Panel Builders

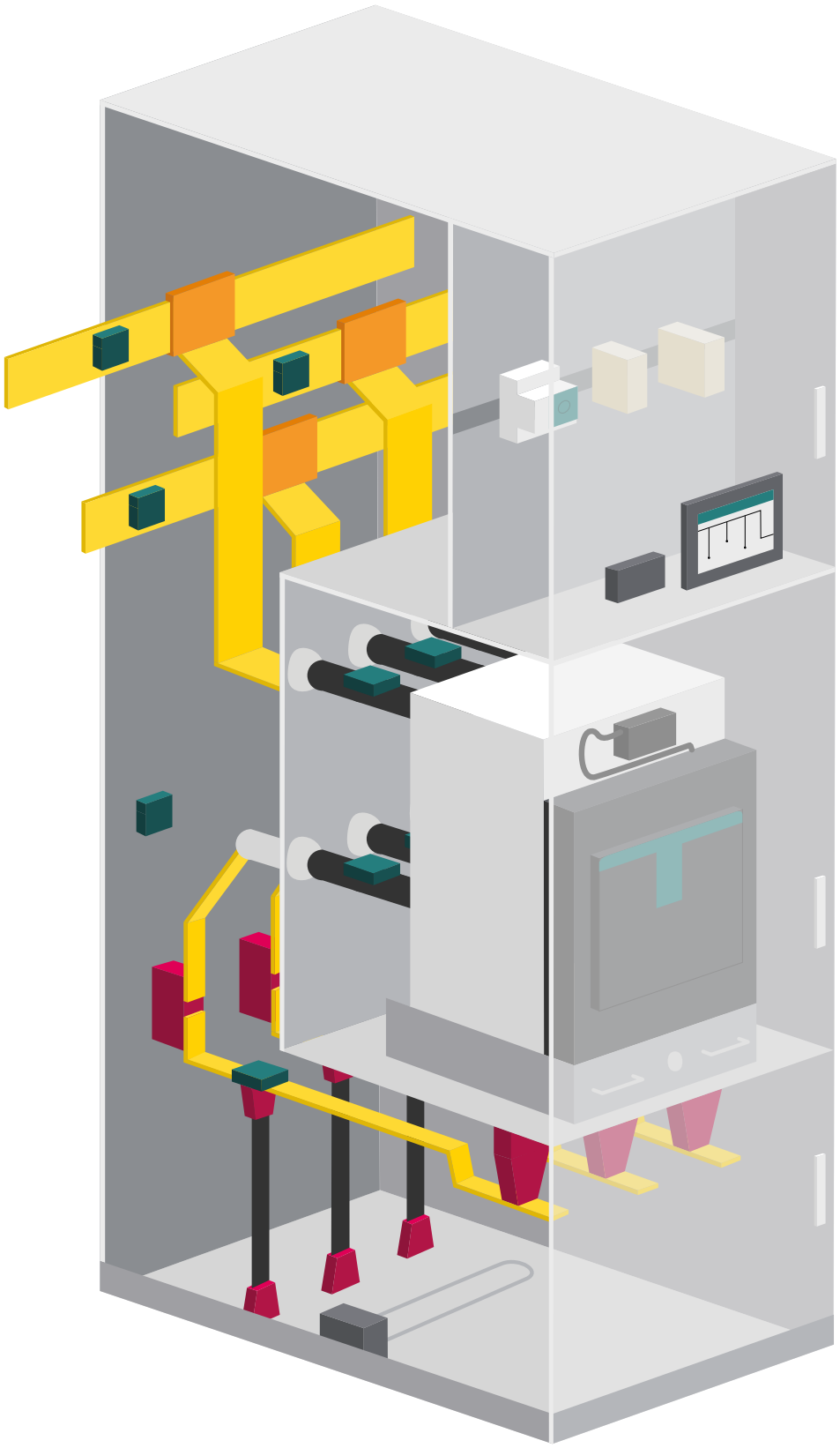
Elevate the Design of your MV Switchgear with More Advanced and Sustainable components

Catalog 2026

Components for Medium Voltage Switchgear

se.com/mv-panelbuilder

Life Is On Schneider Electric



In this overview, Schneider Electric presents all the Medium Voltage and Low Voltage components you need to build your Medium Voltage Switchgear.

General Contents

Today’s Technologies for tomorrow’s challenges

As the energy landscape rapidly evolves, industries leading this transformation must be ready to tackle future challenges to remain competitive. Our solutions are designed to meet the latest standards, embrace emerging priorities, and optimize operational efficiency, empowering you to succeed today while preparing for tomorrow.

With future regulations and shifting customer expectations in mind, our products help you stay ahead and meet the demands of both today's and tomorrow’s markets.

PM110178

User-Centric Innovation

We develop components for the most demanding applications, guided by insights from industry professionals, operators, and end users. As the world and customer expectations shift toward more sustainable and energy-efficient solutions, our innovations reflect this evolution.

PM109463

Enhanced Sustainablility and Efficiency

Engineered for build-in-class quality and safety, our components enable panel builders to deliver more resilient, efficient, and sustainable systems. Bysupporting sustainable practices and optimizing operational performance,they ensure lasting value and a solid return on investment for every installation.

PM110118

Optimized Processes

Our experts and products streamline integration, operation, and maintenance. From design to commissioning, we help panel builders save time and maximize productivity at every stage of their business.

Electricity is getting more Digital and Sustainable, are you ready?

We are dedicated to empowering Medium-Voltage (MV) panel builders with innovative solutions that redefine sustainability and efficiency in the evolving energy landscape. Our compact, SF6-free technology reflects our commitment to reducing environmental impact while enabling smarter switchgear that delivers a clear competitive edge.

By harnessing the advantages of digital enhanced interoperability, we unlock new opportunities for optimizing energy management. These advancements provide MV Panel builders with the tools to quickly adapt to evolving customer demands,streamline product configurations, and maximize operational performance and durability.

EvoPacT™ HVX
Next generation of circuit breaker

PM110584

Revolutionary MV Circuit Breakers

The EvoPacT™ HVX circuit breaker is engineered for performance and reliability in today's demanding electrical systems.

- Equipped with cutting-edge IoT sensors, it monitors the circuit breaker health.
- Provides real-time insights to streamline maintenance activities.
- Helps optimize operations and reduce operational risks.
- Offers a dependable solution for industrial and commercial environments.

EvoPacT ETL
Lateral Vacuum circuit-breaker for MV Secondary distribution

PM110958

Fast-track and Flexible Integration

The EvoPacT ETL circuit breaker is engineered for panel builders seeking efficiency.

- Modernized design leverages field-proven technology for reliability and performance.
- Offers easy customization
- Adapts seamlessly to any integration, fixed or withdrawable designs including last-minute auxiliary additions for maximum flexibility.

AirPacT
SF_6-free switch and disconnector

PM109061

Decarbonize

The use of Pure Air technology eliminates the need of SF_6 gas in MV switchgear, a known high potential Global Warming gas (supports compliance with the SF_6 ban effective January 2026 in Europe).

Additionally, we continually strive to increase equipment efficiency and longevity with groundbreaking innovations such as mechanisms using composite materials, thereby extending operational life.

Enhanced on Quality and Safety

At Schneider Electric, we focus on enhancing quality and safety. Our MV components undergo rigorous testing to help ensure reliability and performance, exceeding industry standards. Standardized global manufacturing and quality processes help deliver precise, dependable products you can trust.

Fully type-tested and compliant with international and local standards

We have a specific attention to safety and reliability of our products, thus during the entire process from conception, and all along the manufacture, our components are following stringent tests and rigorous control routine. In addition, our devices undergo tests in laboratories across the world and are compliant with the latest standards globally and locally.

Quality certification: ISO 9001 and ISO 14001

We adhere to a unified quality process across all our facilities worldwide, to help ensure consistent standards.

Every unit of Schneider Electric has a quality operating organization, with stringent procedures:

- Uniform for all departments
- Recognized by numerous customers and official organizations

PM111586

Expertise and Support to Help You Succeed

Benefit from Tailored Technical Guidance from our Specialists on Demand

Our specialists offer on-demand technical guidance to simplify product integration and accelerate your adoption of our solutions.

We add value by:

- Accelerating the adoption of our offers
- Simplifying component integration
- Sharing technical expertise and innovative solutions

We support you through:

- Assistance with integrating Schneider Electric components
- Simulation of Panel Builder's cubicles into the CAE tool by our core experts, prior to extensive testing
- Support and guidance to prepare Panel Builder's switchgears for type testing
- Training on our products
- Factory visits to experience our processes firsthand

PM110898

Tools to Help You Achieve More

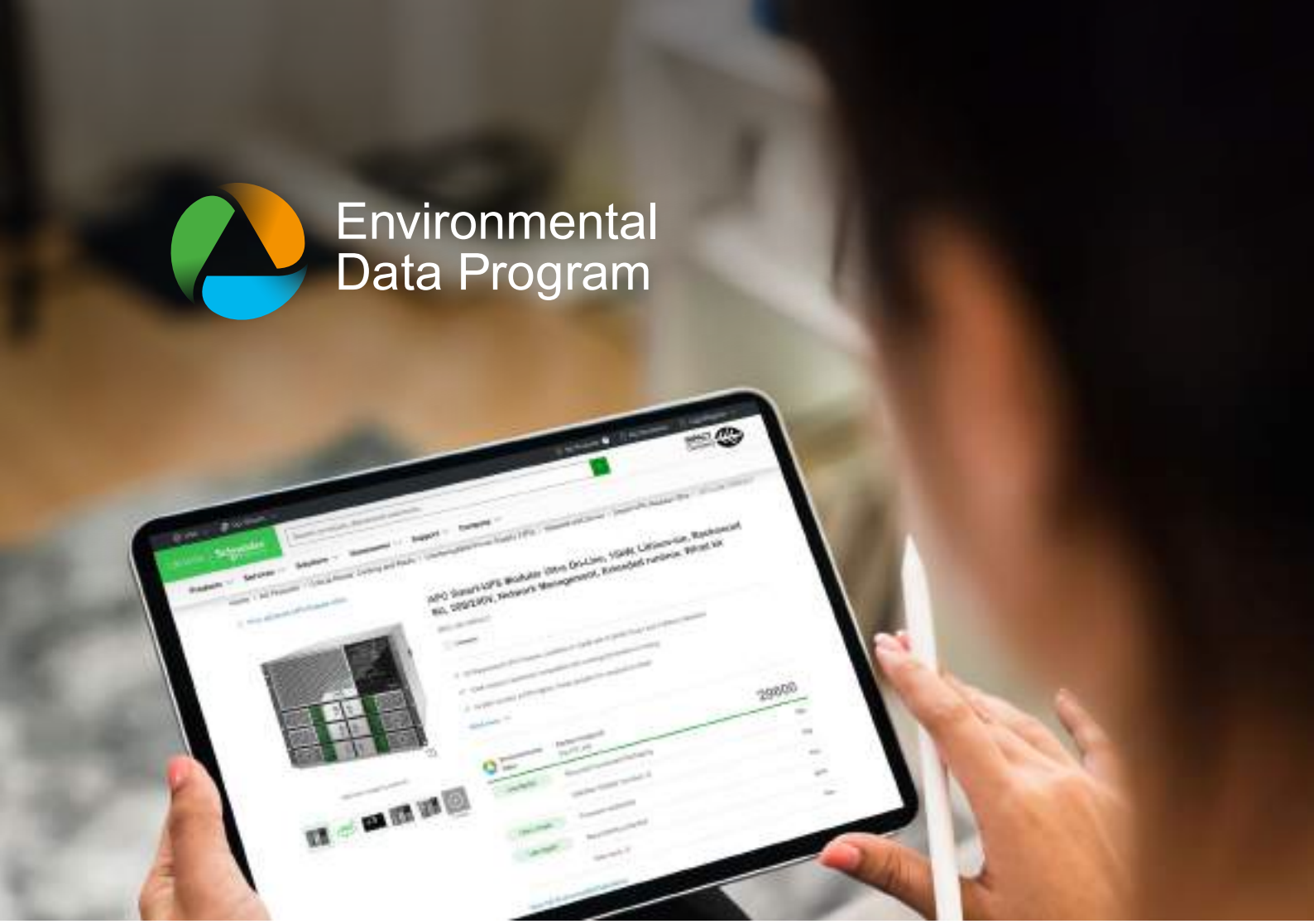
To help ease and secure your designs:

- CAD and drawings are accessible from our Web and Partner Portal
- Access to product installation videos
- Sharing technical expertise and innovative solutions

Share technical Information with your customers:

- User guides, installation manuals, and other technical documentation
- Products catalogs
- Maintenance guides and end-of-life manuals

PM111580

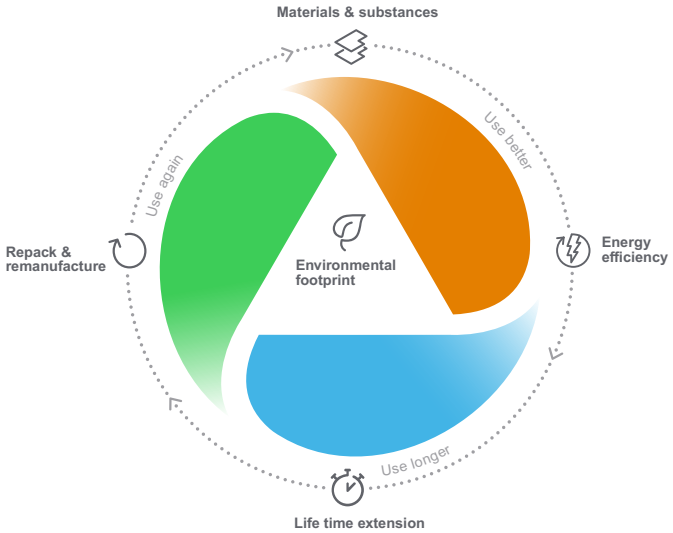


Environmental Data Program

Next-level transparency for better-informed product choices

The Environmental Data Program is a framework for how we measure, categorize, and compare the environmental attributes and footprint of our products.

