



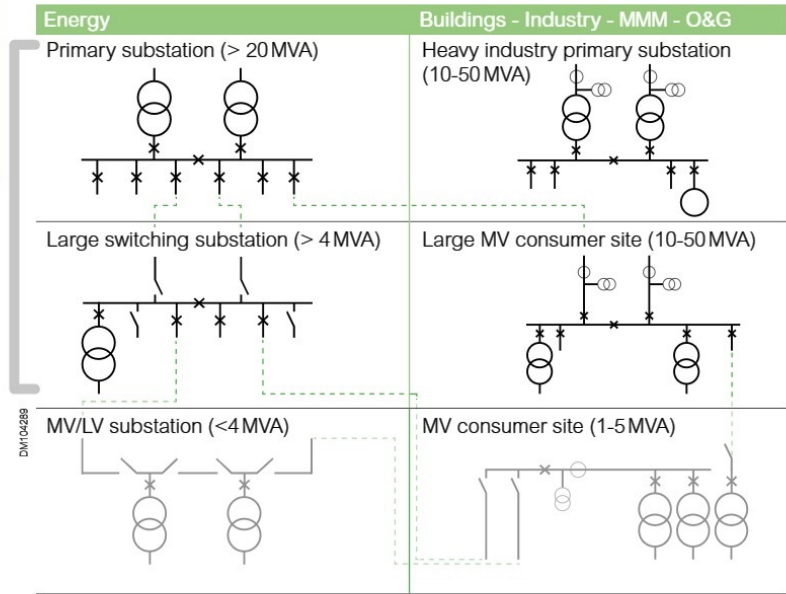
EasyPact EXE

Medium Voltage Distribution



EasyPact EXE is a range of vacuum circuit breakers designed to connect building infrastructure (heating, ventilation, lighting, etc.) and industrial plant processes (MV motors, MV/LV substations, furnaces, etc.) to the power grid, and to protect people and equipment.

Description



EasyPact EXE is available in 2 versions: fixed and withdrawable.

The fixed version comprises:

- 3 poles equipped with vacuum interrupters for medium voltage systems up to 17.5 kV / 31.5 kA / 2 500 A
- 6 primary contacts to connect the vacuum interrupters to the switchgear busbars section on one side and to cables or to another busbars section on the other side
- A spring-operated mechanism to give the device an opening and closing speed that is independent of the operator
- A set of terminal blocks to connect the circuit breaker auxiliaries to the switchgear control circuit and protection relay
- A front cover with pushbuttons, status indicators, and a lever to charge the closing spring in case of lack of auxiliary supply voltage

The withdrawable version comprises:

- 6 arms mounted on the switching device to adapt the position of the primary contacts to engage into the switchgear
- A racking trolley to move the circuit breaker from the disconnected position to the service position and vice versa, either by rotating a lever on the front of the switchgear with the door closed, or remotely by activating an electrical order from the control room
- A removable LV plug with flexible ducting to maintain the circuit breaker auxiliary circuits connected to the switchgear control circuit and the protection relay in any circuit breaker position: disconnected or service



Designed for greater safety



Rotary closing spring charging system

As an alternative option to the integrated spring charging system, we can provide a manual rotary system that uses a removable rotary crank. This rotary system allows charging of the closing spring when auxiliary power is not available and when the MV compartment door is closed.

A decoupling device helps operator safety should the auxiliary power supply be reestablished during manual charging.

Please contact your local Schneider Electric representative.



Vacuum interrupter

The vacuum interrupter has to convey and break the rated normal current, and has to convey and break the rated short-circuit current a number of times, in line with the manufacturer's specification.

It consists of two electrical contacts, one fixed and the other mobile, inside a sealed enclosure. The level of pressure inside the enclosure has to be very low (less than 10⁻¹ Pa) to reach the value specified for the dielectric withstand between the open contacts. In order to maintain the pressure level inside the interrupter throughout its expected operating life, the enclosure has to be perfectly sealed, and the various components have to be fully degassed. This is achieved by:

- Using materials that are specifically selected for this application (metals and ceramics)
- Using an appropriate assembly process (vacuum, high temperature brazing)
- The use of a "getter" material to absorb the residual gas inside the enclosure.

EasyPact EXE vacuum interrupters are designed to operate 10 000 cycles, under the conditions defined by the IEC standard.

Vacuum interrupter



Racking device

The racking device moves the circuit breaker from the disconnected position to the service position and vice versa. The racking operation can be done either manually, by rotating a lever on the front of the switchgear with the door closed, or remotely by activating an electrical order. Remote operation is recommended as it allows convenient operation from beyond any arc flash boundary.

The EasyPact EXE racking device has a robust interlocking system with the switchgear door, the circuit-breaker and the earthing switch. It can be equipped with an electric motor for remote racking from the control room.

The materials used to manufacture EasyPact EXE racking trolley sub-assemblies have been selected and designed to operate 2 000 cycles under the conditions defined by the IEC standard.

Racking device

Schneider Electric delivers products with assembly instruction sheets available on website at www.schneider-electric.com.

The Panel Builder customizes the circuit breaker by following these instructions. This enables the Panel Builder to be very flexible when ordering products references.

Customization flexibility



Simple online ordering

With MySE, the Schneider Electric online application, registered Panel Builders can access order management and logistics information securely and immediately (24/7).

This app provides the real-time price and lead time for any EasyPact EXE reference and offers additional benefits such as online ordering, delivery status follow-up, invoice reprinting, etc.

Registered Panel Builders can also access Power Build Medium Voltage, EasyPact EXE product selector, which allows to easily generate the list of product references needed for a given switchgear configuration, and to upload it into MySE and Panelbuilder ERP.

On-the-shelf availability

EasyPact EXE benefits from Schneider Electric's well-established supply chain with local distribution centers that can deliver high demand products in few days (5 days ex-works usually).

Broad range of dimensions

The wide range of dimensions available in this catalog enables Panel Builders to build compact cubicles starting at 600 mm/800 mm wide for ratings up to 1 250 A and 800 mm/900 mm wide for ratings up to 2 500 A. In addition, the availability of versions with phase distances of 150 mm, 210 mm, and 275 mm means that circuit breakers of various brands can be replaced in existing cubicles with minor modifications to the cubicle architecture.

Cost saving

The features listed above help to reduce costs and give Panel Builders more time to do what really matters: Take care of customers.

Scalability with fit-for-purpose solutions

For customers who would like a digital approach, we propose an efficient and cost-effective alternative to breaker, cable and busbar thermo scanning using temperature wireless sensors and a smart phone app.



TH110 thermal sensor



Supported by our App to view and share temperature information

Easergy TH110

Wireless Thermal Sensor

A battery-less sensor, helping ensure continuous thermal monitoring to detect potential loose connections of:

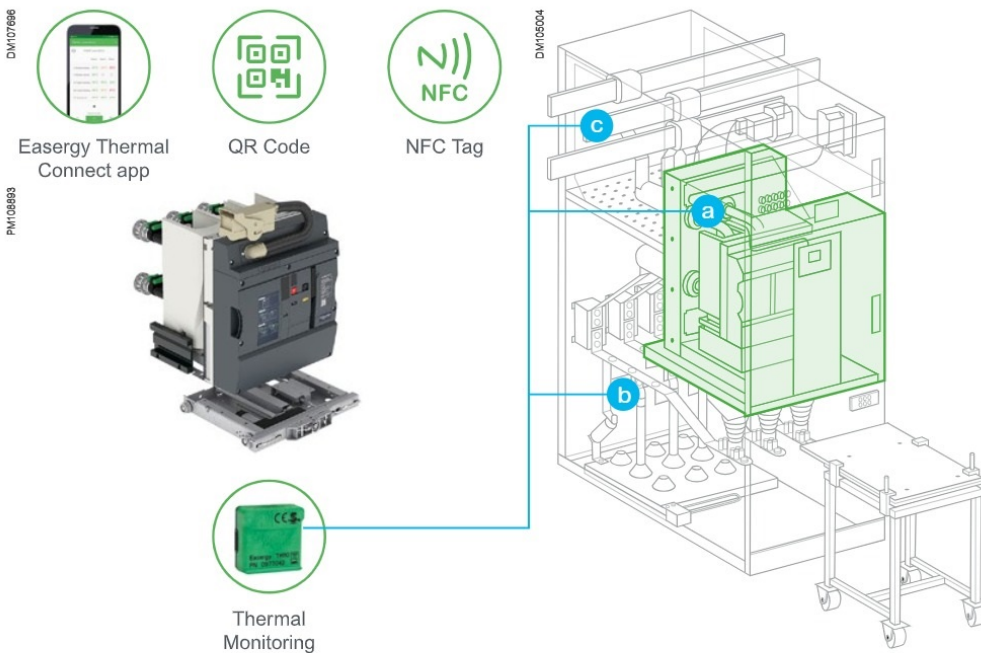
- Cable connections
- Busbar connections
- Circuit breaker arms

