Analyse and isolate the source of power quality problems

I

Demand

Power availability and reliability

- Validate that power quality complies with the energy contract
- Identify power quality issues and fix them quickly with reliable mitigation solutions
- Improve response to power-related problems
- Leverage existing infrastructure capacity and avoid over-building
- Support proactive maintenance to prolong asset life

Energy efficiency and cost savings

- Measure efficiency, reveal opportunities and verify savings
- Manage greenhouse gas emissions
- Allocate energy costs to departments or processes
- Reduce peak demand and power factor penalties
- Enable participation in loadcurtailment programs (e.g. demand response)
- Strengthen rate negotiation with energy suppliers
- Identify billing discrepancies
- Sub-bill tenants for energy costs

Market segments

A

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- Cost allocation
- Procurement optimization
- Power factor correction
- Continuity of service even in case of an earth fault.

- Tenant sub-billing
- Cost allocation
- Energy efficiency & benchmarking
- Procurement optimization
- Power availability
- Demand response / load curtailment.



- Metering all key interchange points with the highest possible accuracy
- Improving the quality of power delivered to your customers
- Ensuring the reliability and efficiency of your network and equipment.

- Revenue metering
- Power quality monitoring
- Power availability and reliability
- Insulation monitoring.

- Infrastructure optimization
- Power quality analysis compliance
- Alarming and event notification
- Energy efficiency
- Cost allocation
- Procurement optimization.

Panorama of the PowerLogic™ range

Use this panorama to select the most efficient products for your application needs

Current transformers		Panel instruments						
 <p>CTs Ip / 5 A</p>		 <p>iAMP</p>	 <p>iVLT</p>	 <p>AMP/VLT</p>	 <p>iFRE</p>	 <p>iCH/iCI</p>		
Function		Current transformer	Ammeter, Voltmeter	Ammeter, Voltmeter	Ammeter, Voltmeter	Frequency meter	Hour counter, Pulse counter	
Applications		Installation Solid Core CTs <ul style="list-style-type: none"> Insulated Cable, diameter 21 to 35 mm Busbar through transformer Cable connections Split Core CTs <ul style="list-style-type: none"> CT installation without the need to uninstall and reinstall power conductors Cable and Busbar connections 	Panel instrumentation Panel instrumentation Sub-billing & cost allocation Demand & load management Billing analysis Energy efficiency & cost Sub-billing & cost allocation Demand & load management Billing analysis Power availability & reliability Compliance monitoring Sag/swell, transient Harmonics Revenue metering Revenue meter	I / U	I / U	I / U	F	hours/pulses
Characteristics		Solid Core CTs <ul style="list-style-type: none"> Transformation ratio: 40/5 A to 6000/5 A Accuracy: class 0.5 to 3 Maximum rated operational voltage: 720 V AC Tropicalised range 25°C to +60°C^[1] Relative humidity > 95% Split Core CTs <ul style="list-style-type: none"> Transformation ratio: 100/5 A to 4000/5 A Accuracy: class 0.5 to 3 Maximum rated operational voltage: 720 V AC Cable connection: -5°C to +50°C Relative humidity 5-85% Busbar connection: 5°C to +40°C Relative humidity 5-85% 	Measurement accuracy Installation Measurement Communication ports Memory capacity	Class 1.5 DIN rail 4 x 18 mm modules iAMP: 30 A direct or external CT	± 0.5% ± 1 digit DIN rail 2 x 18 mm modules iVLT: 600 V AC direct or external VT	Class 1.5 flush mounted 72 x 72 mm 96 x 96 mm VLT: 500 V AC direct or external VT AMP: external CT	± 0.5% ± 1 digit DIN rail 2 x 18 mm modules 400 V AC direct	iCI, iCH: DIN rail 2 x 18 mm modules CH: flush mount

[1] Warning: some products are limited to +50°C.

Technical characteristics Panorama of the PowerLogic™ range

Basic energy metering				
				
iEM2xxx Range iEM2000, iEM2100, iEM2400	iEM3000 Series	PM3000 Series	PowerTag Energy Series	
Function				
	Kilowatt-hour meter	Kilowatt-hour meters Power and energy meters	Metering & sub-metering Class 0.5S IEC 62053-22 Class 1 IEC 62053-21 Class 2 IEC 62053-23	Wireless power & energy meter
Applications				
Panel instrumentation				
Panel instrumentation	E (in all range) I, U, F, P, Q, S, PF (in selected ranges)	I, U, F, P, Q, S, PF, E (Power demand and current demand)	I, U, F, P, Q, S, PF, E (Power demand and current demand)	I, U, F, P, Q, S, PF, E (Depending on reference; Power demand depending on gateway)
Energy efficiency and cost				
Sub-billing & cost allocation	●	●	●	Cost allocation only
Demand & load management		●		
Billing analysis		●		
Power availability & reliability				
Compliance monitoring				
Dip/swell, transient				
Harmonics				
Revenue metering				
Revenue meter				
Characteristics				
Measurement accuracy	Class 1 (Wh) / Class 2 (VARh)	Class 0.5S / Class 1 (Wh) Class 2 (VARh)	Class 0.5	IEC 61557-12 PMD/DD Class 1 (active energy)
Installation	DIN rail 1, 2 x 18 mm modules	DIN rail 5, 7 x 18 mm modules	DIN rail	On product or on cables depending on the reference
Voltage measurement	Up to 276 V (Ph-N) AC direct	100 - 277 V L-N, 173 - 480 V L-L Up to 1MV AC (ext VT)	50 V to 330 V AC (Ph-N) 80 V to 570 V AC (Ph-Ph) Up to 1MV AC (ext VT)	Up to 277 V AC (Ph-N) / 480 V AC (Ph-Ph) depending on the reference
Current measurement	40 to 125 A direct	External CT (iEM32/34/3500) Direct 63 A (iEM3100), 125 A (iEM3300)	External CT	63 to 2000 A
Communication ports	RS-485, M-Bus in selected references	RS-485, M-Bus, BACnet, LonWorks in selected references	1	Wireless
Inputs / Outputs	1/1 (in selected)	Up to 2 Inputs and 1 Output	2 I/O	
Memory capacity				

- A
- B
- C
- D
- E
- F
- G
- H
- I

Panorama of the PowerLogic™ range

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I

	Wireless products		Basic multi-function metering	
				
	PowerTag Control	HeatTag Smart Sensor <small>More details on page 192</small>	PM5000 Series	PM5350 Series
Function	Circuit monitoring & control IEC 60364-8-1 EN 17267 ISO 50010	Early detection of overheating wire connections or overheating cables	Metering & sub-metering Class 0.5S IEC 62053-22 Class 1 IEC 62053-21 Class 2 IEC 62053-23 Class 0.5/1 IEC 61557-12	Class 0.5S IEC 62053-22 Class 2 IEC 62053-23 Class 1 IEC 61557-12
Applications	Panel instrumentation			
Panel instrumentation		Analysis of gas and micro-particles, Temperature, Humidity	I, U, F, P, Q, S, PF, E (Power demand and current demand)	I, U, F, P, Q, S, PF, E (Power demand and current demand)
Energy efficiency and cost	Sub-billing & cost allocation			
Sub-billing & cost allocation			●	●
Demand & load management			●	●
Billing analysis			●	
Power availability & reliability	Compliance monitoring			
Compliance monitoring			●	
Dip/swell, transient				
Harmonics			●	●
Revenue metering	Revenue meter			
Revenue meter				
Characteristics	Measurement accuracy			
Measurement accuracy		Temperature ±1.1°C Humidity ± 9 RH%	Class 0.5	Class 0.5
Installation	DIN rail	DIN rail 6 x 18 mm modules	Flush mount 96 mm x 96 mm or DIN rail (PM5563)	Flush mount 96 mm x 96 mm
Voltage measurement			20 V to 400 V AC L-N 35 V to 690 V AC L-L	20 V to 300 V L-N 35 V to 520 V L-L
Current measurement			External CT	External CT
Communication ports	Wireless		RS-485, Ethernet, BACnet, Ethernet IP	RS-485
Inputs / Outputs	2 I/O		Up to 4 inputs/ 2 outputs	Up to 4 inputs/ 2 outputs
Memory capacity			Available	



Technical characteristics Panorama of the PowerLogic™ range

Advanced metering		
		
	PM8000 Series	ION9000
Function	Energy & Advanced Power Quality Meter IEC 62053-22 Class 0.2S ANSI C12.20 Class 0.2 IEC 61000-4-30 Class S IEC 62586-2 IEC 61557-12 PMD/Sx/K70/0.2 IEC / UL 61010-1	Energy & Advanced Power Quality Meter IEC62052-11 ed.2 Class 0.1S ANSI C12.20 Class 0.1 PQI Class A IEC 62586-1 / -2 IEC 61557-12 PMD/Sx/K70/0.2 IEC / UL 61010-1
Applications		
Panel instrumentation		
Panel instrumentation	I, U, F, P, Q, S, PF, E, THD, Min/Max, harm, alarm, I/O (I, U unbalance, demand, clock/cal, dip/swell)	I, U, F, P, Q, S, PF, E, THD, Min/Max, harm, alarm, I/O (I, U unbalance, demand, clock/cal, dip/swell, transients, flicker, RVC, mains signalling, 1/2 cycle RMS)
Energy efficiency and cost		
Sub-billing & cost allocation	<input checked="" type="radio"/>	<input type="radio"/>
Demand & load management	<input checked="" type="radio"/>	<input type="radio"/>
Billing analysis	<input checked="" type="radio"/>	<input type="radio"/>
Power availability & reliability		
Compliance monitoring	<input type="radio"/>	<input type="radio"/>
Dip/swell, transient	Dip/swell only	<input type="radio"/>
Harmonics	<input checked="" type="radio"/>	<input type="radio"/>
Revenue metering		
Revenue meter		
Characteristics		
Measurement accuracy (active energy)	IEC 62053-22 Class 0.2S ANSI C12.20 Class 0.2	IEC62052-11 ed.2 Class 0.1S ANSI C12.20 Class 0.1
Installation	Flush & DIN 96 mm x 96 mm	Flush & DIN 160 mm x 160 mm Display 96 mm or 197 mm x 175 mm
Voltage measurement	57-400 V AC L-N 3P (100-690 V AC L-L)	57-400 V L-N AC or 100-690 V L-L AC
Current measurement	External CT	External CT and LVCT
Communication ports	3	4
Inputs / Outputs	Up to 27 DI, 9 DO Up to 16 AI, 8 AO	Up to 32 DI, 4 DO, 10 RO (relay) Up to 16 AI, 8 AO
Memory capacity	512 MB	2 GB

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Panorama of the PowerLogic™ range

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Advanced utility metering				
				
	ION7400		ION8650	
		A	B	C
Function	Energy & Advanced Power Quality Meter IEC 61557-12 IEC 62053-22 IEC 61000-4-30 Class S IEC 62586 ANSI C12.20 Class 0.2 PMD/Sx/K70/0.2	Energy & Advanced Power Quality Meter IEC 62052-11 IEC 62053-22/23 Class 0.2S IEC 61000-4-30 Class A		
Applications				
Panel instrumentation	Panel instrumentation			
	I, U, F, P, Q, S, PF, E, THD, Min/Max, harm, alarm, I/O (I, U unbalance, demand, clock/cal)	I, U, F, P, Q, S, PF, E (demand, minimum and maximum values)		
Energy efficiency and cost				
Sub-billing & cost allocation	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Demand & load management	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Billing analysis	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Power availability & reliability				
Compliance monitoring	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Dip/swell, transient	Dip/swell only	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Harmonics	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Revenue metering				
Revenue meter	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Characteristics				
Measurement accuracy (active energy)	IEC 61053-22 Class 0.2S ANSI 12.20 Class 0.2S	Class 0.2S		
Installation	Flush & DIN rail mount 96 mm x 96 mm	ANSI socket mount 9S, 35S, 36S, 39S and 76S; FT21 switchboard case		
Voltage measurement	57-400 V AC L-N 3P (100-690 V AC L-L)	57-277 V L-N AC (9S, 36S); 120-480 V L-L AC (35S)		
Current measurement	External CT	External CT		
Communication ports	3	5		
Inputs / Outputs	Up to 27 DI, 9 DO Up to 16 AI, 8 AO	Up to 22 I/O		
Memory capacity	512 MB	10 MB	4 MB	2 MB



Technical characteristics Panorama of the PowerLogic™ range

Multi-circuit metering				
				
	HDPM6000	BCPM	EM4000	EM4800
Function	3-phase power quality meter; branch-circuit accessory module hub	Branch circuit monitor IEC 61036 Class 1	Multi-circuit Energy meter Class 0.5 ANSI C12.1, C12.20 Class 0.5S IEC 62053-22	Multi-circuit Energy meter Class 0.5 ANSI C12.1, C12.20 Class 0.5S IEC 62053-22
Applications				
Panel instrumentation				
Panel instrumentation		I, U, F, P, Q, S, PF, E (Power demand and current demand)	I, U, F, P, Q, S, PF, E (Power demand and current demand)	I, U, F, P, Q, S, PF, E (Power demand and current demand)
Energy efficiency and cost				
Sub-billing & cost allocation	●	●	●	●
Demand & load management				
Billing analysis				
Power availability & reliability				
Compliance monitoring				
Sag/swell, transient				
Harmonics				
Revenue metering				
Revenue meter				
Characteristics				
Measurement accuracy		Class 1 (mains active energy)	Class 0.5S	Class 0.5S
Installation		Panel or enclosure	Panel or enclosure	Panel or enclosure
Voltage measurement		90 – 277 V L-N voltage Inputs	80 - 480 V AC L-L without PTs, Up to 999 kV with external PTs	80 - 480 V AC L-L without PTs, Up to 999 kV with external PTs
Current measurement		CT strips for branch circuits and external CTs for mains	Split- or solid-core CTs	Split- or solid-core CTs
Communication ports			2	2
Inputs / Outputs			2	2
Memory capacity				

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Panorama of the PowerLogic™ range

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	Multi-circuit metering	Retrofit products	
			
	EM4900	EM3500	EM4200
Function	Multi-circuit Energy meter Class 0.5 ANSI C12.1, C12.20 Class 0.5S IEC 62	DIN rail power & energy meter ANSI 12.20 0.2% accuracy, IEC 62053-22 Class 0.2S for EM35xx models, ANSI C12.20 0.5% accuracy, IEC 62053-22 Class 0.2S for EM35xxA models	Power & energy meter ANSI C12.20 0.2% IEC 62053-22 Class 0.2S
Applications	Panel instrumentation		
Panel instrumentation	I, U, F, P, Q, S, PF, E (Power demand and current demand)	I, U, F, P, Q, S, PF, E (Power demand and current demand)	I, U, F, P, Q, S, PF, E (Power demand and current demand)
Energy efficiency and cost	Sub-billing & cost allocation <input checked="" type="checkbox"/>		
Demand & load management	<input type="checkbox"/>		
Billing analysis	<input type="checkbox"/>		
Power availability & reliability	Compliance monitoring <input type="checkbox"/>		
Sag/swell, transient	<input type="checkbox"/>		
Harmonics	<input type="checkbox"/>		
Revenue metering	Revenue meter <input type="checkbox"/>		
Characteristics	Measurement accuracy	Class 0.5S	Class 1 (mains active energy) ANSI C12.20 Class 0.2S IEC 62053-22 Class 0.2S
Installation	Panel or enclosure	Panel or enclosure	DIN or screw, clip-on or hook
Voltage measurement	150 - 480 V AC L-L without PTs Up to 999 kV with external PTs	UL: 90 V L-N to 600 V L-L; CE: 90 V L-N to 300 V L	890 - 480 V AC L-L
Current measurement	Split- or solid-core CTs	EM35xxA models work exclusively with Rogowski coil CTs	5 A to 5000 A
Communication ports	2	1 for main	2
Inputs / Outputs	2	(see Datasheet)	
Memory capacity			

Technical characteristics Panorama of the PowerLogic™ range

	Insulation monitoring Devices	EcoStruxure™ Panel Server
	 <p>Vigilohm™ Insulation monitoring devices</p>	 <p>More information on page 186</p> <p>EcoStruxure™ Panel Server</p>
Function	Insulation monitoring for IT / Ungrounded networks	IoT gateway for intelligent power network
Features	<p>RS-485 / Ethernet gateway</p> <p>Devices supported</p> <p>Web server with standard HTML pages</p> <p>Web server with custom HTML pages</p> <p>Real time data</p> <p>Historical data</p> <p>Automatic notification</p> <p>Alarm and event logs</p> <p>Waveform display</p> <p>Custom animated graphics</p> <p>Manual/automatic reports</p>	<p>Supports IEEE 802.15.4 and Modbus devices</p> <p>Wired devices communicating through Modbus-SL, Modbus TCP/IP, or digital inputs: Circuit breakers and switch-disconnectors, Protection relays, Power meters, Energy meters, Pulse meters, IO modules, Gateways</p> <p>Wireless devices: PowerTag Energy sensors, Environmental sensors, Acti9 Active, HeatTage sensors, PowerTag Control modules, Wireless indication auxiliaries for ComPact NSX and ComPact NSXm, circuit breakers</p> <p>Available on web server embedded in Panel Server</p> <p>Available on web server embedded in Panel Server (Advanced Panel Server only)</p> <p>Available on embedded web server (Advanced Panel Server only), edge control system & cloud-hosted application</p> <p>Available on embedded web server (Advanced Panel Server only), edge control system & cloud-hosted application</p>
Characteristics	<p>Ethernet ports</p> <p>Modbus TCP/IP protocol</p> <p>RS-485 (2-wire / 4-wire) ports, Modbus protocol</p> <p>Number of devices connected directly</p> <p>RS-232 configuration ports</p> <p>Miscellaneous</p> <p>Installation</p>	<p>An IT earthing system -also called ungrounded system- allows the network to operate even in the presence of an insulation fault, without endangering people or property. Required as part of the IT network, an Insulation Monitoring Device (IMD) detects the insulation fault and locates it so it can be repaired.</p> <p>Two Ethernet 10Base-T/100Base-T port</p> <p>Wi-Fi</p> <p>Bluetooth communication for commissioning</p> <p>Modbus RS485 serial communication</p> <p>IEEE 802.15.4 wireless communication</p> <p>Modbus TCP/IP server and client</p> <p>Support of HTTPS, NTP, SNTP, DHCP client and server with proxy management</p> <p>Modbus RS485 to Modbus/TCP Gateway</p> <p>Wireless devices concentrator to Modbus/TCP</p> <p>Two digital inputs (24 V DC version only) Commissioning through EcoStruxure™ Power Commission or through Embedded Web-Pages</p>



Learn more about PowerLogic™ range here



Scan or click on QR code

Offer

Catalogue

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



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IoT for an intelligent power network

The EcoStruxure™ Panel Server is the next generation of gateway, providing a seamless connection of wired or unwired smart IoT devices to your edge control software or advisor. It is a foundational enabler for Schneider Electric EcoStruxure™ solutions.



[SEE THE VIDEO](#)

EcoStruxure Panel Server gives you access to the information you need to protect, maximize and optimize your power system.

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Help keep people and assets safer



Optimize energy efficiency



Maximize power availability



Improve cybersecurity



Electrical safety

- Panel Server is an integral part of Schneider Electric's continuous thermal monitoring application, helping reduce risk of electrical fires, increase people and assets protection. Implement the thermal monitoring of your electrical panel by connecting thermal and heat sensors to your Panel Server.



Power availability

- Electrical distribution monitoring and power event analysis help avoid unplanned downtime caused by electrical failure. Panel server collects real-time data and alarms, presenting information through embedded webpages, making it available to edge control software or advisor for electrical system diagnostics. Use embedded webpages for first-level monitoring or monitor from your edge control.



Optimize energy efficiency

- Improve your facility's energy efficiency and reduce energy consumption with energy usage analysis and performance tracking. Panel Server collects and shares energy data to help achieve your energy conservation initiatives. It is certified as part of an energy data management system according to ISO 50001, 50002, 50006.



Cybersecurity

- Guarding your electrical assets and systems against cyber attacks is vital. Panel server is an IEC 62443 compliant device and is central to the IEC 62443-3-3 SL1 certified EcoStruxure™ Power system. Use Cybersecurity Admin Expert to manage user accounts, define your cybersecurity policy and retrieve security logs.



Benefits

All-in-one gateway

- Separates your OT network from your IT network
- Wireless data concentrator
- Modbus RS485 to Modbus TCP
- Supports multiple Ethernet connections for serving information to edge control software and cloud applications

Simple commissioning

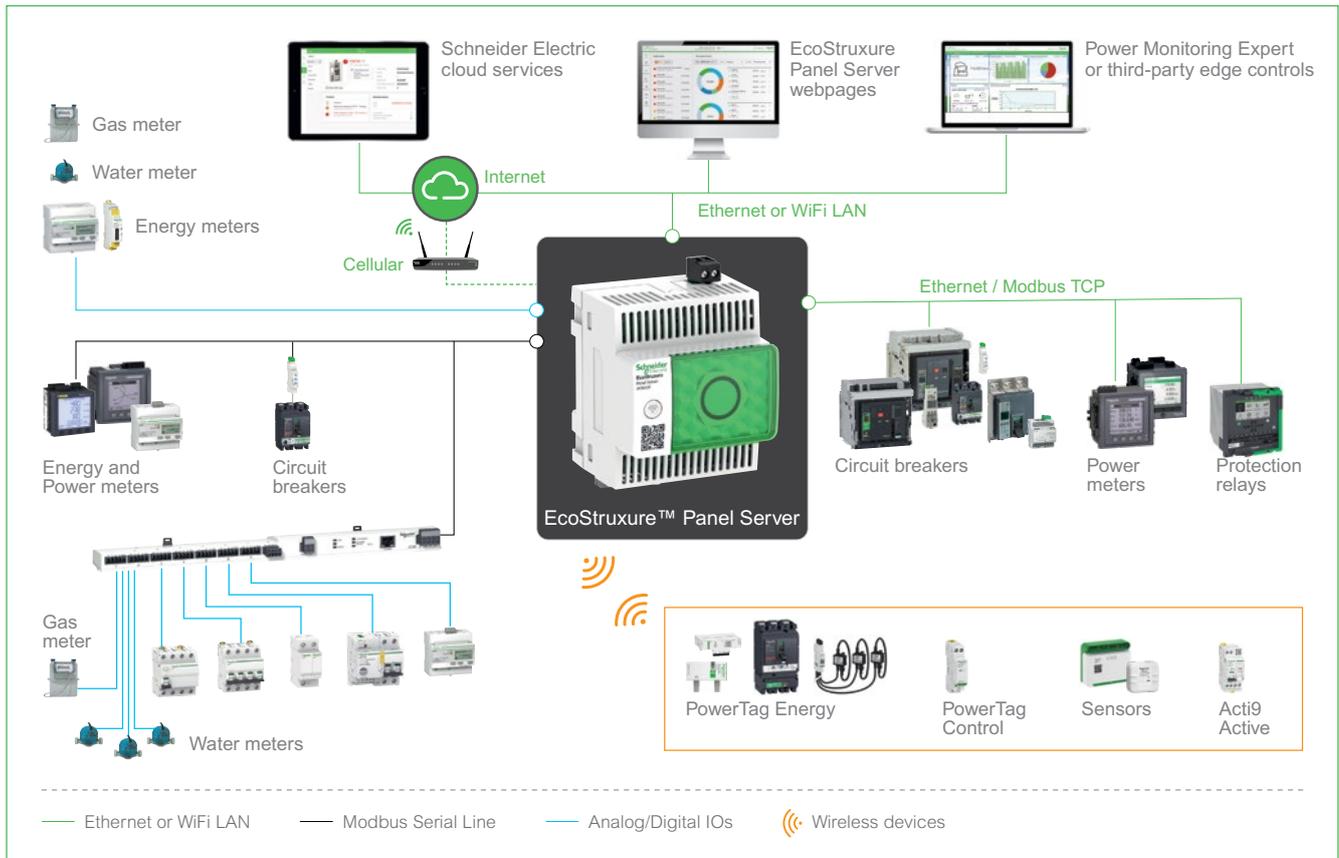
- EcoStruxure™ Power Commission software
- Device auto discovery
- Generation of acceptance reports to validate gateway configuration
- Commission via Bluetooth® or WiFi

Intuitive operation

- User-friendly webpages offer first-level monitoring
- Contextualized data and operational insights
- Simple alarm setup for email notification
- Standardized IEC 62974-1 compliant datalogger and energy server



EcoStruxure™ Panel Server



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Technical characteristics

EcoStruxure™ Panel Server

Entry



Standards & certifications

- IEC 61010-1 Ed.2010.
- UL 61010-1 Ed.2012.
- IEC 61974.
- IEC 62443.



Functions

- Optimized gateway to retrieve data your wireless devices.
- Connect to your monitoring and control software such as EcoStruxure™ Power Monitoring Expert, EcoStruxure™ Power Operation or to your Building Management System.
- Connect to Schneider cloud applications such as Facility Expert or Asset Advisor.
- Ease of commissioning with EcoStruxure™ Power Commission software, enabling device plug-and-play and auto-discovery features.
- Ease of operation with user friendly embedded webpages, and data contextualization for more relevant analytics.

Main features

- Power Supply 110...277 V AC/DC.
- Designed to match with electrical switchboard environment (temperature, humidity electromagnetic compatibility).
- One Ethernet 10Base-T/100Base-T port.
- Wi-Fi.
- Bluetooth communication for commissioning.
- IEEE 802.15.4 wireless communication.
- Modbus TCP/IP server.
- Support of HTTPS, NTP, SNTP, DHCP client with proxy management.
- Wireless devices concentrator to Modbus/TCP.
- Designed through a Secured Development Life Cycle in accordance To IEC 62443-4-1.
- Commissioning through EcoStruxure™ Power Commission or through Embedded Web-Pages.
- Speed-up commissioning through device list import and configuration export to the monitoring software.
- Fully integrated in Cybersecurity Admin Expert tool to facilitate the management of cybersecurity in your electrical network's (User Management with Role Base Access and other security features such as enabling/disabling communication means).
- Embedded web server for real-time measurement visualization, power consumption by usage.
- Customizable alarm with alarm log.
- Alarms can be viewed in the web-pages and notified by e-mail.