Using a rigorous, fact-based methodology, the program provides environmental data from across the product lifecycle.



Use Better: How sustainable a product is, including environmental footprint, materials and substances, packaging, and energy efficiency.

Use Longer: How a product's life time can be effectively extended in terms of repairability and updatability.

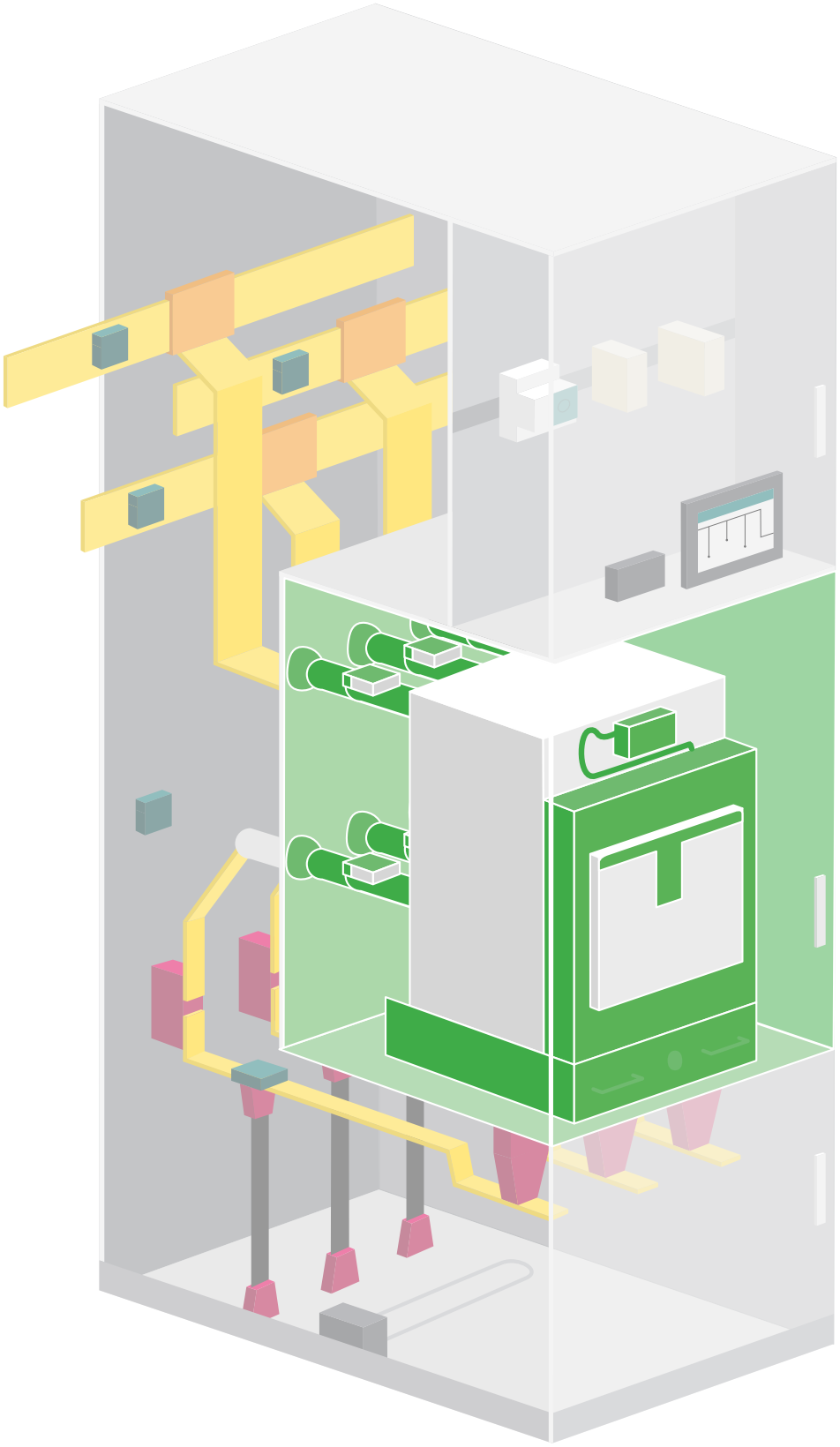
Use Again: How a product can be reused, from dismantling and remanufacturing to recyclability and manufacturer take back.

With this transparent, verified data, customers and partners are empowered to make conscious environmental choices and accurately evaluate and report on sustainability performance.

All our hardware offers have an associated environmental data available on se.com product pages.

Learn more about the Environmental Data Program


MCSeT
Schneider Electric



Medium Voltage Switching Devices

Medium Voltage Switching Devices

Circuit-Breakers

Vacuum Circuit-Breakers

Protection and Operation of Network

	EvoPacT™ HVX			EvoPacT ETL
	 PM110584			 PM110958 New
Rated voltage (kV)	12	17.5	24	24
Max. rated short-circuit current	40 kA	40 kA	31.5 kA	25 kA
Max. rated current	4 000 A(1)	4 000 A(1)	3 150 A	1 250 A
Versions	• Fixed • Withdrawable			• Disconnectable
Number of poles	3p			3p
Mechanical operations cycles (ON/OFF)	Up to 50 000	Up to 50 000	30 000	10 000
Mounting	Frontal			Lateral
Mechanism	Conventional spring			Conventional spring
Standards	• IEC • GB (Chinese) • ANSI			• IEC • GB

Benefits

- Embedded pole for better dielectric and environmental pollution withstand
- Operate smarter with innovative technology
- Help reduce operational risk
- Built-in sustainability
- See video

(1) Need forced cooling

Circuit-Breakers

Vacuum Circuit-Breakers

Protection and Operation of Network

	EasyPact EXE	Evo**Pact** HVX Embedded pole	Evo**Pact** HVX-O
	 PM108877	 PM109084	 PM110584
Rated voltage (kV)	12 / 17.5	12 / 17.5 / 24 / 36[3] / 40.5[3]	36
Max. rated short-circuit current	31.5 kA / 31.5 kA	50 kA / 50 kA / 31.5 kA / 31.5 kA / 31.5 kA	31.5 kA
Max. rated current	2 500 A	3 150 A / 4 000 A[1] / 2 500 A / 2 500 A / 3 150 A[1]	2 500 A
Versions	• Fixed • Withdrawable	• Fixed • Withdrawable	• Fixed (Up to 1 250 A) • Withdrawable
Number of poles	3p	3p	3p
Mechanical operations cycles (ON/OFF)	10 000	10 000	10 000
Mounting	Frontal	Frontal	Frontal
Mechanism	Conventional spring	Conventional spring	Conventional spring
Standards	• IEC • GOST	• IEC • GB (Chinese) • GOST [2]	IEC
Benefits			
	• Kit and web ordering • Better safety • Opex optimization (thermal sensors) • See video	• Embedded pole for better dielectric and environmental pollution withstand	• Assembled pole

[1] Need forced cooling
[2] Only 36 kV and 40.5 kV

Circuit-Breakers

SF_6 Circuit-Breakers[1]

Protection and Operation of Network

	EvoPact LF	EvoPact SF	
		EvoPact SF Lateral	EvoPact SF Frontal
	 PM109988	 PM110000	 PM109997
Rated voltage (kV)	12	12 / 17.5 / 24 / 36	17.5 / 36[2] / 40.5[2]
Max. rated short-circuit current	50 kA	25 kA / 25 kA / 25 kA / 25 kA	25 kA / 40 kA / 31.5 kA
Max. rated current	3 150 A	1 250 A	1 250 A / 3 150 A / 2 500 A
Versions	• Fixed • Withdrawable	• Fixed • Withdrawable	• Fixed • Withdrawable
Number of poles	3p	3p	3p
Mechanical operations cycles (ON/OFF)	10 000	10 000	10 000
Mounting	Frontal	Lateral	Frontal
Mechanism	Conventional spring	Conventional spring	Conventional spring
Standards	• IEC • GOST	IEC	IEC
Benefits			
	• Referenced product for Nuclear Power plants • Marine solutions certified • Seismic version available	• Integrated VIP self-powered protection relay in SFset up to 24 kV • Well suited for capacitor bank and inductive load applications	• Particularly adapted for high voltage ratings and harsh environment • Well suited for capacitor bank and inductive load applications

[1] Regulations in several countries are progressively restricting the use of SF_6 gas in new medium-voltage equipment. We recommend verifying the regulations applicable in your country or the end-user's country. Alternative solutions, such as vacuum circuit breakers, are available in this catalog.

[2] Withdrawable type is available for 36 kV and 40.5 kV ratings only.

Note: For SF_6-free solution, please explore the Evo**Pact** range (see page A7).

Circuit-Breakers

Specific Applications Circuit-Breakers

Protection and Operation of Network

Vacuum Circuit-Breaker

VAH

Function	Protection for generator in power plants up to 130 MVA
Rated voltage (kV)	12 / 13.8 / 17.5
Max. rated short-circuit current	63 kA / 63 kA / 63 kA
Max. rated current	5 000–8 000 A
Versions	Fixed
Number of poles	3p
Mechanical operations cycles (ON/OFF)	10 000
Mounting	Frontal
Mechanism	Conventional spring
Standards	• IEC • ANSI • IEEE C37.013
Benefits	
	• Extremely robust design • Optimized maintenance

Contactors

Vacuum and SF_6 Contactors

Protection and Control of Network

	Vacuum Contactor				SF_6 Contactor	
	CBX		**CVX**		**Rollarc**	
	 PM103784		 PM103792		 PM107151	
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	• Fixed	• Fixed	• Withdrawable version equipped with DIN or BS fuses • Optional on board auxiliary voltage transformer		• Basic • Fixed • Withdrawable	
Number of poles	1p–3p		3p	3p	3p	3p
Mechanical operations cycles (ON/OFF)	• 300 000 (mechanical latch) • 1 000 000 (magnetic held)		• 300 000 (mechanical latch) • 1 000 000 (magnetic held)		• 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	• IEC • GB (chinese)		• IEC • GB		IEC	
Benefits						
	Version available for capacitor banks: • 1 pole version available for neutral Earthing • Specific version available for capacitor banks		• LV supply thanks to optional on board VT • High short circuit breaking capacity in combination with fuses • Cradle available (1)		• Reference product in SF_6 contactor market • Nuclear powerplant and Marine applications • Soft breaking, suited for capacitor bank, power transformers and motors applications	

(1)For cradle information, contact Schneider Electric.