Local, on demand connectivity enables:

- Nearby thermal monitoring on your smartphone up to 10 m from your switchgear
- Fast access to documentation via QR code

Enhanced for modern MV distribution

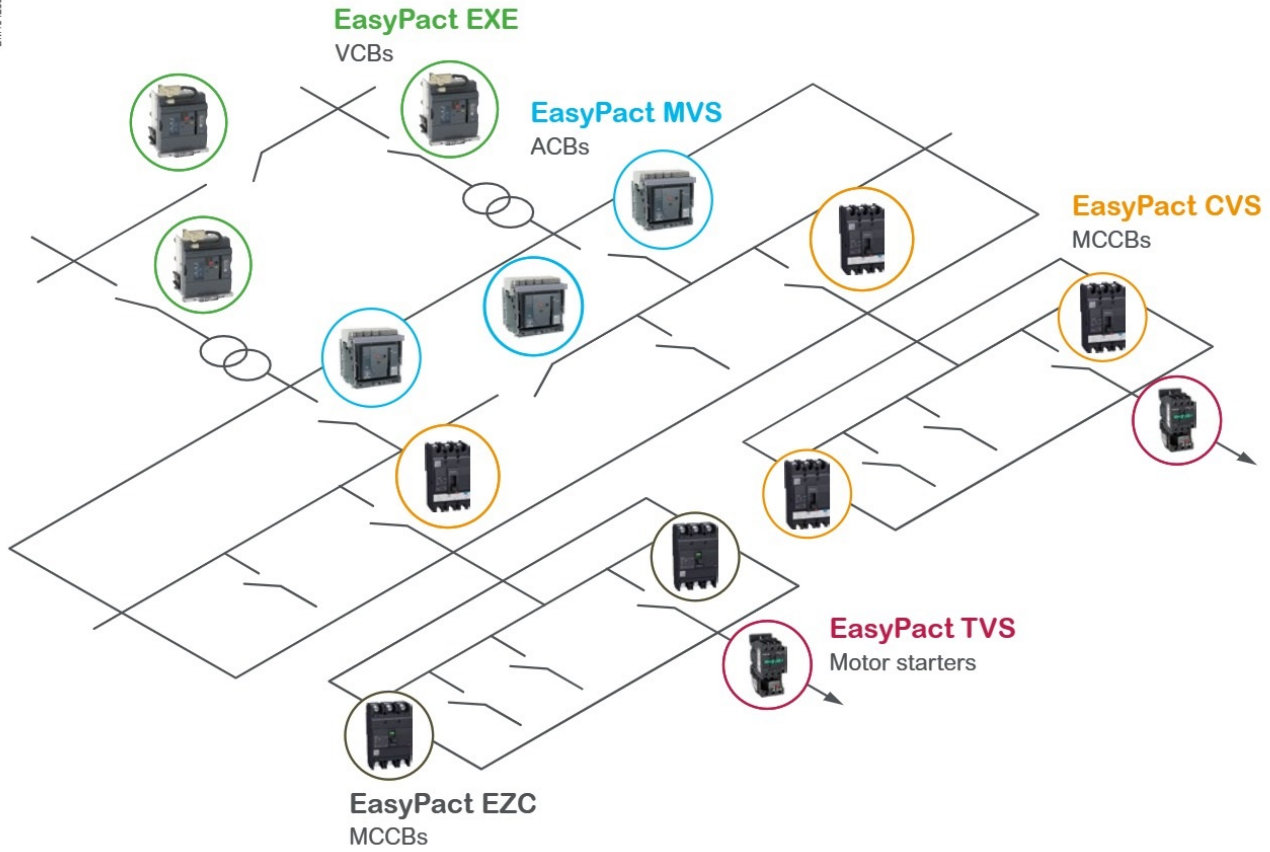
The connected switchgear is the perfect choice for intelligent distribution, helping to secure both new and existing operations. Thanks to its innovative tools and IoT capabilities, your switchgear can start to become future-ready.



A comprehensive solution

The EasyPact family: Build your complete MV & LV distribution network

DM104280



Medium voltage	
General specification	EasyPact EXE
Rated voltage (kV)	7,2 / 12 - 17,5
Rated lightning impulse withstand (kV)	60 / 75 - 95
Rated short circuit breaking current (kA)	20 - 25 - 31.5
Rated duration of short circuit (s)	3
Rated normal current (A)	630 - 800 - 1 250 1 600 - 2 000 - 2 500
Target application	Building, industry, and power grid



Low voltage				
General specification	EasyPact MVS	EasyPact CVS	EasyPact TVS	EasyPact EZC
Rated insulation voltage (V) Ui	1 000	690	690	690
Impulse withstand voltage (kV) Uimp	12	8	6	6
Rated operational voltage (V AC 50/60 Hz) Ue	690	440	690	550
Target application	Buildings and industry	Commercial and industrial buildings	Buildings and simple industry	Commercial and residential buildings

A comprehensive solution

The EasyPact family: Build your complete MV & LV distribution network

SEA10FC0180911EN-01



EasyPact MVS

The easy choice for reliable performance

Application

Power circuit breakers, ideal for the "head end" of electrical distribution panels in medium to large office buildings and factories.

Performance

Reliable performance for the entire range with a rating:

- $I_{cs} = I_{cu} = I_{cw} (1 s) = 50$ and 65 kA at 440 V

Flexibility

Covers a broader range of applications than competing offers:

- Suitable for applications up to 690 V
- Operates across a wide temperature range before requiring derating
- Compatible with copper and aluminium connections
- Includes a complete range of switch disconnectors

PE10644-03_3P_CIRCODE



EasyPact CVS

The easy choice for quality and value

Application

Moulded-case circuit breakers, an excellent choice for feeders and sub-feeders in small and medium-sized industrial and commercial buildings.

Performance

- $I_{cs} = 100\%$ I_{cu}
- Suitable for reverse feeding applications
- Adjustable thermal protection
- Optional insulation fault protection
- IEC 60947-2 isolation and highly visible contact position ensures the downstream circuit is safe.

Flexibility

- Compatible with copper and aluminium connections
- Includes a complete range of switch disconnectors

Schneider Electric product portfolios include a wide choice of multi-function relays to be used together with EasyPact EXE to build a consistent solution for protection, control, and monitoring.

Protection and control relays

Protection and control relays provide all the necessary functions:

- Effective fault diagnosis and protection planning
- Accurate measurements and detailed diagnosis
- Integral equipment control
- Local or remote indication and operation



Easergy P3



Sepam range



MiCOM range



PowerLogic range



VAMP 125

Easergy P3

The Easergy P3 range of relays is suitable for all common applications as well as some specific applications including advanced metering functions. Easergy P3 relays are to protect applications, from overhead line feeders and substations to power plants and industrial power systems.

Sepam

Sepam series 20, series 40, series 60 and series 80 protection relays take full advantage of Schneider Electric's experience in electrical network protection.

Sepam allows easy upgrading: addition of communication, digital I/O's, analog output, or temperature acquisition systems can be added due to its modular design.

MiCOM

MiCOM protection provides the user with a choice of optimised solutions for specific protection requirements within the distribution network.

The MiCOM relay series offers comprehensive protective function solutions for all power supply systems as well as for various functional and hardware project stages.

PowerMeter and circuit monitors

The PowerLogic PowerMeter replaces a whole set of basic analogue meters.

This cost-effective, high-performance meter provides a full range of accurate true-rms metering values.

The PowerLogic series 3000/4000 Circuit Monitor is designed for critical power users and large energy consumers, to provide the information needed to confidently enter the evolving world of deregulation.

It can be adapted to meter almost any time-of-use or real-time rate.

VAMP arc fault protection relay

The VAMP arc protection unit detects an arc flash in an installation and trips the feeding breaker. The unique arc fault protection functionality enhances the safety of both people and property and has made VAMP a leading brand in arc protection relays worldwide.