Commercial Reference	Description
PAS400	Panel Server Entry 110..277 V AC/DC



Technical characteristics

EcoStruxure™ Panel Server Universal



Standards & certifications

- IEC 61010-1 Ed.2010.
- UL 61010-1 Ed.2012.
- IEC 61974.
- IEC 62443.

CE

cULus
LISTED

EAC

Functions

- An all-in-one gateway to retrieve data from both your IEEE 802.15.4 And Modbus devices.
- Connect to your monitoring and control software such as EcoStruxure™ Power Monitoring Expert, EcoStruxure™ Power Operation or to your Building Management System.
- Connect to Schneider cloud applications such as Facility Expert or Asset Advisor.
- Ease of commissioning with EcoStruxure™ Power Commission software, enabling device plug-and-play and auto-discovery features.
- Ease of operation with user friendly embedded webpages, and data contextualization for more relevant analytics.

Main features

- Power Supply 24 V DC, 110..240 V AC/DC, 110...277 V AC/DC.
- Designed to match demanding electrical switchboard environment (temperature, humidity electromagnetic compatibility).
- Two Ethernet 10Base-T/100Base-T port (supporting switched or separated network topology).
- Wi-Fi.
- Bluetooth communication for commissioning.
- Modbus RS485 serial communication.
- IEEE 802.15.4 wireless communication.
- Modbus TCP/IP server and client.
- Support of HTTPS, NTP, SNTP, DHCP client and server with proxy management.
- Modbus RS485 to Modbus/TCP Gateway.
- Wireless devices concentrator to Modbus/TCP.
- Two digital inputs (24VDC version only) for contact information or WAGES pulse meter.
- Designed through a Secured Development Life Cycle in accordance To IEC 62443-4-1.
- Commissioning through EcoStruxure™ Power Commission or through Embedded Web-Pages.
- Speed-up commissioning through device list import and configuration export to the monitoring software.
- Fully integrated in Cybersecurity Admin Expert tool to facilitate the management of cybersecurity in your electrical network's (User Management with Role Base Access and other security features such as enabling/disabling communication means).
- Embedded web server for real-time measurement visualization, power consumption by usage.
- Customizable alarm with alarm log.
- Alarms can be viewed in the web-pages and notified by e-mail.

Compatible accessories

- Wi-Fi/Bluetooth external antenna (PASA-ANT1).

Commercial References	Description
PAS600L	Panel Server Universal with 24 V DC power supply
PAS600T	Panel Server Universal with 100-240 V AC/DC power supply
PAS600	Panel Server Universal with 100-277 V AC/DC power supply



Technical characteristics

EcoStruxure™ Panel Server

Advanced



Standards & certifications

- IEC 61010-1 Ed.2010.
- UL 61010-1 Ed.2012.
- IEC 61974.
- IEC 62443.



Functions

- An all-in-one gateway to retrieve data from both your wireless IEEE 802.15.4 devices and Modbus devices.
- Connect to your monitoring and control software such as EcoStruxure Power Monitoring Expert, EcoStruxure Power Operation or to your Building Management System.
- Connect to Schneider cloud applications such as Facility Expert or Asset Advisor.
- Ease of commissioning with EcoStruxure Power Commission software, enabling device plug-and-play and auto-discovery features.
- Ease of operation with user friendly embedded webpages, and data contextualization for more relevant analytics.

Main features

- Power Supply 24 V DC, 110...277 V AC/DC, PoE-PD (CLASS 0, IEEE802.3af/at).
- Designed to match demanding electrical switchboard environment (temperature, humidity electromagnetic compatibility).
- Two Ethernet 10Base-T/100Base-T port (supporting switched or separated network topology).
- Wi-Fi.
- Bluetooth communication for commissioning.
- Modbus RS485 serial communication.
- IEEE 802.15.4 wireless communication.
- Modbus TCP/IP server and client.
- Support of HTTPS, NTP, SNTP, DHCP client and server with proxy management.
- Modbus RS485 to Modbus/TCP Gateway.
- Wireless devices concentrator to Modbus/TCP.
- Two digital inputs (24 V DC version only) for contact information or WAGES Pulse meter.
- Designed through a Secured Development Life Cycle in accordance to IEC 62443-4-1.
- Commissioning through EcoStruxure™ Power Commission or through Embedded Web-Pages.
- Speed-up commissioning through device list import and configuration export to the monitoring software.
- Fully integrated in Cybersecurity Admin Expert tool for security settings (Role Base Access and other security features such as enabling/disabling communication means).
- Embedded web server for real-time measurement and alarm visualization, energy & power consumption by usage and location, 3 years historical trending and dashboarding.
- 3 years Data Logger with 32 GB memory.
- Customizable alarm with alarm log.
- Alarms can be viewed in the web-pages and notified by e-mail.

Compatible accessories

- Wi-Fi/Bluetooth external antenna (PASA-ANT1).
- IEEE 802.15.4 external antenna (PASA-ANT1).

Commercial References	Description
PAS800L	Panel Server Advanced with 24 V DC power supply
PAS800P	Panel Server Advanced with PoE power supply
PAS800	Panel Server Advanced with 100-277 V AC/DC power supply



Technical specifications

EcoStruxure™ Panel Server

A

EcoStruxure Panel Server Entry



The screenshot shows a detailed technical specification table for the EcoStruxure Panel Server Entry. It includes various columns for product details, performance metrics, and compliance information. The table is organized into sections, with a 'Features' section at the top and a 'Specifications' section below. The Schneider Electric logo is visible at the bottom of the page.

[CLICK HERE TO SEE THE TECHNICAL DATA](#)

B

EcoStruxure Panel Server Universal



The screenshot shows a detailed technical specification table for the EcoStruxure Panel Server Universal. It includes various columns for product details, performance metrics, and compliance information. The table is organized into sections, with a 'Features' section at the top and a 'Specifications' section below. The Schneider Electric logo is visible at the bottom of the page.

[CLICK HERE TO SEE THE TECHNICAL DATA](#)

D

E

EcoStruxure Panel Server Advanced



The screenshot shows a detailed technical specification table for the EcoStruxure Panel Server Advanced. It includes various columns for product details, performance metrics, and compliance information. The table is organized into sections, with a 'Features' section at the top and a 'Specifications' section below. The Schneider Electric logo is visible at the bottom of the page.

[CLICK HERE TO SEE THE TECHNICAL DATA](#)

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Learn more about
EcoStruxure
Panel Server
range here



Scan or
click on
QR code

Offer

If you need more details about product references and availability, please check your local Schneider Electric contact
<https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



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PowerLogic™ HeatTag

A

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Wireless Sensor for early detection of overheating cables

The PowerLogic™ HeatTag sensor analyzes gas and airborne particles helping facility manager to anticipate and act before smoke appears or an electrical fire starts.

Electrical fires generate huge losses in commercial and industrial buildings, interrupting production and delaying service delivery. These losses can be prevented if early detection of component overheating is accurately detected and alarmed.

PowerLogic™ HeatTag helps prevent electrical cabinets from being damaged by analyzing airborne gas and particles and sending alerts before smoke appears or an electrical fire starts. HeatTag is much more than a fire or smoke detector - it scientifically detects overheating in electrical installations before any damage is done.



[SEE THE VIDEO](#)

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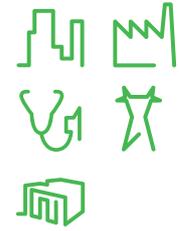
I



The solution for

Markets that can benefit from a solution that includes PowerLogic™ HeatTag smart sensors:

- Buildings
- Industry
- Healthcare
- Data Center and networks
- Infrastructure.



Power management solutions

• Schneider Electric provides innovative power management solutions to increase your energy efficiency and cost savings, maximize electrical network reliability and availability, and optimize electrical asset performance.



Competitive advantages

- Easy to install and operate
- Suitable for non forced ventilated cabinets ≥ IP30
- Immediately detects overheating in cables and connections
- More than a smoke detector or heat sensor
- 3 levels of alert recording
- Monitors air quality index
- Continuous improvements of algorithms.



Conformity of standards

- IEC/UL 61010-1
- IEC 61010-2-201
- IEC 61326-1
- IEC61326-2-3
- ETSI EN 301 489-1
- ETSI EN 301 489-17
- ETSI EN 300 328
- EN 62311
- EN IEC 63000
- IEEE 802.15.4 protocol
- FCC and IC certified.



Benefits

System integrators' benefit

- Ease of integration
- Ease of setup
- Cost effectiveness
- Seamless integration with EcoStruxure™ solutions

Panel builders' benefit

- No settings
- Nominal environment auto-learning to avoid false alerts
- Concentrator auto-discovery
- Alerts generated by a powerful algorithm integrated in HeatTag

End users' benefit

- Ease of use
- Prevents fire damage and associated costs
- Comprehensive, consistent and superior performance
- Maximize uptime, eliminate faults, and enhance safety



PowerLogic™ HeatTag

HeatTag sensors

A



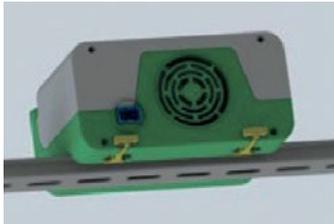
PowerLogic™ HeatTag sensor

B



HeatTag sensor DIN mounted

C



HeatTag rear view showing fan

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Sensor Characteristics

Temperature measurement	Measurement range	-15°C / +70°C (5°F to 158°F)
	Measurement accuracy	-1.1°C / +1.1°C
	Default transmission period	60 seconds (higher in case of high wireless data traffic)
Humidity measurement	Measurement range	15 - 90%
	Measurement accuracy	±9 RH %
	Default transmission period	60 seconds (higher in case of high wireless data traffic)
Air quality		Index (0 to 10), alert generation when index ≥10
Test alert after pairing		During first 30 minutes
Environment auto-learning phase		8 hours after the first 30 minutes

Mechanical Characteristics

Dimensions (W x H x D)	108 x 107 x 55 mm
Weight	270 g
Degree of protection (IEC 60529)	IP20

Electrical Characteristics

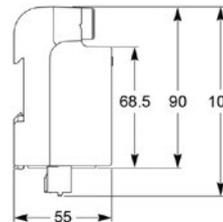
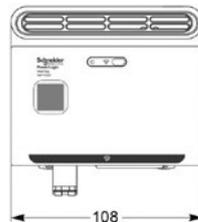
Supply voltage	110 - 277 V AC, -15% / +15%
Frequency	50 - 60 Hz
Max. consumption	0.1 A
Operating temperature	-15°C / +70°C (5°F to 158°F)
Storage temperature	-20°C / +85°C (-4°F to 185°F)
Relative humidity in operation	15 - 90%
Altitude of use	0 - 2000 m (0 - 6500 ft)
Degree of pollution (IEC 60664-1)	3
Overvoltage category	OVC III

Commercial Reference Number

PowerLogic™ HeatTag Sensor	SMT10020
----------------------------	-----------------



Q1
110-277 V~
2 A
C Curve or Fast-acting fuse
L N



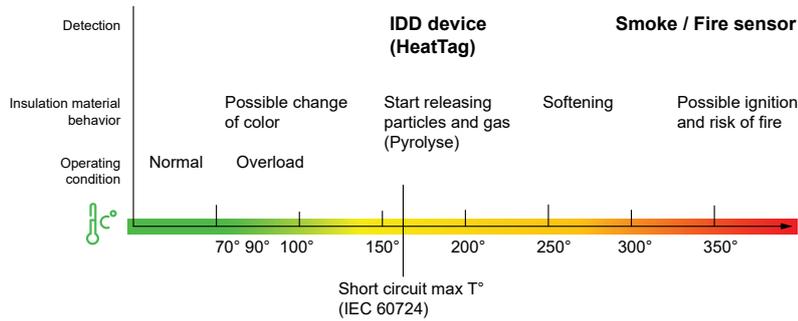
HeatTag sensor dimensions.
See the appropriate Installation Guide.



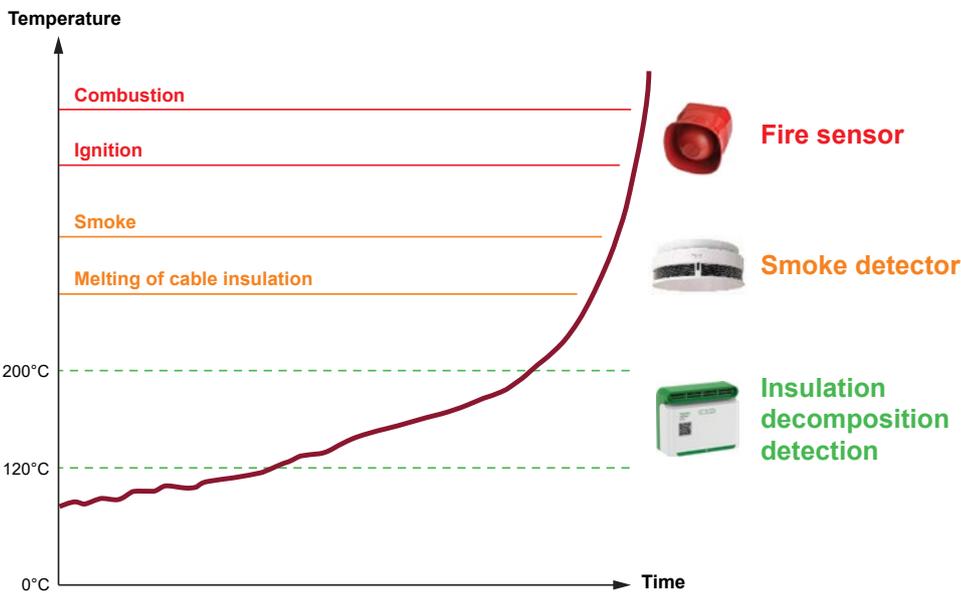
Functions and characteristics

PowerLogic™ HeatTag

HeatTag sensors



PVC insulation material behavior with increasing temperature



Comparison of HeatTag, smoke and fire sensors

NOTE

Do not use HeatTag as a safety device or to replace fire protection devices. Please see the appropriate User Guide for this product.

Learn more about PowerLogic™ HeatTag range here

Offer

White paper

Scan or click on QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



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Multifunction energy and power meters

F

The easy choice...

- for quality - Designed and manufactured in ISO-certified Schneider Electric facilities.
- for value - The right balance of features and price.
- for peace of mind - Reliable performance where you need it.

Leaner, more efficient order management thanks to field settable CT or PT ratios, modularity Fast and efficient installation & commissioning. Safety marks for CE and UL compliance in accordance with latest IEC/UL 61010-1 Ed-3 standard.

H

Performance without compromise - exceptional reliability in its class

- > Assured quality that you can trust to meet your needs throughout its lifecycle.
- > Outstanding value for an optimized feature set.
- > Simple to choose and easy to install and use for many applications.

I



Digital Panel Meters



Family	DM1000			DM3000		DM6000H	
Parameters	DM1110	DM1210	DM1310	DM3110	DM3210	DM6000H	DM6000H
Amps: per phase & 3-ph avg	1-ph			3-ph (per ph)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Volts: per phase & 3-ph avg		1-ph			3-ph (per ph)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Frequency			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Power Factor per phase & 3-ph avg						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CT Secondary I nominal	5 A or 1 A			5 A or 1 A		5 A or 1 A	5 A or 1 A
Class of Accuracy	0.5	0.5	0.2	0.5	0.5	1	1
RS-485 Modbus RTU							<input checked="" type="checkbox"/>
Form Factor in mm (LengthxWidthxDepth)	96x96x44	96x96x44	96x96x44	96x96x44	96x96x44	96x96x49	96x96x49
Mounting	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel

Simple energy cost management

Data aggregation							<input checked="" type="checkbox"/>
Load profile							<input checked="" type="checkbox"/>
Bill verification							
Cost allocation							

Basic network management

Panel instrumentation	<input checked="" type="checkbox"/>						
Power metering							
Basic harmonic monitoring							
Status monitoring							
Threshold alarming							

Monitoring and verification

Test bench	<input checked="" type="checkbox"/>						
Genset	<input checked="" type="checkbox"/>						
PF Improvement panel						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Labs	<input checked="" type="checkbox"/>						
OEMs	<input checked="" type="checkbox"/>						
Commercial reference numbers	METSEDM1110	METSEDM1210	METSEDM1310	METSEDM3110	METSEDM3210	METSEDM6000HCL10NC	METSEDM6200 HCCL10RS (LED) METSEDM6220HCL1 (LCD)

EasyLogic Power Metering

Power & Energy Meters



Family	PM1120H/ EM1250H	PM1130H	PM2100 LED	PM2200 LCD	PM2200R
Parameters					
Amps: per phase & 3-ph avg	✓	✓	✓	✓	✓
Volts: per phase & 3-ph avg	✓	✓	✓	✓	✓
Frequency	✓	✓	✓	✓	✓
Power Factor per phase & 3-ph avg	✓	✓	✓	✓	✓
W, Wh	✓ ^[1]	✓	✓	✓	✓
VAR, VARh	✓ ^[1]	✓	✓	✓	✓
VA, VAh	✓ ^[1]	✓	✓	✓	✓
DI/DO (optional)			2 (PM2130)	2 (PM2230)	2 (PM2230R)
Class of Accuracy ^[2]	1.0 active (0.5 optional)	1.0 active (0.5 optional)	1.0 active (0.5S PM2x30) 1.0 reactive	1.0 active (0.5S PM2x30) 1.0 reactive	1.0 active (0.5S PM2x30R) 1.0 reactive
Analog IO A (optional)			2 (PM2130)	2 (PM2230)	2 (PM2230R)
RS-485 Modbus RTU	✓	✓	✓	✓	✓
CT Secondary I nominal	5 A or 1 A	5 A or 1 A	5 A or 1 A	5 A or 1 A	LVCT
Form Factor in mm	96x96x49	96x96x52	96x96x54	96X96X54	96X96X54
With IO module			96X96X72	96X96X72	96X96X72
Mounting	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel

Simple energy cost management

Data aggregation	✓	✓	✓	✓	✓
Load profile			✓	✓	✓
Bill verification	✓	✓	✓	✓	✓
Cost allocation	✓	✓	✓	✓	✓

Basic network management

Panel instrumentation	✓	✓	✓	✓	✓
Power metering	✓	✓	✓	✓	✓
Basic harmonic monitoring	✓	✓	✓	✓	✓
Status monitoring			✓	✓	✓
Threshold alarming		✓	✓	✓	✓

Monitoring and verification

Test bench	✓	✓	✓	✓	✓
Genset	✓	✓	✓	✓	✓
PF Improvement panel	✓	✓	✓	✓	✓
Labs	✓	✓	✓	✓	✓
OEMs	✓	✓	✓	✓	✓

Commercial reference numbers (Link to product information)	METSEPM1120HCL10RS METSEPM1125HCL10RS METSEPM1225HCL10RS METSEPM1125HCL1LVD METSEPM1225HCL1LVD METSEEM1250HCL1	METSEPM1130HCL05RS METSEPM1230HCL1 METSEPM1230HCL5LVD	METSEPM2110 METSEPM2120 METSEPM2130	METSEPM2210 METSEPM2220 METSEPM2230	METSEPM2210R METSEPM2220R METSEPM2230RCL05
---------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------	-------------------------------------------	-------------------------------------------	--------------------------------------------------

[1] Refer data sheet for operating range

✓ One power vector at a time (W/Wh or VA/VAh or VAR/ VARh in PM1120H and Three power vector in PM1125H/ PM1225H)

[1] Three power three energy

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EasyLogic™ DM1000/3000 series

DM1000 series: 1-Ph V A F panel meters

DM3000 series: 3-Ph V A panel meters

The universal, user-programmable DM1000 and DM3000 series panel meters for AC circuits are ideal replacements for analog meters. These five compact, flexible and customizable models will meet all your panel metering requirements.



DM1000 series digital panel meter

Basic VAF panel meters - main features

- 4 digit, 15 mm height, 7 segment LED display
- 1-ph & 3-ph Volt or Amps panel meters
- Accuracy of 0.5% on full scale for Volt & Ammeter, 0.2% for Hz meter
- Inbuilt selector switch in 3-ph meter model
- Single key for programming, navigation or as selector switch.

EasyLogic™ DM6xx0H series

DM6000H & DM6200H VAF PF digital panel meters in LED display

DM6220H VAF PF digital panel meters in LCD display

Introducing EasyLogic™ DM6xx0H meters that are ideal replacements for multiple analog meters for stand-alone metering in custom panels, switch boards, switch-gear, genset panels, motor control centres, power factor improvement panels, and OEM panel board.

DM6xx0H series meters offer large 8-segment alpha-numeric LED display type, intuitive navigation with self-guided 4 buttons, bright LED's of 14.2 mm height with 12 LEDs for indicating percentage of load in the circuit.

DM6220H meter displays measured parameters and values in elegant single row, bright back lit graphical LCD display in 128 x 32 pixels size.



Applications

- Cost management
 - Electrical installation remote monitoring
 - Control panels
 - Motor control centres
 - Power distribution boards
 - Original equipment manufacturers (OEM's)
 - Building management system
 - Panel instrumentation
 - Energy management system.

Network management

- Measurement of Power factor
- % unbalance for voltage and current
- Phase angle between the respective voltage and current phase
- Modbus RTU protocol, RS-485 communication port for integration with energy management systems (DM6200H & DM6220H).

Functions and characteristics

EasyLogic Power Metering

EasyLogic™ EM1250H

EM1250H energy meters in LCD display

The EasyLogic™ EM1250H energy meter offers all the basic energy measurement capabilities required to monitor an electrical installation in a single 96 x 96 mm unit.

Characterized by their rugged construction, compact size, and low installation costs, these state-of-the-art meters are ideal for control panels, motor control centres, and genset panels.



EasyLogic™ meters are ideal replacements for multiple analog meters for stand-alone metering in custom panels, switch boards, switch-gear, genset panels, motor control centres, power factor improvement panels and OEM panel board.

Application

- Cost management applications
 - Measurement of basic electrical parameters in control panels, motor control panels, power distribution boards, OEM's, Building management systems, panel instrumentation
 - Aggregation of energy consumption and cost allocation per area, per usage, per shift and per time within the same facility.
- Network management applications
 - Measurement of Power factor
 - Modbus RTU protocol RS-485 communication port for integration with energy management system.

EasyLogic™ PM1000H series

The EasyLogic™ PM1000H basic power and energy meters with the option of LCD or LED Display

Offering all the measurement capabilities required to monitor the electrical installation in a single 96 x 96 mm unit, with 8 segment alphanumeric bright, large 14.2 mm high LED display (PM1125H) or with 128 x 32 pixels LCD display (PM1225H) options.



EasyLogic™ PM1125H/PM1225H meters are ideal replacements for multiple analog meters for stand-alone metering in custom panels, switch boards, switch-gear, genset panels, motor control centres, power factor improvement panels and OEM panel board.

Application

- Cost management applications
 - Measurement of basic electrical parameters in control panels, motor control panels, power distribution boards, OEM's, Building management systems, panel instrumentation
 - Aggregation of energy consumption and cost allocation per area, per usage, per shift and per time within the same facility.
- Network management applications
 - Power quality analysis (THD %)
 - Demand measurement
 - Measurement of Power factor
 - Phase angle between the voltage and current
 - % unbalance among voltage and current
 - Modbus RTU protocol RS-485 communication port for integration with energy management system.

The EasyLogic™ PM1130H/ PM1230H dual/ alternate source power and energy meters

Two energy registers (Utility vs Genset, Utility vs Solar, Utility vs Wind, or a combination of any two power sources) separately records consumption for dual source energy accounting. Ideal for any installation which requires split energy monitoring for two conditions, e.g., running and Idle. Form A relay to control the load in the event of abnormality in the electrical circuit including excess consumption of power. The meters can be used for secondary billing application in large commercial complexes or buildings as tenant meters in custom panels, switch boards, switchgear, genset panels, non-renewable energy panel and OEM panel board.

Offering all the measurement capabilities required to monitor the electrical installation in a single 96 x 96 mm unit, PM1130H with 8 segment alpha-numeric bright, large 14.2 mm high LED display.

PM1230H meter displays measured parameters and values in elegant single row, bright back lit graphical LCD display in 128 x 32 pixels size.



Application

- Cost management applications
 - Measure basic electrical parameters in control panels, power distribution boards, OEM's, and Building management systems
 - Aggregate energy consumption and cost allocation based on consumption from Utility vs Genset, or between any two power sources, per area, per shift and per time within the same facility.
- Network management applications
 - Power quality analysis (THD %)
 - Demand measurement
 - Measurement of Power factor
 - Phase angle between the voltage and current
 - % unbalance among voltage and current
 - Modbus RTU protocol RS-485 port for integration with energy management system.

Functions and characteristics

EasyLogic Power Metering

EasyLogic™ PM2000 series

The EasyLogic™ PM2000 multi-function power and energy meter

Offering all the measurement capabilities required to monitor and electrical installation in a single 96 x 96 mm unit, with LED or LCD display options.

Application

Cost management applications

- Bill checking to verify that you are only charged for the energy you use
- Aggregation of energy consumption, including WAGES, and cost allocation per area, per usage, per shift or per time within the same facility
- Energy cost and usage analysis per zone, per usage or per time period to optimise energy usage.

Network management applications

- Metering of electrical parameters to better understand the behaviour of your electrical distribution system
- Power quality analysis.



LCD display

LED display

Introducing EasyLogic PM2000 series, next generation power meter which offers all the measurement capabilities required to monitor an electrical installation in a single 96 x 96 mm unit. PM2000 meters are available in LED and LCD display variants.

PM2100 series

- LED display type: Intuitive navigation with self-guided, three buttons, bright red colour LEDs of 14.2 mm height. Two columns of LEDs indicate the parameter name chosen for display.

PM2200 series

- LCD display type: Monochrome graphical LCD of 128 x 128 pixels lets users read all three phase values simultaneously. The bright display enables easy reading even in extreme lighting conditions and viewing angles, with intuitive menus, multi-language text, icons and graphics.