Switches and Disconnectors

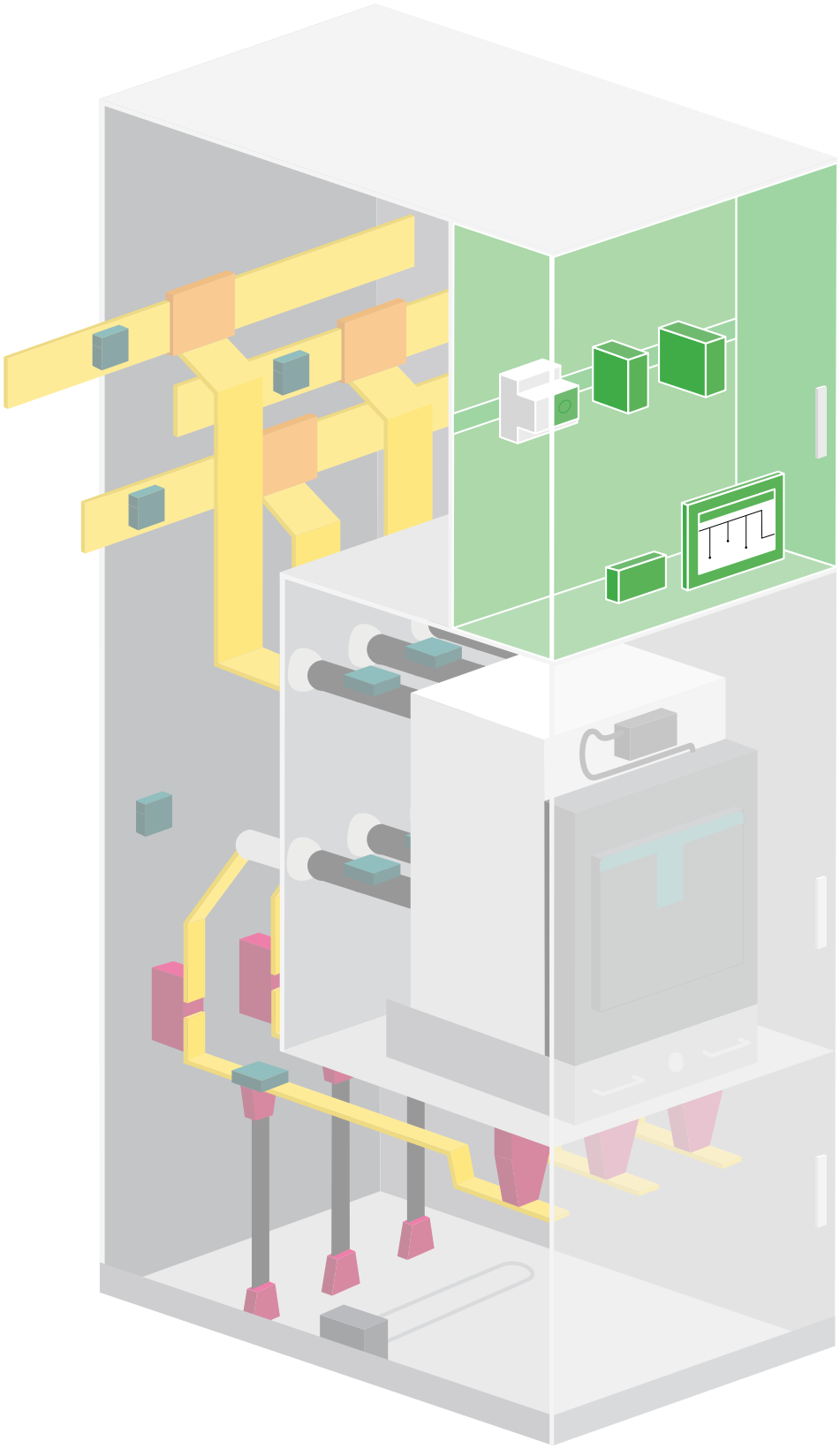
Indoor Load Break Switch and Disconnector

	SF_6-Free Switch and Disconnector	SF_6 Switch and Disconnector	
	AirPacT	**LBSkit**	
	 PM109061	 PE56373	
Function	Indoor load break switch, disconnector and accessories		
Rated voltage (kV)	24	24	36
Max. rated short-circuit current	25 kA/1 s	25 kA/1 s	25 kA/1s
Max. rated current	1 250 A	1 250 A	1 250 A
Pole center distance	200 mm	200 mm	350 mm
Mechanical operations cycles (ON/OFF)	5 000 O/C cycles (Class M2)	1 000 O/C cycles (Class M1)	
Switch 3 position	Yes	Yes	
Insulating medium	Pure Air	SF6	
Switching medium	Vacuum with SVI™ (1)	SF6	
Standards	• IEC • In accordance with EU 2024/573 – F-gas Regulation	IEC	
Benefits			
	• Sealed for life • Reduced maintenance • Easy and flexible integration • See video	• Sealed for life • Reduced maintenance	

(1)SVI™: Shunt Vacuum Interruption patented technology of Schneider Electric

Cradle

	L-Frame Cradle	MC Cassette
	 PM105644	 PM10893
Function	Integration of switching device	Integration of switching device
Rated voltage (kV)	12 / 17.5 / 24	7.2 / 12 / 17.5
Max. rated short-circuit current	40 kA / 31.5 kA	50 kA
Max. rated current	3 150 A / 2 500 A	3 150 A
Recommended cubicle width	650–1 000 mm / 800–1 000 mm	570–900 mm
Integration of switching device	EvoPacT HVX Embedded Pole + EasyPact EXE  PM105605  PM108877	EvoPact LF + EasyPact EXE  PE58239  PM108877
Version	With and without earthing switch	With earthing switch in option
Benefits		
	Fully assembled by Schneider Electric	Full type tested solution including internal arc protection with MV door



Protection, Metering and Distribution Automation

Protection, Metering and Distribution Automation

Empower your Panel Building Projects with, Enhanced Quality, Reliability, Safety, and Control

Explore our Protection and Control portfolio, which includes protection relays, arc flash devices, remote terminal units (RTUs) and substation controllers. These mission-critical solutions help protect assets by detecting and isolating faults to ensure best-in-class service continuity. They also facilitate the advanced monitoring and automation of electrical networks.

The table below shows the global positioning of our Protection and Control portfolio. Please note that regional or country-specific variations may occur due to different market requirements or regulatory conditions.

Protection Relays

VIP and PowerLogic P1 Ranges

		Self-Powered Protection Relay VIP40/45 VIP400/410	PowerLogic P1 P1F/P1V
		 PM100511	 PM107253
Application			
Feeder	Phase and earth-fault	●	●
	With directional	-	-
	With line differential	-	●
	With distance	-	-
Voltage	Voltage and frequency	-	●
Transformer	Phase and earth-fault	●	●
	With transformer differential	-	-
Motor	Phase and earth-fault	-	-(1)
	With voltage	-	-
	With machine differential	-	-
Generator	Phase and earth-fault	-	-
	With directional	-	-
	With machine differential	-	-
Busbar	With busbar differential	-	-
Capacitor bank		-	-
Front port		-	USB type B
Sensors		VIP 40/45/400: LPCT VIP 410: LPCT, Core Balance CT (CSH)	CT (1 or 5 A) or LPCT VT
Display		VIP 40/45: 4 digits display VIP 400/410: Graphical LCD	Graphical LCD • 32 characters divided in 2 lines
Other characteristics		VIP 40/45/400: Self-powered VIP 410: Dual powered with 24 to 125 Vdc/100 to 120 Vac or 110 to 250 Vdc/100 to 240 Vac Dimensions: VIP 40/45: 180 x 140 x 31 mm/7.09 x 5.51 x 1.22 in VIP 400/410: 180 x 140 x 105 mm/7.09 x 5.51 x 4.13 in	Dimensions: 116 × 116 × 108 mm/4.57 x 4.57 x 4.25 in Fits in 100 mm depth LV compartment using rising frame REL 15043
Input/Output		VIP 40/45/400: 0/1 (Mitop) VIP 410: 1/4 (1 for Mitop)	8/6
I/O terminals		Screw type	Screw type
Communication protocol		VIP 410 with power supply: Modbus RTU-RS485 (plug and play with T300)	• Modbus RTU • IEC 60870-5-103 • Modbus PO (EcoStruxure Power Operations)
Ambient temperature, in operation		-40°C to 70°C (-40°F to 158°F)	• -25°C to 70°C (-13°F to +158°F)
Standards		IEC, EAC, UKCA	IEC, EAC, UKCA

(1) Will be implemented in Future PowerLogic P1M.

Protection Relays

PowerLogic P3 Range

PowerLogic P3 contains
Two main devices, each with specific functions to address your needs in a one-box design, regardless of application.

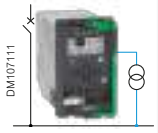
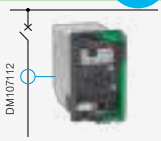
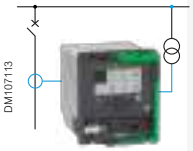
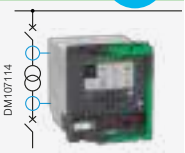
		PowerLogic P3 Standard		PowerLogic P3 Advanced	
		 DM109790		 DM109791	 DM109792
Application					
Feeder		P3U20 with O/C with directional E/F	P3U30 with directional O/C with voltage protection	P3F30 with directional P3L30 with differential	-
Transformer				-	P3T32 with differential
Motor				P3M30	P3M32 with differential
Generator				P3G30	P3G32 with differential
Characteristics					
Measuring inputs	Phase current	1/5 A CT or LPCT (x3) [1]		1/5 A CT	1/5 A CT (x6)
	Residual current	1/5 A CT or 0.2/1 A CT or CSH 2 A/20 A		(1/5 A+0.2/1 A) CT (1/5 A + CSH 2/20 A)	2 x (1/5 A+0.2/1 A) CT, 1 x (1/5 A) CT
	Voltage	VT (x1)	VT (x4) or LPVT (x4) [1]	VT (x4)	VT (x4)
Arc-flash sensor input		-		Loop sensor: 1 Point sensor: 2, 4 or 6 [2][3]	Loop sensor: 1 Point sensor: 2, 4 or 6 [2]
Digital	Input	8/10	14/16	6 to 36	6 to 16
	Output	5/8 + SF	11/8 + SF	10 to 21 + SF	10 to 13 + SF
Analogue	Input	0 or 4 [2]		0 or 4 [2]	
	Output	0 or 4 [2]		0 or 4 [2]	
Temperature sensor input		0 or 8 or 12 [2]		0 or 8 or 12 [2]	
Front port		USB type B		USB type B	
Nominal power supply		24 Vdc or 24–48 Vdc or 48–240 Vdc/Vac (39-265 Vdc/Vac) [4]		24–48 Vdc or 110–240 Vdc/Vac (88-265 Vdc/Vac)	
Ambient temperature, in operation		-40 to 60°C (-40 to 140°F)		-40 to 60°C (-40 to 140°F)	
Communication					
Rear ports RS232, IRIG/B, RS485, Ethernet		●	●	●	●
Protocols	IEC61850 ed1 and ed2	●	●	●	●
	IEC 60870-5-101 and 103 and 104	●	●	●	●
	DNP3 over Ethernet	●	●	●	●
	DNP3 serial	●	●	●	●
	Modbus serial	●	●	●	●
	Modbus over Ethernet	●	●	●	●
	Ethernet IP [5]	●	●	●	●
	Profibus DP	●	●	●	●
	SPAbus	●	●	●	●
Redundancy protocols (RSTP/PRP)		●	●	●	●
Others					
Control		4 objects 4 display	4 objects 8 display	8 objects 3-8 display	
Logic (Matrix + Logic equation)		●		●	
Withdrawable CT connector with shorting		●		-	
Remote HMI		-		●	
Hardware dimensions (W/H/D)		171 x 176 x 214[6] mm/6.73 x 6.93 x 8.43 in		264 x 177 x 208 mm/10.39 x 6.97 x 8.19 in	

[1] P3U30 relay only. Consult Schneider Electric for other models
[2] Depends on optional module
[3] P3L30 can have 1 loop or 2 point sensors only
[4] Check the available power supply range from the device's serial number label
[5] For details and availability, contact Schneider Electric.
[6] 226 mm (8.90 in) with ring-lug connectors

Note: Watchdog: Internal function; SF relay: Output signal/contact.

Protection Relays

PowerLogic P5 Range

PowerLogic P5 contains two main devices, each with specific functions to address your needs in a one-box design, regardless of application.		PowerLogic P5x20		PowerLogic P5x30	
		 DM107111	 DM107112	 DM107113	 DM107114
Application					
Voltage		P5V20	-	-	-
Feeder			P5U20 with directional in LPCT/LPVT version	P5F30 with directional	-
Transformer		-		-	P5T30
Motor				P5M30 with directional	-
Line		-	-	P5L30 with directional	-
Characteristics					
Measuring inputs	Phase current	-	1/5 A CT (x3) or LPCT (x3) (1)	1/5 A CT (x3) or LPCT (x3)	1/5 A CT (x6)
	Residual current	-	1/5 A CT and 1A CT or CSH core balance CT	1/5A CT and 1A CT or CSH core balance CT	1/5A CT (x2)
	Voltage	VT (x4)	LPVT (x4) (1)	VT (x4) or LPVT (x4)	VT (x1)
Arc-flash sensor inputs		-		0 to 6 point sensors	
Digital	Inputs	4 to 16		4 to 40	
	Outputs	3 to 8 + Watchdog		3 to 18 + Watchdog	
Temperature sensor input		-	0 to 16 (external modules)	0 to 16 (external modules)	
Analogue inputs/outputs		0 to 12/12 (external modules)		0 to 12/12 (external modules)	
Front ports		1 USB for configuration 1 USB for USB key		1 USB for configuration 1 USB for USB key	
Power supply		24–250 Vdc; 100-230 Vac		24 – 48 Vdc or 48–250 Vdc; 100–230 Vac	
Ambient temperature, in service		-40 to 70°C (-40 to 158°F)		-40 to 70°C (-40 to 158°F)	
Communication					
Hardware modules	Extension(2) + Backup memory	●		●	
	Serial	●		●	
	Ethernet	●		●	
	2nd Ethernet or InterRelay	-		●	
Protocols	IEC 61850 Ed.1 and Ed.2	●		●	
	IEC 60870-5-103 and 101	●		●	
	DNP3 Ethernet	●		●	
	DNP3 serial	●		●	
	Modbus Ethernet	●		●	
	Modbus serial	●		●	
	EtherNet IP	●		●	
Redundancy protocols	RSTP	●		●	
	PRP / HSR	●		●	
Wireless protocols	ZigBee 2.4 GHz (IEEE 802.15.4) Green Power	●		●	
Time synchronization	Pulse, IRIG-B(3)	●		●	
	SNTP, PTP IEEE 1588 v2(4)	●		●	
Others					
Control		8 controlled objects Mimic		8 controlled objects Mimic	
Logic (Matrix + Programmable logic)		●		●	
Optional Advanced Logic Engine (order option)		●		●	
Cybersecurity (settable)		Basic or Advanced		Basic or Advanced	
Draw-out device (withdrawability)		●		●	
Hardware dimensions (W/H/D)		102 / 176 / 219 mm 4.01 / 6.93 / 8.62 in		152 / 176 / 219 mm 6.0 / 6.93 / 8.62 in	

(1) In case P5U20 is choosen for cooperation with low power sensors, it contains LPCT (x3) and LPVT (x4) channels
(2) For connection of RTD module and IRIG-B module
(3) IRIG-B module is a separate accessory
(4) PTP IEEE 1588 v2 is availaible with HSR/PRP communication board

Protection Relays

PowerLogic P7 Range

PowerLogic™ P7 provides specific functions to address your needs in a one-box design, regardless of application.