Fixed Circuit Breaker (CB)

Main characteristics



EasyPact EXE

Ref: EXE172512B1B
SN*: SE-2018-W06-3-0068

Ur: 17.5 kV
Up: 95 kV
Ir: 1250 A
Isc: 25 kA tk: 3 s

Seq: 0-0.3s-CO-15s-CO
50Hz/60Hz
Classes: E2, M2, S1

IEC62271-100 : 2012

According to IEC 62271-100: 2012

Designation		Dimensions and electrical characteristics									
Phase distance (mm)				145	150	185	185	210	210	240	275
Rated voltage	Ur	kV	12	•	•	•	•	•	•	•	•
			17.5	•	•	•	•	•	•	•	•
Rated frequency	fr	Hz	50/60	•	•	•	•	•	•	•	•
Rated short duration power frequency withstand voltage ⁽¹⁾	Ud	kV	28	•	•	•	•	•	•	•	•
			38	•	•	•	•	•	•	•	•
Rated lightning impulse withstand voltage	Up	kV	75	•	•	•	•	•	•	•	•
			95	•	•	•	•	•	•	•	•
Rated short-circuit breaking current	Isc	kA	20	•	•	•	•	•	•	•	•
			25	•	•	•	•	•	•	•	•
			31.5	•	•	•	•	•	•	•	•
Rated duration of short-circuit	tk	s	3	•	•	•	•	•	•	•	
Rated normal current	Ir	A	630	•	•	•	•	•	•	•	•
			800	•	•	•	•	•	•	•	•
			1 250	•	•	•	•	•	•	•	•
			1 600				•	•	•	•	•
			2 000				•	•	•	•	•
			2 500					•	•	•	

Additional characteristics according to IEC 62271-100 are listed in the common characteristics section.
(1) Contact us for 42 kV - 5 min.©

The EasyPact EXE fixed version is equipped with threaded copper connection terminals at the top and bottom. The shape and dimensions of conductors should be determined by the Panel Builder according to the dielectric withstand and temperature rise characteristics of the whole connection system. Field deflectors on lower connection up to 1250 A may be required to achieve 95 kV BIL dielectric withstand depending on the switchgear architecture. Please contact your sales representative to receive EasyPact EXE integration guide with more information.



Connection terminal without field deflector



Connection terminal with field deflector



Withdrawable Circuit Breaker (CB) - Tulip Contact

Main characteristics



PM106412

EasyPact EXE →

Ref: EXE172512B1B
SN#: SE-2016-W06-3-0068

Ur: 17,5 kV
Up: 96 kV
Ir: 1250 A
Isc: 25 kA tk: 3 s

Seq: 0-0.3s-CO-15s-CO
50Hz/60Hz
Classes: E2, M2, S1

IEC62271-100 : 2012

According to IEC 62271-100: 2012

Designation		Dimensions and electrical characteristics					
Phase distance (mm)			150	210	210	275	
Rated voltage	Ur	kV	12	•	•	•	•
			17.5	•	•	•	•
Rated frequency	fr	Hz	50/60	•	•	•	•
Rated short duration power frequency withstand voltage ⁽¹⁾	Ud	kV	28	•	•	•	•
			38	•	•	•	•
Rated lightning impulse withstand voltage	Up	kV	75	•	•	•	•
			95	•	•	•	•
Rated short-circuit breaking current	Isc	kA	20	•	•		
			25	•	•	•	•
			31.5	•	•	•	•
Rated duration of short-circuit	tk	s	3	•	•	•	•
Rated normal current	Ir	A	630	•	•		
			800	•	•		
			1 250	•	•		
			1 600			•	
			2 000			•	
			2 500				•

Additional characteristics according to IEC 62271-100 are listed in the common characteristics section.
(1) Contact us for 42 kV - 5 min.



Tulip-type contacts

The shape of EasyPact EXE contact is tulip-type. The size depends on the rated current to provide a maximum contact surface optimizing heat dissipation and offering good compensation characteristics for electrodynamic forces. The Panel Builder should provide fixed type contacts with the correct shape, tolerance, and material characteristics compatible with the EasyPact EXE tulip-type contacts.

Arms

The shape and size of EasyPact EXE arm depend on the rated lightning impulse voltage, the rated normal current, and the racking trolley stroke.

Racking device

EasyPact EXE racking device enables Panel Builder to design switchgear solutions with enhanced safety features. It has a robust interlocking system with the switchgear door, the circuit-breaker and the earthing switch. It can be equipped with an electric motor for remote racking from the control room.

Withdrawable Disconnecting Device (DD) - Tulip Contact

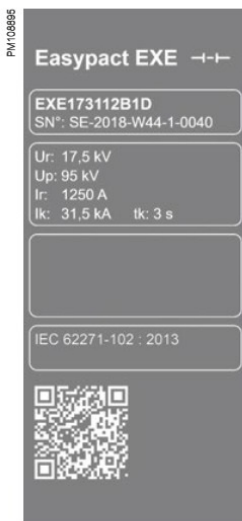
Main characteristics



This device allows disconnection of the upstream and downstream circuits in the cubicle. It is installed in the same location as the withdrawable circuit breaker in the switchgear compartment, with the option to rack the device remotely.

It includes a device to lock it in the service position.