Network management

- Power Quality analysis: THD % and individual harmonics to 15th or 31st order
- Measurement of True PF and Displacement PF
- Recording Min/Max values of instantaneous parameters with date and timestamp
- Optional IO modules comprising either 2 Digital Inputs and 2 Outputs, or 2 Analog Inputs and 2 Outputs, or 2 Digital Inputs and 2 Relay Outputs for comprehensive WAGES monitoring
- Calculates % unbalance for voltage & current
- Embedded 2 D/I and 2 R/O or 2 A/I and 2 A/O in PM2125 and PM2225 meters.

EasyLogic™ PM2200R Quick Click series

The EasyLogic™ PM2200R multi-function power and energy meter with Quick Click CTs

Offering the same extensive measurement capabilities of the PM2200 meters - now with the option to significantly reduce installation time, cost, and complexity with new plug & play, 3-in-1 Quick Click CTs.

Application

Cost management applications

- Bill checking to verify that you are only charged for the energy you use
- Aggregation of energy consumption and cost allocation per area, per usage, per shift or per time within the same facility
- Energy cost analysis per zone, per usage or per time period to optimise energy consumption.

Network management applications

- Metering of electrical parameters to better understand the behaviour of your electrical distribution system
- Power quality analysis.



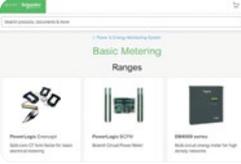
Introducing the new Quick Click enabled Easylogic PM2200R series, next generation power meter which offers all of the measurement capabilities of the PM2200 series with the added benefit of plug & play CT installation. For installers - time, labour, and rework savings of over 75% compared to traditionally wired meters with conventional CTs.

Applications

- Cost management:
 - Electrical installation remote monitoring
 - Energy accounting and balancing
 - Tenant and sub-billing
 - Panel instrumentation
 - Energy management.

Network management

- Power quality analysis: THD % and individual harmonics up to the 15th order (PM2200R)
- Measurement of True PF and Displacement PF
- Recording Min/Max values of instantaneous parameters with date & timestamp
- Calculates % unbalance for voltage & current.



Learn more about EasyLogic Power Metering range here



Offer



Catalogue

Scan or click on QR code



If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



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EasyLogic PFC: The new generation LV power factor correction capacitors

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What is power factor correction?

In electrical networks, reactive power and harmonics result in increased line currents for a given active power transmitted to loads. The principle of power factor correction is to reduce the apparent Power S (kVA for a given active Power P (kW).

Preliminary steps proposed to customers include power quality audits and the installation of power monitoring systems. This will provide comprehensive knowledge of the electrical installation characteristics in terms of power factor and harmonic distortion. Compensation of reactive power/energy or harmonic mitigation will be selected accordingly.

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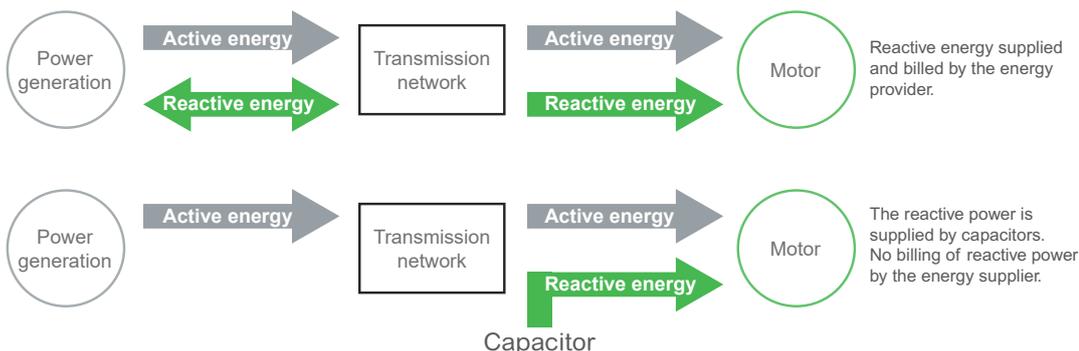
Compensation of reactive power/energy

An electricity bill generally includes components relating to active and reactive power (or energy) that has been absorbed over time.

Compensation of reactive energy is typically achieved by producing reactive energy close to the consuming loads through capacitor banks connected to the network. As a result, the energy supplier provides active energy only.

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5 Easy Steps for Energy Efficiency



30%

weight and size
reduction

100 k

lifetime hours

30%

more continuous current-
carrying capacity

Easy installation

EasyLogic PFC Capacitor's optimised design reduces product size and weight by 30%, compared to the same rating of capacitor unit of the same class available in market. Its compact size helps to save panel space while its lower weight improves user experience during installation.

The EasyLogic PFC Capacitor capacitor's ergonomically designed Clamptite terminals also make handling simple and effortless. Its unique termination system is designed to maintain tightness and reduce the risk of loose connections.

Easy reliability & safety usage

EasyLogic PFC Capacitor capacitor offers exceptional reliability, extended life and high over-current capacity for handling slightly harmonic polluted networks. It gives a fail-safe performance and user confidence. EasyLogic PFC Capacitor has a three-phase design with a peripheral Pressure Sensitive Disconnection (PSD) mechanism. Schneider Electric has implemented a very stringent quality checking procedure to ensure consistency and reliability of the PSD mechanism. This independent mechanical component helps to disconnect the electricity supply automatically and has a guaranteed safe disconnection when the capacitor reaches the end of its life.

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EasyLogic PFC Capacitors

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5 Easy Steps for Energy Efficiency

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100%

commitment to testing ISO 9001, ISO 14000 and ISO 50001 quality certified manufacturing

30%

energy wastage reduction

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Easy quality assurance

EasyLogic PFC Capacitor is manufactured in a state-of-the-art factory with advanced testing equipment to maintain product quality. All products are being fully tested before being sold, with seven testing stages for components and a two-stage final test, including component and film inspection, element and CD testing. EasyLogic PFC Capacitor capacitors meet the highest standards to satisfy worldwide requirements.

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Easy saving

EasyLogic PFC Capacitor power correction capacitors can help to reduce up to 30% energy wastage. This consequently saves money and increases the available power in the network. The use of EasyLogic PFC Capacitor capacitors means electricity bill penalties are avoided and you can save more while spending less. Capacitor usage can reduce 1,000 kg of carbon footprint in a year, making it another easy way to protect the environment.

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The compact size of EasyLogic PFC Capacitor capacitors (30% smaller than other similar models) helps to save up to 20% power panel space and maximises the utility of power usage for each area.

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5 Easy Steps for Energy Efficiency

> Easy choice of components to optimise your solution.



PowerLogic PFC Detuned Reactors

Schneider Electric's range of VarPlus Reactors should be associated with capacitor banks for Power Factor Correction in systems with significant non-linear loads, generating harmonics.

Capacitors and reactors are configured in a series resonant circuit, tuned so that the series resonant frequency is below the lowest harmonic frequency present in the system.

Capacitor Duty Contactors

Special contactors LC1 D•K are designed for switching three-phase, single- or multiple-step capacitor banks. They comply with IEC 60070 and 60831, NFC 54-100, VDE 0560, UL and CSA standards.

PowerLogic PFC Controller

The Varlogic controllers permanently monitor the reactive power of the installation, and control the connection and disconnection of capacitor steps in order to obtain the targeted power factor.

EasyPact MCCB

The **EasyPact** MCCBs acts as a overload and short circuit protector for individual capacitor bank, preventing disconnection of the bank in the event of overload due to harmonics or other fluctuations.

Use of MCCBs are highly recommended for every capacitor steps.

This harmonic rated range of capacitors (480 V & 525 V) is dedicated to applications where a high number of non-linear loads are present.

These capacitors are designed for use with detuned reactors to deliver a perfect balance between performance and cost.



EasyLogic PFC Capacitors

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Specifications	
Construction	Extruded aluminium can
Voltage range	230 V - 525 V
Power range (Three Phase)	1 - 30 kvar
Peak inrush current	Up to $200 \times I_n$
Over voltage	$1.1 \times U_n$ As per IEC 60831- ½
Over current	$1.5 \times I_n$
Mean life expectancy	Up to 100,000 h
Discharge device	50 V / 1 min
Dielectric	Special profile Al/Zn Metalised Poly Propylene film
Impregnation	Non-PCB Biodegradable soft resin
Ambient temperature	-25°C to max 55°C
Protection	IP20 (Fast on and clamptype)
Mounting	1- point mounting, upright
Terminals	<ul style="list-style-type: none"> ■ Double fast-on + cable < 10 kvar ■ CLAMPTITE ≥10 kvar to 30 kvar ■ STUD TYPE for more than 30 kvar

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Green innovation
RoHS and REACH
compliant





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Technical characteristics

EasyLogic™ PFC SD Can

Single Phase & Three Phase

An easy choice for savings which is optimized to deliver the performance you need. Suitable for standard operating conditions to deliver safe and reliable performance.



EasyLogic™ three phase



EasyLogic™ single phase

Operating conditions

- For networks with insignificant non-linear loads: ($N_{LL} \leq 10\%$).
- Standard voltage disturbances.
- Standard operating temperature up to 55°C.
- Normal switching frequency up to 5 000/year.
- Maximum current (including harmonics) is $1.5 \times I_N$.

Technology

Constructed internally with single-phase capacitor elements assembled in an optimized design. Each capacitor element is manufactured with metallized polypropylene film.

The active capacitor elements are covered in a specially formulated biodegradable, non-PCB, polyurethane soft resin. This ensures thermal stability and heat removal from inside the capacitor.

The unique finger-proof CLAMPTITE termination is fully integrated with discharge resistors. It allows suitable access to tightening and cable termination without any loose connections.

For Lower ratings, double fast-on terminals with integrated cables are provided for easy and faster connection, reducing the risk of terminal overheating and failure.

Safety

- Self-healing.
- Pressure-sensitive disconnecter on all the phases.
- Discharge resistors fitted - non removable.
- Finger-proof CLAMPTITE terminals to reduce risk of accidental contact and to ensure firm termination (10 to 30.3 kvar in three phase and 8.3 - 15.1 kvar in single phase).

Easy installation & maintenance

- Optimized design for safety, reliability with required performance, Optimized size to ensure easy installation and upto 20% space saving in cubicles.
- New CLAMPTITE terminals for easy of connection that maintains the terminal tightness with IP20 protection.
- Non accessible in-built discharge resistors to ensure safety.
- Single point/Stud for mounting and earthing.
- Simultaneous and safe disconnection of all the phases at end of life in EasyLogic™.
- Stacked design and resin filled technology for better heat dissipation/cooling.

Benefits

- Easy installation.
- Easy for reliability and safe usage.
- Easy for quality assurance.
- Easy choice for building your solutions with other Schneider Electric components.
- Easy choice for savings.

EasyLogic™ PFC SD Can

Single Phase & Three Phase

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General characteristics

Standards	IEC 60831-1/2						
Voltage range	<ul style="list-style-type: none"> ■ 230 V to 525 V in Three Phase ■ 220-440 V in Single Phase 						
Frequency	50 / 60 Hz						
Power range	1 to 30.3 kvar						
Losses (dielectric)	< 0.2 W / kvar						
Losses (total)	< 0.5 W / kvar						
Capacitance tolerance	-5%, +10%						
Voltage test	<table border="0"> <tr> <td>Between terminals</td> <td>2.15 x U_N (AC), 10 s</td> </tr> <tr> <td>Between terminal & container</td> <td>3 kV (AC), 10 s or 3.66 kV (AC), 2 s</td> </tr> <tr> <td>Impulse voltage</td> <td>8 kV</td> </tr> </table>	Between terminals	2.15 x U _N (AC), 10 s	Between terminal & container	3 kV (AC), 10 s or 3.66 kV (AC), 2 s	Impulse voltage	8 kV
Between terminals	2.15 x U _N (AC), 10 s						
Between terminal & container	3 kV (AC), 10 s or 3.66 kV (AC), 2 s						
Impulse voltage	8 kV						
Discharge resistor	Fitted, standard discharge time 60 s						

Working conditions

Ambient temperature	-25 / 55°C (Class D)
Humidity	95%
Altitude	2,000 m above sea level
Overvoltage	1.1 x U _N 8 h in every 24 h
Overcurrent	Up to 1.5 x I _N
Peak inrush current	200 x I _N
Switching operations (max.)	Up to 5,000 switching operations per year
Mean Life expectancy	Up to 100,000 hrs
Harmonic content withstand	N _{LL} ≤ 10%

Installation characteristics

Mounting position	Indoor, upright
Fastening	Threaded M12 stud at the bottom
Earthing	
Terminals	<ul style="list-style-type: none"> ■ CLAMPTITE - terminals with electric shock protection (finger-proof) & double fast-on terminal in lower kvar ■ Stud type terminal: <ul style="list-style-type: none"> □ three way stud type terminals for the ratings above 30.3 kvar in three phase capacitors (2 terminals for single phase) □ two way stud terminals for ratings above 15.1 kvar in single phase

Safety features

Safety	Self-healing + Pressure-sensitive disconnecter + Discharge device
Protection	IP20 (for fast-on and clamtite)

Construction

Casing	Extruded Aluminium Can
Dielectric	Metallized polypropylene film with Zn/Al alloy
Impregnation	Biodegradable, Non-PCB, polyurethane soft resin

Technical characteristics

EasyLogic™ PFC HD Can

Three Phase

An Easy choice for savings which is optimized to deliver the performance you need. Suitable for operating conditions with a few non-linear loads to deliver safe and reliable performance.



EasyLogic™ three phase



EasyLogic™ single phase

Operating conditions

- For networks with insignificant non-linear loads: ($N_{LL} \leq 15\%$).
- Standard voltage disturbances.
- Standard operating temperature up to 55°C.
- Normal switching frequency up to 6 500/year.
- Maximum current (including harmonics) is $1.6 \times I_N$.

Technology

Constructed internally with single-phase capacitor elements assembled in an optimized design. Each capacitor element is manufactured with metallized polypropylene film.

The active capacitor elements are covered in a specially formulated biodegradable, non-PCB, polyurethane soft resin. This ensures thermal stability and heat removal from inside the capacitor.

The unique finger proof CLAMPTITE termination is fully integrated with discharge resistors. It allows suitable access to tightening and cable termination without any loose connections.

For Lower ratings, double fast-on terminals with integrated cables are provided for easy and faster connection, reducing the risk of terminal overheating and failure.

Safety

- Self-healing.
- Pressure-sensitive disconnecter on all the phases.
- Discharge resistors fitted - non removable.
- Finger-proof CLAMPTITE terminals to reduce risk of accidental contact and to ensure firm termination (10 to 25 kvar in three phase).
- Stud terminals above than 25 kvar for easy terminal connection.

Easy installation & maintenance

- Optimized design for safety, reliability with required performance, Optimized size to ensure easy installation and upto 20% space saving in cubicles.
- New CLAMPTITE terminals for easy of connection that maintains the terminal tightness with IP20 protection.
- Non accessible in-built discharge resistors to ensure safety.
- Single point/Stud for mounting and earthing.
- Simultaneous and safe disconnection of all the phases at end of life in EasyLogic™.
- Stacked design and resin filled technology for better heat dissipation/cooling.

Benefits

- Easy installation.
- Easy for reliability and safe usage.
- Easy for quality assurance.
- Easy choice for building your solutions with other Schneider Electric components.
- Easy choice for savings.

EasyLogic™ PFC HD Can

Three Phase

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General characteristics

Standards	IEC 60831-1/2	
Voltage range	480 V to 525 V in Three Phase	
Frequency	50 / 60 Hz	
Power range	7.5 to 45.2 kvar	
Losses (dielectric)	< 0.2 W/kvar	
Losses (total)	< 0.5 W/kvar	
Capacitance tolerance	-5%, +10%	
Voltage test	Between terminals	2.15 x U _N (AC), 10 s
	Between terminal & container	3 kV (AC), 10 s or 3.66 kV (AC), 2 s
	Impulse voltage	8 kV
Discharge resistor	Fitted, standard discharge time 60 s	

Working conditions

Ambient temperature	-25 / 55°C (Class D)
Humidity	95%
Altitude	2,000 m above sea level
Overvoltage	1.1 x U _N 8 h in every 24 h
Overcurrent	Up to 1.6 x I _N
Peak inrush current	200 x I _N
Switching operations (max.)	Up to 6,500 switching operations per year
Mean Life expectancy	Up to 120,000 hrs
Harmonic content withstand	N _{LL} ≤ 15%

Installation characteristics

Mounting position	Indoor, upright
Fastening	Threaded M12 stud at the bottom
Earthing	
Terminals	<ul style="list-style-type: none"> ■ CLAMPTITE - terminals with electric shock protection (finger-proof) & double fast-on terminal in lower kvar ■ Stud type terminal: <ul style="list-style-type: none"> □ three way stud type terminals for the ratings above 25 kvar in three phase capacitors

Safety features

Safety	Self-healing + Pressure-sensitive disconnecter + Discharge device
Protection	IP20 (for fast-on and clamptype)

Construction

Casing	Extruded Aluminium Can
Dielectric	Metallized polypropylene film with Zn/Al alloy
Impregnation	Biodegradable, Non-PCB, polyurethane soft resin



Learn more about EasyLogic PFC Capacitors range here



Offer



Catalogue

Scan or click on QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



Motor control

TeSys
General overview F-214

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Innovative
and connected solutions
for motor starters

- > Control
- > Power
- > Protect
- > Active





Start smart. Run smart. With TeSys motor controls.

Stay smart with the world's best-selling motor control solutions from the inventor of the world's first contactor - Schneider Electric™.

For almost a century, TeSys motor controls have driven the industry with innovations in motor protection, monitoring, and control.

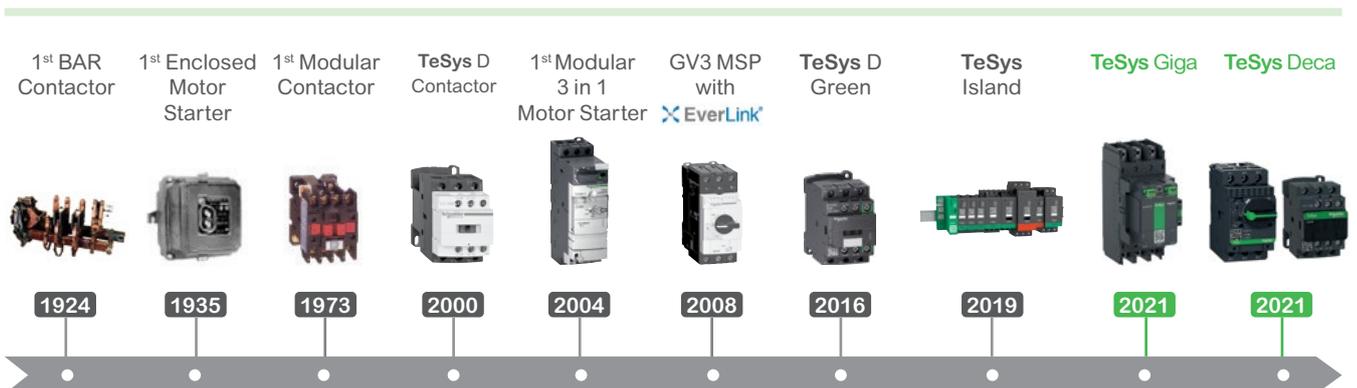
It started with the introduction of the industry's first BAR contactor in 1924, and today, the legacy of innovation is built into every TeSys motor control device.

Best-in-class safety and reliability, plug-and-play architecture, and flexible functionality mean TeSys motor control solutions can meet your requirements across a wide range of applications, from the most common to the most advanced.

Wherever you are and anywhere your projects come together, you can trust Schneider Electric and TeSys contactors, circuit breakers, relays, and switches for unmatched reliability, complete compatibility with international standards, and the robust support of the Schneider Electric global supply network.

Start smart, run smart and stay smart with TeSys motor controls.

A Century OF INNOVATION AND LEADERSHIP



TeSys

Superior safety for all industries

TeSys motor controls come with all of the isolation, protection and emergency handling you need to comply with international codes. High-contrast covers identify safety-critical devices to prevent inadvertent manual operation. Every TeSys contactor is both mechanically linked and equipped with mirror contacts for safety applications and wherever auxiliary contact state reliability is critical.

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HVAC

Ensure 24/7 availability of your HVAC system with reliable products that can reach high ambient temperatures without derating.



Conveying

Decentralize the control cabinet of your conveyor line and benefit from up to 80% space reduction.



Genset

Make certain your generator starts even in the harshest conditions with robust TeSys solutions.



Pumping

Optimize single or multi-drive boosters for industry or infrastructure with energy and cost-effective solutions.



Packaging

Keep pace with the most demanding, high-end packing applications with solutions that can perform 30 million AC53a electrical cycles, like TeSys H.



Oil and Gas

Keep your employees and assets safe and improve uptime in onshore and offshore applications: pipeline operations: LNG and natural gas processing: and refining and petrochemical applications.



Water and Wastewater

Optimize the treatment and delivery of safer water by reducing energy usage and lowering operating costs.



Food and Beverage

Serve your customers with environmentally friendly products to improve sustainability, efficiency, and flexibility, allowing you to adapt to changing customer habits.

Online selection tool

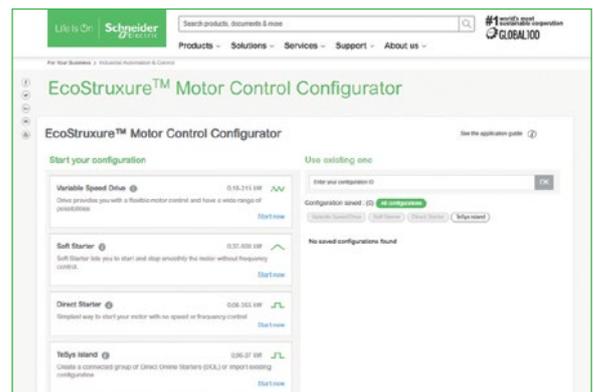
EcoStruxure™ Motor Control Configurator

For Direct-On-Line and Star-Delta starters, motor circuit breakers with advanced protection, motor management relays, configurations for total coordination, drives, and soft starters.

No matter what kind of starting method you need, our online **EcoStruxure™ Motor Control Starter Configurator** will help you to quickly and easily select the optimal combination of components to ensure maximized motor safety, protection, and uptime.



Scan or click on QR code



Visual aspect

New

The design of the TeSys core offer is evolving. Circuit breakers, contactors and several other components are now sharing a modern look giving the control panel a new and qualitative visual aspect.

Schneider Electric's identity is fully revealed by the green parts.



TeSys function names

New

TeSys components are grouped by function name, for easier identification. These functions are related to motor, power, control and protection.

TeSys Power

- Short-circuit protection solution



TeSys Control

- Contactors and starters



TeSys Protect

- Motor and load protection devices



TeSys Active

- Intelligent relay and motor starters



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TeSys

TeSys components full names at a glance



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Old names	NEW names	Complementary indications
	TeSys Function - Component Series	
TeSys Vario, mini Vario	TeSys Control - Switch-disconnectors	
<ul style="list-style-type: none"> ■ TeSys DF ■ TeSys LS ■ TeSys GK 	TeSys Power - Fuse carriers	<ul style="list-style-type: none"> ■ DF type ■ LS type ■ GK type
TeSys GS	TeSys Power - Switch-disconnector fuses	1 - 30 kvar
<ul style="list-style-type: none"> ■ TeSys GV2 ■ TeSys GV3 ■ TeSys GV4 	TeSys Power - Deca circuit breakers	<ul style="list-style-type: none"> ■ Frame 2 ■ Frame 3 ■ Frame 4
<ul style="list-style-type: none"> ■ TeSys GV5 ■ TeSys GV6 	TeSys Power - Giga circuit breakers	<ul style="list-style-type: none"> ■ Frame 5 ■ Frame 6
TeSys D	<ul style="list-style-type: none"> ■ TeSys Control - Deca control relays ■ TeSys Control - Deca contactors 	
TeSys LRD, LR9D	TeSys Protect - Deca overload relays	
TeSys H	TeSys Control - Hybrid motor starters	
TeSys U	TeSys Control - Ultra motor starters	
TeSys island	TeSys Active - island motor starter	



Learn more about TeSys range here



Offer



Catalogue

Scan or click on QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



Control and signaling, Automation relays & Power supply

Harmony

Push buttons

XB4	G-221
XB5	G-222
XB7	G-224

Cam switches

Harmony K.....	G-226
----------------	-------

Tower lights

XVU.....	G-228
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Control and time relays	G-232
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Timer Relays	G-244
--------------------	-------

Electromechanical Relays	G-248
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Solid State Relays	G-256
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Modicon Power Supply

ABLM Modular power supply	G-268
---------------------------------	-------

ABLS Optimized power supply	G-269
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ABL8RP/WP Universal power supply.....	G-270
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Linergy

Linergy TR Terminal blocks.....	G-274
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Harmony

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Push buttons, Cam switches and signaling units

Improved reliability of panels, machines, and processes

- Sealing effectiveness rated up to IP66, IP67, IP68, IP69, IP69K, and type 4X
- High impact resistance up to IK06 rating
- Operating temperature ranging from -40 to +70°C/-40 to +158°F
- Compliance with international standards (IEC, UL, CCC, EAC, JIS)
- Marine certified (BV, LROS, BDNV, GL).

G

High electrical performance

- Contacts and heads designed to prevent vibration, helping to ensure secure mounting and wiring
 - Choose from standard, low-load, and high-power electrical contacts.

Lower maintenance

- Harmony push buttons are designed to perform up to 10 million operations
 - This represents more than 1,000 operations a day for 27 years.

H

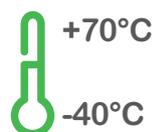
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[SEE THE VIDEO](#)

IP69

Robust performance even in harsh environments



Harmony Push buttons XB4 metal



Harmony XB4 range of control and signaling units for Ø 22 mm/0.866 in. mounting



Harmony XB4 flush mounted control and signaling units for Ø 30 mm/1.181 in mounting

Presentation

The Harmony® XB4 metal range of modular control and signaling units combines simplicity of installation, flexibility, and robustness. It meets the requirements of the majority of industrial applications. These units are either available as complete products or separate components for customer assembly.