PowerLogic P7


PM111581

Application

Feeder	●	**Line Differential**	●
Motor	●	**Busbar**	●
Generator	●	**Stand-Alone Merging Unit (SAMU)**	●
Transformer	●	**Bay Controller**	●

Characteristics

Measuring inputs	Current	5CT (1/5A) or 6CT (1/5A per analogue module, max. 3 modules)
	Core balance current	1CT (1A) core balanced (5CT module incl.)
	Voltage	4VT or 3VT per analogue module (max. 3 modules)
Digital	Inputs	8 to 104 (40TE)
	Outputs	8 to 36 (40TE) + Watchdog (WD)
	HSHB outputs	0 to 6
Temperature sensor input		0 to16 (external module)
Current loop input and output (4-20 mA)		0 to 4 (external module)
Front ports		1 mini-USB for configuration
Power supply		24 to 34 Vdc; 48 to 125 Vdc; 110 to 250 Vdc/Vac
Ambient temperature, in service		-40 to 85 °C (-40 to 185 °F)

Communication

DHMI port (wall mounting only)		Optional
Rear Ports	Serial	●
	Ethernet	●
	Redundant Ethernet	Optional SFP modules
Protocols	DNP3 Ethernet[1]	●
	DNP3 serial[1]	●
	Modbus Ethernet[1]	●
	Modbus serial[1]	●
	IEC 60870-5-103[1]	●
	IEC 61850 Ed2.1	●
	IEC 61850-9-2 LE	●
	IEC 61869-9	●
Redundancy protocols	RSTP	●
	PRP / HSR	●
	Failover	●
Time synchronization	IRIG-B[2], Protocol	●
	SNTP, PTP IEEE 1588	●

Others

Control		Mimic, Up to 4 CBs and 20 switches depending on the choosen application
Logic (Matrix Programmable + Logic Equations)		●
Cybersecurity according IEC 62443		Security Level 2
Modular hardware (board withdrawability)		●
Mounting variants	Flush	●
	Rack[3]	●
	Wall mounting with detachable HMI (DHMI) support	●

[1] Not supported for P7S (SAMU)
[2] IRIG-B module is a separate accessory
[3] Rack mounting frame is a separate accessory (REL70067)

Protection Relays

Easergy MiCOM Range

Application		Easergy MiCOM P30	Easergy MiCOM P40
		 PM108873	 8297098
Feeder	Phase and earth-fault	•	•
	With directional	•	•
	With line differential	•	•
	With distance	•	•
Voltage	Voltage and frequency	•	•
Transformer	Phase and earth-fault	•	•
	With transformer differential	•	•
Motor	Phase and earth-fault	•	•
	With voltage	•	•
	With machine differential	-	•
Generator	Phase and earth-fault	-	•
	With directional	-	•
	With machine differential	-	•
Busbar	With busbar differential	-	•
Capacitor bank		-	-
Sensors		• CT (1 or 5 A) • VT	• CT (1 or 5 A) • VT
Display		• Large color LCD type display with single-line diagram (mimic) • Remote UMI	• Standard UMI
Other characteristics		• Multifunction; integrated Bay controller • High firmware/hardware variability	• Multifunction • High firmware/hardware variability
Input/Output		80/45	64/60
I/O terminals		• Screw type • Ring lug	Ring lug
Temp. sensors		10	10
Communication protocol		• Modbus RTU • IEC 60870-5-101/103 • DNP3 • IEC 61850 with GOOSE • RSTP • PRP / HSR / DUAL-IP • IEC 6870-5-104	• Modbus RTU • IEC 60870-5-103 • DNP3 serial/DNP3oE • IEC 61850 with GOOSE • RSTP/SHP/DHP • HSR/PRP • Process Bus
Logic equations		Comprehensive logic equations	Comprehensive logic equations
Standards		• Cyber security • IEC, EAC, ATEX	• Cyber security (IEC 62351) • IEC, UL, CSA, EAC, ATEX

Protection Relays

Easergy VD23

Easergy VD23

Functions

- Indicates presence or absence of voltage through 1 or 2 relays
- For MV networks from 3 kV to 36 kV
- Associated with VPIS-VO V2 (see next page)

Technical specifications

- Self-adapted to network voltage
- Displays the voltage in % of nominal
- Output contacts behaviour configurable according to various combinations of phase and unbalance voltage status
- DIN format
- Allows to address various applications:
  - Automatic transfer systems
  - Alarms on voltage loss
  - Automation on voltage loss
  - Earth locking on voltage presence
  - Alarms on voltage presence

Reference numbers

- Voltage detection relay (VD23): ref. EMS58421
- Combined voltage presence relay + Fault Passage Indicator (Flair 23DM): ref. EMS58355

Standards

IEC

Benefits

- Fits all MV network neutral systems
- Compact (DIN format)
- Output contact behavior highly configurable according to application needs

Arc Fault Detection and Protection

PowerLogic Arc Protection Range

The arc protection unit detects an arc flash in an installation and trips the feeding breaker. An arc flash rotection maximizes personnel safety and minimizes material damage caused by arc faults.	**Arc V121**  PM105563	**PowerLogic A1**  PM110955
System features	• Operation on light only • Up to 10 sensors arc or smoke sensors • Single trip contact • Straight-forward installation • Typical operation time 9 ms (including the output relay) • Cost efficient solution • Self-supervision • Binary input for blocking or resetting (programmable) the unit • Possibility for double arc channel activation trip criteria • BIO light transfer possibility to other Vamp device	Stand-alone arc flash protection light detection for typical configurations: • 4 Arc inputs (point sensors) • Integrated 24 to 230 Vac/Vdc power supply • High speed trip output (1 to 2 ms operation time) • 1 self supervision output • D-rail or flush mounting • Master trip I/O to transfer trip order to another A125. Allows more selectivity • Direct installation with basic comissioning • Front status LEDs • Add current condition when associated to VAM4C
Sensors		
Point sensor - Surface	• Arc detection from compartments • Self-monitored • 6 m and 20 m cable lengths available	• Arc detection from compartments • Self-monitored • 6 m and 20 m cable lengths available • Shielded or not shielded
Point sensor - pipe	• Arc detection from compartments • Self-monitored • 6 m and 20 m cable lengths available • Shielded or not shielded	
Loop sensor (fibre)	VA 1DA  PM111583	VA 1EH  PM111584
Standards	IEC	IEC/UL
Benefits		
	• Personnel safety • Helps reduce production loss • Extended switchgear life cycle • Helps reduced insurance costs • Low investment costs and fast installation • Helps secure operation	

Arc Fault Detection and Protection

PowerLogic Arc Protection Range

PowerLogic A3	PowerLogic A5
 PM110956 PM110957	 PM105565
Stand-alone and small system arc flash protection light detection for typical configurations supported by 4 commercial references: • A3-F6P and A3-F12P operate in stand alone mode • A3-S6P and A3-S12P are operating as auxiliaries to A3-Fxx devices • 6 or 12 Arc inputs (point sensors) • Integrated 24 to 230 Vac/Vdc power supply • A3-Sxx have POE power supply by A3-Fxx • High speed trip output (1 to 2 ms operation time) • 1 self supervision output • D-rail or flush mounting • High speed bus to support selective protection between devices • Direct installation with basic comissioning • Front status LEDs	• Three phase current, zero sequence voltage and current • Event logs, disturbance recording and real time clock • Operation on simultaneous current and light or light only • Informative display LCD (single line diagram) • Up to four fast trip contacts • Direct light sensors and fiber optic up • Support up to 170 arc flash point sensors (with VAM I/O and A3 units) • One normally open and one change over alarm contact • Typical operation time: less than 7 ms (including the output relay) • Optionally 2 ms typical operation time when semi-conductor outputs are used • Programmable operation zones • Continuous system self supervision • PC configurable • Communication ports supporting a wide range of communication protocols which are intended for a SCADA interface • Multiple configurable DI and DO • AEM Bus (Arc Extension Modules) to connect to PowerLogic A3 range
• Arc detection from compartments • Self-monitored • 6 m and 20 m cable lenghts available, shielded or not shielded	• Arc detection from compartments • Self-monitored • 6 m and 20 m cable lengths available • Shielded or not shielded
• Arc detection from compartments • Self-monitored • 6 m and 20 m cable lenghts available, shielded or not shielded	• Arc detection from compartments • Self-monitored • 6 m and 20 m cable lengths available • Shielded or not shielded
SLM  PM111585	• Monitors various compartments • Small bending radius for easy installation • Shielded or not shielded
IEC/UL	IEC

- Helps personnel safety
- Helps reduces production loss
- Large scale installation like substation
- Helps reduced insurance costs
- Low investment costs and fast installation
- Helps secure operation

Note: The choice is to be made according to the needs of type and number of sensors. Please contact us.

MV-LV Substation Remote Control and Monitoring

EasyLogic T150 Range

EasyLogic™ T150 RTU provides a flexible platform for the most common substation control applications with a modular design.		EasyLogic T150 RTU
		
Traditional RTU: I/O to SCADA/DCS		●
Flexible Logic programming: IEC 61131/IEC 61499		●
Data concentrator		●
Protocol converter		●
Substation Gateway		●
Lightweight substation HMI		●
Characteristics		
I/O modules	Digital Inputs	16 per AB_DI or AB_DIDO module
	Digital outputs	8 per AB_DI or AB_DIDO module
	Analog inputs (DC)	8 per AB_AI module
	Analog outputs (DC)	4 per AB_AO module
	Timestamping resolution	1 millisecond
	Galvanic isolation Embedded	Embedded
	Max. Total I/O modules	32
Power supply		24 to 48 Vdc
Ambient temperature, in service		-40 to 70 °C (-40 to 158 °F)
Communication		
Serial ports	Embedded in Head Unit	2x RS232 + 1x RS485 ports
	Expansion	Upto 16 additional RS232/485 ports (4x AB_SER modules)
Ethernet ports	LAN ports (10/100 Mbps)	2x interfaces (HSR/PRP capable) - RJ45 or SFP options
	MNT port (10/100 Mbps)	1x RJ45
Protocols	DNP3 IP	client and server
	DNP3 Serial	client and server
	Modbus/TCP	client and server
	Modbus serial	client and server
	Spabus	client
	IEC 60870-101	client and server
	IEC 60870-103	client
	IEC 60870-104	client and server
	IEC 61850 ed1.0	client
	IEC 61850 ed2.0	client and server
Time synchronization	IRIG-B , telecontrol protocol	-
	SNTP, IEEE 1588 (PTP)	client and server
Others		
Max. Datapoints		250,000
Cybersecurity services		RBAC, logging, secured access
Hot-swappable hardware modules		-
Mounting variants	DIN-rail mounting	-

MV-LV Substation Remote Control and Monitoring

PowerLogic T300 Range

Advanced Supervision and Control of Medium Voltage and Low Voltage Distribution System

PowerLogic T300: A modular RTU solution for any kind of applications


PM104388

Developed according to IEC 62443-4-2, PowerLogic T300 has been designed with a cyber security package. This shall help reduce exposure to cyber threats and improved operational security. It includes important features such as password management, firmware signature, port hardening, and secured communication compliant to the latest international standards.