According to IEC 62271-102: 2011

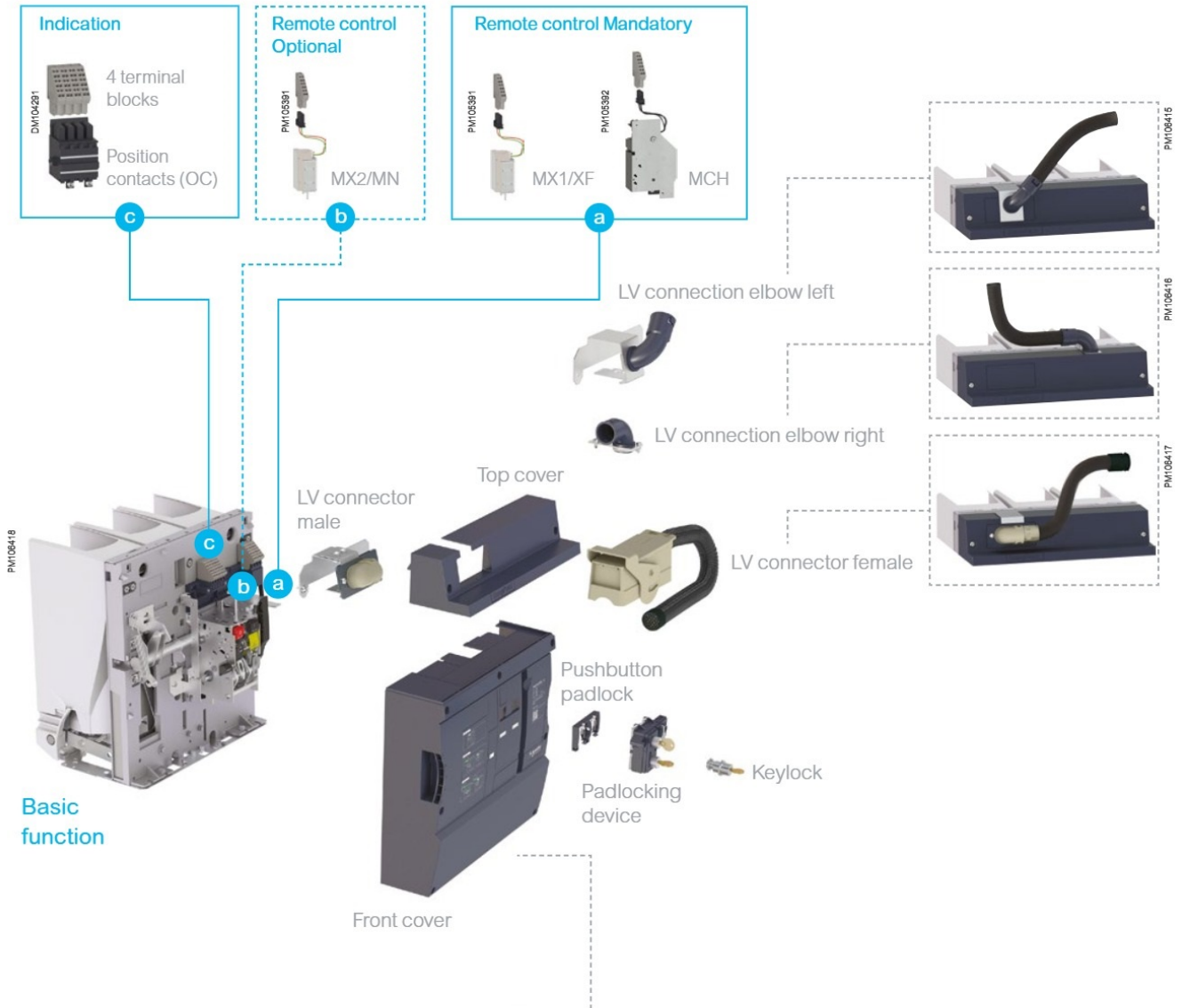


Designation		Dimensions and electrical characteristics					
Phase distance (mm)				150	210	210	275
Rated voltage	Ur	kV	12	•	•	•	•
			17.5	•	•	•	•
Rated frequency	fr	Hz	50/60	•	•	•	•
Rated short duration power frequency withstand voltage ⁽¹⁾	Ud	kV	28	•	•	•	•
			38	•	•	•	•
Rated lightning impulse withstand voltage	Up	kV	75	•	•	•	•
			95	•	•	•	•
Rated short-time withstand current	Ik	kA	31.5	•	•	•	•
Rated peak withstand current	Ip	kA	82	•	•	•	•
Rated duration of short-circuit	tk	s	3	•	•	•	•
Rated normal current	Ir	A	1 250	•	•		
			2 000			•	
			2 500				•

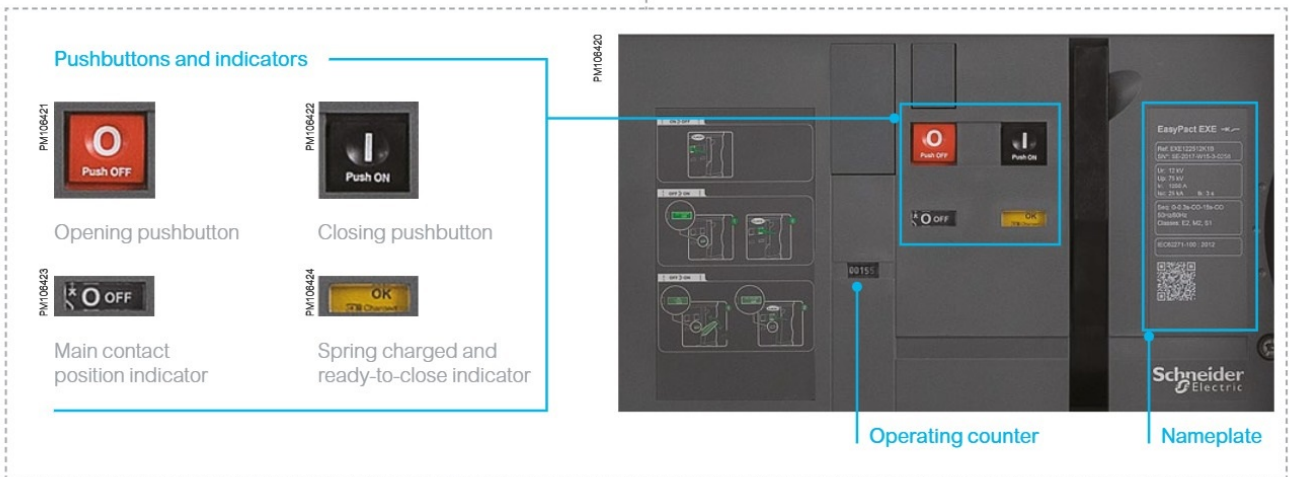
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Overview

Fixed Circuit Breaker

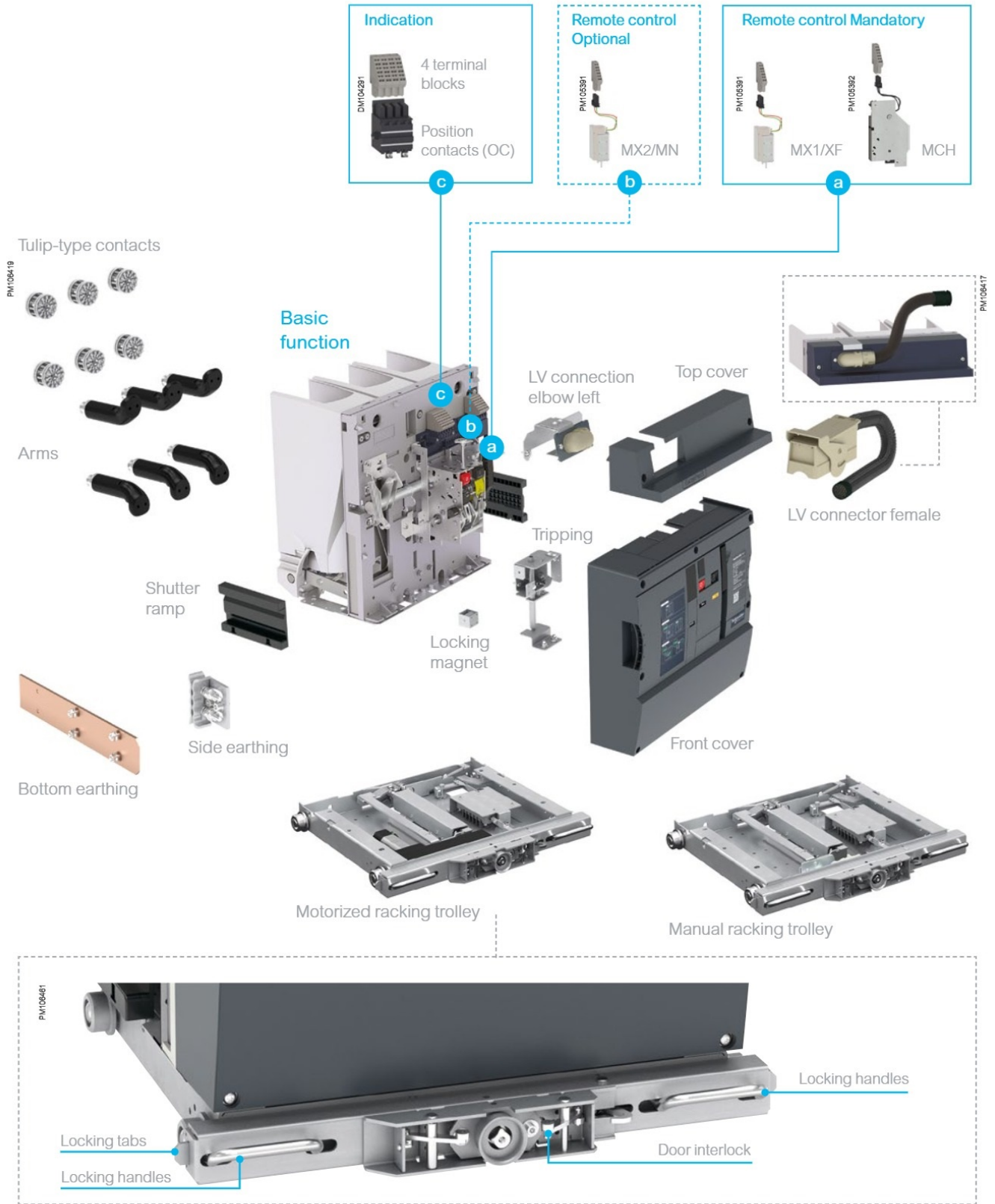


Basic function



Overview

Withdrawable Circuit Breaker





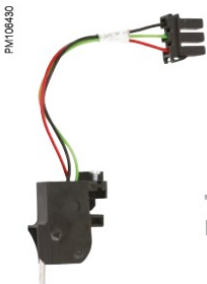
Rotary type contacts (OC)

Position contacts (OC)

EasyPact EXE is equipped with one block of four position contacts as standard, and the Panel Builder may add one or two additional blocks of four contacts. The maximum number of position contacts is twelve.

Characteristics			
Standard delivery	1 (1 block of 4 contacts)		
Maximum quantity	3 (3 blocks of 4 contacts)		
Breaking capacity (A) Cos φ: 0.3	Standard	Min. load: 100 mA/24 V	
	V AC	240/380	10/6
	V DC	24/48	10/6 *
		125	10/6
		250	3

* standard contacts: 10 A; optional contacts: 6 A (temperature derating)



"Ready to close" PF contact

"Ready to close" contact (PF)

A "ready to close" contact (PF) indicates that the circuit breaker is ready to close in the following conditions:

- The circuit breaker contacts are open
- The operating mechanism closing spring is charged
- The opening pushbutton is not activated (by a keylock or manually)
- The opening shunt release is not energized
- The undervoltage release, if present, is energized

EasyPact EXE is always equipped with 1 "ready to close" contact (PF) for remote control.