This range includes:

- Push buttons, selector/key switches, Emergency stop functions, and multiple-headed push buttons designed for parameter settings, adjustments, and start/stop control of machines and installations
- Pilot lights, illuminated push buttons, illuminated selector switches, and illuminated Emergency stop functions designed for visual signaling.
- Various accessories including:
 - Flush mounting kits:
 - redesigned, improving the look of the control panel
 - quick and easy installation in a 30.5 mm/1.20 in. hole making it compatible with 22 mm/0.87 in. devices
 - a cost-effective solution, as the control devices and the operating modes of the machine do not change.
 - Other accessories: protective covers, legends and legend holders, push button caps, boots, bulbs, etc.

The push button and switch control offer (illuminated and non-illuminated) is both broad and comprehensive:

- Push buttons, spring return with flush push, projecting push, recessed push, booted flush push, or mushroom head
- Emergency stop push buttons with 3 types of head: push-pull, turn to release, and key release
- Pilot lights and illuminated push buttons with Universal LED and BA 9s base fitting bulbs
- Selector switches with different types of operator: standard handle, long handle, knurled knob, or key
- Choice of heads: circular, double-head/triple-head rectangular, or toggle
- Colors of push: white, black, green, orange, blue, red, or yellow
- Connection type: screw clamp connector, Faston connector, spring terminal, or for printed circuit board
- Contact blocks for general purpose or specific applications (low current, standard, or high power switching)
- Choice of heads to meet the majority of industrial needs: from the most basic push buttons and pilot lights, to functions meeting modern machine requirements, such as USB & RJ45 ports
- Wide choice of accessories and spare parts
- Other specific functions: complete potentiometer, hour counters, annunciator, or joystick controllers.

Innovative complementary offers are also available:

- Control and signaling units for severe applications
- Wireless and batteryless push buttons
- Biometric switches.

Environment

The performance of the Harmony XB4 range meets some of the most demanding international standards and approvals:

- Certified and approved for meeting requirements throughout all continents: EN/IEC, CE marking, UL, CSA, CCC, EAC, JIS, NEMA, and marine approvals
- Protection against ingress of solid objects, dust, and water: IP66, IP67, IP69, IP69K, type 4X
- Operating temperature range from -40°C to +70°C/-40°F to +158°F for outdoor applications
- Shock protection level up to IK06
- High vibration resistance with shakeproof connection screws (periodic retightening unnecessary).

Harmony Push buttons XB5, plastic

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Harmony XB5 range of control and signaling units for Ø 22 mm/0.866 in mounting

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Harmony XB5 flush mounted control and signaling units for Ø 30 mm/1.181 in mounting

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Presentation

The Harmony XB5 plastic range of modular control and signaling units combines simplicity of installation, flexibility, and robustness. It meets the requirements of the majority of industrial applications. These units are either complete products or separate components for customer assembly.

This range includes:

- Push buttons, selector/key switches, Emergency stop functions, and multiple-headed push buttons designed for parameter settings, adjustments, and start/stop control of machines and installations
- Pilot lights, illuminated push buttons, illuminated selector switches, and illuminated Emergency stop functions designed for visual signaling
- Flush mounting heads for Ø 30 mm/1.181 in. mounting and flush mounting kit accessories combined to offer a modern look to the control panel
- Harmony basic and configurable display offers data visualization
- Various accessories including protective covers, legends and legend holders, push button caps, boots, bulbs, etc.

The push button and switch control offer (illuminated and non-illuminated) is both broad and comprehensive:

- Push buttons, spring return with flush push, projecting push, recessed push, booted flush push, or mushroom head
- Emergency stop push buttons with three types of head: push-pull, turn to release, and key release
- Pilot lights and illuminated push buttons with universal LED and BA 9s base fitting bulbs
- Selector switches with different types of operator: standard handle, long handle, knurled knob, or key
- Choice of heads: circular, rectangular, double-head/triple-head rectangular, or toggle
- Colors of push: white, black, green, orange, blue, red, or yellow
- Connection type: screw clamp connector, faston connector, spring terminal, or for printed circuit board
- Contact blocks for general purpose or specific applications (low current, standard or high-power switching)
- Choice of heads to meet the majority of industrial needs, from the most basic push buttons and pilot lights, to functions meeting modern machine requirements, such as USB & RJ45 ports
- Wide choice of accessories and spare parts
- Configurable display for simple machine function
- Other specific functions: complete potentiometer, hour counters, annunciator, or joystick controllers.

Innovative complementary offers are also available:

- Control and signaling units for severe applications
- Wireless and batteryless push buttons
- Biometric switches.

Harmony Push buttons XB5, plastic



Harmony Digital Panel meter

Basic display: Harmony Digital Panel meter

Harmony XBH is a digital panel meter for mounting on a control panel or directly on the front of a machine. With the simple 4-digit display, it is easy to view process data from long distances. The display is easy to mount directly in a Ø 22 mm/ 0.866 in. hole and is supplied directly from the measuring loop. It has 2 digital outputs for setting a high and low limit and can be configured using the blue and red buttons on the side of the housing. An external alarm can be connected to the panel meter for providing an additional alert in the event of reaching a high or low limit threshold. Harmony XBH panel meters have an IP65 protection rating and the operating temperature can be between -20 and 60°C/-4 and 140°F.

The following settings can be adjusted using the configuration buttons:

- Minimum and maximum value of the input signal
- Number of decimals
- Number of measurements per second
- LOW limit and HIGH limit output threshold
- LOW limit and HIGH limit hysteresis and time delay
- Password protection for the configuration.

Environment

The performance of the Harmony XB5 range meets some of the most demanding international standards and approvals:

- Certified and approved for meeting requirements worldwide: EN/IEC, CE marking, UL, CSA, CCC, EAC, JIS, NEMA, and marine approvals
- Protection against the ingress of solid foreign objects, dust, and water: IP66, IP67, IP69, IP69K, type 4X
- Operating temperature range from -40°C to +70°C/-40°F to +158°F for outdoor applications
- High chemical robustness
- Shock protection level up to IK03
- High vibration resistance with shakeproof connection screws (periodic retightening unnecessary).

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Harmony Push buttons XB7, monolithic

Control and signaling units Ø 22



Presentation

The Harmony® XB7 range of plastic control and signaling units is a monolithic range designed for use in the industrial, tertiary and building sectors. It is simple to use and quick to install.

This range includes:

- Push buttons and switches designed for Start/Stop control of machines and installations, adjustment and parametering (contact functions): Push buttons, selector/key switches, Emergency stop or Emergency switching off push buttons
- Pilot lights designed for visual signaling (signaling functions)
- Illuminated push buttons designed for control and signaling (contact functions + signaling functions)
- The range comprises complete units, with round plastic bezel, and 6 pilot light.

The push button and switch control offer comprises:

- Flush and projecting spring return push buttons, with or without marking
- Flush latching push buttons, without marking
- Projecting spring return or latching illuminated push buttons
- Emergency stop trigger action and mechanically latching mushroom head push buttons (conforming to standards EN/IEC 60204-1 and EN/ISO 13850)
- Emergency switching off mechanically latching mushroom head push buttons (conforming to standard IEC 60364-5-53)
- Selector switches, with standard black handle, and key switches
- Legends and legend holders
- Accessories and spare parts.

The pilot light signaling offer includes:

- Pilot lights with integral LED
- Pilot lights for BA 9s base fitting bulbs.

The two types of pilot lights are for direct supply or with resistor.

Installation

Harmony XB7 products are both simple and quick to install:

- Mounting by single installer
- Fixing by a single locking nut.

Two types of connection are available:

- Screw clamp terminals
- Faston connectors (only for pilot lights).

Environment

The performance features of the XB7 range meet the following specifications:

- International standards and approvals:
 - For the entire range: EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-4, UL 508, CSA C22-2 n°. 14, GB 14048.5
 - For Emergency stop push buttons: EN/IEC 60947-5-5, EN/ISO 13850 and EN/IEC 60204-1
 - For Emergency switching off push buttons: EN/IEC 60364-5-53.
- International certifications: UL, CSA, CCC, GOST
- Degrees of protection:
 - Front face: IP65 (IP54 for Emergency switching off push buttons)
 - Rear face: IP20 (protection against direct contact).

For more technical information, please refer to our website www.se.com

Harmony Push buttons XB4, XB5 and XB7

Type	Push buttons, selector switches, and pilot lights		
			
Type references	XB4	XB5	XB7
Description of range			
	<ul style="list-style-type: none"> ■ Push buttons ■ Multiple-headed push buttons ■ Emergency Stop push buttons ■ Selector switches and key switches ■ Illuminated push buttons ■ Pilot lights ■ Flush mounted push buttons, selector switches, and pilot lights^[1] 	<ul style="list-style-type: none"> ■ Push buttons ■ Emergency Stop and Emergency switching off push buttons ■ Selector switches and key switches ■ Illuminated push buttons ■ Pilot lights 	
Features			
Products	Complete units or sub-assemblies (body + head)	Double insulated	Monolithic
Bezel	Metal, chromium plated, or black	Double insulated	Double insulated, dark gray (or white for pilot lights)
Shape of head	Circular	Circular	Circular
Drilling or cut-out for fixing			
	<ul style="list-style-type: none"> ■ Ø 22 mm/0.866 in. ■ Ø 30 mm/1.181 in. (for flush mounted control and signaling units) 		Ø 22 mm/0.866 in.
Degree of protection			
Conforming to IEC 60529	IP66, IP67, IP69, and IP69K		<ul style="list-style-type: none"> ■ IP65 (control buttons and pilot lights) ■ IP54 (Emergency switching off push buttons)
Conforming to UL 508 and CSA C22-2 No. 14	Enclosure type 4, 4X, and 13		Enclosure type 3 (push buttons and Emergency stop) and 4 (pilot lights)
Cabling			
	<ul style="list-style-type: none"> ■ Spring clamp terminal connections ■ Screw clamp terminal connections ■ Faston connectors ■ Connector with adapter for printed circuit board 		<ul style="list-style-type: none"> ■ Screw and captive clamp terminal connections ■ Faston clip connections (pilot lights)
Mounting			
Panel thickness	1...6 mm/0.039...0.236 in.		1...6 mm/0.039...0.236 in.

[1] Flush mounted control and signaling units are available for Harmony XB4 and XB5 ranges only.



Learn more about Harmony Push buttons range here

 Offer
  Catalogue XB4
  Catalogue XB5
  Catalogue XB7

Scan or click on QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



Cam switches

Harmony Type K

Type		Type K10	Type K1/K2
			
Cam switch model		K10●	K1●
Applications		Used in building control panels and consoles, type K cam switches allow control of processes and utilities in industry and buildings and direct control for simple machines.	
Functions			
Off-On/On-Off switches		1 to 4-pole	1 to 6-pole
Stepping switches		2 to 4-position, 1 and 2-pole	2 to 12-position, 1 to 4-pole
Changeover switches		1 to 4-pole	1 to 5-pole
Measurement switches		Voltmeter and ammeter	Voltmeter and ammeter
Reversing switches		-	2 and 3-pole
Reversing star-delta switches		-	-
Pole change switches		-	2 and 3-speed
Characteristics			
Conventional rated thermal current (I _{th})		10 A	12 A
Rated insulation voltage (U _i)		440 V	690 V
Electrical operating characteristics		<ul style="list-style-type: none"> ■ AC-15 - A300 ■ 240 V - 3 A 	<ul style="list-style-type: none"> ■ AC-3 - 3-phase ■ 230 V - 1.1 kW - 4.6 A ■ AC-15 ■ 230 V - 3 A
Front plate degree of protection		IP65	<ul style="list-style-type: none"> ■ IP40 ■ IP65 (with seal)
Product composition		Complete switches	<ul style="list-style-type: none"> ■ Complete switches ■ Adaptable sub-assemblies ■ Special products (Consult our Customer Care Centre)
Compatibility		Ø 16 and Ø 22 control and signaling units	Ø 22 control and signaling units
Fixing	Front mounting	Single Ø 16 or Ø 22 hole	<ul style="list-style-type: none"> ■ Multi-fixing ■ Single Ø 22 hole
	Rear mounting	-	Screw fixing, 4 holes on 36 mm/1.42 in. centres
Front plate dimensions (mm)		30 x 30 mm/1.18 x 1.18 in.	<ul style="list-style-type: none"> ■ 45 x 45 mm/1.77 x 1.77 in. ■ 60 x 60 mm/2.36 x 2.36 in. (adaptable sub-assemblies)
Operating heads		<ul style="list-style-type: none"> ■ Black standard handle ■ Metallic legend, black marking 	<ul style="list-style-type: none"> ■ Black and red standard and long handles ■ Key operator ■ Metallic head ■ Metallic legend with black marking or black legend with white marking
Approvals		<ul style="list-style-type: none"> ■ cULus ■ EN/IEC 60947-3 ■ EN/IEC 60947-5-1 	<ul style="list-style-type: none"> ■ UL-CSA ■ EN/IEC 60947-3 ■ EN/IEC 60947-5-1

Selection guide

Cam switches

Harmony Type K

Type K30...K150



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K2● K30● K50● K63● K115● K150●

1 to 6-pole	1 to 6-pole
2 to 12-position, 1 to 4-pole	-
1 to 5-pole	1 to 4-pole
-	-
2 and 3-pole	2 and 3-pole
Star-delta	Star-delta
2 and 3-speed	2-speed

20 A	32 A	50 A	63 A	115 A	150 A
690 V	690 V	690 V	690 V	690 V	690 V
<ul style="list-style-type: none"> AC-3 - 3-phase 230 V - 2.2 kW - 8.3 A AC-15 230 V - 4 A 	<ul style="list-style-type: none"> AC-3 - 3-phase 230 V - 5.5 kW AC-15 230 V - 14 A 	<ul style="list-style-type: none"> AC-3 - 3-phase 230 V - 7.5 kW AC-15 230 V - 16 A 	<ul style="list-style-type: none"> AC-3 - 3-phase 230 V - 11 kW - 	<ul style="list-style-type: none"> AC-3 - 3-phase 230 V - 15 kW - 	<ul style="list-style-type: none"> AC-3 - 3-phase 230 V - 22 kW -
<ul style="list-style-type: none"> IP40 IP65 (with seal) 	IP40				
<ul style="list-style-type: none"> Complete switches Adaptable sub-assemblies Special products (Consult our Customer Care Centre) 	Complete switches				
Ø 22 control and signaling units	-				
<ul style="list-style-type: none"> Multi-fixing Single Ø 22 hole 	By 4 holes on 48 mm /1.89 in. centres			By 4 holes on 68 mm/2.68 in. centres	
Screw fixing, 4 holes on 36 mm/1.42 in. centres	Screw fixing, 4 holes on 48 mm/1.89 in. centres			Screw fixing, 4 holes on 68 mm/2.68 in. centres	
<ul style="list-style-type: none"> 45 x 45 mm/1.77 x 1.77 in. 60 x 60 mm/2.36 x 2.36 in. (adaptable sub-assemblies) 	64 x 64 mm/2.52 x 2.52 in.			88 x 88 mm/3.46 x 3.46 in.	
<ul style="list-style-type: none"> Black and red standard and long handles Key operator Metallic head Metallic legend with black marking or black legend with white marking 	<ul style="list-style-type: none"> Black standard handle Metallic legend, black marking 				
<ul style="list-style-type: none"> UL-CSA EN/IEC 60947-3 EN/IEC 60947-5-1 	<ul style="list-style-type: none"> cULus EN/IEC 60947-3 				



Learn more about
Harmony K
range here



Offer



Catalogue

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If you need more details about product references and availability, please check your local Schneider Electric contact
<https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



General overview

Harmony Signaling units type XVU Ø 60

Modular tower lights

Harmony XVU modular tower light with innovative features

The Harmony XVU modular range of tower lights are 360° pilot lights and commonly used signaling product for a wide range of applications. These tower lights are visual and audible signaling units that comes with a combination of innovative features, high performance and simplicity.

High performance light

- True color and homogeneity light
- Improved visibility
- LED super-bright flash with long life performance.

Customized voice message

- A free of charge configuration software allows to customize the audible signals via SD card
- The sound unit plays voice message when customer inputs PLC signals
- Adjustable volume up to 86 dB at 1 m/3.281 ft.

Simplified wiring

- Pulse signal units use one signal wire to define different types of signaling
- Flexible and configurable light patterns
- Up to 256 different combination of audible and visual signals
- Up to 16 different combination of visual signals (color combination)
- One pulse signal multi-color unit can be implemented instead of several single color illuminated units
- Reduction in 1/0 wires to connect PLC with tower light
- CE, UL, CSA, and PCT certified.

Aesthetic design

- Available in black and metallic silver body
- Reduced diameter (Ø 60 mm/2.362 in.) makes them suitable for small equipment
- Aesthetic design distinguishes them from other tower lights.



The mix of homogeneity light and true color improves the aesthetic of the tower light



Playlist Builder

Configuration of audible signal via Playlist Builder software



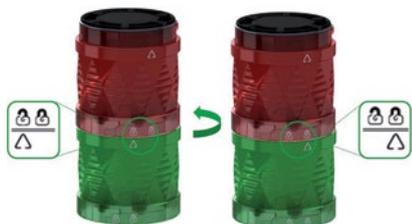
Addition of pulse signal unit to the existing range of Harmony XVU tower lights



> Super bright LED technology

> Pulse signal unit enables up to 75% reduction in wiring

Harmony Signaling units type XVU Ø 60 Modular tower lights



 With the indicator marks, the units are simple and quick to assemble

Simplicity

- Simple and easy assembly without use of any tools
- Convenient mounting option with: direct mounting, pole mounting and three-in-one adjustable wall mounting.

Good resistance

- Resistant to dust and water and are UL/CSA compliant
- The illuminated units have IP65 degree of protection, and are resistant to cutting oil
- Audible units have IP54 degree of protection.

IP65
IP54

Degree of protection and compliance



 +  = **> User-friendly**



Harmony Signaling units type XV

Signaling solutions

- A
- B
- C
- D
- E
- F
- G
- H
- I

Harmony type XV	Modular tower lights										
											
Type references XVU											
Type of products	Tower lights for customer assembly of up to 5 units										
Diameter	Ø 60 mm/2.362 in.										
Degree of protection conforming to IEC 60529	<ul style="list-style-type: none"> ■ IP65 for illuminated units ■ IP54 for audible units ■ IP55 for flexible mounting unit 										
Type of signalling	<table border="0" style="width: 100%;"> <tr><td style="width: 30%;">Steady</td><td>Yes</td></tr> <tr><td>Flashing</td><td>Yes</td></tr> <tr><td>High flashing</td><td>Yes</td></tr> <tr><td>“Flash”</td><td>–</td></tr> <tr><td>Sound</td><td>Yes (buzzer or editable voice)</td></tr> </table>	Steady	Yes	Flashing	Yes	High flashing	Yes	“Flash”	–	Sound	Yes (buzzer or editable voice)
Steady	Yes										
Flashing	Yes										
High flashing	Yes										
“Flash”	–										
Sound	Yes (buzzer or editable voice)										
Light sources	<table border="0" style="width: 100%;"> <tr><td style="width: 30%;">Incandescent bulb</td><td>–</td></tr> <tr><td>LED bulb</td><td>–</td></tr> <tr><td>Integral LED</td><td>Yes</td></tr> <tr><td>“Flash” discharge tube</td><td>–</td></tr> <tr><td>Halogen bulb</td><td>–</td></tr> </table>	Incandescent bulb	–	LED bulb	–	Integral LED	Yes	“Flash” discharge tube	–	Halogen bulb	–
Incandescent bulb	–										
LED bulb	–										
Integral LED	Yes										
“Flash” discharge tube	–										
Halogen bulb	–										
Colors of illuminated units	<ul style="list-style-type: none"> ■ Green ■ Red ■ Orange ■ Blue ■ White ■ Yellow 										
Connection	Spring cage connection terminals										
Support panel drilling or cut-out	<ul style="list-style-type: none"> ■ Mounting on support tube and adjustable support tube: 4 x Ø 6 mm/0.236 in. ■ Flexible wall mounting: 3 x Ø 5 mm/0.197 in. ■ Direct mounting: <ul style="list-style-type: none"> □ 2 x Ø 5 mm/0.197 in. □ 3 x Ø 5 mm/0.197 in. □ 4 x Ø 5 mm/0.197 in. ■ Mounting on bracket: 2 x Ø 9 mm/0.354 in. 										



Learn more about
Harmony XVU
range here



Offer



Catalogue

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If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



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Harmony Control and time relays

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Enhance operational efficiency and optimize equipment availability with Harmony, our widest range of relays. Harmony relays are designed, manufactured, and tested to meet your needs for both wired logic functions and PLC Interfaces.

E

> Control relays



> Timer relays



F

> Electromechanical relays



> Solid state relays



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Near Field Communication and conventional Control Relays

Harmony Control relays monitor and detect abnormal operating conditions concerning phase, current, voltage, frequency, speed, or temperature. The relays inform users of abnormal conditions, and allow them to initiate the necessary corrective actions before serious and costly breakdowns can occur. By monitoring energy network statuses, they enable both electrical and mechanical load control.



They are suitable for a wide range of applications:

- Hoisting: construction cranes, harbor cranes
- Packaging: motor voltage, current overload
- Lifts: construction lifts, passenger lifts, escalators
- Textile: motor voltage, current overload
- Water: liquid level on water tank at water and waste water recycling plant.

Depending on the product model, control relays are categorized into 8 product families:

- 3-phase control
- Current control
- Voltage control
- Frequency control
- Speed control
- Lift temperature control
- Level control
- Pump control.

Harmony Control relay functions

Monitoring

Control relays monitor physical and electrical values. They measure variable signals such as phase (presence, sequence and symmetry), voltage, current, and frequency. They also control liquid levels and process operating rates.

Informing

Control device outputs provide users with electrical information. In addition, setting faults are signaled by simultaneous flashing of all LEDs.

Protecting

Integrated in the control circuits of automated systems, they enable automatic shutdown management and provide fault information, thus protecting the equipment.

Managing

When the power is switched on, the control relays are inhibited to enable correct measurement circuit setting. The outputs operate with positive logic, the contact or contacts being closed under normal conditions and opening as soon as a fault or power supply loss is detected.

Commissioning

When the diagnostic button is used, the downstream circuit can be closed immediately without sending a fault input signal to the relays. This shortens the testing time during commissioning and troubleshooting.

A

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General overview

Harmony Control relays

A

Harmony Control relays with unique design and features

- Compact modular sizes: 17.5 mm/0.69 in., 22.5 mm/0.88 in., 35 mm/1.38 in.
- Adapted for industrial and building control panels
- True RMS measurement that minimizes the possibility of unexpected trips from highly polluted networks (except RM17TG and RM22TG)
- Diagnostic button to check the downstream circuit immediately and reduce commissioning and troubleshooting time^[1]
- IP50 lead-sealable settings protection cover helps prevent dust and unintended human intervention
- Status indication by LEDs, additional dial pointer LED for easy setup in dark conditions^[1], and power “On” status indication when relay is ready to perform
- Optimization of power supplies
- Worldwide certification:



B

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Harmony Control relay with NFC^[2] technology

Simplify product selection

One product reference with 7 control functions: Phase loss, Phase sequence, Asymmetry, Overvoltage, Undervoltage, Overfrequency, and Underfrequency.

Achieve unprecedented accuracy

- Digitized setting eliminate the need for screw driver
- Timed delay can be set by minute, second or millisecond.

Fault diagnosis

- Fault status indication by LEDs
- Real time fault analysis and Historical fault data are viewable in APP.

Superior security

4 digit password protection.

- + _____
- > A simple approach to monitoring your equipment
- > To control your machines and processes of the future





NFC Control Relay:

As simple as

- 1 Install
- 2 Open app
- 3 Set parameters

Scan here to check out the NFC Control Relay video

[1] Available in RM35JA32MR, RM35JA32MT, and all RM22 references.

[2] Near Field Communication.