Main functions

MV network remote control of UG and OH equipment : Fault Location Isolation system and restoration for all neutral system - centralized and decentralized network management

- LV switchboard monitoring
- Voltvar optimisation support
- MV and LV power and quality measurement
- Thermal monitoring and asset management

Protocols

- IEC 60870-5-101/104 controlled and controlling station (standard and secure)
- DNP3 serial and TCP outstation and master station
- Modbus serial and TCP server and client (standard and secure)
- IEC 61850 server and client

Communication system

- Two flexible communication ports accommodated with modem boxes:
  - RS232/RS485 modem box for WAN or LAN communication
    ZigBee modem
  - 4G European standard modem box with GPS clocks for accurate time synchronization
- Two Ethernet ports (for WAN and LAN communication)
  - 1 Ethernet port for WAN communication
  - 1 Ethernet port for LAN communication with third party devices
- 1 serial RS232/RS485 for Modbus LAN communication
- Helps to secure WiFi for local connection as option

Standards

IEC, UL

Benefits

- PowerLogic T300 adress the follow customer challenges:
  - Evolve with the grid: manage bidirectional and intermittent power flow
  - Increase availibility: improve SAIDI and optimise MV networks
  - Maintain power quality
  - Manage the costs: reduce installation, operation and maintenance expenditures
  - Deliver efficiency: optimise network to manage growing consumption
  - Improve Cybersecurity: help defend against malicious software and unauthorised access
- PowerLogic T300 is a modular FRTU platform, hardware, firmware. Modular approach helps to ensure T300 will be configurable to your exact needs e.g. packaged solutions, embedded solutions, open solutions
- This open architecture supports different applications, from a single communication gateway to large substation management
- Built-in web server for commissioning and maintenance with local and remote access, compatible with PC, tablet and smartphone devices
- High availability back up power supplies range PS100/50/25 for control and monitoring applications

MV-LV Substation Remote Control and Monitoring

PowerLogic T300 Range

PowerLogic HU250 Head unit Communication - Gateway


PM104385

PowerLogic SC150 MV Switch Controller


PM104382

Functions

- Flexible communication to control centre and other customers' IT applications
- Open peer-to-peer communication for self-healing applications(1)
- Open to third-party devices with many protocol capabilities
- Embedded IEC 601131-3 PLC for automation design
- Cyber security management: Compliance to the security standards/ regulations (IEC 62351/IEEE 1686)
- Configurable Sequence of Events (SOE) for data logs
- Software integrity with firmware signature on all modules:
  - Secure communication between PowerLogic T300 and associated webserver tool with local or remote connections using HTTPS, SSH, SFTP, and TLS
  - User identification and authentication according to IEC 62351-8
  - User access management according to IEC 62351-8
  - Communication authentication according to IEC62351-5 when using DNP3 and IEC60870-5-104 protocols
  - Port hardening management
  - IP communication filter
  - Security events log storage and transmission according to Syslog protocol

- Control and monitoring of all switchgear types
- Advanced Fault Passage Indicator (FPI) algorithms:
  - Phase-phase and phase-ground detection ANSI 50/51, 50N/51N
  - Directional phase-phase and phase-ground detection ANSI 67/67N
  - Broken conductor detection (one phase lost) ANSI 47
- MV Voltage monitoring ANSI 27, 59, 59N
- MV Current monitoring ANSI 37
- Directional active overpower detection ANSI 32P
- Large current and voltage measurement capabilities: standard CT for current, LPVT, VT and from capacitor divider and voltage presence indicator (VDS, VPIS) for voltage
- Power measurement according to IEC 61557-12
- Power quality according to IEC 61000-4-30 class S
- Specific application automation: sectionalizer
- Disturbance recording

(1) For details and availability, contact Schneider Electric.

PowerLogic LV150 Transformer and LV Monitoring


PM104381

PowerLogic SC160 Switchgear Controller


PM108159

Functions

- Current and voltage measurements according to IEC 61557-12
- Broken conductor detection 47BC
- Power quality according to IEC 61000-4-30, Class S
- Transformer temperature monitoring

PowerLogic SC160 is a modular switchgear controller configurable as protection with Circuit Breaker (CB) use or Fault current indicator with Load Break Switch (LBS) use.

- Control and monitoring of all switchgear types
- Protection or fault passage indication function:
  - Phase overcurrent (ANSI 50/51)
  - Ground/earth fault overcurrent (ANSI 50N/51N)
  - Directional phase overcurrent fault (ANSI 67)
  - Directional ground/earth fault overcurrent (ANSI 67N)
  - Cold load pickup
  - Inrush restraint

MV-LV Substation Remote Control and Monitoring

PowerLogic T300 Range

PowerLogic PS50 Monitoring

Functions

The PowerLogic PS50 power supplies, associated with a backup battery, are designed to maintain control and monitoring of the entire MV substation during long power supply interruptions (up to 48 hours). They are designed to supply:

- MV switchgear motor mechanism and circuit-breaker coils
- Transmission equipment (e.g. radio)
- Electronic modules of T300
- All other devices in MV/LV substations (Protection relays, Fault Passage Indicators or others IEDs, low voltage breakers, PLC concentrators, etc.)

Power supply outputs

- 12 Vdc, 18 W permanent for telecom equipment
- 12 Vdc, 36 W permanent for IEDs
- 48 Vdc or 24 Vdc 10 W permanent (for protection relays, electronic devices, etc.) and 300 W/1min (for switchgear operating mechanism motors)

Protocols

Modbus RS485

Standards

IEC 60255-5 (10 kV level)

Benefits

- High availability due to the separate voltage output for IEDs, telecom and motor
- High efficiency and high energy backup autonomy
- Designed for severe environment with higher insulation (10 kV)
- Easy maintenance with only one battery, 24 Ah or 38 Ah robust life span (> 10 years)
- Modbus communication for battery monitoring to allow optimised maintenance operations

- Battery charging and monitoring for longer battery life
- Battery end-of-life monitoring and anticipated maintenance
- Designed for long outage time

Energy Management and Control

Basic and Advanced Meters

	Basic Energy Meters	Basic Panel Meters	Advanced Meters
	IEM3200 series	**PM5100/5300/ PM5500/5600/5700**	**PM8000**
	 PB115488	 PB111776	 PB113683
Function	kW/h meters	Metering and sub-metering	Energy and intermediate power quality meter
	• IEC 62053-22 Class 0.5S • IEC 62053-21 Class 1 • IEC 62053-23 Class 2 • IEC 61557-12 • EN 50470-1/3	• IEC 62053-22 Class 0.5S • IEC 62053-22 Class 0.2S (PM55xx) • IEC 62053-23 Class 2 • IEC 61557-12 • EN 50470-1/3 • ANSI C12.20 Class 0.2 and 0.5	• IEC 61557-12 • IEC 62053-22 Class 0.2S • IEC 61000-4-30 Class A • IEC 62856-1 • ANSI C12.20 Class 0.2 • PMD /Sx/K70/0.2
Applications			
Panel instrumentation	I, U, F, P, Q, S, PF, E alarm, I/O, enegy	I, U, F, P, Q, S, PF, E min/max, harm., alarm, I/O (I, U, unbalance, demand, clock/cal)	I, U, F, P, Q, S, PF, E, THD min/max, harm., alarm, I/O (I, U, unbalance, demand, clock/cal)
Energy efficiency and cost			
Sub-billing and cost allocation	•	•	•
Demand and load management	-	-	•
Billing analysis	-	-	•
Power availability and reliability			
Harmonics	-	•	•
Dip/swell, transient	-	-	•
Compliance monitoring	-	-	•
Revenue metering			
Characteristics			
Measurement accuracy (active energy)	• Class 0.5S/Class 1	• Class 0.2S (PM55xx) • Class 0.5S	• IEC 62053-22 Class 0.2S • ANSI 12.20 Class 0.2S
Installation	• DIN rail 5 or 7 x 18 mm modules	• Flush mounted 96 x 96 mm. Remode display option in PM55xx	• Flush and DIN rail mounted 96 x 96 mm
Voltage measurement	• 50 V to 330 V (Ph-N) • 80 V to 570 V (Ph-Ph) • Up to 1 MVac (ext VT)	• 20V L-N/35V L-L to 400V L-N/ 690V L-L • Up to 1 MVac (ext VT)	• 57-400 Vac L-N 3P (100-690 Vac L-L)
Current measurement	• External CT	• External CT	• External CT
Communication ports	• Modbus serial • BACnet IP • M-bus • LON works	• Modbus serial • Modbus TCP/IP • Ethernet IP • BACnet IP • DNP 3.0	• Modbus RTU • Modbus TCP • ION • DNP 3.0 • HTTPS • SFTP
Inputs/Outputs	• 2 I/O	• 4 I/O, Relay Option • 6 I/O (PM55xx)	• Up to 27 DI, 9 DO • Up to 16 AI, 8 AO
Memory capacity		256 kB and 1.1 MB (PM55xx)	• Advanced: 512 MB (64 DR) • Standard: 512 MB (50 DR) • Essential: 64 MB (10 DR)

Energy Management and Control

Advanced and Utility Meters

	Advanced Meters		Utility Meters
	ION7400	**ION9000**	**ION8650 A/B/C**
	 PB115151	 PB115917/PB115914	 PB107500
Function	Energy and basic power quality meter • IEC 61557-12 • IEC 62053-22 • IEC 61000-4-30 Class A • ANSI C12.20 Class 0.2 • PMD /Sx/K70/0.2 • IEC 62586-1	Energy and advanced quality meter • IEC 61557-12 • IEC 62053-22 Class 0.1S • IEC 61000-4-30 Class A • IEC 62856-1 / IEC 62856-2 - PQI class A • ANSI C12.20 Class 0.1 • PMD /Sx/K70/0.2	Energy and power quality meter • IEC 62052-11 • IEC 62053-22/23 Class 0.2S • IEC 61000-4-30 Class A • ANSI C12.20 Class 0.1 • IEC 62586-2
Applications			
Panel instrumentation	I, U, F, P, Q, S, PF, E, THD min/max, harm., alarm, I/O (I, U, unbalance, demand, clock/cal, flicker)	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, min/max values, unbalance, flicker, transient, sag/swell)
Energy efficiency and cost			
Sub-billing and cost allocation	•	•	•
Demand and load management	•	•	•
Billing analysis	•	•	•
Power availability and reliability			
Harmonics	•	•	•
Dip/swell, transient	•	•	•
Compliance monitoring	•	•	•
Revenue metering			
Characteristics			
Measurement accuracy (active energy)	• IEC 62053-22 Class 0.2S • ANSI 12.20 Class 0.2S	• IEC 61053-22 Class 0.1S • ANSI 12.20 Class 0.1S	• IEC 62053-22 Class 0.2S • ANSI 12.20 Class 0.1
Installation	• Flush and DIN rail mounted 96 x 96 mm	• DIN rail mounted	• ANSI socket mounting 9S, 35S, 36S, 39S and 76S • FT21 switchboard case
Voltage measurement	• 57-400 Vac L-N 3P (100-690 Vac L-L)	• 57-400 Vac L-N 3P (100-690 Vac L-L)	• 57-277 V L-N AC (9S, 36S); 100-480 V L-L AC (35S)
Current measurement	• External CT	• External CT	• External CT
Communication ports	• Modbus RTU • Modbus TCP • ION • DNP 3.0 • DLMS • HTTPS • SFTP	• Modbus RTU • Modbus TCP • ION • DNP 3.0 • DLMS • HTTPS • SFTP	• Modbus RTU • Modbus TCP • ION • DNP 3.0 • DLMS • SFTP • HTTP
Inputs/Outputs	• Up to 27 DI, 9 DO • Up to 16 AI, 8 AO	• Up to 32 DI, 4 DO, 10 RO • Up to 16 AI, 8 AO	• Up to 22 I/O
Memory capacity	• Advanced: 512 MB (64 DR) • Standard: 512 MB (50 DR) • Essential: 64 MB (10 DR)	2 GB	A: 128 MB B: 64 MB C: 32 MB

Energy Management and Control

EcoStruxure Panel Server

		Entry PAS400	Universal PAS600
		 DB410978	 DB410983
Function		Compatible with a large set of wireless sensors, PowerTag Energy, HeatTag, and others. PAS400 is the perfect fit for small networks or installations where space is a challenge. • Connect to Schneider Electric Cloud solution, SCADA or BMS • Benefit from PAS easy commissioning and monitoring experience for your wireless sensors	The All-in-one Panel Server Universal, PAS600 and PAS600L are designed to retrieve data from wireless, Modbus, and Ethernet based protocols to offer versatility and adaptability • Connect to Schneider Electric Cloud solution, SCADA or BMS • Benefit from PAS easy commissioning and experience
Characteristics			
Power Input		110–277 Vac	110–240 Vac, 24 Vdc
Storage temperature		-40°C to +85°C	-40°C to +85°C
Operating temperature		-25°C to +60°C	-25°C to +70°C
Humidity		⩽ 93%	⩽ 93%
Pollution degree		Class II	Class II Class III: PAS600L
Number of devices	Total for mixed configuration	20	40
	PowerTag Energy, Acti9 Active, and wireless breaker auxiliaries	20	85[1]
	Easergy TH110/CL110, and environmental sensors	20	100
External IEEE 802.15.4 and Wi-Fi	Antenna		PASA-ANT1
Modbus RS485 Master	Max. number of devices w/o repeater	–	32
	Maximum Length	–	1000 m
	Baudrate	–	1200; 4800; 9600; 19200; 38400; 57600; 115200
Communication		Ethernet 10/100base T and Wi-Fi Access Point; TCP/IP; IP V4 / IP V6; DPWS; DHCP; Modbus/TCP Server; Modbus/TCP Client[2]; Schneider Cloud Services; SFTP and HTTPS publication; External Wi-Fi/Wireless (802.15.4) Antenna[2]	
Standards		IEC 61010; IEC 61010-1; IEC 61010-2-201; UL 61010; UL 61010-1; UL 61010-2-201; CSA C22.2 No 61010-1-12; CSA C22.2 No 61010-2-201; IEC 62974-1; IEC 62443-4-1: IEC 61326-1; EN 301-489-1; EN 301-489-17; EN 55032; CISPR 11; EN 300-328; IEEE 802.15.4; IEEE 802.11b/g/n; IEEEE802.3 af/at (PAS600P, PAS800P)	