Characteristics			
Standard delivery	1		
Maximum quantity	1		
Breaking capacity (A) Cos φ: 0.3	Standard	Min. load: 100 mA/24 V	
	V AC	240/380	5
	V DC	24/48	3
		125	0.3
		250	0.15



Operation counter (CDM)

Operation counter (CDM)

An operation counter counts the number of operating cycles (close-open) that the device has carried out.

EasyPact EXE is always delivered with an operation counter showing the number of close-open cycles that have been performed for the factory routine test.

Withdrawability

Racking Device

The EasyPact EXE withdrawable version requires a racking device, arms, and tulip-type contacts for connection to the switchgear power circuit, and a removable LV plug to connect auxiliary circuits.

EasyPact EXE racking function

EasyPact EXE racking device enables Panel Builder to design switchgear solutions with enhanced safety features. It has a robust interlocking system with the switchgear door, the circuit-breaker and the earthing switch.

It can be equipped with an electric motor for remote racking from the control room.

The Racking Device is composed of 3 elements:

- Racking Trolley
- Shutter Ramp
- Tripping

The EasyPact EXE racking function comprises:

- A racking trolley equipped with 4 wheels for moving on the rails located at the bottom of the circuit breaker compartment, and with shutter ramps to operate the shutter mechanism according to the racking trolley position
- A system to attach the racking trolley to the switchgear frame
- A racking trolley with a threaded shaft that rotates to move the circuit breaker inside the circuit breaker compartment
- 2 sets of 4 contacts to indicate electrically if the circuit breaker is in service position, intermediate position or in disconnected position
- A set of mechanical parts, called Tripping fixed on the mechanical support, to interlock the racking trolley with the following equipment:
 - Earthing switch
 - Circuit breaker
- An optional motor drive that rotates to move the circuit breaker inside the circuit breaker compartment.



Racking Trolley



Shutter ramps



Tripping



Bottom earthing



Side earthing



Motor controller

Earthing

The racking device is earthed using bar earthing or through side earthing.

Motor controller

The motor controller is required for the remote operation of racking device, it also has the feature of over-current protection.

Locking

Fixed Circuit Breaker

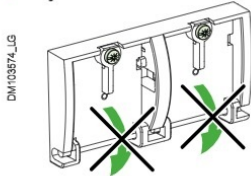
Easypact EXE can be equipped with locking in permanent position either by padlock or by keylock and with pushbutton padlock.

Screen for pushbutton padlocking

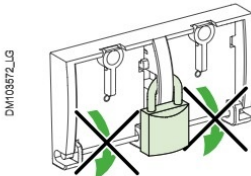
An optional transparent screen can prevent access to the opening and/or closing pushbuttons on the circuit breaker.

Locking is achieved by means of one of the following:

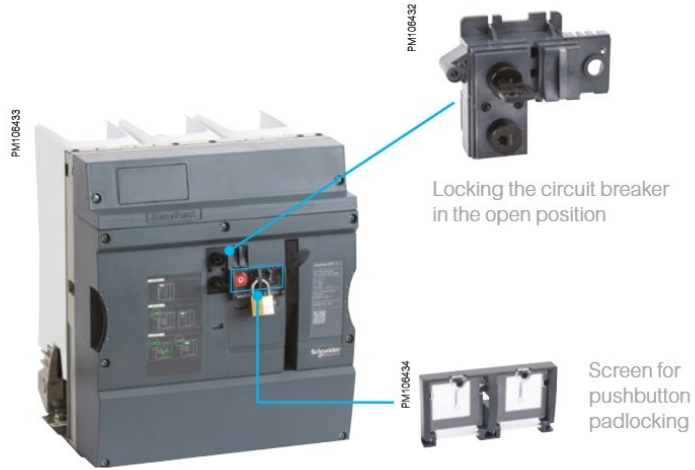
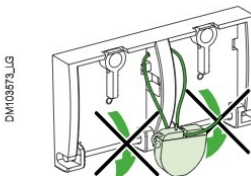
- By 2 screws



- By 3 padlocks (not supplied with the circuit breaker)



- By a lead seal (not supplied with the circuit breaker)



Locking the circuit breaker in the open position

Screen for pushbutton padlocking

Locking in permanent open position by padlock



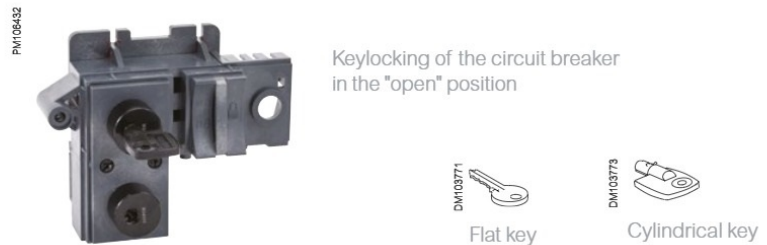
Padlocking of the circuit breaker in the "open" position

The circuit breaker is locked in the "open" position by maintaining the opening pushbutton in the engaged position with a padlock holder for 1 to 3 padlocks (not supplied).

Locking in permanent open position by keylock

The circuit breaker is locked in the "open" position by maintaining the opening pushbutton in the engaged position with a keylock device with the following options:

- 1 single keylock supplied with 2 identical keys
- 1 single keylock for the circuit breaker supplied with 1 key, plus 1 identical keylock delivered separately to be mounted on the device to be interlocked with the circuit breaker, using the key supplied for the circuit breaker.



Keylocking of the circuit breaker in the "open" position

DM103771
Flat key

DM103773
Cylindrical key

The key is free after locking. The key can be used to operate or give access to remote devices (Earthing switch, Transformer ...).

Basic function Circuit Breaker (CB)

12 kV and 17.5 kV - 20 kA



An EasyPact EXE Basic function Circuit Breaker (CB) consists of:

- The basic function circuit breaker
- 1 ready to close contact PF with 1 terminal block
- 1 block of 4 auxiliary contacts with 4 terminal blocks
- 4 additional terminal blocks
- 1 operating counter
- 1 receipt guide

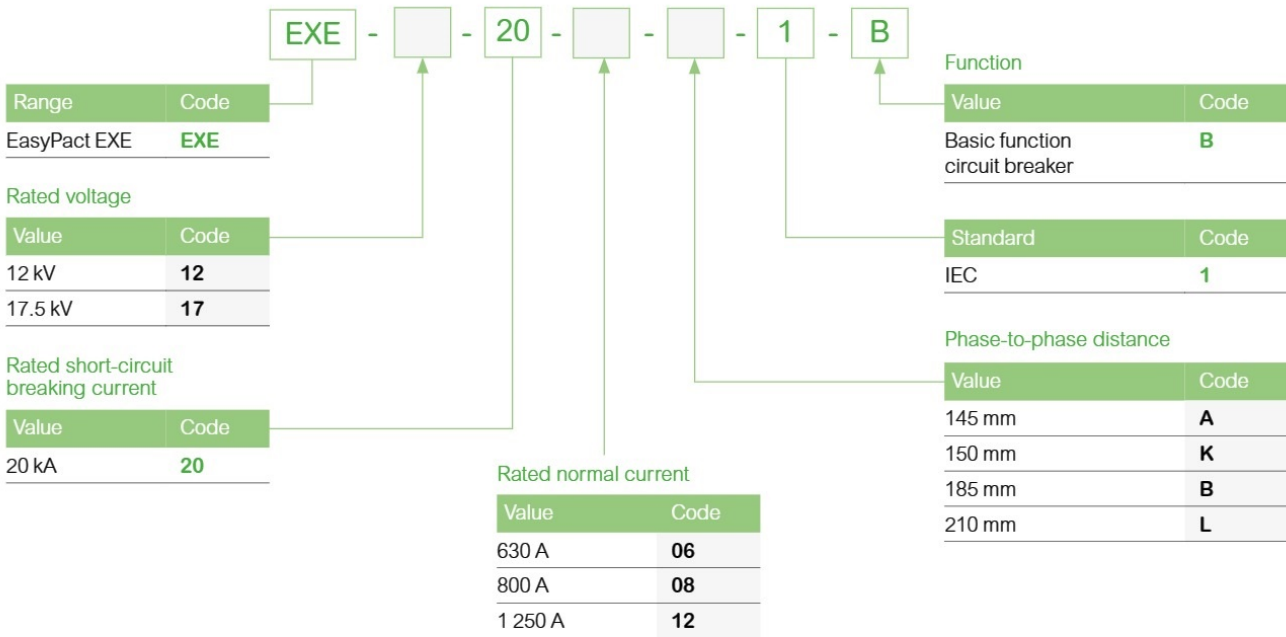
Additional options may be added, using the catalog product references.