General overview

Harmony Control relays

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Harmony Control relays

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Type	Modular relay				
					
	RM17TG00 RM17TG20	RMNF22TB30	RM22TG20	RM17TT00	RM22TR31 RM22TR33
Application	3-phase control				
Functions	<ul style="list-style-type: none"> Phase sequence Phase loss 	With/without memory selection in the app. <ul style="list-style-type: none"> Phase sequence Phase loss Asymmetry Undervoltage Overvoltage Under-frequency Over-frequency 	<ul style="list-style-type: none"> Phase sequence Phase loss 	<ul style="list-style-type: none"> Phase sequence Phase loss 	<ul style="list-style-type: none"> Phase sequence Phase loss Overvoltage and undervoltage
Values controlled	<ul style="list-style-type: none"> 208...480 V ~ 208...440 V ~ 	208...480 V ~	208...480 V ~	208...480 V ~	<ul style="list-style-type: none"> 200...240 V ~ 380...480 V ~
Output contact rating	1 or 2 CO 5 A	2 CO 8 A (individually configurable)	2 CO 8 A	1 CO 5 A	2 CO 8 A
Supply voltage	Self-powered	<ul style="list-style-type: none"> 208...480 V ~ line to line 120...277 V ~ line to neutral 	Self-powered		
Time delay	–	0.1s...60 min	–		0.1...30 s
Size (mm/in.)	17.5/0.69	22.5/0.885	22.5/0.885	17.5/0.69	22.5/0.885

Selection guide Harmony Control relays



RM17TU00



RM22TU21
RM22TU23



RM17TA00



RM22TA31
RM22TA33



RM17TE00
RM35TF30



RM17UB310
RM35UB330
RM35UB3N30



RM35TM50MW
RM35TM250MW

<ul style="list-style-type: none"> Phase sequence Phase loss Undervoltage 	<ul style="list-style-type: none"> Phase sequence Phase loss Asymmetry 	<ul style="list-style-type: none"> Phase sequence Phase loss Asymmetry 	<ul style="list-style-type: none"> Phase sequence Phase loss Asymmetry Overvoltage and undervoltage 	<ul style="list-style-type: none"> Overvoltage and undervoltage between phases Overvoltage and undervoltage between phases and neutral Absence of neutral/phase 	<ul style="list-style-type: none"> Phase sequence Phase loss Motor temperature 	
208...480 V ~	<ul style="list-style-type: none"> 200...240 V ~ 380...480 V ~ 	208...480 V ~	<ul style="list-style-type: none"> 200...240 V ~ 380...480 V ~ 	<ul style="list-style-type: none"> 208...480 V ~ 220...480 V ~ 	<ul style="list-style-type: none"> 220...480 V ~ 208...480 V ~ 120...277 V ~ 	<ul style="list-style-type: none"> 208...480 V ~ Motor temperature: PTC probe resistance 15 Ω to 3100 Ω
1 CO 5A	2 CO 8A	1 CO 5A	2 CO 8A	1 or 2 CO 5A	1 CO or 2 CO 5A	2 NO 5A
Self-powered						24-240 V ~
0.1...10 s	–	0.1...10 s	0.1...30 s	0.1...10 s	0.3...30 s	–
17.5/0.69	22.5/0.885	17.5/0.69	22.5/0.885	17.5/0.69 or 35/1.377	17.5/0.69 or 35/1.377	35/1.377

- A
- B
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- E
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- H
- I

Harmony Control relays

- A
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Type	Modular relay		
	 RM17UAS15315M	 RM17UAS14 RM17UAS16 RM17UAS15	 RM35UA11MW RM35UA12MW RM35UA13MW
Application	1-phase voltage control		
Functions	Undervoltage (without memory)	Overvoltage or undervoltage (with/without memory)	
Values controlled	220 V ~	<ul style="list-style-type: none"> ■ 9...15 V ~ ■ 20...80 V ~ ■ 65...260 V ~ 	<ul style="list-style-type: none"> ■ 0.05...5 V ~ ■ 1...100 V ~ ■ 15...600 V ~
Output contact rating	1 CO 5A	1 CO 5A	2 CO 5A
Supply voltage	Self-powered	Self-powered	24...240 V ~
Time delay	3...15 min	0.1...10 s	0.3...30 s
Size (mm/in.)	17.5/0.69	17.5/0.69	35/1.377

Selection guide Harmony Control relays

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RM22UA21MR
RM22UA22MR
RM22UA23MR



RM22UA31MR
RM22UA32MR
RM22UA33MR
RM22UA33MT



RM17UBE16
RM17UBE15



RM22UB34

Overvoltage (without memory)	<ul style="list-style-type: none"> ■ Overvoltage (with/without memory) ■ Undervoltage (with/without memory) ■ Overvoltage and undervoltage in window mode (with/without memory) 	Overvoltage and undervoltage in window mode (without memory)	
<ul style="list-style-type: none"> ■ 0.05...5 V \sim ■ 1...100 V \sim ■ 15...500 V \sim 	<ul style="list-style-type: none"> ■ 0.05...5 V \sim ■ 1...100 V \sim ■ 15...500 V \sim 	<ul style="list-style-type: none"> ■ 20...80 V \sim ■ 65...260 V \sim 	80...300 V \sim
2 CO 8 A	2 CO 8 A	1 CO 5 A	2 CO 8 A
24...240 V \sim	<ul style="list-style-type: none"> ■ 24...240 V \sim ■ 380...415 V \sim 	Self-powered	110...240 V \sim
–	0.1...30 s	0.1...10 s	0.1...30 s
22.5/0.885	22.5/0.885	17.5/0.69	22.5/0.885

Harmony Control relays

- A
- B
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- H
- I

Type	Modular relay	
	 RM17JC00MW	 RM22JA21MR
Application	1-phase current control	
Functions	Integrated current transformer Overcurrent (without memory)	No integrated current transformer Overcurrent (without memory)
Values controlled	2...20 A	4 mA...1 A
Output contact rating	1 CO 5 A	2 CO 8 A
Supply voltage	24...240 V \sphericalangle	24...240 V \sphericalangle
Time delay	-	-
Size (mm/in.)	17.5/0.69	22.5/0.885

A

B

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RM35JA31MW
RM35JA32MW



RM22JA31MR
RM35JA32MR
RM35JA32MT

- Overcurrent (with/without memory)
- Undercurrent (with/without memory)

- Overcurrent (with/without memory)
- Undercurrent (with/without memory)
- Overcurrent and undercurrent in window mode (with/without memory)

- 2...500 mA
- 0.15...15 A

- 4 mA...1 A
- 150 mA...15 A

2 CO 5 A

2 CO 8 A

24...240 V ~

- 24...240 V ~
- 380...415 V ~

- Inhibition time delay upon startup 1...20 s
- Time delay 0.3...30 s

0.1...30 s

35/1.377

22.5/0.885, 35/1.377

Harmony Control relays

A

Type	Modular relay			
	 <p>RM22LG11MR RM22LG11MT</p>	 <p>RM35LM33MW</p>	 <p>RM22LA32MR</p>	 <p>RM35LV14MW</p>

B

C

Application	Level control			
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D

Functions	By resistive probes			By discrete sensor
	<ul style="list-style-type: none"> ■ Level 1/Level 2 ■ Fill operation ■ Empty operation ■ Standard sensitivity 	<ul style="list-style-type: none"> ■ Level 1/Level 2 ■ Fill operation ■ Empty operation ■ Low sensitivity ■ Standard sensitivity ■ High sensitivity 	<ul style="list-style-type: none"> ■ Level 1/Level 2 ■ Fill operation ■ Empty operation ■ Low sensitivity ■ Standard sensitivity ■ High sensitivity 	<ul style="list-style-type: none"> ■ Empty or fill ■ Input for discrete sensor AON: Contact/PNP/NPN

E

Values controlled	<ul style="list-style-type: none"> ■ 5...100 kΩ 	<ul style="list-style-type: none"> ■ 0.25...5 kΩ ■ 5...100 kΩ ■ 0.05...1 MΩ 	<ul style="list-style-type: none"> ■ 0.25...5 kΩ ■ 5...100 kΩ ■ 0.05...1 MΩ 	–
-------------------	----------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------	---

F

Output contact rating	1 CO 8A	2 CO 5A	2 CO 8A	1 CO 5A
-----------------------	---------	---------	---------	---------

Supply voltage	<ul style="list-style-type: none"> ■ 24...240 V ~ ■ 380...415 V ~ 	24...240 V ~	24...240 V ~	24...240 V ~
----------------	-------------------------------------------------------------------------------------------	--------------	--------------	--------------

Time delay	–	0.1...5 s	0.1...30 s	0.1...5 s
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Size (mm/in.)	22.5/0.885	35/1.377	22.5/0.885	35/1.377
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G

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RM17TU00



RM22TU21
RM22TU23



RM17TA00



RM22TA31
RM22TA33



RM17TE00
RM35TF30

Pump control	Frequency control	Speed control	Temperature control for elevator machine rooms and 3-phase supplies	
<p>3-phase and 1-phase</p> <ul style="list-style-type: none"> Overcurrent and undercurrent Phase sequence on 3-phase supply Phase loss on 3-phase supply 	<p>Over-frequency and under-frequency (with/without memory)</p>	<p>Over or under operating rate/speed (with/without memory)</p>	<ul style="list-style-type: none"> Elevator Machine room temperature Over temperature and under temperature 	<ul style="list-style-type: none"> Elevator Machine room temperature Over temperature and under temperature Phase loss and phase sequence
<ul style="list-style-type: none"> Current: 1...10 A 3-phase 208...480 V ~ 1-phase 230 V ~ 	<ul style="list-style-type: none"> Mains supply: 50 or 60 Hz High threshold: -2...+10 Hz Low threshold: -10...+2 Hz 	<p>Time controlled between pulses:</p> <ul style="list-style-type: none"> 0.05...0.5 s, 0.1...1 s, 0.5...5 s, 1...10 s 0.1...1 min, 0.5...5 min, 1...10 min 	<p>Temperature:</p> <ul style="list-style-type: none"> Low threshold: -1...11°C High threshold: 34...46°C 	<p>Temperature:</p> <ul style="list-style-type: none"> Low threshold: -1...11°C High threshold: 34...46°C 3-phase supplies: 208...480 V ~
1 CO 5A	2 CO 5A	1 CO 5A	1 CO 5A or 2 NO 5A	2 NO 5A
<ul style="list-style-type: none"> 208...480 V ~, 3-phase 230 V ~, 1-phase 	120...277 V ~	24...240 V ~	24...240 V ~	24...240 V ~
<ul style="list-style-type: none"> Inhibition time delay upon startup 1...60 s Time delay 0.1...10 s 	0.1...10 s	Inhibition time delay upon startup 0.6...60 s	1...10 s	1...10 s
35/1.377	35/1.377	35/1.377	35/1.377	35/1.377



Learn more about
Harmony
Control Relays
range here



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Catalogue

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QR code

If you need more details about product references and availability, please check your local Schneider Electric contact
<https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>

General overview

Harmony Timer Relays

A

Near Field Communication and conventional Timer Relays

B



C

Harmony Timer are timing relays designed to time events in industrial automation systems by closing and opening contacts before, during, or after a set time period. They are designed for hard-wired logic automated systems to complement the functions of industrial programmable logic controllers (PLCs).

D

They are suitable for a wide range of applications:

- Machines: single machine, and industrial automation and processes
- Buildings: lighting control, access control door locks, roller shutters
- Water segment: pumping and irrigation systems
- HVAC: fans and centralized water systems.

Depending on the product model, these relays support multiple time ranges:

- Modular DIN rail mounted timing relays

E

The Harmony Timer relays also feature:

- Wide power supply range from 24 to 240 V \approx
- Single or multi timing ranges from 0.02 s to 999 hrs
- Screw or spring connection terminals
- Relay or solid-state output
- Conformity to IEC 61812-1 and EN 61812-1 standards
- UL, CSA, GL, RCM, EAC, CCC, and China ROHS compliance
- Easy to set up with wiring diagrams on the side of the product.

- Miniature plug-in timing relays

- Panel mounted/plug-in timing relays



RE17



RENF



RE22



REXL



RE48A

F

G

Harmony Timer Relays

- Innovative, ergonomic and configurable offer with single or multifunction types

H

I



Harmony RE22 Timing Relays

Modular relays with unique features

- Innovative: dial pointer LED indicator and diagnostic button to assist setup and troubleshooting
- Compact and reliable
- Energy efficient: simple to implement, operate, and maintain
- Compliance with standards and certifications
- QR code embedded in instruction sheet for easy setup.



> A complete range of reliable and flexible offers

Harmony NFC Timing Relays

The NFC timing relay is designed to time events in industrial automation systems by closing or opening contacts before, during, or after a set timing period.

The mobile app, Zelio NFC created for NFC timing relay is Android enabled and can be downloaded on the phone from Google Play.

Simplify product selection

- One product reference
- 28 timing functions
- 2 outputs
- Wide range of voltage supplied (24...240 V $\overline{\text{---}}$ / \sim).

Achieve unprecedented accuracy

- Reduce error margin from 10% to 0.2%
- Timing can be set by hour, minute, second, or millisecond.

Diagnose your relay

- Read relay status
- Overwrite the output
- Manage relays without power.

Count on superior security

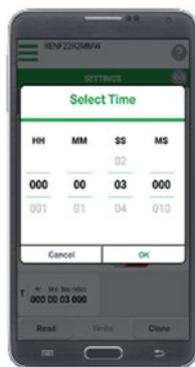
- Four-digit password protection without power.

Save valuable time

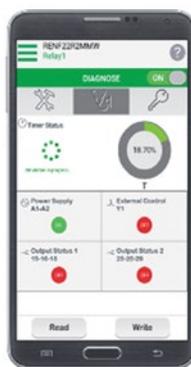
- Clone settings
- Store settings
- Share settings through SMS



Select Function



Select Time



Diagnose



Security setting

NFC Timing Relay:

As simple as

- 1 Install
- 2 Open app
- 3 Set parameters



> World's first industrial NFC timing relay

Harmony Timer Relays

- A
- B
- C
- D
- E
- F
- G
- H
- I

Type	Modular and DIN rail mounted			
	 RE17L... <small>Screw type</small>	 RE17L...S <small>Spring type</small>	 RE17R... <small>Screw type</small>	 RE17R...S <small>Spring type</small>
Application	These timing relays enable simple automation cycles to be set up using wired logic. They can also be used to complement the functions of PLCs.			
Output	Solid state Timing relays with solid state output reduce the amount of wiring required (wired in series). The durability of these timing relays is independent of the number of operating cycles.		Relay Relay outputs provide complete isolation between the supply circuit and the output. It is possible to have several output circuits.	
Connection	<small>Screw type</small>	<small>Spring type</small>	<small>Screw type</small>	<small>Spring type</small>
Time ranges	<ul style="list-style-type: none"> ■ 7 ranges: <input type="checkbox"/> 1 s <input type="checkbox"/> 10 s <input type="checkbox"/> 1 min <input type="checkbox"/> 10 min <input type="checkbox"/> 1 h <input type="checkbox"/> 10 h <input type="checkbox"/> 100 h 		<p>Depending on model:</p> <ul style="list-style-type: none"> ■ 6 ranges: <input type="checkbox"/> 1 s <input type="checkbox"/> 10 s <input type="checkbox"/> 1 min <input type="checkbox"/> 10 min <input type="checkbox"/> 1 h <input type="checkbox"/> 10 h ■ 7 ranges: <input type="checkbox"/> 1 s <input type="checkbox"/> 10 s <input type="checkbox"/> 1 min <input type="checkbox"/> 10 min <input type="checkbox"/> 1 h <input type="checkbox"/> 10 h <input type="checkbox"/> 100 h 	



A

B

C

D

E

F

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RENF



RE22



REXL



RE48A

Screw type

0.1 s to 999 h

Depending on model:

■ 7 ranges:

- 1 s
- 10 s
- 1 min
- 10 min
- 1 h
- 10 h
- 100 h

■ 7 ranges:

- 1 s
- 3 s
- 10 s
- 30 s
- 100 s
- 300 s
- 10 min

■ 7 ranges:

- 0.5 s
- 1 s
- 3 s
- 10 s
- 30 s
- 100 s
- 300 s

■ 1 range:

- 30 s

■ 10 ranges:

- 1 s
- 3 s
- 10 s
- 30 s
- 100 s
- 300 s
- 30 min
- 300 min
- 30 h
- 300 h

■ 7 ranges:

- 0.1 s...1 s
- 1 s...10 s
- 0.1 min...1 min
- 1 min...10 min
- 0.1 h...1 h
- 1 h...10 h
- 10 h...100 h

■ 14 ranges:

- 1.2 s
- 3 s
- 12 s
- 30 s
- 120 s
- 300 s
- 12 min
- 30 min
- 120 min
- 300 min
- 12 h
- 30 h
- 120 h
- 300 h



Learn more about
Harmony
Timer Relays
range here



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General overview

Harmony Electromechanical Relays

A

Interface, miniature, and power electromechanical relays

B



C

Harmony relays offer interface, miniature, universal, and power electromechanical relays, from 1 CO to 4 CO contacts, up to 30 A. The electromechanical relays help to reduce the size of enclosures and at the same time increase machine reliability.

Harmony Electromechanical Relays

- Used to multiply the number of input and output contacts, or for logic processing control

D

RSL relays for compactness

Flexible offer

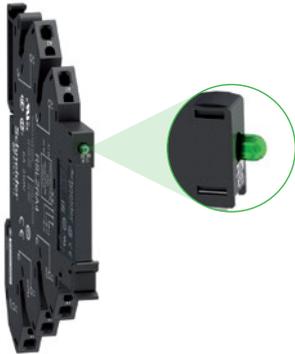
- Available as a single-referenced complete product (relay and socket) or customer-assembled product
- Wide choice of sockets ranging from 12 to 230 V ~
- Standard and low level contact types.

Enhanced performance

- Sockets with integrated reverse polarity protection circuit
- Relays for high breaking capacity or low-level current application requirements
- Power-on and Relay status LED indicator.

Simple installation and cabling

- Locking/unlocking lever for removing and replacing the relay in the socket
- Simple DIN rail mounting and commoning link accessory
- Choice of screw connector or spring terminal connection for sockets.



LED indicator for RSL relay status

F

G

RSL relays are compact modular relays conforming to IEC/EN 61810-1, UL508, CSA C22.2 No. 14, and EAC international standards.



Screw connector



Spring terminal

H



Learn more about Harmony Electromechanical Relays range here



Offer



Catalogue

Scan or click on QR code

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



Harmony Electromechanical Relays

RXG relays for reliability

Complete offer

RXG relays offer a broad range of coil voltages, from 6 V to 110 V --- and 24 V to 230 V \sim . The relays are available with/without lockable test button, LED, and clear cover.

Easy to mount and use

These are the latest relays with a single-step lockable test button. The Faston pin terminal mounts quickly and securely. The slim 16 mm/0.629 in. socket for 2 CO saves panel space.

Expandable relays

RXG relays can be expanded with protection modules such as diode, diode with LED, varistor with LED, and RC circuit.



> Latest interface relay with easy testing function



Single-step lockable test button

RXM relays for automation control

Easy to select

- Wider choice of contacts (2, 3, and 4 CO)
- Broad range of control circuit voltages and different socket types.

Convenient to use

- One-step lockable test button
- Mechanical indicator for contact status
- "Power On" LED for readiness.

Simple to install

- 64% less wiring time with Push-in Sockets (no screwdriver required)
- Sockets for both DIN rail and panel mounting, time-saving bus jumper
- Direct mounting with DIN rail or flange adapter.

Designed to perform

- Eco-design with RoHS and REACH
- Flexible add-on protection modules
- Push-in Socket with 223.75 Newton max pull out force, reliable in vibration environment.

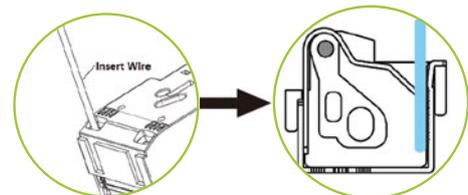
RXM industrial relays bring features for easy and improved control of simple and complex automation systems.



> Miniature in size and powerful in performance



LED indicator for relay status



Push-in terminal: insert without tool

Note: The Zelio Relays range name has been changed in 2020 to Harmony Relays. As the timeline for each range is different, during the transition period there will be both Zelio and Harmony ranges shown on different product datasheets and packaging.

Harmony Electromechanical Relays

A

Type	Plug-in relays
	 <p>RXG●●●● [1]</p> <p>Interface relays</p>

B

Number and type of contacts/conventional thermal current (Ith on NO contact)	<ul style="list-style-type: none"> ■ 1 CO/10 A ■ 2 CO/5 A
------------------------------------------------------------------------------	-----------------------------------------------------------------------------------

C

Control circuit voltage	<p>~ 24...230 V</p> <p>— 6...110 V</p>
-------------------------	----------------------------------------

Pin type	Flat (Faston type)
----------	--------------------

Operational voltage	Up to 250 V ~
---------------------	---------------

D

Durability (operating cycles per hour)	
Electrical, resistive load	100,000
Mechanical, no-load	<ul style="list-style-type: none"> ■ 10,000,000 for AC coil ■ 10,000,000 for DC coil

Functions	
LED	Yes (depending on version)
Mechanical indicator	Yes (depending on version)
Test button	Yes, lockable (depending on version)
Contact type	Standard

E

Accessories	
Mounting adapters for DIN rail	No
Mounting adapters with fixing lugs	No

F

Type of associated	Sockets					
						
	RGZE1S35M	RGZE1S48M	RGZE05P	RGZE08P	RGZE05E	RGZE08E

G

Contact terminal arrangements	Separate	Mixed
-------------------------------	----------	-------

Connection	Screw connector	Push-in terminals	Screw clamp terminals
------------	-----------------	-------------------	-----------------------

H

Accessories			
Protection modules	Yes	No	
Timer module	No		
Maintaining clamps	Yes (plastic, integrated)		
Socket identification legend	Yes	No	
Bus jumper	Yes	Yes, 2-pole	No

I

Conventional thermal current (Ith)	10 A for 1 CO	5 A for 2 CO	10 A	5 A	10 A	5 A
------------------------------------	---------------	--------------	------	-----	------	-----

[1] Pre-assembled interface relays RSL1PV●● and RSL1PR●● (standard type relay + socket), RSB (relay + socket + clamp + protection module + label), and RXG (relay + socket + protection module) are also available.

[2] When using relay RSB1A160●● with socket RSZE1S48M, terminals must be linked.



Harmony Electromechanical Relays

	
<p>RSL1●B4●D^[1]</p>	<p>RSB●●●●●●●^[1]</p>
<p>Slim interface relays</p>	<p>Interface relays</p>

<p>1 CO/6A</p>	<ul style="list-style-type: none"> ■ 1 CO/16 A ■ 1 CO/12 A ■ 2 CO/8 A
<p>– 12...60 V</p>	<p>24...240 V 6...110 V</p>
<p>Flat (PCB type, reinforced)</p>	<p>Flat (PCB type)</p>
<p>Up to 400 V ~/300 V ---</p>	
<p>60,000 10,000,000</p>	<p>100,000 30,000,000</p>
<p>No No No</p>	<p>Yes (with protection modules)</p>
<p>Standard and low level</p>	<p>Standard</p>

Sockets with LED and protection circuit		Sockets without LED			
					
<p>RSLZV●●</p>	<p>RSLZR●●</p>	<p>RSZE1S35M</p>	<p>RSZE1S48M</p>	<p>RSZE05P</p>	<p>RSZE08P</p>

<p>Separate</p>							
<p>Screw connector</p>		<p>Spring terminals</p>		<p>Screw connector</p>		<p>Push-in terminals</p>	
<p>No</p>	<p>No</p>	<p>Yes</p>	<p>Yes</p>				
<p>No</p>	<p>No</p>	<p>No</p>	<p>No</p>				
<p>No</p>	<p>No</p>	<p>Yes</p>	<p>Yes (plastic, integrated)</p>				
<p>Yes</p>	<p>Yes</p>	<p>Yes</p>	<p>Yes</p>				
<p>Yes, 20-pole</p>		<p>Yes</p>	<p>Yes, 2-pole</p>				
<p>6A</p>	<p>6A</p>	<p>12A</p>	<p>(2 terminals) x 10 A^[1]</p>	<p>12A</p>	<p>10 A</p>		

- A
- B
- C
- D
- E
- F
- G
- H
- I

Harmony Electromechanical Relays

A

Type Plug-in relays



RXM●●●●●● [1]

Miniature relays

B

Number and type of contacts/conventional thermal current (Ith on NO contact)

	<ul style="list-style-type: none"> ■ 2 CO/12 A ■ 3 CO/10 A ■ 4 CO/6 A ■ 4 CO/3 A (low level)
--	----------------------------------------------------------------------------------------------------------------------------------------

C

Control circuit voltage

~	24...240 V
≡	12...220 V

Pin type

	Flat (Faston type)
--	--------------------

Operational voltage

	Up to 250 V ~
--	---------------

D

Durability (operating cycles per hour)

Electrical, resistive load	100,000
Mechanical, no-load	10,000,000

Functions

LED	Yes (depending on version)
Mechanical indicator	Yes
Test button	Yes, lockable
Contact type	Standard and low level

E

Accessories

Mounting adapters for DIN rail	Yes
Mounting adapters with fixing lugs	Yes

F

Type of associated Sockets without LED



RXZE2M114M



RXZE2M114



RXZE2S●●●M



RXZE14P

G

Contact terminal arrangements

	Mixed	Separate
--	-------	----------

Connection

	Screw connector	Screw clamp terminals	Screw connector	Push-in terminals
--	-----------------	-----------------------	-----------------	-------------------

H

Accessories

Protection modules	Yes	Yes	Yes
Timer module	No	No	No
Maintaining clamps	Yes	Yes	Yes (plastic, integrated)
Socket identification legend	Yes	No	Yes
Bus jumper	No	Yes, 2-pole (Ith = 5 A)	Yes, 2-pole

I

Conventional thermal current (Ith)

	10 A	10 A	<ul style="list-style-type: none"> ■ 12 A for 2 CO [2] ■ 6 A for 4 CO 	<ul style="list-style-type: none"> ■ 12 A for 2 CO ■ 6 A for 4 CO
--	------	------	-----------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------

[1] Pre-assembled miniature relays RXM (relay + socket + clamp + label) are also available.

[2] Except for sockets RXZE2S11●M: 10 A.

[3] To be used with specified sockets only.



Harmony Electromechanical Relays



782X●XH●●●●^[3]

Hermetically sealed relays

- 4 CO/5 A
- 4 CO/3 A (low level)
- 2 CO/5 A

6...240 V
6...110 V

Flat (Plug-in type)^[3]

Up to 264 V ~/121 V ---

100,000
10,000,000

No
No
No
Standard and low level

No
No

Sockets



70-782E14-1



70-461-1



70-782EL14-1



70-378-1



70-379-1

Mixed

Separate

–

–

Screw connector

Screw clamp terminals

Screw connector

Solder lug

PCB pins

Yes

No

Yes

No

No

No

No

No

No

No

Yes

Yes

Yes

Yes

Yes

Yes

No

Yes

–

–

–

–

Yes, 2-pole

–

–

10 A

10 A

10 A

5 A

10 A

A

B

C

D

E

F

G

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I

Harmony Electromechanical Relays

A

Type	Plug-in socket mount	Panel/DIN rail mount with flat (Faston type) terminals	Panel/DIN rail mount with screw terminals
	 <p>725●XX●BM4L-● Power relays</p>	 <p>725●XX●BC3ML-●</p>	 <p>725●XX●SC3ML-●</p>

B

C

Number and type of contacts/conventional thermal current (Ith on NO contact)	
	<ul style="list-style-type: none"> ■ 1 NO/30 A ■ 2 NO/25 A

D

Control circuit voltage	
~	24...240 V
---	12...24 V
Pin type	
	Flat (Faston type) Screw type

E

Operational voltage	
	Up to 264 V ~/26.4 V ---
Durability (operating cycles per hour)	
Electrical, resistive load	100,000
Mechanical, no-load	5,000,000
Functions	
LED	Yes
Mechanical indicator	Yes No
Test button	Yes, lockable Yes, non-lockable
Contact type	Standard

F

Accessories	
Mounting adapters for DIN rail	No - -
Mounting adapters with fixing lugs	No - -

G

Type of associated	Sockets
	 <p>70-725-1</p>

H

Contact terminal arrangements	
	Separate -
Connection	
	Screw connector -

I

Accessories	
Protection modules	Yes -
Timer module	No -
Maintaining clamps	Yes -
Socket identification legend	- -
Bus jumper	No -
Conventional thermal current (Ith)	
	30 A -

[1] 100,000 for RPM1 and RPM2; 60,000 for RPM3 and RPM4.