Benefits

- Easy installation
- Easy commissioning with EcoStruxure Power Commission, a single tool that auto discovers, configures, tests and maintenance
- Embedded web pages for real time, complete and accurate views into power network energy and operations efficiency
- Enhanced cybersecurity design at every phase of the product life cycle

[1] Lower limits may apply depending on the firmware version, consult the User Manual, Release Notes or other documentations
[2] Only Universal PAS600 and Advanced PAS800

Energy Management and Control

EcoStruxure Panel Server

	Universal Wired by Design PAS600WD	Advanced PAS800
	 DB410983	 DB410992
Function	Panel Server Universal Wired by Design, PAS600LWD and PAS600PWD are designed for specific cybersecure sensitive installations, dedicated to wired communication protocols (Modbus, Ethernet) • Connect to Schneider Electric Cloud solution, SCADA or BMS • Benefit from improved security with the Wired by Design PAS	Discover PAS Data Logger and Local Energy Server capabilities. It embodies the first step into energy monitoring for small businesses. Follow, analyze and compare your loads consumption to enable energy savings. • Connect to Schneider Electric Cloud solution, SCADA or BMS • Benefit from local Energy management and improve your energy efficiency
Characteristics		
Power Input	24 Vdc, POE (Power over Ethernet)	110-240 Vac, 24 Vdc, POE (Power over Ethernet)
Storage temperature	-45°C to +85°C	-40°C to +85°C
Operating temperature	-25°C to +85°C	-25°C to +70°C
Humidity	⩽ 93%	⩽ 93%
Pollution degree	Class II: PAS600PWD Class III: PAS600LWD	Class II: PAS800P, PAS800 Class III: PAS800L
Number of devices	-	40
	-	85[1]
	-	100
External IEEE 802.15.4 and Wi-Fi	-	PASA-ANT1
Modbus RS485 Master	32	32
	1000 m	1000 m
	1200; 4800; 9600; 19200; 38400; 57600; 115200	1200; 4800; 9600; 19200; 38400; 57600; 115200
Communication	Ethernet 10/100base T; PPPoE (PAS600PWD)TCP/IP; IP V4 / IP V6; DPWS; DHCP; Modbus/TCP Server; Modbus/TCP Client[2]; Schneider Cloud Services; SFTP and HTTPS publication	Ethernet 10/100base T and Wi-Fi Access Point; TCP/IP; IP V4 / IP V6; DPWS; DHCP; Modbus/TCP Server; Modbus/TCP Client[2]; Schneider Cloud Services; SFTP and HTTPS publication; External Wi-Fi/Wireless (802.15.4) Antenna[2]; PPoE (PAS800P)
Standards	IEC 61010-2; UL 61010-2; CSA C22.2; IEC 62974-1; IEC 62443-4-1; IEC 61326-1; EN 301-489; EN 55032; CISPR 11; EN 300-328; IEEE 802.15.4; IEEE 802.11 a/b/g/n; IEEE 802.3 af/at (PAS800P)	IEC 61010; IEC 61010-1; IEC 61010-2-201; UL 61010; UL 61010-1; UL 61010-2-201; CSA C22.2 No 61010-1-12; CSA C22.2 No 61010-2-201; IEC 62974-1; IEC 62443-4-1: IEC 61326-1; EN 301-489-1; EN 301-489-17; EN 55032; CISPR 11; EN 300-328; IEEE 802.15.4; IEEE 802.11b/g/n; IEEEE802.3 af/at (PAS600P, PAS800P)

Benefits

- Easy installation
- Easy commissioning with EcoStruxure Power Commission, a single tool that auto discovers, configures, tests and maintenance
- Embedded web pages for real time, complete and accurate views into power network energy and operations efficiency
- Enhanced cybersecurity design at every phase of the product life cycle
- PAS800 only: 3 Years Data historization, energy monitoring and trending capabilities

[1] Lower limits may apply depending on the firmware version, consult the User Manual, Release Notes or other documentations
[2] Only Universal PAS600 and Advanced PAS800

Low Voltage Protection

Acti9 Range

	Acti9 iC60N	Acti9 C60H-DC	Electrical Auxiliaries OF	 SD
				
Function	DIN rail miniature circuit-breakers. Circuit-breaker used in auxiliary power supply circuits providing overload and short-circuit protection	DIN rail miniature circuit-breakers. Circuit-breaker used in auxiliary power supply circuits providing overload and short-circuit protection	Open/ closed contact	Fault signalisation contact
Rated voltage	• 1P/1P+N: 12 to 240 Vac • 2P/3P/4P: 12 to 440 Vac	• 1P: 24 to 250 Vdc • 2P: 24 to 500 Vdc	• 240 to 415 Vac • 24 to 220 Vdc	
Number of poles	1, 1P+N, 2, 3, 4	1 or 2		
Nominal current	0.5 to 63 A	0.5 to 63 A	Maximum operating current: 100 mA mini, 6 A maxi	
			LCA	2 mA to 100 mA/ up to 220 Vdc and 240 Vac
			24 Vdc	6 A
			48 Vdc	2 A
			60 Vdc	1.5 A
			130 Vdc	1 A
			24 to 240 Vac	6 A
			415 Vac	3 A
Connection	Screw	Screw	Screw	
Standard	IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-5-1	
Type of loads				
Tripping curves				
Standard	C (8 In ± 20%)	C (8.5 In ± 20%)		
Inrush current	D (12 In ± 20%)			
Electronics or high cable lenght	B (4 In ± 20%)			
Benefits				
	The Acti 9 circuit-breaker is recognised in over 100 countries for its quality and the breadth of its range, making it an indispensable component for your Low Voltage cabinet with complete peace of mind.			

Low Voltage Relays

Zelio Relays

Designed for the adaptation, amplification, multiplication and processing of information in automated systems	Miniature relays RXM	Universal relays RUM
	 PM106144	 PM106145
Switching voltage	12/24/48/110/125/220 Vdc 24/48/120/230/240 Vac	12/24/48/60/110/125/220 VDC 24/48/120/230 Vac
Number of contacts	2, 3 or 4 CO	2 or 3 CO
Current	3 - 6 - 10 - 12 A	10 A
Mounting	Plugs into socket (DIN rail)	Plugs into socket (DIN rail)
Standards	IEC 61810-1	IEC 61810-1

Benefits

- Wide choice of number of contacts (up to 4)
- Simplicity of installation and maintenance
- Push-in wiring in RXM family
- Standardization of relay pin arrangement on its socket
- Lockable test button to close manually the contacts and test the application during commissioning or debugging phase
- Clear indication of the contact status by mechanical flag, and power on coil by LED

Low Voltage Control and Signalling

Push Buttons and Switches

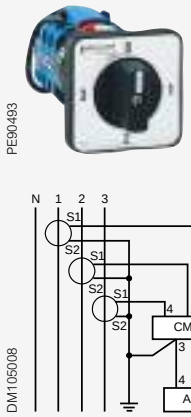
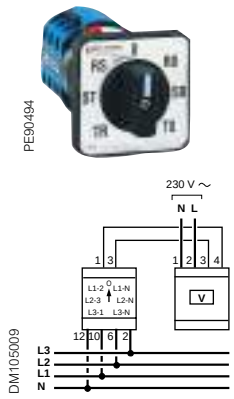
	XB7	ZB5/XB5	ZB4/XB4	K1/K2
Standard Version				
Enables operation of the Low Voltage circuits of the Medium Voltage cubicle				
Illuminated Version: Push buttons/Pilot lights/Switches				
Provides status information and enables control of Low Voltage circuits				
Mounting hole	22	22/30	22/30	16/22
Material	Plastic	Plastic	Metallic	Plastic or metallic
Head shape	●	●	●	■
Composition type	Unibody	Modular	Modular	Modular
Panel fixing	Plastic nut	Plastic nut	3 points metal	Plastic nut or 4 screws
Degree of protection	IP65	IP66, IP67, IP69, IP69K	IP66, IP67, IP69, IP69K	IP40/IP65
Rated insulation voltage	250 V	600 V	600 V	690 V
Standards	250 V	600 V	600 V	690 V
Standard and Illuminated versions	• UL/CSA, IEC, CCC, UAC	• UL/CSA, IEC, CCC, EAC • Marine: BV, LROS, DNV, GL	• UL/CSA, IEC, CCC, EAC • Marine: BV, LROS, DNV, GL	• UL/CSA, IEC

Benefits

Standard version	• Easy to select and install • A wide choice of functions • Robustness and mechanical durability • High protection degree • Excellent aesthetics and ergonomics
Illuminated version	• Long life resistance (LED technology) • True colors and excellent brightness • A wide choice of voltages • High protection degree • Easy mounting

Low Voltage Control and Signalling

Selector Switches

	CMA	CMV
		
Function	CMA uses a single ammeter (by means of Current Transformers) for successive measurement of the currents of a three-phase circuit	CMV uses a single voltmeter for successive measurement of voltages (phase-to-phase and phase-to-neutral) of a three-phase circuit
Mechanical switching cycles	2 000 000	2 000 000
Electrical switching cycles	100 000	100 000
Max. rated voltage		500 V
Max. rated current	20 A	
Mounting	48 x 48 Flush mounted	48 x 48 Flush mounted
Standards	IEC 60947-3	IEC 60947-3
Benefits		
	• AgNi contact helps ensuring mechanical durability • IP 65 on front face	

Discover More Products on www.se.com


Legend panels


3 phase pilot lights

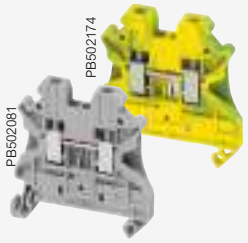
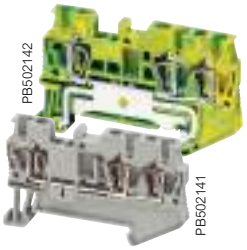
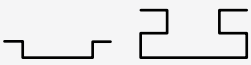
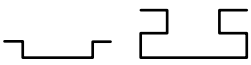
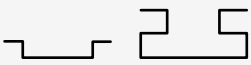

Diam 12/10/8 pilot lights


New signaletic pilot lights from XA2 (Not UL certified)


Harmony Hub + Temperature sensors and current monitoring

Low Voltage Control and Signalling

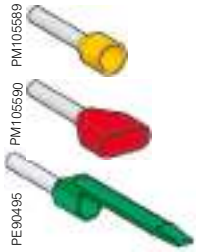
Linergy TR - Terminal Blocks

	NSY TRV	NSY TRR	NSY TRP
			
Function	Helps ensuring connection of Low Voltage cables or wires	Helps ensuring connection of Low Voltage cables or wires	Helps ensuring connection of Low Voltage cables or wires
Technology	Screw clamp technology	Spring clamp technology	Push-in technology
Connection functions	• Passthrough (2.5 - 150 mm²) • Protective earth • Disconnect type (blade or fuse) • Double deck, multi-pole • Multifunction • Neutral disconnect	• Passthrough (2.5 - 35 mm²) • Protective earth • Disconnect type (blade or fuse) • Double deck, multi-pole	• 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 mm² to 150 mm²	2.5 mm² to 35 mm²	2.5 mm² and 4 mm²
Number of poles	1 - 1 x 1/1 - 2 x 2 2 - 1 x 1/3 - 1 x 1	1 - 1 x 1/1 - 1 x 2/1 - 2 x 2 2 - 1 x 1/2 - 1 x 2/3 - 1 x 1	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, CSA, VDE, ATEX, LR, GL, DNV, EAC	UL, CSA, VDE, ATEX, LR, GL, DNV, EAC	UL, CSA, VDE, ATEX, LR, GL, DNV, EAC
Benefits			
	Rugged and reliable This technology not only helps to enhance the quality, safety, and availability of the equipment but also streamlines installation, setup, and operation through its simple, integrated functions.	**Cost effective (quick and reliable)** Spring technology is a maintenance-free connection method that helps assuring separation of mechanical and electrical functions. It also helps to prevent the need for regular re-tightening	**Quick and innovative** 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