Basic function							
Phase distance (mm)	145	185	240	150	210	275	
12 kV	630 A	EXE122006A1B	EXE122006B1B	-	EXE122006K1B	EXE122006L1B	-
	800 A	EXE122008A1B	EXE122008B1B	-	EXE122008K1B	EXE122008L1B	-
	1 250 A	EXE122012A1B	EXE122012B1B	-	EXE122012K1B	EXE122012L1B	-
	1 600 A	-	-	-	-	-	-
	2 000 A	-	-	-	-	-	-
	2 500 A	-	-	-	-	-	-
17.5 kV	630 A	EXE172006A1B	EXE172006B1B	-	EXE172006K1B	EXE172006L1B	-
	800 A	EXE172008A1B	EXE172008B1B	-	EXE172008K1B	EXE172008L1B	-
	1 250 A	EXE172012A1B	EXE172012B1B	-	EXE172012K1B	EXE172012L1B	-
	1 600 A	-	-	-	-	-	-
	2 000 A	-	-	-	-	-	-
	2 500 A	-	-	-	-	-	-

Notes:

- The 12 kV basic function may be used for 7.2 kV rated voltage

Check your commercial number:



Basic function Circuit Breaker (CB)

12 kV and 17.5 kV - 25 kA



An EasyPact EXE Basic function Circuit Breaker (CB) consists of:

- The basic function circuit breaker
- 1 ready to close contact PF with 1 terminal block
- 1 block of 4 auxiliary contacts with 4 terminal blocks
- 4 additional terminal blocks
- 1 operating counter
- 1 receipt guide

Additional options may be added, using the catalog product references.

Basic function							
Phase distance (mm)	145	185	240	150	210	275	
12 kV	630 A	EXE122506A1B	EXE122506B1B	-	EXE122506K1B	EXE122506L1B	-
	800 A	EXE122508A1B	EXE122508B1B	-	EXE122508K1B	EXE122508L1B	-
	1 250 A	EXE122512A1B	EXE122512B1B	-	EXE122512K1B	EXE122512L1B	-
	1 600 A	-	EXE122516B1B	-	-	EXE122516L1B	-
	2 000 A	-	EXE122520B1B	-	-	EXE122520L1B	-
	2 500 A	-	-	EXE122525C1B	-	EXE122525L1B	EXE122525M1B
17.5 kV	630 A	EXE172506A1B	EXE172506B1B	-	EXE172506K1B	EXE172506L1B	-
	800 A	EXE172508A1B	EXE172508B1B	-	EXE172508K1B	EXE172508L1B	-
	1 250 A	EXE172512A1B	EXE172512B1B	-	EXE172512K1B	EXE172512L1B	-
	1 600 A	-	EXE172516B1B	-	-	EXE172516L1B	-
	2 000 A	-	EXE172520B1B	-	-	EXE172520L1B	-
	2 500 A	-	-	EXE172525C1B	-	EXE172525L1B	EXE172525M1B

Notes:

- The 12 kV basic function may be used for 7.2 kV rated voltage

Check your commercial number:

EXE - [] - 25 - [] - [] - 1 - B

Range	Code
EasyPact EXE	EXE

Rated voltage	Value	Code
12 kV	12	12
17.5 kV	17	17

Rated short-circuit breaking current	Value	Code
25 kA	25	25

Rated normal current	Value	Code
630 A	06	06
800 A	08	08
1 250 A	12	12
1 600 A	16	16
2 000 A	20	20
2 500 A	25	25

Function	Value	Code
Basic function circuit breaker	B	B

Standard	Value	Code
IEC	1	1

Phase-to-phase distance	Value	Code
145 mm	A	A
150 mm	K	K
185 mm	B	B
210 mm	L	L
240 mm	C	C
275 mm	M	M

Basic function Circuit Breaker (CB)

12 kV and 17.5 kV - 31.5 kA



An EasyPact EXE Basic function Circuit Breaker (CB) consists of:

- The basic function circuit breaker
- 1 ready to close contact PF with 1 terminal block
- 1 block of 4 auxiliary contacts with 4 terminal blocks
- 4 additional terminal blocks
- 1 operating counter
- 1 receipt guide

Additional options may be added, using the catalog product references.

Basic function							
Phase distance (mm)	145	185	240	150	210	275	
12 kV	630 A	EXE123106A1B	EXE123106B1B	-	EXE123106K1B	EXE123106L1B	-
	800 A	EXE123108A1B	EXE123108B1B	-	EXE123108K1B	EXE123108L1B	-
	1 250 A	EXE123112A1B	EXE123112B1B	-	EXE123112K1B	EXE123112L1B	-
	1 600 A	-	EXE123116B1B	-	-	EXE123116L1B	-
	2 000 A	-	EXE123120B1B	-	-	EXE123120L1B	-
	2 500 A	-	-	EXE123125C1B	-	EXE123125L1B	EXE123125M1B
17.5 kV	630 A	EXE173106A1B	EXE173106B1B	-	EXE173106K1B	EXE173106L1B	-
	800 A	EXE173108A1B	EXE173108B1B	-	EXE173108K1B	EXE173108L1B	-
	1 250 A	EXE173112A1B	EXE173112B1B	-	EXE173112K1B	EXE173112L1B	-
	1 600 A	-	EXE173116B1B	-	-	EXE173116L1B	-
	2 000 A	-	EXE173120B1B	-	-	EXE173120L1B	-
	2 500 A	-	-	EXE173125C1B	-	EXE173125L1B	EXE173125M1B

Notes:

- The 12 kV basic function may be used for 7.2 kV rated voltage

Check your commercial number:

EXE - [] - 31 - [] - [] - 1 - B

Range	Code
EasyPact EXE	EXE

Rated voltage	Value	Code
12 kV	12	12
17.5 kV	17	17

Rated short-circuit breaking current	Value	Code
31.5 kA	31	31

Rated normal current	Value	Code
630 A	06	06
800 A	08	08
1 250 A	12	12
1 600 A	16	16
2 000 A	20	20
2 500 A	25	25

Function	Value	Code
Basic function circuit breaker		B

Standard	Value	Code
IEC	1	1

Phase-to-phase distance	Value	Code
145 mm	A	A
150 mm	K	K
185 mm	B	B
210 mm	L	L
240 mm	C	C
275 mm	M	M

Basic function Disconnecting Device (DD)

12 kV and 17.5 kV - up to 31.5 kA



An EasyPact EXE Basic function Disconnecting Device (DD) consists of:

- The basic function Disconnecting Device
- An interlocking cam
- 1 receipt guide