[2] 30 A when mounted with 13 mm (0.51 in.) gap between two relays and 25 A when mounted side-by-side without a gap.



Harmony Electromechanical Relays

Plug-in relays			Relays with clamp fixing	
 <p>RPM●●●● Power relays</p>		 <p>RUM●●●● Universal relays</p>		 <p>RPF●●●● Power relays</p>
<ul style="list-style-type: none"> ■ 1 CO/15 A ■ 2 CO/15 A ■ 3 CO/15 A ■ 4 CO/15 A 	<ul style="list-style-type: none"> ■ 2 CO/10 A ■ 3 CO/10 A 	<ul style="list-style-type: none"> ■ 2 CO/10 A ■ 3 CO/10 A 	<ul style="list-style-type: none"> ■ 2 NO/30 A^[2] ■ 2 CO/30 A^[2] 	
12...110 V	24...230 V 12...220 V		12...110 V	12...24 V
Flat (Faston type)	Cylindrical		Flat (Faston type)	Flat (Faston type)
Up to 250 V \sim	Up to 250 V \sim		Up to 250 V \sim	Up to 250 V \sim
100,000 ^[1] 10,000,000	100,000 5,000,000		100,000 5,000,000	
Yes (depending on version) Yes Yes, lockable Standard	Yes (depending on version) Yes Yes, lockable Low level (depending on version)		Standard	–
Yes Yes	No No			– –
Sockets without LED				
 <p>RPZF●</p>		 <p>RUZC●M</p>	 <p>RUZSC●M</p>	 <p>RUZSF3M</p>
Mixed	Mixed	Separate		–
Screw connector	Screw connector			–
Yes Yes (for 3-pole and 4-pole) Yes (on socket RPZF1) Yes No	Yes Yes Yes Yes No		Yes, 2-pole (I _{th} = 5 A)	– – – – –
16 A	12 A			–

Note: The Zelio Relays range name has been changed in 2020 to Harmony Relays. As the timeline for each range is different, during the transition period there will be both Zelio and Harmony ranges shown on different product datasheets and packaging.



Harmony Solid State Relays

A

Slim interfaces, Modular DIN rail and Panel mount solid state relays

B



C



D

The Harmony SSR series offers slim interface (SSL), modular DIN rail (SSD, SSM) and panel mount (SSP) solid state relays that provide complete, compact, and innovative solutions for a wide variety of applications with interfacing control and load switching.

E

They are the ideal solution for packaging, plastic molding, textile, and heating furnace applications.

F

Harmony Relays - Solid State Relays

- Choose long life and silent operation with Harmony SSRs

<p>Maintenance free</p> <p>fully electronic, unlimited life span</p>	<p>Silent and reliable switching</p> <p>no moving parts, noiseless switching</p>
<p>High switching frequency</p> <p>allows precise and quick control</p>	<p>Sustainability in harsh environment</p> <p>resistance to shock, vibration, and contamination</p>

G

H

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Harmony Solid State Relays

SSL solid state slim interface relays

Choose a slim interfacing solution with SSL relays

Slim relay-socket solution

- Complete range of control input and load output configurations for both AC and DC switching applications
- Compact solution with 6 mm/0.236 in. width, allows customers to choose the combination of relays and associated sockets from the wide range available.

Pre-assembled SSL relays^[*]

Control input voltage	Load output voltage
≡ 4...12 V	<ul style="list-style-type: none"> ■ ≡ 1...24 V ■ ≡ 1...48 V ■ ~ 24...250 V
≡ 16...30 V	<ul style="list-style-type: none"> ■ ≡ 1...24 V ■ ≡ 1...48 V ■ ~ 24...250 V

[*] SSL relays + SSLZ sockets.

Enhanced performance in any situation

- Socket with integrated reverse polarity protection circuit and control input/relay status LED indicator
- IP67 protection and fully encapsulated.

Simplified installation and mounting

- Locking/unlocking lever for replacing relay from the socket
- Simple mounting on DIN rail
- Choice of screw connector and spring terminal connection for sockets.



> SSL (1-phase) + SSLZ (socket) = Slim plug-in interface solution



SSL slim interface relay mounted on SSLZ socket



LED indicator for relay status



Screw connector



Spring terminal

General overview

Harmony Solid State Relays

SSD solid state DIN rail mount relays

A

Choose reliability and flexibility with innovative DIN rail mount SSD relays

Performance

- High I²T (up to 8320 A²S) to facilitate the use of circuit breakers instead of fuses, allowing Type 1 coordination protection (as per IEC 60947-4-3)
- High current rating (up to 35 A for 22.5 mm models, and up to 60 A for 45 mm models) at a compact size, optimizing the size of your enclosure
- Surge protection from applications with built-in transient overvoltage protection.

B

Flexibility

- Relay and Contactor configuration to suit your wiring preferences
- Telescopic screw terminal options available to facilitate the use of lug terminals.

D

Simplified selection and installation

- Integrated heat sink to eliminate the need for thermal calculation
- Spring and screw input connectors option is available for simplified wiring.

E

Wide range of standards and certifications

- Complies with IEC 61373 for railway and rolling stock application
- Electromagnetic compatibility complying to IEC 60947-4-3 standard
- Conforms to a wide range of internationally recognized standards and certification.

F

G

SSD relays

Control input voltage	Load output voltage
⎓ 4...32 V	■ ⎓ 1...150 V
⎓ 90...280 V	■ ~ 48...600 V
	■ ~ 48...600 V

H

I



Relay configuration



Pluggable Spring input connectors

Pluggable Screw input connectors

22.5mm/0.886 in.



SSD1: 20, 30 and 35 A single-phase SSR

45mm/1.772 in.



SSD1: 45 and 60 A single-phase SSR

Note: The SSD1 range references will be substituting the SSM1 range references for 22.5 mm/0.886 in. width (20 A, 30 A) and 45 mm/1.772 in. width (45 A, 55 A).



> The new generation solid state relays



Harmony Solid State Relays

SSM solid state modular DIN rail mount relays

Choose modularity with DIN rail mount SSM relays

Ready to use "Plug and play"

- Modular design of IP20 housing and built-in heat sink for optimized operating conditions
- Easy mounting on standard 35 mm/1.378 in. DIN rail with a secure mounting latch.

Compact design

- Requires less panel space due to slim width and thus reduces the size of your enclosures
- Optimized modular design available in various sizes (11, 18, 22.5, 45 and 90 mm width) with load output current of 6, 12, 20, 30, 45, and 55 A.

SSM1 relays		SSM2 relays	
Control input voltage	Load output voltage	Control input voltage	Load output voltage
≡ 4...32 V	■ ≡ 1...48 V ■ ≡ 24...100 V	≡ 4...32 V	■ ~ 24...280 V ■ ~ 48...600 V
≡ 4...32 V	■ ~ 24...280 V ■ ~ 48...600 V	-	-
■ ~ 18...36 V ■ ~ 90...140 V ■ ~ 200...265 V	■ ~ 24...280 V ■ ~ 48...600 V	-	-

SSM1 relays	
Control input voltage	Load output voltage
≡ 4...32 V	■ ~ 24...280 V ■ ~ 48...660 V
≡ 3...32 V	~ 24...280 V
■ ~ 90...140 V ■ ~ 90...280 V	■ ~ 24...280 V ■ ~ 48...660 V

SSM3 relays	
Control input voltage	Load output voltage
≡ 4...32 V	~ 48...600 V
~ 90...140 V	~ 48...600 V
~ 180...280 V	~ 48...600 V

Enhanced modular solution

- Wide choice of relays with single-phase and three-phase options and current ratings from 6 A to 55 A
- Zero voltage switching for resistive loads and random switching for inductive loads
- UL and cUL approved including the general purpose and motor controller rating standards.

+ **> SSM1 (1-phase) / SSM2 (1-phase dual channel) / SSM3 (3-phase)**
= Plug & Play solution

11 mm/0.433 in.



SSM1: 6 A single-phase SSR

18 mm/0.709 in.



SSM2: 6 A dual channel, single-phase SSR

22.5 mm/0.886 in.



SSM1: 20 and 30 A single-phase SSR

45 mm/1.772 in.



SSM1: 45 and 55 A single-phase SSR

90 mm/3.543 in.



SSM3: 25 A three-phase SSR



General overview

Harmony Solid State Relays

SSP solid state panel mount relays

Choose a complete panel mount solution with SSP relays

Complete solution

- Single-phase and three-phase panel mount solid state relays with a range of heat sinks and accessories to meet application needs from 10 A to 125 A
- Easy product selection with simplified product nomenclature and direct heat sink selection available in product data sheets
- Wide choice of heat sinks with thermal resistance ratings of 0.2°C/W to 2.5°C/W.

SSP1 relays

Control input voltage	Load output voltage
≡ 3.5...32V	≡ 1...150V
≡ 3...32V	~ 24...300 V
≡ 4...32V	~ 48...660 V
~ 90...280V	■ ~ 24...300 V
	■ ~ 48...660 V

SSP1.S relays

Control input voltage	Load output voltage
≡ 3...32V	~ 24...300 V
≡ 4...32V	~ 48...660 V

SSP3 relays

Control input voltage	Load output voltage
≡ 4...32V	~ 48...530 V
■ ~ 18...36 V	~ 48...530 V
■ ~ 90...140 V	
■ ~ 180...280 V	

Simple, safe, and robust screw terminals

- Simple and easy wiring; accepts wires with different kinds of terminations (cable ends, fork lug, ring lug)
- Safe and fool-proof design with IP20 protection and integrated enclosure
- Robust self-aligned screw terminals with proven effectiveness in helping to prevent screw jams.

Innovative SSP1.S with smart diagnostics and test button

- Smart diagnostic features with built-in visual indicator and alarm output enables quick response to unexpected results and correct monitoring of SSR operation
- A test button for easy debugging, testing, and commissioning.

Simplified installation and mounting

- Product option with readily available factory-fit thermal pad
- Heat sink offers panel and DIN rail mounting options.

+ **> SSP1 (1-phase) / SSP3 (3-phase) + SSRH (Heat sinks)**
= Complete solution



SSP1: Single-phase panel mount SSR



SSP1.S: Single-phase panel mount SSR with smart diagnostic features



SSP3: Three-phase panel mount SSR

Harmony Solid State Relays

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Harmony Solid State Relays

Type	Slim interface SSR		Modular DIN rail SSR	
				
	Customer assembly (Relay and socket)	Pre-assembly (Relay with socket)		
Solid state Relay type	SSL ^{[1][2]}		SSD1 ^[3]	SSM1
Number of phase	1			
Type of mounting	Plug-in PCB pins with DIN rail mounted socket		DIN rail mounted	
Control input voltage	~	–	–	90...280 V
	–	–	–	<ul style="list-style-type: none"> ■ 18...36 V ■ 90...140 V ■ 200...265 V
	<ul style="list-style-type: none"> ■ 3...12 V ■ 15...30 V ■ 16...30 V 	<ul style="list-style-type: none"> ■ 4...12 V ■ 16...30 V 	<ul style="list-style-type: none"> ■ 4...32 V ■ 90...280 V 	4...32 V
Output load voltage	~	24...280 V	24...250 V	48...600 V
	–	–	–	<ul style="list-style-type: none"> ■ 24...280 V ■ 48...600 V
	<ul style="list-style-type: none"> ■ 1...24 V ■ 1...48 V 	<ul style="list-style-type: none"> ■ 1...24 V ■ 1...48 V 	1...150 V	<ul style="list-style-type: none"> ■ 1...60 V ■ 1...100 V
Output load current	~	2 A	–	–
	–	–	–	<ul style="list-style-type: none"> ■ 20, 35 A for 22.5 mm/0.886 in. ■ 40, 60 A for 45 mm/1.772 in.
	–	–	–	<ul style="list-style-type: none"> ■ 6 A for 12 mm/0.472 in. ■ 12 A for 18 mm/0.709 in.
	0.1, 3.5 A	–	–	<ul style="list-style-type: none"> ■ 20, 30 A for 22.5 mm/0.886 in. ■ 6 A for 12 mm/0.472 in. ■ 12 A for 18 mm/0.709 in.
Type of switching	Zero voltage	Yes	–	–
	Random	Yes	–	–
	DC	Yes	–	–
Cooling	–		Built-in heat sink	
Degree of protection	<ul style="list-style-type: none"> ■ IP67 (encapsulation) ■ IP20 (socket) 		IP20	
LED indication	Yes (on socket)		Yes	

[1] SSL slim relays and SSLZ sockets.

[2] Pre-assembled SSL slim relays (relay + socket).

[3] The SSD1 range references will be substituting the SSM1 range references for 22.5 mm/0.886 in. width (20 A, 30 A) and 45 mm/1.771 in. width (45 A, 55 A).



Selection guide Harmony Solid State Relays

				Panel mount SSR	
					
					
					
					
					
					
					
					

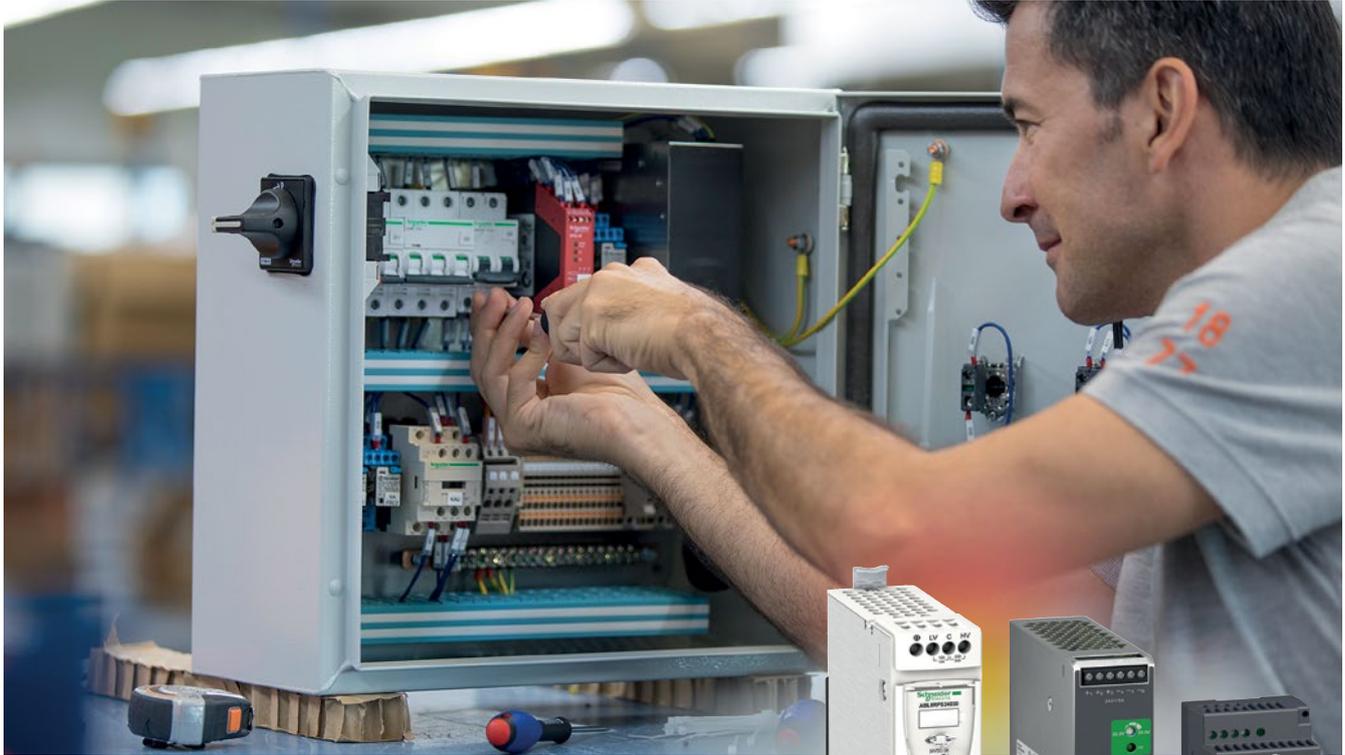
Modicon Power Supply

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B

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E

Regulated power supply for industrial use, rail mounting



F

The **Modicon** switch mode power supply offer is designed to provide the DC voltage necessary for the automation system equipment control circuits.

G

They are fully electronic with a regulated output voltage. The use of electronics makes it possible to significantly improve the performance of these power supplies, which offer

- Compact dimensions
- Integrated overload, short-circuit, overvoltage, and undervoltage protection
- Wide input voltage range
- High degree of output voltage stability
- Efficiency
- Diagnostics via LEDs on the front panel
- Remote diagnostics via relay contact with ABL8RP/WP Universal.

H

They deliver a stabilized DC output voltage that is precise to less than 3%, whatever the load from an AC line supply, within the following ranges:

- 100 to 240 V AC for phase-to-neutral (N-L1) or phase-to-phase (L1 – L2) connections for the ABLM Modular, ABLS Optimized and ABL8RPM universal types
- 100 to 500 V AC for phase-to-neutral (N-L1) or phase-to-phase (L1 – L2) connections for the ABL8RPS Universal types
- 380 to 500 V AC for 3-phase connections (L1-L2-L3) for the ABL8WP Universal types
- They comply with IEC standards and are certified to comply with the major certifications bureau standards. Power supplies with 24 V DC output and power output equal or lower than 90 W are also NEC Class 2 and Limited Power Source compliant
- The harmonic pollution is reduced to a minimum level across the entire Modicon power supply types, ensuring compliance with the requirements of standard IEC/EN 61000-3-2.

I

Modicon power supplies incorporate

- An output voltage adjustment potentiometer to help compensate for any line voltage drops in installations with long cable runs
- Direct mounting on 35 mm (1.37 in) omega rail.



Modicon ABLM Modular power supply



Modicon ABLM Modular power supply

Description

The ABLM Modular type meets the needs of simple automation systems with power ratings from 10 to 60 W and an output voltage of 5, 12 or 24 V DC.

- The shape and compact nature of the housing mean that it can be mounted directly on a panel, in a modular distribution panel or on a omega rail in a cabinet
- **Modicon** ABLM Modular power supply conform to the Overvoltage Category III and therefore can be directly connected to central distribution boards. In the event of an overload the power supply protection interrupts power; when the source of the overload has been corrected, the power supply reverts to its nominal state (automatic reset).

Modicon ABLS Optimized power supply



Modicon ABLS Optimized power supply

Description

The ABLS Optimized type offers competitive functionality for applications supplied with 12, 24 or 48 V DC and with power ratings from 50 W up to 480 W.

Modicon ABL8RP/WP Universal power supply



Modicon ABL8RP/WP Universal power supply

Description

The ABL8RP/WP Universal type covers power ratings from 72 to 960 W in 24 V DC and adapts to the majority of power distribution networks used throughout the world. The same power supply can thus be connected phase-to-neutral (N-L1) or phase-to-phase (2 or 3 phases) for line supplies ranging from 100 V AC to 500 V AC nominal.

The ABL8RP/WP Universal type offers:

- Diagnostic functions (local or remote)
- User choice of operating mode in the event of an overload (automatic or manual reset)
- Functional modules to help continuity of service, for protection against microbreaks or prolonged outages, for paralleling and redundancy functions and for discriminating protection against application overloads
- A power reserve (boost function) for absorbing the transient current peaks required by the application.

With ABL8RP/WP Universal power supplies, it is possible to meet the need for auxiliary voltage (5 to 15 V DC) using DC/DC converter modules.

Modicon Power Supply

A

Protective extra low voltage (PELV) and Safety extra low voltage (SELV)

- The Modicon power supplies can be used to supply protection extra low voltage (PELV) or safety extra low voltage (SELV) control circuits in compliance with standard IEC/EN 60364-4-41
- They have the following characteristics:
 - Double insulated between the input circuit (connected to the line supply) and the low voltage output circuit via an integrated isolation transformer
 - Internal circuitry limiting the output voltage to less than 60 V under single fault conditions.



B

C

Harmonic pollution (power factor)

- The current drawn by a power supply is not sinusoidal. This leads to the generation of harmonic currents that pollute the distribution network
- European standard IEC/EN 61000-3-2 limits the harmonic currents produced by power supplies
- This standard covers devices between 75 and 1000 W, drawing up to 16 A per phase, and connected directly to the public distribution network
- **Modicon** ABLU3, ABL8RP/WP Universal and ABL5 Optimized from 75 W power supplies conform to IEC/EN 61000-3-2 and can therefore be connected directly to public distribution networks
- Since ABLM Modular, ABL51A12062, ABL51A24021, and ABL51A24031 power supplies have power ratings that are less than 75 W, they are not subject to the requirements of standard IEC/EN 61000-3-2. They can therefore be connected directly to public distribution networks.



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Output characteristics & conditions of use

- The ambient temperature is a determining factor that limits the power an electronic power supply can deliver continuously
- If the temperature around the electronic components is too high, the integrated overtemperature protection could activate and/or the lifetime of the power supply may be significantly reduced
- Depending on product type, the upper nominal ambient temperature is 50 or 55°C (122 or 131°F) for a standard mounting position, at 230 V AC input voltage. Above this temperature with different input voltages, and/or with other mounting positions, derating is necessary up to a maximum temperature of 60 or 70°C (140 or 158°F)
- In most cases, there must be adequate convection and sufficient clearance around the products to assist cooling
- Derating is also necessary in case of altitudes greater than 2000 m (6561.6 ft)
- The derating curves are given in each product data sheet, available on our website and directly accessible via the QR code printed in front of the product (except on ABL8 products)
- It is considered good practice to select a power supply with a nominal output current at least 20% greater than required



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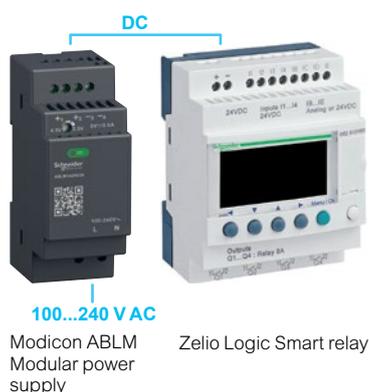
H

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Technical characteristics

Modicon Power Supply

ABLM Modular power supply



Modicon ABLM Modular power supply Zelio Logic Smart relay

Functions

The Modicon ABLM Modular are regulated power supplies designed to supply control circuits in industrial and building automation up to 60 W.

- Thanks to their modular housing, they can be installed either in enclosures ([Spacial and Thalassa](#)) or industrial panels by clipping on omega (DIN) rail
- Direct, fixed mounting on panel is also possible without additional parts thanks to the integrated mounting lugs
- Available with 18, 36 and 53 mm (0.70, 1.41, and 2.09 in) widths, ABLM modular power supplies are one of the most compact ranges on the market
- Modicon ABLM Modular power supply meet NEC Class 2 and LPS (Limited Power Source) requirements
- Modicon ABLM Modular power supply conform to the Overvoltage Category III and therefore can be directly connected to central distribution boards
- A QR code is printed on the front of the power supplies and gives a direct access to the latest technical documentation
- Modicon ABLM Modular power supply are the right choice for use with Zelio logic Smart relays.

Product certifications

- CE marking
- CB Scheme
- cULus Listed
- cURus Recognized
- RCM
- EAC

Conformity to standards

- IEC/EN 62368-1
- IEC/EN 61010-1
- UL/CSA 61010-1
- UL/CSA 61010-2-201

Main features

Nominal input voltage	100...240 V AC
Network system compatibility	TN, TT, IT
Nominal output voltage	5, 12 and 24 V DC
Operating temperature	-25°...+70° C (-13...158° F)
Operating altitudes	<ul style="list-style-type: none"> ■ 0...2000 m (6561.6 ft) ■ 0...5000 m (16404.2 ft) with Derating



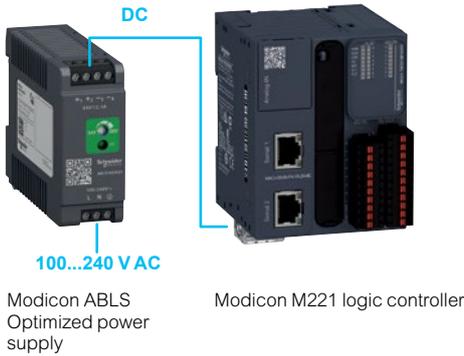
Description

- 1 Screw terminal for connection of the DC output voltage
- 2 Output voltage adjustment potentiometer (depending on models)
- 3 LED indicating presence of DC output voltage
- 4 QR code for access to the latest technical documentation
- 5 Screw terminal for connection of the AC input voltage
- 6 Spring clip for 35 mm (1.37 in) Ω rail
- 7 Retractable mounting lugs for panel mounting
- 8 2 fixing holes

Technical characteristics

Modicon Power Supply

ABLS Optimized power supply



Functions

The Modicon ABLS Optimized are regulated power supplies, designed to supply control circuits in industrial applications from 50 up to 480 W.

- They are available in 2 housing formats for a better adaptation to the enclosure:
 - compact housing 75 mm height (2.95 in)
 - or book housing 124 mm height (4.88 in)
- Available with a width from 27 mm (1.06 in), ABLS optimized power supplies are one of the slimmer ranges on the market
- The printed circuit board of the power supplies (book housing) has a conformal coating in order to resist to common dust and chemical pollutants
- Modicon ABLS Optimized power supply meet NEC Class 2 and LPS (Limited Power Source) requirements
- Up to 6 output terminals make wiring easier
- A QR code is printed on the front of power supply and gives a direct access to the latest technical documentation.