Low Voltage Control and Signalling

Linergy TR - Terminal Blocks

Cable Ends

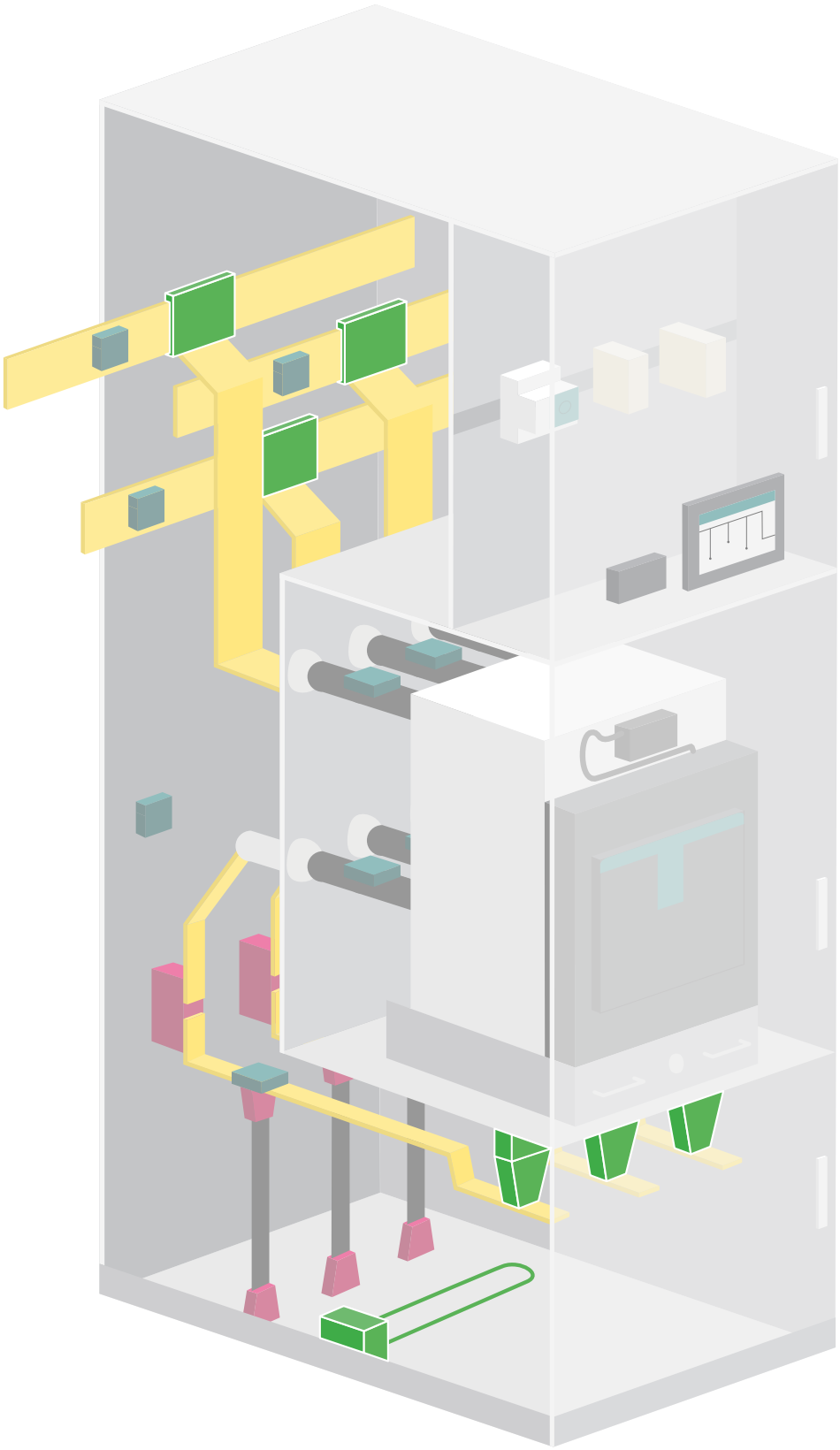


Function	• Facilitates the insertion of wires into the terminals and helps assuring the insulation between adjacent connection • Allows the identification of the wires
Technology	Insulated cable ends
Connection functions	Four available versions: • Single conductor cable ends • Single conductor markable cable ends • Uninsulated cable ends • Twin conductor cable ends
Conductor nominal c.s.a. (cross section area)	0.25 mm² to 50 mm²
Certifications	UL, CSA

Benefits

Fast and reliable wiring

Use the AZ5 and DZ5 ranges of cable ends to simplify wiring and provide optimum electrical continuity between wire and terminal block.

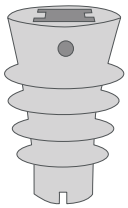


Accessories

Accessories

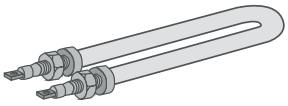
Accessories

Characteristics and References


PE90500-B?

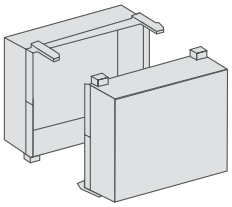
Insulating Holder with or without Capacitive Divider

Function	• **Without capacitive divider:** Provides mechanical support and insulation through their rigid fin arrangement; used to support busbars and cable ends • **With capacitive divider:** Provides mechanical support and insulation. The embedded capacitors in this insulating holder provide voltage output to indicate the voltage presence, up to 24 kV
Technical specifications	• Height: 175 mm • Capacitive divider: ISO 35 pf
Reference numbers	
• **3 insulating holders:** - 17.5 kV ref. 59431 - 24 kV ref. AAA10075	• **3 insulating holders with capacitive divider:** - 17.5 kV ref. 59430 - 24 kV ref. AAA10074
Standards	IEC
Benefits	• Dielectric withstand • Mechanical robustness


DE56927

Anti-Condensation Heating Element

Function	Heating the inside of the cubicle when the ambient temperature is too low
Technical specifications	• 220 Vac • 150 W • Length: 432 mm • Supplied with its support without thermostat
Reference numbers	59280
Benefits	Avoid condensation in the cubicle

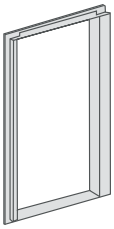

DE90216

Insulation Busbar Cover

Function	Set of three insulating covers which enables improved dielectric withstand at the busbars connections in the cubicle
Technical specifications	For 1 to 4 busbars (100 mm x 800 mm each)
Reference numbers	59420
Benefits	Can be adjusted according to number of busbars

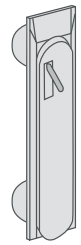
Accessories

Characteristics and References



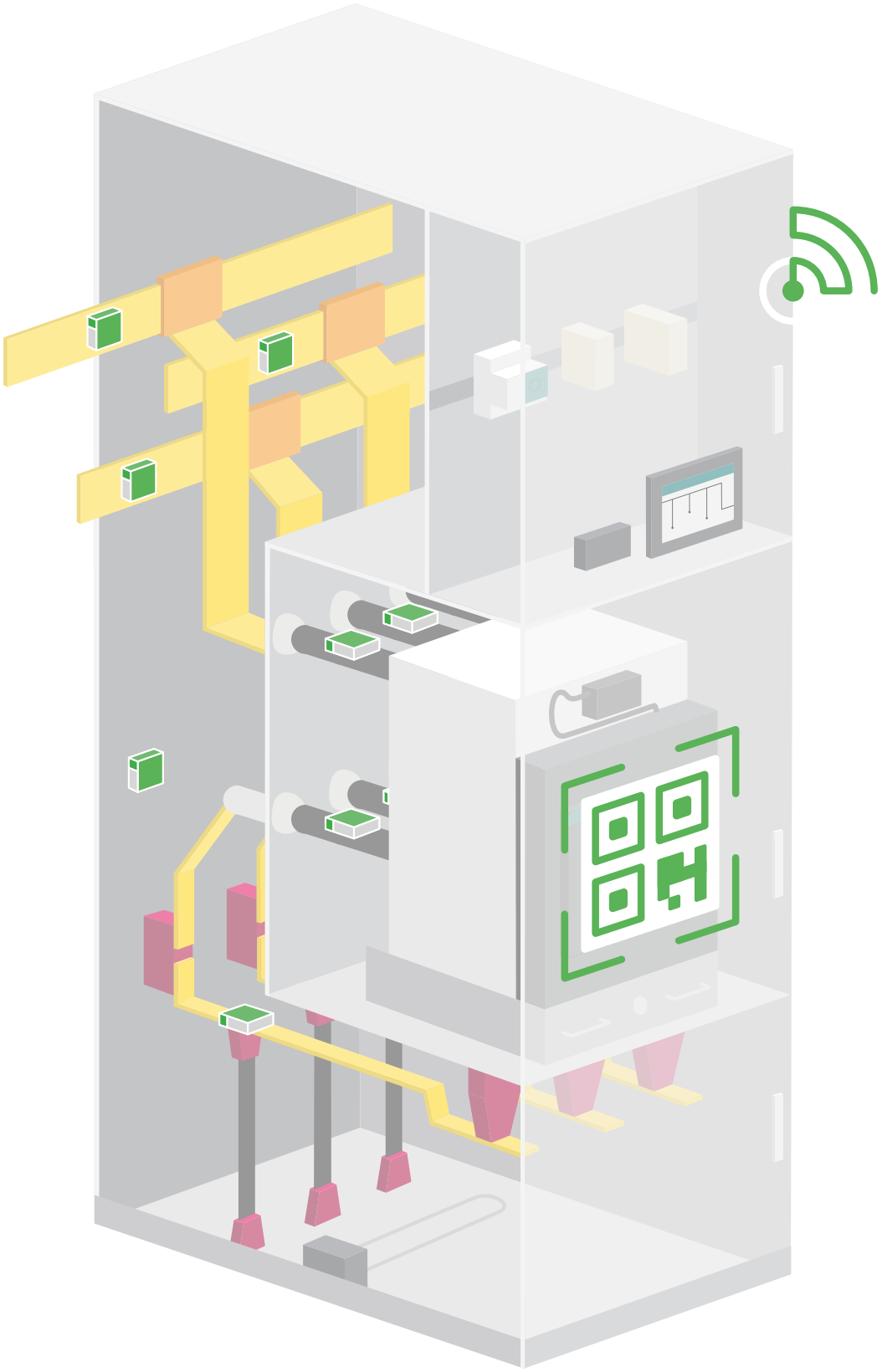
High Resistance Plastic Window

Function	Located on the panel or the door, allows you to see inside a cubicle
Technical specifications	• 3 mm thick transparent polycarbonate window • Dimensions: 138 mm x 85 mm
Reference numbers	59105
Benefits	Internal arc withstand up to 31.5 kA



Cubicle Compartment Handle

Function	Enables the front panel door of the cubicle to be closed
Technical specifications	• Material: Zamak • A version with key is available
Reference numbers	• 59270 (handle) • 59271 (handle with key)
Benefits	Robustness



Complementary Services

Complementary Services

Power Quality Solutions

Power Correction Systems

Power Quality Solutions

As our world becomes increasingly digital and interconnected, electrical networks face growing challenges from sensitive electronics, dynamic load variations, and network disturbances. Power quality is now critical to ensuring system reliability, efficiency, and compliance. The integration of local renewable generation, energy storage, and EV charging infrastructure adds further complexity, creating fast-changing load patterns and nonlinear behaviors. These conditions demand a tight voltage envelope and robust power quality solutions.

Active technologies such as AccuSine PCSP and PowerLogic DVR provide effective solutions for:

- Power factor correction, Harmonic mitigation, and Flicker management (AccuSine PCSP)
- Voltage regulation (PowerLogic DVR)

These technologies help improve reliability, support grid compliance, and reduce operating costs.

Hybrid Solutions for MV Applications

For MV networks, Hybrid solutions offer an economical approach to power factor correction and harmonic filtering. These solutionscombine MV power-factor-correction equipment and AccuSine EVC Plus or AccuSine PCS Plus (via a step-up transformer), to help achieve unity power factor and meet harmonic standards (IEE 519) at the point of common coupling.

Feature Set	PowerLogic PFC	Accusine EVC Plus	Accusine PCS Plus
	 VAF1P	 EVCP100D5W31	 PB502832
Function	kVAR correction	kVAR correction ±1 kVAR	kVAR + harmonics correction ±1 kVAR / 50th order
Stepless PF Compensation	No	Yes	Yes
Response Time (ms)	10-600 secs	≤ 1/4 cycle	≤ 1/4 cycle
Lag PF Correction	Yes	Yes	Yes
Lead PF Correction	No	Yes	Yes
Unbalance Correction	No	Yes	Yes
Resonance and Harmonic Amplification	High	Low	Low
Harmonic Filtering	No (Minimal)	Yes (5th,7th,11th and 13th)	2nd to 51st harmonic order

PowerLogic DVR

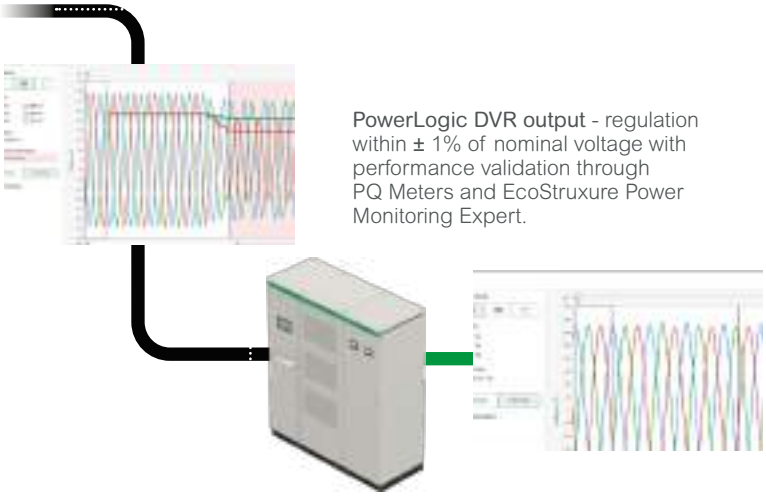
High-Performance Votage Regulation

Power Logic DVR

The PowerLogic DVR is an advanced IGBT-based electronic compensator without batteries designed to deliver exceptional voltage stability and reliability. It dynamically injects or absorbs energy to mitigate electrical disturbances, ensuring a stable nominal voltage (Vn ±1%) with an ultra-fast response time.