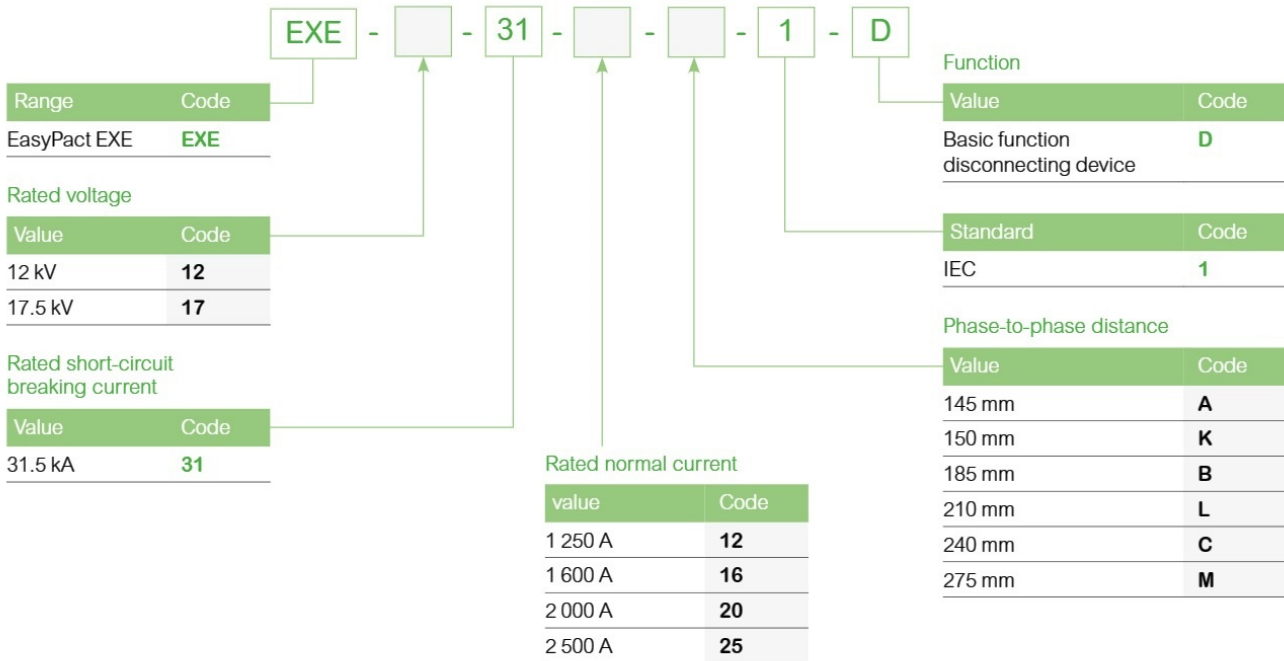
Additional options may be added, using the catalog product references.

Basic function				
Phase distance (mm)	150	210	275	
12 kV	630 A	-	-	
	800 A	-	-	
	1 250 A	EXE123112K1D	EXE123112L1D	-
	1 600 A	-	-	-
	2 000 A	-	EXE123120L1D	-
	2 500 A	-	-	EXE123125M1D
17.5 kV	630 A	-	-	
	800 A	-	-	
	1 250 A	EXE173112K1D	EXE173112L1D	-
	1 600 A	-	-	-
	2 000 A	-	EXE173120L1D	-
	2 500 A	-	-	EXE173125M1D

Notes:

- The 12 kV basic function may be used for 7.2 kV rated voltage

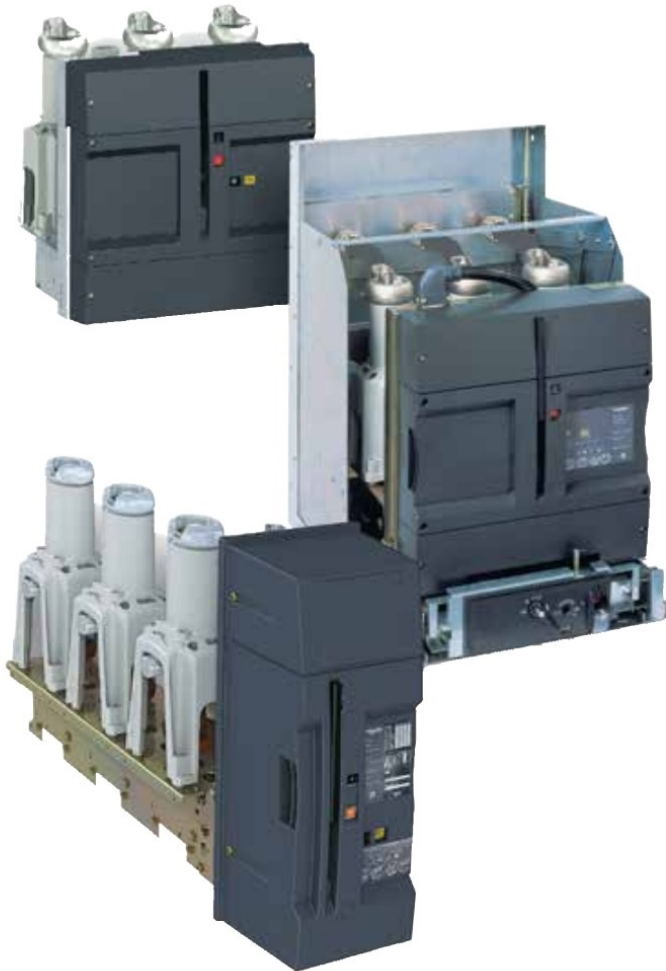
Check your commercial number:



Medium Voltage Distribution

Evolis circuit breakers 24 kV

vacuum breaking
fixed and withdrawable versions



Evolis

Circuit breakers adapted to your needs

Evolis: a range of circuit breakers that takes account of your electrical installations' requirements today and in the future.

Description

Evolis: a range of vacuum-type circuit breakers from 7.2 kV to 24 kV, combining easy selection and a comprehensive offer:

- a fixed, frontal or lateral version
- a withdrawable, frontal version with a circuit breaker and its cradle or its cassette
- a fixed, lateral version equipped with an integrated protection chain
- separately delivered accessories.

The Evolis circuit breaker is operated via a spring mechanism that gives an operating speed that is independent of the operator and that does not require an auxiliary power supply.

When the operating mechanism is motorized the circuit breaker can include telecontrol functions and carry out rapid reclosing cycles.

The various circuit breaker versions are easy to integrate in a cubicle environment. An Installation Guide details the required procedure.

Applications

Evolis is intended for use in medium voltage network applications, in new installations or renovation, for utilities companies, infrastructures, the process industry and the tertiary sector.

It provides protection for all types of applications: cables, overhead lines, motors, capacitors, transformers, source busbar sections, etc.

Evolis, a fixed, frontal or lateral version

Here the circuit breaker is in its simplest version. In this case it can be combined with additional accessories to meet various requirements.

For the fixed lateral version, the MV connection can be on the right or on the left depending on the type of circuit breaker.



Evolis 17.5 kV fixed, frontal version ()*



Evolis 24 kV fixed, frontal version



*Evolis 24 kV fixed, lateral version
MV connection on the left hand side*



*Evolis 24 kV fixed, lateral version
MV connection on the right hand side*

Evolis

Circuit breakers adapted to your needs

(cont.)

Evolis: a withdrawable, frontal version

In this version, the circuit breaker is equipped with arms, clusters, a rack, and cradle or cassette. The cradle and the circuit breaker can be ordered and delivered separately.

PE57984



Evolis 17.5 kV withdrawable, frontal version in NEX cradle ()*

PE58001



Evolis 24 kV withdrawable, frontal version in NEX cradle

PE58046



Evolis HP withdrawable, frontal version in MC cassette ()*

PE58089



Evolis 17.5 kV withdrawable, frontal version in MC cassette ()*

EVOset: a fixed, lateral version equipped with an integrated protection chain

The EVOset is provided with a fully autonomous integrated protection chain (with a VIP type control unit) operating without an auxiliary power source. The protection unit exists in 4 models: VIP30, VIP35, VIP300P and VIP300LL. VIP protection units are associated with functional current sensors. The circuit breaker is delivered with its factory-tested protection chain. It therefore simplifies the panel builder's installation work.