Modicon ABLS Optimized power supply are the right choice for use with Modicon M221/M241/M251 logic controllers and Modicon M262 logic/motion controllers.

Product certifications

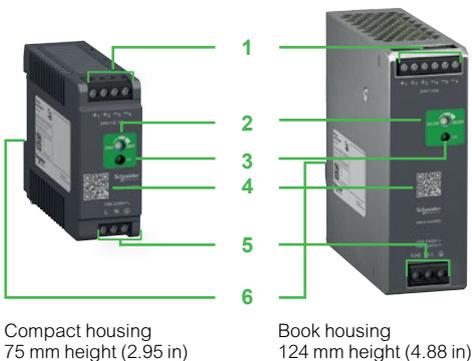
- CE marking
- CB Scheme
- cULus Listed
- cURus Recognized
- RCM
- EAC.

Conformity to standards

- IEC/EN 62368-1
- IEC/EN 61010-1, IEC/EN 61010-2-201 (except ABLS1A24050, ABLS1A24100, ABLS1A48025)
- UL/CSA 61010-1, UL/CSA 61010-2-201 (except ABLS1A24050, ABLS1A24100 and ABLS1A48025)
- UL 508/CSA C22.2 No. 107.1 (only for ABLS1A24050, ABLS1A24100 and ABLS1A48025).

Main features

Nominal input voltage	<ul style="list-style-type: none"> ■ 100...240 V AC ■ 140...340 V DC
Network system compatibility	TN, TT, IT
Nominal output voltage	12, 24 and 48 V DC
Operating temperature	-20°...+70° C (-4...158° F)



Description

- 1 Screw terminals for connection of the DC output voltage
- 2 Output voltage adjustment potentiometer (except on ABLM1A24038)
- 3 Output DC status LED (green)
- 4 QR code for access to the latest technical documentation
- 5 Screw terminals for connection of the input voltage (single-phase N-L1, phase-to-phase L1-L2)
- 6 Spring clip for 35 mm (1.37 in) rail



Modicon Power Supply

ABL8RP/WP Universal power supply

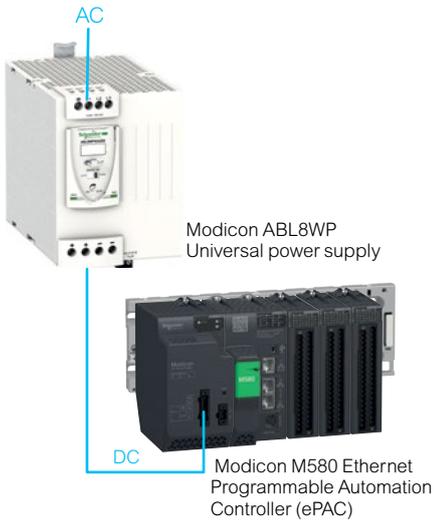
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Functions

The ABL8RP/ABL8WP Universal power supplies offer is designed to provide the DC voltage necessary for the control circuits of automation system equipment.

- Comprising six products, this range meets the needs encountered in industrial and commercial applications
- These compact electronic switch mode power supplies provide a quality of output current that is suitable for the loads supplied and compatible with the Modicon M340, Modicon M580, Modicon Premium, and Modicon Quantum ranges
- When used with additional function modules, they ensure continuity of service in the event of power outages. Clear guidelines are given on selecting the function modules and upstream protection devices that are often used with them to provide a comprehensive, usable solution
- ABL8RP/ABL8WP Universal power supplies must be connected in phase-to-neutral or phase-to-phase for ABL8RPS/8RPM, and in 3-phase for ABL8WPS. They deliver a voltage that is precise to within 3%, whatever the load and whatever the type of line supply, within the following ranges:
 - 85 to 132 V AC and 170 to 550 V AC for ABL8RPS
 - 85 to 132 V AC and 170 to 264 V AC for ABL8RPM
 - 340 to 550 V AC for ABL8WPS.

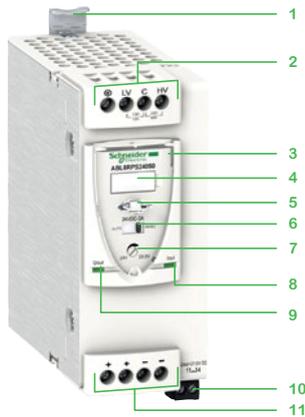
Their very wide input voltage range allows a considerable reduction of parts held in stock and offers a distinct advantage in terms of machine design.

- Conforming to IEC standards and UL and CSA certified, they are suitable for universal use
- ABL8RP/ABL8WP power supplies are all equipped with a harmonic filter, giving compliance with standard IEC/EN 61000-3-2 concerning harmonic pollution
- ABL8RP/ABL8WP Universal power supplies have protection devices to ensure optimum performance of the automation system. Their operating mode can be configured as required by the user:
 - Manual reset protection mode: Priority is given to the voltage so as to ensure the PLC logic states and nominal operation of the supplied actuators.
 - Automatic reset protection mode: Priority is given to the current to ensure continuity of service until the maintenance team arrives.
- Modicon ABL8RP/ABL8WP Universal power supplies also have a power reserve, allowing them to deliver a current of 1.5 In at regular intervals. This avoids the need to oversize the power supply if the device has a high inrush current to be able to maintain optimum performance of the automation system
- The diagnostics for the Modicon ABL8RP/ABL8WP Universal range of power supplies are available on the front of the device via LEDs (Uout and Iout) via a volt-free relay contact (PLC state)
- The products are equipped with an output voltage adjustment potentiometer in order to be able to compensate for any line voltage drops in installations with long cable runs.

These power supplies are designed for direct mounting on a 35 mm (1.37 in) rail.

Modicon Power Supply

ABL8RP/WP Universal power supply



Description

- 1 Spring clip for 35 mm (1.37 in) \lrcorner rail
- 2 4 mm² enclosed screw terminals for connection of the incoming AC voltage (single-phase, phase-to-phase, or 3-phase connection)
- 3 Protective glass flap
- 4 Clip-on marker tag
- 5 Locking catch for the glass flap (sealable)
- 6 Protection mode selector
- 7 Output voltage adjustment potentiometer
- 8 Output voltage status LED (green and red)
- 9 Output current status LED (green, red, and orange)
- 10 Screw terminals for connection of the diagnostic relay, except on **ABL8RPS24030**
- 11 4 mm² (10 mm² on **ABL8WPS24200**, **ABL8WPS24400** and **ABL8RPM24200**) enclosed screw terminals for connection of the DC output voltage

Note: Phaseo Universal power supplies shown in this document are identified as Modicon as they will undergo a future brand change. All other product documentation will reference Phaseo until the brand change occurs.



Learn more about
Modicon
Power Supply
range here



Offer



Catalogue

Scan or
click on
QR code

If you need more details about product references and availability, please check your local Schneider Electric contact
<https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>

Panorama of Modicon Power Supply range

Regulated power supply for industrial use, rail mounting



Voltage

Input Voltage	100...240 V AC									100...240 V AC, 140...340 V DC ^[1]	
Nominal output power	10 W	12 W	15 W	18 W	25 W	30 W	50 W	60 W	50 W	75 W	

Connection to world-wide line supplies

United States: 120 V (in phase-to-neutral) / 240 V (in phase-to-phase)	Single-phase (N-L1) or 2-phase (L1-L2) connection	Single-phase (N-L1) or 2-phase (L1-L2) connection
Europe: 230 V (in phase-to-neutral) / 400 V (in phase-to-phase)	Single-phase (N-L1) connection	Single-phase (N-L1) connection
United States: 277 V (in phase-to-neutral) / 480 V (in phase-to-phase)	-	-

Characteristics

Protection against overloads and short-circuits	Yes, with automatic restart after the source of overload/short-circuit has been corrected	Yes, with automatic restart after the source of overload/short-circuit has been corrected
Diagnostic relay	-	-
Certifications	CE marking CB Scheme cULus Listed cURus Recognized RCM EAC	CE marking CB Scheme cULus Listed cURus Recognized RCM EAC

Power supply type

Output voltage	5 V	-	-	-	ABLM1A05036	-	-	-	-	-	-
	12 V	-	ABLM1A12010	-	-	ABLM1A12021	-	ABLM1A12042	-	-	ABLS1A12062
	24 V	ABLM1A24004	-	ABLM1A24006	-	-	ABLM1A24012	-	ABLM1A24025	ABLS1A24021	ABLS1A24031
	48 V	-	-	-	-	-	-	-	-	-	-
Output rating	NEC Class 2, Limited Power Source									NEC Class 2, Limited Power Source (except ABLS1A12062)	
Compatible functional modules	-									Easy UPS control module DC-DC	

[1] Except ABLS1A24021 and ABLS1A24038.

Panorama of Modicon Power Supply range

Modicon ABL8RP/WP Universal power supply



				100...120 V AC and 200...500 V AC	100...120 V AC, 200...240 V AC	380...500 V AC			
91.2 W	120 W	240 W	480 W	75 W	120 W	240 W	480 W	480 W	960 W

	Single-phase (N-L1) or 2-phase (L1-L2) connection	-
	Single-phase (N-L1) or 2-phase (L1-L2) connection	3-phase (L1-L2-L3) connection
	Single-phase (N-L1) or 2-phase (L1-L2) connection	3-phase (L1-L2-L3) connection

Yes with 2 possible modes:
 - automatic restart after the source of overload/short-circuit has been corrected
 - manual restart, the input voltage must be interrupted after the source of overload/short-circuit has been corrected

Yes, depending on model

CE marking
 CB Scheme
 cULus Listed
 CSA
 RCM
 EAC

-	-	-	-	-	-	-	-	-	-
-	ABLS1A12100	-	-	-	-	-	-	-	-
ABLS1A24038	ABLS1A24050	ABLS1A24100	ABLS1A24200	ABL8RPS24030	ABL8RPS24050	ABL8RPS24100	ABL8RPM24200	ABL8WPS24200	ABL8WPS24400
-	ABLS1A48025	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

Converter module
 Redundancy module
 Buffer module
 Universal Battery control module
 Protection module
 Easy UPS control module DC-DC



Linergy TR - Terminal blocks

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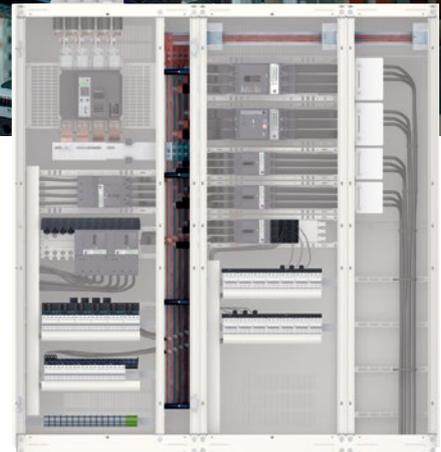
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Terminal block and bars, earth and neutral bars as well as auxiliary connections.

F

Linergy terminal blocks and bars are designed to provide the quick and reliable connection performances you expect from a top-quality installation.

All Linergy terminal blocks and bars are engineered to ensure a long service life providing heat-resistant material, firm connections and high vibration-resistance.



G

Linergy TR terminal blocks offer a wide variety of solutions for your application:

- Multiple connection options: screw, spring, push-in technologies
- Conforms to the International standards of the IEC-UL-CCC-Marine
- RoHS compliance
- Extensive connection and test accessories - Installations are completed quickly and easily
- Marking accessories
- Plug-in bridges for all technologies.

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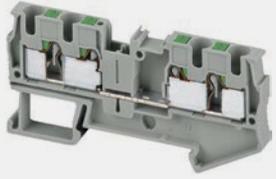
- > Simplicity of use
- > Consistency and cross-functionality guaranteed
- > Few references for a maximum of applications



Technical characteristics

Linergy TR - Terminal blocks

Low Voltage control and signalling

	NSY TRV 	NSY TRR 	NSY TRP 
			
Function	Ensures connection of Low Voltage cables or wires	Ensures connection of Low Voltage cables or wires	Ensures connection of Low Voltage cables or wires
Technology	Screw clamp technology	Spring clamp technology	Push-in technology
Connection functions	<ul style="list-style-type: none"> • Passthrough (2.5 - 150 mm²) • Protective earth • Disconnect type (blade or fuse) • Double deck, multi-pole • Multifunction • Neutral disconnect 	<ul style="list-style-type: none"> • Passthrough (2.5 - 35 mm²) • Protective earth • Disconnect type (blade or fuse) • Double deck, multi-pole 	<ul style="list-style-type: none"> • Passthrough (2.5 - 4 mm²) • Protective earth • Disconnect type (blade or fuse) • Double deck, multi-pole
Conductor nominal c.s.a. (cross section area)	2.5 mm ² to 150 mm ²	2.5 mm ² to 35 mm ²	2.5 mm ² and 4 mm ²
Number of poles	<ul style="list-style-type: none"> • 1 - 1 x 1 / 1 - 2 x 2 • 2 - 1 x 1 / 3 - 1 x 1 	<ul style="list-style-type: none"> • 1 - 1 x 1 / 1 - 1 x 2 / 1 - 2 x 2 • 2 - 1 x 1 / 2 - 1 x 2 / 3 - 1 x 1 	<ul style="list-style-type: none"> • 1 - 1 x 1 / 1 - 1 x 2 / 1 - 2 x 2 • 2 - 1 x 1 / 2 - 1 x 2 / 3 - 1 x 1
Clip-on mounting on rail type			
Certifications	<ul style="list-style-type: none"> • UL • CSA • VDE • ATEX • LR • GL • DNV • EAC 	<ul style="list-style-type: none"> • UL • CSA • VDE • ATEX • LR • GL • DNV • EAC 	<ul style="list-style-type: none"> • UL • CSA • VDE • ATEX • LR • GL • DNV • EAC
Benefits			
	<p>Rugged and reliable</p> <p>This technology not only provides quality, safety and availability of equipment but optimizes installation setup and operation with their simple integrated functions</p>	<p>Cost effective (quick and reliable)</p> <p>Spring technology is a maintenance-free connection method assuring separation of mechanical and electrical functions. It also eliminates the need for regular re-tightening</p>	<p>Quick and innovative</p> <ul style="list-style-type: none"> • Solid conductors or conductors with cable-ends can be directly inserted into the terminal block without tools • The actuation lever can be operated with any tool for releasing conductors

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Linergy TR - Terminal blocks

Low Voltage control and signalling

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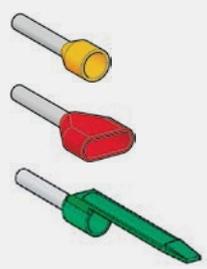
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Cable ends	
	
Function	<ul style="list-style-type: none"> Facilitates the insertion of wires into the terminals and assures the insulation between adjacent connection Allows the identification of the wires
Technology	Insulated cable ends
Connection functions	Four available versions: <ul style="list-style-type: none"> Single conductor cable ends Single conductor markable cable ends Uninsulated cable ends Twin conductor cable ends
Conductor nominal c.s.a. (cross section area)	0.25 mm ² to 50 mm ²
Certifications	<ul style="list-style-type: none"> UL CSA
Benefits	
	<p>Fast and reliable wiring</p> <p>Use the AZ5 and DZ5 ranges of cable ends to simplify wiring and provide optimum electrical continuity between wire and terminal block</p>



Learn more about **Linergy TR** - Terminal blocks range here




Scan or click on QR code



Offer
Catalogue

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>

Electrical protection and control

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Acti9 Active and Acti9

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Set a new standard for electrical safety

E

Set a new standard for electrical safety

Active Safety System ensures enhanced safety and visibility for people, circuits, appliances, and assets. It helps prevent earth-leakage, overload, overvoltage, short-circuit, and improves fire-safety.

F

Acti9 Active is a family of all-in-one protection devices with in-built residual circuit devices, miniature circuit breakers, arc fault detection devices (AFDD).

Thanks to in-built connectivity, Acti9 Active can send data and notifications to the cloud via our latest generation of gateways - EcoStruxure Panel Server for remote monitoring and asset management.

G

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.

H

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.

I

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.



Achieving greater resiliency and reliability through active safety

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

- integrated devices and wireless connectivity to 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



Acti9 Active

A

Best-in-class connectivity in a simplified form

B

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.

C



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.

D



EcoStruxure

Panel Server (the gateway)

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

E



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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.

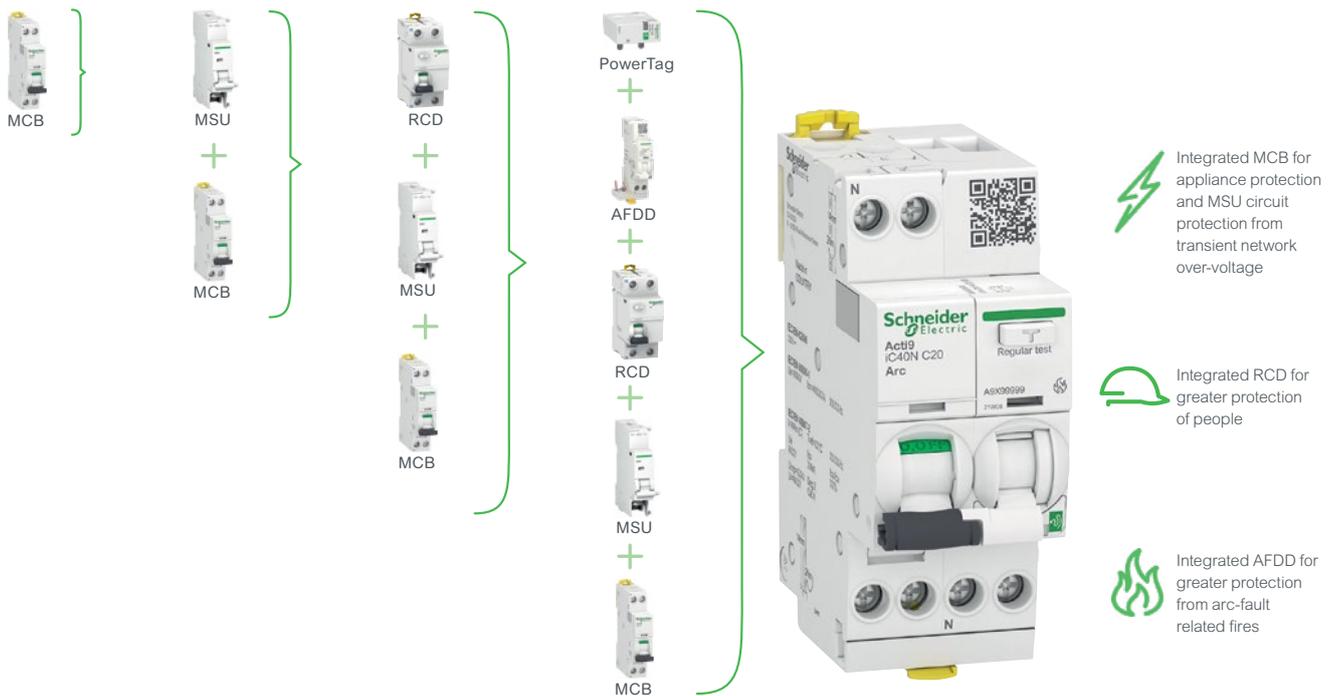


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All-in-one protection in a single 36 mm device

A core part of the Active Safety System, the Acti9 Active VigiARC 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.



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Acti9 Active

A

Discover the full range of Acti9 Active devices

B

Available in connected and non-connected versions, Acti9 Active devices provide advanced protection with a variety of options – something to suit any set-up.

C

Acti9 Active VigiARC



An all-in-one device with integrated connectivity and AFDD, MCB, RCD, and MSU

A combination of AFDD + RCD add-on

Acti9 Active AFDD



A combination of AFDD + MCB

With an AFDD add-on + MCB

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Whatever your needs, our Active Safety System solutions offer a range of specifications, so you can find the right connected or non-connected device for you.

G

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The all-in-one option integrates MCB, RCD, and AFDD, with the possibility of in-built connectivity capabilities.

Acti9 VigiARC (non-connected version)



An all-in-one device with integrated AFDD, MCB, RCD, and MSU

AFDD with an RCD add-on

Acti9 ARC (non-connected version)



A combination of AFDD + MCB

With an AFDD add-on

Whatever your needs, our Active Safety System solutions offer a range of specifications, so you can find the right connected or non-connected device for you.



Acti9

Acti9 Miniature Circuit Breakers – MCBs

A

Our new high performance modular system for final distribution, provides unmatched performance when it comes to installation simplification and speed, space saving as well as ease of maintenance and upgrading.

B



Acti9 iC40

Miniature Circuit Breakers up to 40 A

- Suitable for isolation in compliance with IEC/EN 60898-1 and/or IEC/EN 60947-2
- Available in 1P+N, 3P and 3P+N for circuits up to 40 A
- Breaking capacity at 4500 A, 6000 A and 10 000 A
- Wide range of tripping curves available: B, C and D
- Class 2 insulation for optimal protection of operators and unqualified persons
- Wide range of operating temperatures: -25 / +70°C
- Sharing same key features with Acti9 iC60 in regards to aesthetics, form-factor, range of auxiliaries
- VisiTrip offers a visible fault indicator for fast and optimized on-site servicing
- VisiSafe offers a visible green strip with reinforced insulation for maintenance in better safety conditions
- Environmentally friendly with 100% recyclable and recoverable materials.

Product References

D



Acti9 iC60

Miniature Circuit Breakers up to 63 A

- VisiSafe: provides protection during maintenance work on downstream circuits
- VisiTrip: signals with a redflag the faulty miniature circuit breaker outgoers to reduce intervention time
- Class-2 insulation: double insulation distance to ensure continuous protection or both operators and unqualified persons
- Pollution Class 3 for operation in more polluted environments such as some industrial applications
- Fully compliant with standards IEC/EN 60898-1 and IEC/EN 60947-2
- Add-on fully immune Acti9 iC60 Vigi earth leakage protection devices: improved continuity of service, especially in polluted environments and networks
- Offers a wide range of electrical auxiliaries: remote indication of Acti9 iC60 status and several tripping actuators: shunt trip, undervoltage trip, overvoltage trip.

Product References

F



Acti9 C120

Miniature Circuit Breakers up to 120 A

- Nominal current: 10 to 125 A
- Large choice of breaking capacities and tripping curves (B, C, D)
- Compliant with IEC EN 60898 or IEC 60947-2 depending on the version.
- Suitable for isolation: compliant with IEC 60947
- VisiSafe provides a visible green indicator showing which circuits are disconnected and safe for maintenance operations
- Operating voltage: up to 440 V AC
- Insulation voltage: 500 V AC
- IP20 terminal insulation
- Optional add-on residual current device modules: Acti9 C120 Vigi
- Optional electrical auxiliaries for remote open/closed status or remote tripping of Acti9 C120 circuit breaker with shunt, overvoltage and undervoltage release.

Product References

I



Application

- Acti9 iC40 system is dedicated to the small and medium buildings applications.
- Low-voltage final distribution Installations.



Application

Providing essential protection in industrial and commercial buildings, our miniature circuit breakers work especially well in polluted environments and networks.



Application

- Protection of electrical circuits in all industrial and commercial buildings.
- Particularly suited to higher ratings applications.



Product References

Acti9 NG125

High performance Miniature Circuit Breakers up to 125 A

- Nominal current: 10 to 125 A
- Provides the user with a large choice of breaking capacities and tripping curves: B, C, D...
- Fully Compliant with standards: IEC 60947-2, as certified by national official authorities
- Suitable for isolation in accordance with industrial standards: IEC 60947
- Operating voltage: up to 500 V AC
- Insulation voltage: 690 V AC
- Provides installers with optional add-on earth leakage modules: Vigi NG125
- Several optional auxiliaries: indication of state and tripping, shunt trip, undervoltage trip, overvoltage trip.



Designed with providing essential protection to industrial and tertiary buildings in mind:

- Incoming protection in modular enclosure.
- Outgoers in power switchboards.

AFDD



Product References

Advanced fire-protection devices with inbuilt connectivity and option of advanced circuit protection due to integrated miniature circuit breaker.

Acti9 iARC

Mitigates the risk of electrical fires caused by electrical arcs resulting from faulty or worn electrical appliances and circuits.

- Worn or aging cabling
- Pinched conductors in earthed metallic cases
- Pinched extension cables trapped by doors
- Plugs being repeatedly removed by pulling the cable rather than the plug, thus causing the insulation to fail
- Rodent damage to cable insulation
- Damage caused by cables being exposed to sunlight (UV)
- Damage caused by drilling into walls with hidden electrical cables
- Loose cable connections in wall socket outlets, power strip sockets and junction boxes
- Damage caused by heat, vibration and humidity to wall mounted cables and sockets.



Application

- New building construction of single residence or multi-residence buildings.
- Retrofitting existing single residence or multi-residence buildings.



Product References

Acti9 ARC, Acti9 Active VigiARC, Acti9 VigiARC, Acti9 Active AFDD and Acti9 AFDD

Advanced fire-protection devices with inbuilt connectivity and option of advanced circuit protection due to integrated miniature circuit breaker.

- Increase Service Continuity and Resilience with our all-in-one connected solution
- Increased Service Continuity: fewer breakdowns with pre-alarms and alarms
- Enhanced Efficiency: easy remote monitoring, diagnostics and analytics mean fewer disruptions and more efficiency gains
- Advanced Protection: All-in-one solutions covering a wide range of faults, with in-built MCB, and AFDD
- Simple Installation and Upgrade: integrated devices and wireless connectivity to 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.



Application

Customize the Pre-Alarms based on your preference to have ample time to work on resolving the issues.

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Acti9

Acti9 Surge Protection Devices – SPDs

A



Protection of electrical and electronic equipment, telephone and computer lines against transient overvoltages of atmospheric origin and maneuvering.