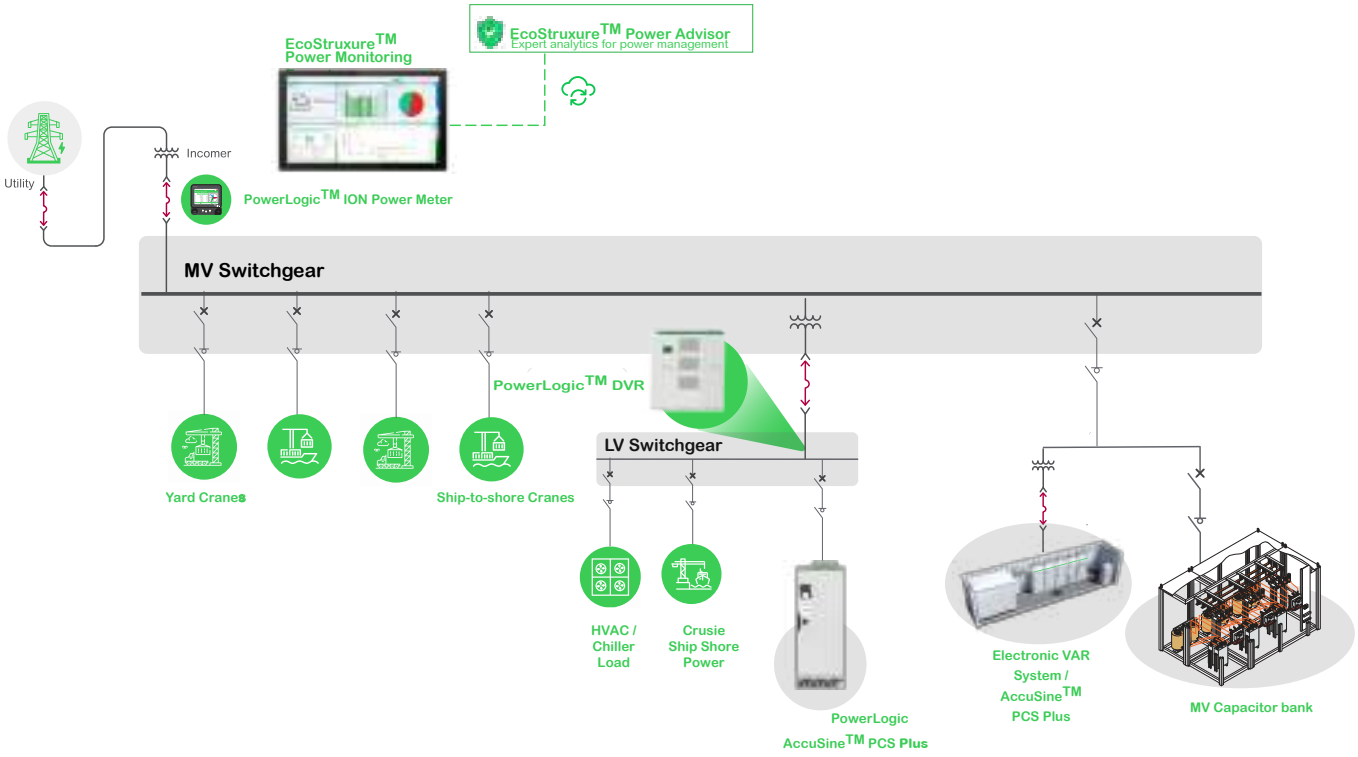
Key System Specifications	
Input Voltage	200 to 690 Vac
Capacity Rang	150–900 kVA (higher ratings on request)
Continuous Voltage Regulation	± 20%
Frequency	50/60 Hz ±10%
Overload Capability	> 98%
	110% for 30 secs, 150% for 1 sec
Maximum Sag Depth (3-phase)	110% for 30 secs, 150% for 1 sec
Single-Phase Sag Correction	-40% (higher on request)
Static Regulation	Up to -70%
Response Time	± 1%
Transfer to Bypass	< 0.5 ms

PowerLogic DVR input - Sag captured at the incomer (37.2% sag or 62.8% remaining voltage).



PowerLogic DVR output - regulation within ± 1% of nominal voltage with performance validation through PQ Meters and EcoStruxure Power Monitoring Expert.

Voltage regulation challenges in the MV networks can be addressed connecting a PowerLogic DVR (via a step-up transformer), to help achieve +20 to -20% continuous voltage regulation and sag correction upto 70% of the nominal voltage.



For more information, please follow up: https://www.se.com/us/en/product-category/4300-power-quality-and-power-factor-correction/

Testing and Certification

Laboratory

PM110149

Experienced F-lab Volta and Amplitude laboratories cooperates with several Schneider Electric entities throughout the world supporting development of quality and safety (robustness and reliability) of products and systems in conformity with various standards covering most of the global market.

PM110150

Power laboratory

The power laboratory has acquired extensive experience in short-circuit tests on low and medium voltage products. The tests are conducted in compliance with standards IEC, IEEE, ANSI, UL, HN, etc. and others depending on the specifications of our customers.

The laboratory is equipped with 3 power alternators (2 x 600 MVA and 1 x 2500 MVA).

Medium Voltage tests

- Bench to conduct make and break tests under MV downstream load: up to 36 kV - 3 phases (inductive, resistive and capacitive loads)
- Bench to conduct MV short-circuit make and break tests: up to 18 kV - 80 kA - 3 phases
- Bench to conduct tests on arc due to MV internal fault: 31.5 kA - 1s; 40 kA - 0.5 s; 50 kA - 0.25 s.

PM110151

Functional laboratory

Functional laboratory check behavior of the devices under their normal and specific operating conditions.

It provides support throughout all the development, checking and certification phases, including quality sampling to monitor performance.

Functional tests

This laboratory proposes a wide range of test services (heating, triggering, dielectric, etc.) at high performance levels and using unique means such as tests on the energy measuring devices.

- Temperature rises up to 15 kA AC and 7 kA DC - climatic chamber up to 100 m^3
- Triggering of overload and short-circuit
- LV and MV dielectric
- Aging tests
- Specific 230 m^3 climatic chamber for dielectric, water and ice.

Explore all F-lab Expertise

Connected Solutions

EcoStruxure™ Power

500 000

EcoStruxure™ has been deployed in almost 500 000 sites with the support of some 20 000 developers, 650 000 service providers and partners, and 3 000 utilities, and connects over 2 million assets under management.

EcoStruxure™ Connected

Efficient asset management

Greater efficiency with **predictive** maintenance helping to reduce downtime.

24/7 connectivity

Real-time data **everywhere anytime** to make better informed decisions.

Increased protection

Proven design and experience combined with **internal arc designs** to enhance people and equipment protection.

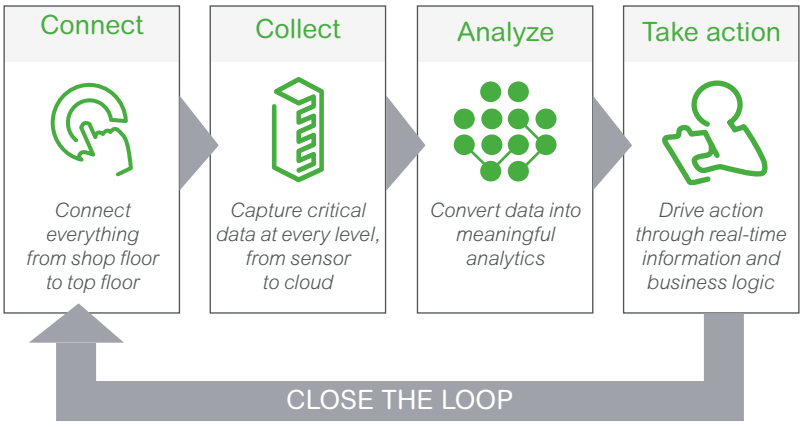
EcoStruxure™ is our open, interoperable, IoT-enabled system architecture and platform. EcoStruxure delivers enhanced value around safety, reliability, efficiency, sustainability, and connectivity for our customers. EcoStruxure leverages advancements in IoT, mobility, sensing, cloud, analytics, and cybersecurity to deliver Innovation at Every Level. This includes Connected Products, Edge Control, and Apps, Analytics and Services, which are supported by Customer Lifecycle Software.

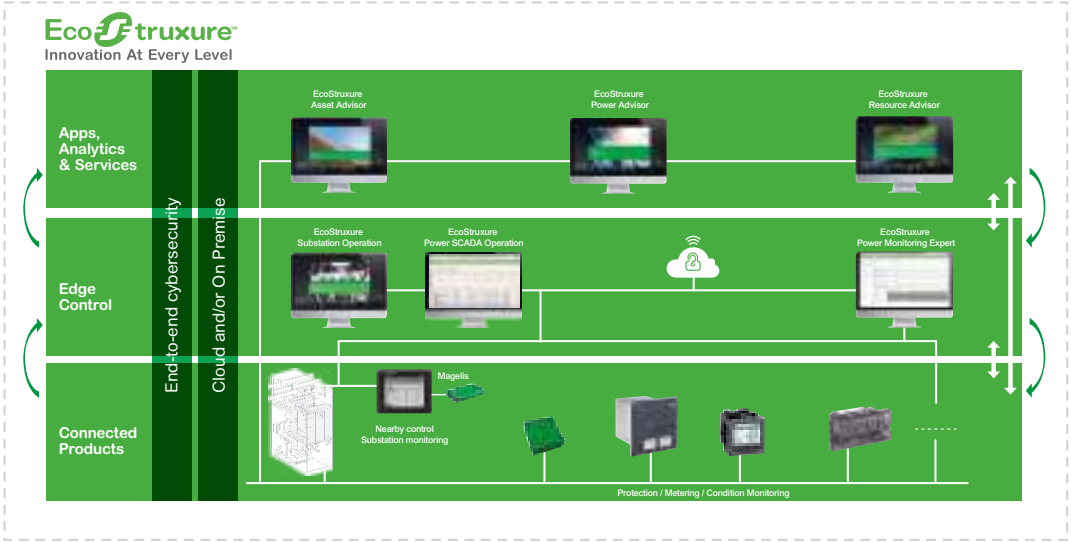
Turn data into action

EcoStruxure™ architecture lets customers maximize the value of data.

Specifically, it helps them:

- Translate data into actionable intelligence and better business decisions
- Take informed decisions to secure uptime and operational efficiency thanks to real-time control platforms
- Gain visibility to their electrical distribution by measuring, collecting, aggregating, and communicating data





Litteratures

Learn more on our Medium Voltage products and technology

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

Helping protect people and systems from arc flash in medium voltage equipment

- Easy to understand approach on arc flash systems installed in MV switchgear

Arc Flash eGuide

Improving your business with digital self-service

- Digital self-service helps your business improve flexibility and productivity, allowing you to quickly adapt to customer needs in changing times.

Digital Life Cycle eGuide

Schneider Electric EcoFit™ Life Extension Essential Catalog

- Discover in a single catalog all assets and services to modernize existing MV and LV installations by adding sensors and communication capabilities.

Catalog EcoFit™ Life Extension Essential

Register to mySchneider and simplify your life at all steps of your business

Connect mySchneider

Register to mySchneider portal and discover your personalized experience giving you access to tools and resources helping you being more efficient, productive, develop your skills and collaborate.

You'll get:

- Productivity tools
- Personalized resources
- Collaborative sales support
- Trainings

PM107043

Get Support anytime

- Access 24/7 self-service, mobile catalog and access to expert help
- Offline and online catalog
- Get trainings, Advanced support

PM107044

Select and Design

Advanced WEB functionalities that help to:

- Select and compare components
- Build easily your technical documentation with ready to use tools (CAD, export files)

PM107046

Configure and Quote

Simplified and validated configuration

- Always updated technical content
- Ready to use data and documentation for your projects
- Last minute changes
- Manage and track your orders

Collaborate, find solution and make business

- Get to Schneider Electric Exchange find solution develop business
- Schneider Electric Exchange is an online community where individuals can do business
- Whether you're seeking find Solutions or have products, services, and advice to share
- We'll help you connect with peers, technology partners, and experts to gain a competitive edge

Manage your installed base

Digital Logbook, where you can find all of the documents you'll need during your circuit breakers' manufacturing, installation, operation, and maintenance from anywhere, in a single, well secured paperless environment.

- User manuals
- Design drawings
- Single-line drawings
- Factory and site acceptance tests
- Spare parts lists
- Maintenance records, schedules, and more

Life Is On | Schneider Electric

Schneider Electric Industries SAS

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