Acti9 iPRD

Surge Protection Devices Type 2 or 3, from 8 kA to 65 kA

- Certified for short-circuit current withstand, I_{sc} up to 50 kA (IEC 61643-11: 2011)
- The maximum discharge current covers from 8 to 65 kA
- The maximum continuous operating voltage U_c is 350 V AC or 460 V AC
- They are suitable for any earthing system: TT, TN-S, TN-C and IT
- Withdrawable cartridges of Acti9 iPRD Surge arresters allow quick replacement of damaged devices
- It is possible to use multipolar or unipolar products for serial assembly
- The Acti9 iPRD surge arresters "r" version have dry contacts for transferring remotely the end-of-life information.

Product References

B

C

D



Acti9 iPF K

Surge Protection Devices Type 2 from 20 kA to 65 kA

- Maximum discharge current: from 20 to 65 kA
- Surge arrester/disconnector combinations is certified for short-circuit current withstand I_{sc} up to 6 kA (IEC 61643-11:2011)
- Maximum continuous operating voltage $U_c = 340$ V AC
- Monobloc form factor
- Multiple-pole or single-pole products for assembly
- Contacts for the remote transfer of end-of-life information.

Product References

E

F



Acti9 iPRD1, PRD1

Surge arresters Type 1 or Type 1+2

Impulse discharge current I_{imp} :

- 12.5 kA for Acti9 iPRF1 12.5r is suitable for buildings with protection levels III and IV
- 25 kA for Acti9 PRD1 25r and 35 kA for Acti9 PRD1 Master are suitable for buildings with protection levels I and II.

Surge arresters must be associated with a suitable disconnection device, fuse or circuit-breaker.

These Surge arresters are available either as monobloc or with pluggable cartridges.

These ranges cover all the different earthing system: multiple-pole or single-pole devices to be assembled.

They come with output contacts for remote transfer of end-of-life information (for Acti9 SmartLink or other input/output devices).

- Acti9 iPRF1 12.5r and Acti9 PRD1 25r are also Type 2 rated (8/20 μ s) to protect the electrical equipment by finely clipping the voltage surge
- They are suitable for 230/400 V 50/60 Hz networks, with earthing system TT, TN-S, TN-C
- Acti9 PRD1 Master is also suitable for 440 V IT earthing system.

Product References

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Application

Protect the electrical installations in all industrial and tertiary buildings against induced or conducted surges caused by indirect lightning strikes.



Application

- Protects electrical installations against transient overvoltage and surges caused by indirect lightning strokes in all industrial and tertiary buildings.
- They can also be used in residential sector with appropriate rated discharge current (20 kA).



Application

Acti9 iPRF1, PRD1 Type 1 Surge arresters protect the electrical installations against induced or conducted surges caused by direct lightning strikes.

- The IEC/EN 62305-2 specifies the use of Type 1 or Type 1+2 Surge Protection Devices in commercial and industrial buildings protected by a lightning conductor or a lightning rod
- Surge Protection Devices are recommended when there is higher risk of direct lightning strikes.



Acti9 Electrical circuit control



Product References

Acti9 iCT

Modular contactors up to 100 A

Fully consistent with the entire Acti9 range, our DIN rail contactors with electrical control help you control electrical circuits in industrial, residential and commercial buildings efficiently

- Rating: 16, 20, 25, 40, 63 and 100 A
- 1 to 4 poles: 1P, 2P, 3P, 4P
- Fully compliant with standards: EN 61095 and CEI 1095
- Excellent electrical endurance (O-C): 100,000 cycles
- Provides users with up to 100 switching operations a day
- 2 versions available with the option to use either standard or manually operated contactors
- Wide range of flexible optional auxiliaries including: state indication, interference filtering, dual control and time delay.



Application

- Complete control and monitoring solution for electrical circuits in all industrial, commercial and residential buildings
- Easily control and monitor single -or three- phase loads up to 100 A
- Effortlessly interface between the control gear and power circuits for final circuits such as lighting, heating, roller blinds, watering system, ovens, utility motors (ventilation, heat pump), and more.



Product References

Acti9 iTL

DIN rail Impulse relays

Designed with protection in mind and with a host of exclusive features, the Acti9 iTL DIN rail impulse relays, which are fully consistent with the entire Acti9 range, give you total electrical control of circuits in industrial, residential and commercial buildings.

- Class-2 insulation: providing enhanced protection for operators as well as unqualified personnel
- Rating: 16, 32 A
- 1 to 4 poles: 1P, 2P, 3P or 4P
- Easy wiring of multiple control points
- Wide range of control voltage: 230, 130, 48, 24 V AC; 110, 24, 12 V DC
- Lifetime - total number of switching operations (AC21): 200,000 for iTL 16 A; 50,000 for iTL 32 A
- Fully compliant with standards: EN 60-669-1 & EN 60-669-2-2
- Great choice of built-in or optional auxiliary functions including: state indication, centralised control, latched control, control for illuminated PB, step-by-step control and time delay.



Application

- Provides a complete control solution for electrical circuits in all industrial, commercial and residential buildings
- Lighting management via several easy wiring of multiple control points push buttons.

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Acti9

Acti9 indication and tripping auxiliaries

A

Simplified electrical maintenance

Designed with protection and with a wide range of features, the Acti9 indication and tripping auxiliaries combine easy installation with high levels of functionality. It includes:

- Automatic reclosing, remote control, remote indication, and tripping
- VisiTrip for quick detection of faulty outgoers and reduced intervention time
- Clip-on assembly system for ease of use.

B

C



Acti9 iOF auxiliaries

Acti9 iOF auxiliaries for remote indication of the state of the device to which they are connected (fully compliant with IEC 60947-5-1 and, IEC 60947-5-4 for low current auxiliaries):

- Remote indication of "open" or "closed" state and of "tripped" state
- Instantaneous tripping when the control circuit is energized, de-energized, or if there is a dip in its supply voltage
- Time-delayed tripping (to cope with micro-breaks or brief voltage drops) when the control circuit is de-energized, or if there is a dip in its supply voltage
- Fail-safe emergency stop tripping.

D

Product References

E



Auxiliary RCA for remote control

- Remote electrical control (opening and closing) of circuit breakers with or without Vigi iC60 add-on RCD and with or without auxiliary.
- Circuit-breaker resetting after tripping, in full accordance with protection principles and regulations.
- Local control feature via an operating handle.

F

Product References

G



Auxiliary ARA for remote automatic reclosing

- Easily perform automatic reclosing of the associated protection device after tripping.
- Increase the availability of hard to access and isolated installations without supervision (mobile telephony systems, motorways, pumping stations, airports, railways, meteorological stations, service stations, automatic teller machines, public lighting, tunnels, etc.), by restoring them to operate without the need of personal intervention in the event of a transient fault (atmospheric disturbances, industrial overvoltages, etc.).

H

Product References

I



Application

- Industrial buildings
- Commercial buildings
- Critical building
- Data center
- Machine
- Infrastructure

Acti9 Comb Busbars



Product References

Acti9 range for low voltage DIN rail system up to 63 A.

Thanks to its exclusive features, the Acti9 range for low voltage **DIN rail** system provides absolute safety and better continuity of service.

- **VisiSafe:** for safe operation and maintenance work on circuits
- **Class-2 insulation:** continuous safety for operators and non-qualified personnel.
- **VisiTrip:** detects faulty Miniature Circuit-Breaker outgoers quickly and reduces intervention time
- **Fully immune add-on Residual Current Devices:** better continuity of service, in particular for polluted networks and environments
- **The Reflex iC60 all-in-one concept,** a one-piece combined unit integrating a circuit-breaker + contactor + impulse relay
- **Total coordination guaranteed** by Schneider Electric
- **Optimised design time,** in particular for lighting solutions in buildings
- **50% fewer connections** with the Acti9 Reflex iC60 all-in-one concept
- **Flexible, upgradeable** solutions and simple operations
- **Easier status diagnosis** via product front face indications
- **Multiclip distribution systems** suitable for upgrading electrical facilities, add-ons, adaptation, phase balancing, etc.
- **Easy to adapt** to constraints and last-minute changes in the tertiary and industrial fields
- **Operating and control mode selection**
- **Building management system interfacing**
- **Limitation of intervention costs** on remote structures thanks to the new automatic remote control auxiliary.



Application

- Protection by Miniature Circuit-Breaker (MCB) in all industrial and commercial buildings
- Protection of motor circuits
- Protection of DC circuits
- Protection of people and property by super-immune earth leakage Residual Current Devices (RCDs)
- Protection by surge arresters against overvoltages of atmospheric origin
- Control of power and control circuits by contactors and impulse relays
- Remote control of circuits by remote controls associated with Miniature Circuit-Breaker
- Remote control and protection of circuits by integrated control circuit-breaker
- Programming, regulation, signalling, etc.



Learn more about Acti9 Active and Acti9 ranges here



Scan or click on QR code

Offer

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



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Easy9

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Protection devices MCB RCCB RCBO SW SPD



With everything from comb busbars to MCBs in the range, you are bound to find flexibility with the **Easy9** protection range, designed to provide you with maximum electrical protection in residential buildings.

F

Easy9 devices

Included in the range:

- Miniature circuit breakers (MCBs) for short circuit protection and overload protection
- Residual current circuit breakers (RCCBs) for earth leakage protection
- Residual current devices (RCBOs) for earth leakage protection, short circuit protection and overload protection
- Switches for Isolation
- Surge protection devices (SPD) for Surge protection
- Comb busbars for power distribution.

G

Application

Targeted towards the residential sector, the Easy9 range gives you electrical protection in residential buildings, and provides you with complete peace of mind, ease of use and reliability.

- Designed with the residential market in mind
- Ideally suited to individual and collective buildings.

H

I



Easy9 Incoming Devices

Switch-disconnectors



- Positive contact indication
- Suitable for isolation according to BSEN 60947-3 standard
- Manual control on front face by O-I lever

Characteristics

Main characteristics

Operating category	AC-22 A
Permissible rated short-time withstand current (I _{cw})	12 I _e , 1 second
Conditional rated short-circuit current (I _{nc})	5000 A
Rated short-circuit closing current (I _{cm})	15 I _e

Additional characteristics

Degree of protection (IEC 60529)	Device only	IP20
Endurance (O-C)	Mechanical	40 -100 A: 8500 cycles
	Electrical	40 -100 A: 1500 cycles
Operating temperature		-25°C to +60°C
Storage temperature		-40°C to +85°C
Tropicalisation (IEC 60068-1)		Treatment 2 (relative humidity 95% to 55°C)

RCCB residual current circuit breakers



- Positive contact indication
- Fault tripping indication on the front panel by the position of the handle
- (O - I engraved)

Characteristics

Main characteristics

Rated impulse withstand voltage (U _{imp})	4 kV
Conditional rated short circuit current (I _{nc} /I _{Δc})	4.5 kA or 6 kA

Additional characteristics

Degree of protection (IEC 60529)	Device only	IP20
Tropicalisation (IEC 60068-1)		Treatment 2 (relative humidity 95% to 55°C)
Operating temperature		-5°C to 60°C
Storage temperature		-40°C to +85°C

Easy9

Easy9 Devices

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Miniature circuit breakers 6 kA

Easy9 circuit breakers combine the following functions:

- Circuit protection against short-circuit currents
- Circuit protection against overload currents.



- Fault tripping indication on the front panel by position of the handle
- (O-I engraved)

Characteristics

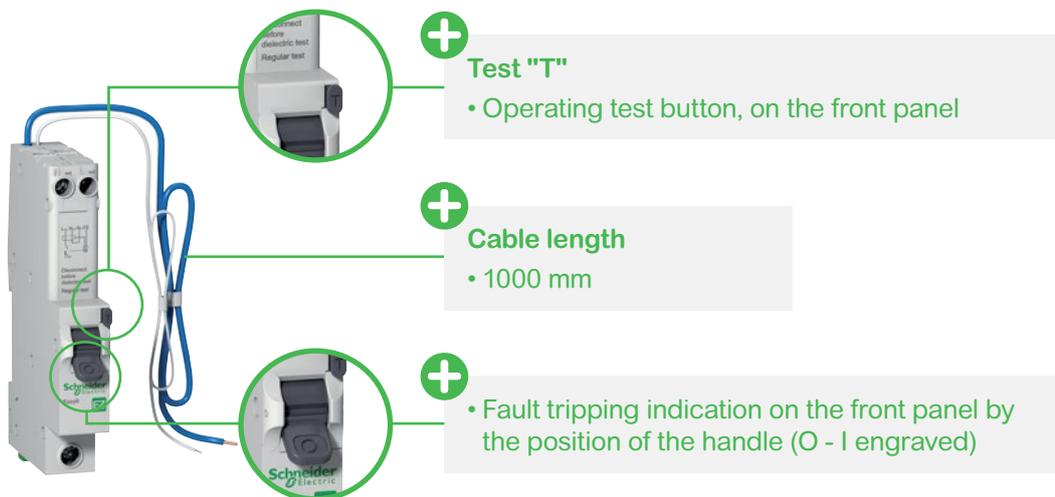
Main characteristics		
Voltage rating (Ue)		230/400 V AC
Operating frequency		50/60 Hz
Electrical feeding		By the top and bottom
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
Tropicalisation (IEC 60068-1)		Treatment 2 (relative humidity 95% to 55°C)
Operating temperature		-25°C to +60°C
Storage temperature		-40°C to +85°C



Easy9 Devices (continued)

RCBO residual current devices 6 kA

Certified compliant BS EN 61009-1.



Characteristics

Main characteristics		
Endurance (O-C)	Electrical	4000 cycles
	Mechanical	10000 cycles
Passive, will not trip in the event of a voltage loss		
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
Overvoltage category (IEC 60364)		IV
Operating temperature		-15°C to +60°C
Storage temperature		-40°C to +85°C
Hazardous substances		RoHS 2003 compliant
Tropicalisation (IEC 60068-1)		Treatment 2 (relative humidity 95% to 55°C)



Learn more about
Easy9
range here



Scan or
click on
QR code

Offer

If you need more details about product references and availability, please check your local Schneider Electric contact <https://www.se.com/ww/en/work/support/country-selector/contact-us.jsp>



Critical Power

Galaxy™ V Series

General overview	I-296
Technical specifications	I-299

Easy UPS series

General overview	I-300
Technical specifications	I-302

Uninterruptible power system

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Galaxy™ V series: Uninterruptible power system

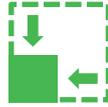
Well suited for a wide range of applications

- Edge, small, and medium data centers, and computer rooms
- Manufacturing facilities
- Telecommunication
- Commercial buildings
- Healthcare
- Transportation



New patented hybrid technology

Provides up to 97% efficiency in double conversion mode. Electricity savings in full protection mode at every load level.



Compact design optimised footprint

High-density technology and full front access make Galaxy VS a footprint saver well suited for confined spaces.



Battery flexibility, including Lithium-ion batteries

Increase availability and reduce TCO with long-life, intelligent energy storage.



99% efficient in patented EConversion™ mode

Recover your initial investment within twothree years through energy savings.



Maximum availability thanks to modular architecture

Critical system components built as modules for faster serviceability and fault tolerance. N+1 redundancy and scalability options available.



EcoStruxure IT

Anytime, anywhere monitoring and service support via smartphone app.



Leading performance

> Robust and flexible design ideal for demanding environments at maximum performance

Reduce your energy bill

> By using EConversion mode, significant savings are achieved every year on your electricity bill

Quick to install and fits

> Everywhere thanks to its compact design

Simple to maintain and fast to service

> Thanks to its modular architecture



Galaxy™ V series

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Galaxy™ VS/VM/VX

10 to 1500 kVA 3 phase UPS for small and medium data centers and other business critical applications

Part of Galaxy V Series

Description

3 phase Uninterruptible Power System. Designed for fast and easy installation, this EcoStruxure-ready UPS features a wide operating temperature window and strong overload protection, all in a compact and lightweight footprint.

Characteristics

Normal AC supply input

- 10 to 1500 kVA
- 3:3
- Input voltage (V): 380 / 400 / 415 V (Three-phase + Neutral)
- Frequency (Hz): 40 – 70 Hz
- Input power factor: >0.99
- THDI: < 3% at full linear load

Output

- Nominal output voltage (V): 3:3 – 380/400/415 V
- Efficiency: Double conversion mode up to 96%
- Efficiency: ECOconversion mode up to 99%
- Overload capacity in normal operation 125% for 10 minutes and 150% for one minute^[1]
- Output voltage tolerance ±1%
- Lithium capable

Connectivity

Communication interface RS485, USB, Dry contact, Modbus TCP/IP (SNMP optional) Five inch touchscreen LCD, status, and display console.

[1] Under 30°C degrees.

Galaxy VS

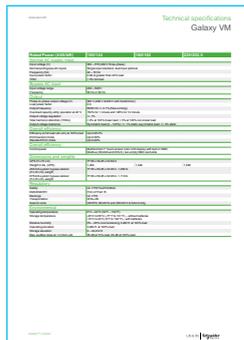


Technical specifications
Galaxy VS

Parameter	Value
Rated voltage	240 V AC
Rated current	16 A
Rated power	3.84 kW
Rated power factor	0.95
Rated efficiency	0.95
Rated speed	1450 rpm
Rated torque	2.8 Nm
Rated power factor	0.95
Rated efficiency	0.95
Rated speed	1450 rpm
Rated torque	2.8 Nm

[CLICK HERE TO SEE THE TECHNICAL SPECIFICATIONS](#)

Galaxy VM



Technical specifications
Galaxy VM

Parameter	Value
Rated voltage	240 V AC
Rated current	16 A
Rated power	3.84 kW
Rated power factor	0.95
Rated efficiency	0.95
Rated speed	1450 rpm
Rated torque	2.8 Nm
Rated power factor	0.95
Rated efficiency	0.95
Rated speed	1450 rpm
Rated torque	2.8 Nm

[CLICK HERE TO SEE THE TECHNICAL SPECIFICATIONS](#)

Galaxy VX



Technical specifications
Galaxy VX

Parameter	Value
Rated voltage	240 V AC
Rated current	16 A
Rated power	3.84 kW
Rated power factor	0.95
Rated efficiency	0.95
Rated speed	1450 rpm
Rated torque	2.8 Nm
Rated power factor	0.95
Rated efficiency	0.95
Rated speed	1450 rpm
Rated torque	2.8 Nm

[CLICK HERE TO SEE THE TECHNICAL SPECIFICATIONS](#)

Learn more about Galaxy™ V series range here



Galaxy VS offer



Galaxy VM offer



Galaxy VX offer



Galaxy VS brochure



Galaxy VM brochure



Galaxy VX brochure

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Uninterruptible power system

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Easy UPS Series Business continuity made easy

F

The Schneider Electric Easy UPS 3 Series is an easy-to-install, easy-to-connect, easy-to-use, and easy-to-service 10-600 kVA 3 phase UPS ideal for small and medium businesses, data centers, and other mission critical applications.

G

Easy to use, connect, monitor, and manage

- User-friendly display interface supports easy configuration
- The optional network card enables:
 - Monitoring of UPS status remotely through a Web interface
 - Monitoring and management of the UPS status and performance through EcoStruxure IT's cloud-based and on-premise software suites, bringing you peace of mind.

H

Easy to maintain

- Front and rear access for service
- Quickly and easily replace the dust filter conveniently located behind the front door
- Schneider Electric service team available to make service easy and improve uptime with proper maintenance of your UPS and batteries.

I

Robust and competitive

- Easy UPS 3 Series brings predictability to utility costs:
 - Up to 96% efficiency in double conversion mode
 - Up to 99% efficiency in ECO mode
- Minimize your power losses and cooling requirements with up to unity power factor (kW=kVA)
- Protect your data center or electrical room with these fortifying features:
 - Embedded dust filter
 - Conformal coating
 - Operating temperature up to 40 °C
 - Wide input voltage range.

Proven performance

With an established customer base of over 100,000 satisfied customers, we have been providing business continuity around the world for more than 30 years. The Schneider Electric Easy UPS 3 Series is the easy-to-choose, easy-to-use power protection solution for today's connected businesses.

Over
120,000
satisfied customers



Typical applications

- Small and medium data centers and computer rooms
- Manufacturing facilities
- Telecommunication
- Commercial buildings
- Healthcare
- Transportation



Easy UPS 3S/3M/3L

10 to 600 kVA 3 phase UPS for small and medium data centers and other business critical applications

Part of Easy Series

Description

3 phase Uninterruptible Power System. Designed for fast and easy installation, this EcoStruxure-ready UPS features a wide operating temperature window and strong overload protection, all in a compact and lightweight footprint.

Characteristics

Normal AC supply input

- 10 to 40 kVA (Internal or External batteries)
- 3:1 (10 to 30 kVA) 3:3 (10 to 600 kVA)
- Input voltage (V): 380 / 400 / 415 V (Three-phase + Neutral)
- Frequency (Hz): 45 – 65 Hz
- Input power factor: >0.99
- THDI:
 - linear load,
 - 5% non-linear load.

Output

- Nominal output voltage (V):
 - 3:1 – 220 / 230 / 240 V
 - 3:3 – 380 / 400 / 415 V
- Efficiency: Double conversion mode up to 96%
- Efficiency: ECO mode up to 99%
- Overload capacity in normal operation 130% for 10 minutes and 130-150% for one minute
- Output voltage tolerance $\pm 1\%$.

Connectivity

Communication interface RS232, RS485, USB, dry contact, Modbus TCP/IP, optional network card Control panel Multi-function LCD, status and display console.



Easy to install and start up

- > Rolls into position quickly and easily
- > Minimal footprint requirement with lightweight, compact form factor
- > Straightforward installation
- > Input, output, and bypass breakers are included
- > Emergency Power Off (EPO) switch is included
- > Easy Loop test verifies UPS performance before you connect your load, without the need for a load bank
- > Aesthetic design blends well into your installation environment

A

Easy UPS 3S



Technical specifications
Easy UPS 3S

Model	Power (VA)	Power (W)	Efficiency (%)	MTBF (h)
Easy UPS 3S 1500	1500	1200	80	100,000
Easy UPS 3S 2000	2000	1600	80	100,000
Easy UPS 3S 2500	2500	2000	80	100,000
Easy UPS 3S 3000	3000	2400	80	100,000
Easy UPS 3S 3500	3500	2800	80	100,000
Easy UPS 3S 4000	4000	3200	80	100,000
Easy UPS 3S 4500	4500	3600	80	100,000
Easy UPS 3S 5000	5000	4000	80	100,000
Easy UPS 3S 5500	5500	4400	80	100,000
Easy UPS 3S 6000	6000	4800	80	100,000
Easy UPS 3S 6500	6500	5200	80	100,000
Easy UPS 3S 7000	7000	5600	80	100,000
Easy UPS 3S 7500	7500	6000	80	100,000
Easy UPS 3S 8000	8000	6400	80	100,000
Easy UPS 3S 8500	8500	6800	80	100,000
Easy UPS 3S 9000	9000	7200	80	100,000
Easy UPS 3S 9500	9500	7600	80	100,000
Easy UPS 3S 10000	10000	8000	80	100,000

[CLICK HERE TO SEE THE TECHNICAL SPECIFICATIONS](#)

B

Easy UPS 3M



Technical specifications
Easy UPS 3M

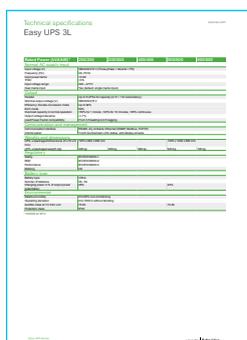
Model	Power (VA)	Power (W)	Efficiency (%)	MTBF (h)
Easy UPS 3M 1500	1500	1200	80	100,000
Easy UPS 3M 2000	2000	1600	80	100,000
Easy UPS 3M 2500	2500	2000	80	100,000
Easy UPS 3M 3000	3000	2400	80	100,000
Easy UPS 3M 3500	3500	2800	80	100,000
Easy UPS 3M 4000	4000	3200	80	100,000
Easy UPS 3M 4500	4500	3600	80	100,000
Easy UPS 3M 5000	5000	4000	80	100,000
Easy UPS 3M 5500	5500	4400	80	100,000
Easy UPS 3M 6000	6000	4800	80	100,000
Easy UPS 3M 6500	6500	5200	80	100,000
Easy UPS 3M 7000	7000	5600	80	100,000
Easy UPS 3M 7500	7500	6000	80	100,000
Easy UPS 3M 8000	8000	6400	80	100,000
Easy UPS 3M 8500	8500	6800	80	100,000
Easy UPS 3M 9000	9000	7200	80	100,000
Easy UPS 3M 9500	9500	7600	80	100,000
Easy UPS 3M 10000	10000	8000	80	100,000

[CLICK HERE TO SEE THE TECHNICAL SPECIFICATIONS](#)

D

E

Easy UPS 3L



Technical specifications
Easy UPS 3L

Model	Power (VA)	Power (W)	Efficiency (%)	MTBF (h)
Easy UPS 3L 1500	1500	1200	80	100,000
Easy UPS 3L 2000	2000	1600	80	100,000
Easy UPS 3L 2500	2500	2000	80	100,000
Easy UPS 3L 3000	3000	2400	80	100,000
Easy UPS 3L 3500	3500	2800	80	100,000
Easy UPS 3L 4000	4000	3200	80	100,000
Easy UPS 3L 4500	4500	3600	80	100,000
Easy UPS 3L 5000	5000	4000	80	100,000
Easy UPS 3L 5500	5500	4400	80	100,000
Easy UPS 3L 6000	6000	4800	80	100,000
Easy UPS 3L 6500	6500	5200	80	100,000
Easy UPS 3L 7000	7000	5600	80	100,000
Easy UPS 3L 7500	7500	6000	80	100,000
Easy UPS 3L 8000	8000	6400	80	100,000
Easy UPS 3L 8500	8500	6800	80	100,000
Easy UPS 3L 9000	9000	7200	80	100,000
Easy UPS 3L 9500	9500	7600	80	100,000
Easy UPS 3L 10000	10000	8000	80	100,000

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Learn more about
Easy UPS Series
range here



Easy UPS 3S
offer



Easy UPS 3M
offer



Easy UPS 3L
offer



Easy UPS Series
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