PE58090



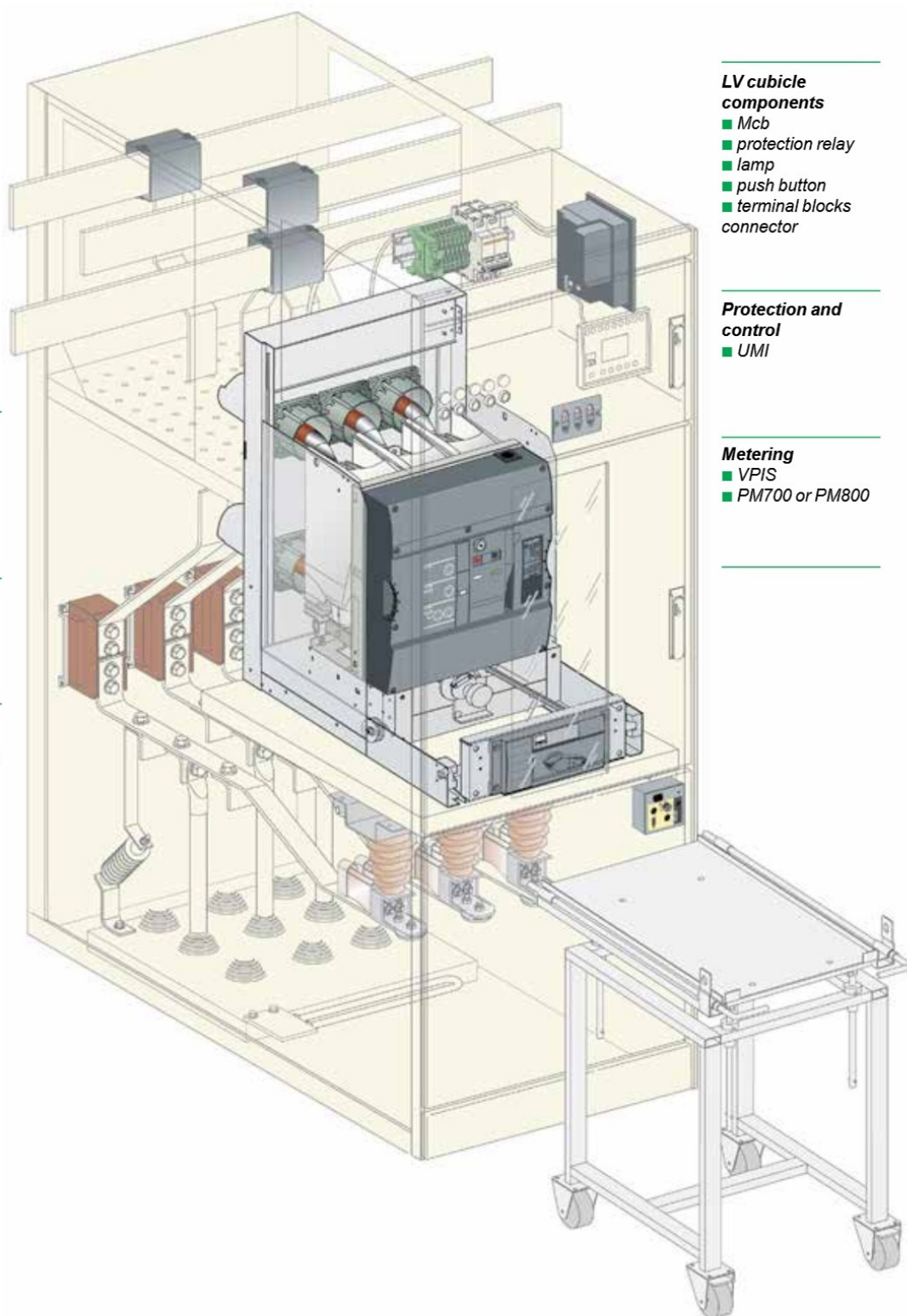
EVOset 24 kV fixed, lateral version MV connection on the right hand side

PIE8002

Circuit breaker
■ cradle

Instrument transformer

MV cubicle components
■ capacitor insulator
■ earthing switch
■ heating resistor
■ voltage presence indicator
■ crank
■ extraction table



LV cubicle components

■ Mcb
■ protection relay
■ lamp
■ push button
■ terminal blocks connector

Protection and control

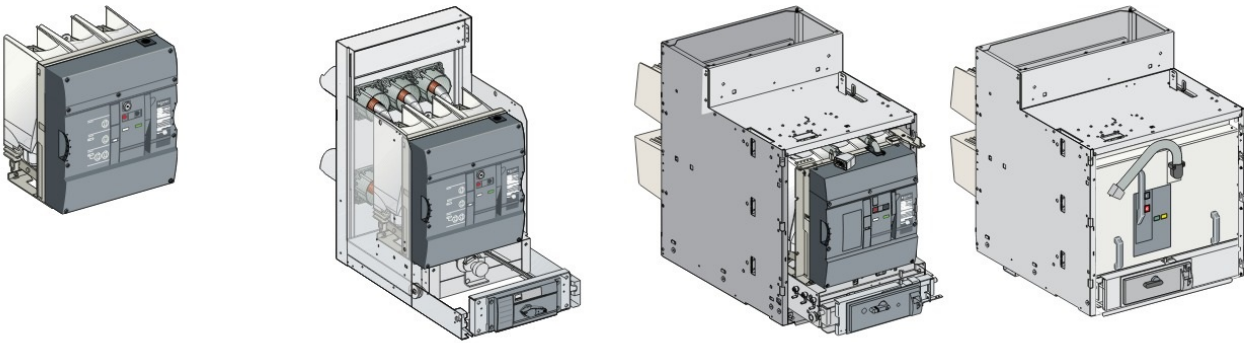
■ UMI

Metering

■ VPIS
■ PM700 or PM800

Circuit breakers

Evolis from 7.2 kV to 17.5 kV



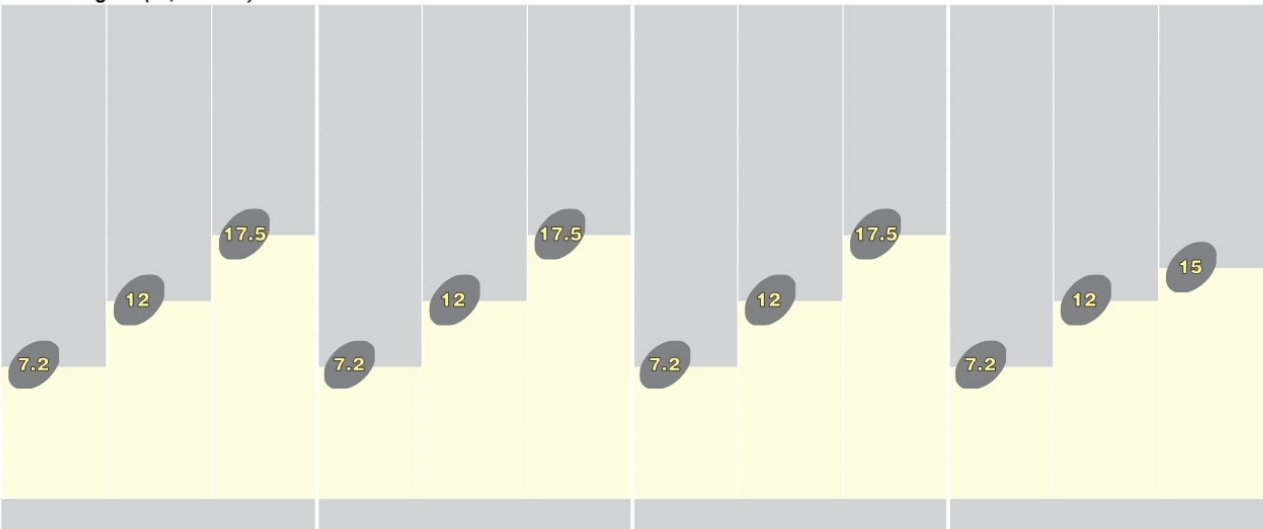
Fixed version
Operating mechanism on the front

Withdrawable version in NEX cradle
Operating mechanism on the front

Withdrawable version in MC cassette
Operating mechanism on the front

Withdrawable HP version in MC cassette
Operating mechanism on the front

Rated voltage U_r (kV, 50/60 Hz)



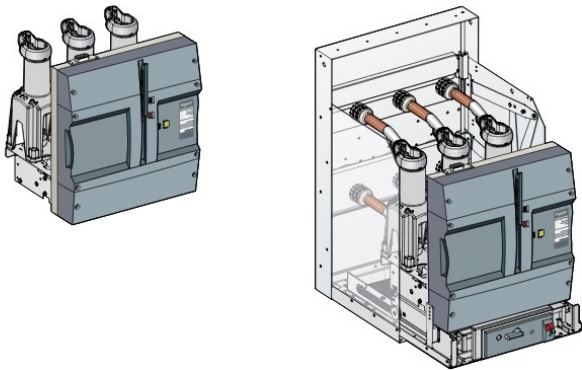
Short circuit rated breaking capacity (I_{sc})

from 25 to 40 kA	from 25 to 40 kA	from 25 to 40 kA	from 25 to 50 kA
------------------	------------------	------------------	------------------

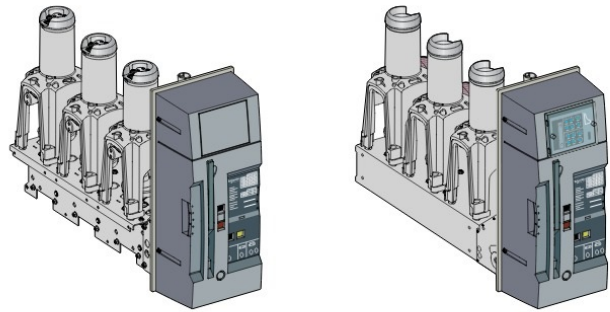
Rated current (I_r)

from 630 to 2500 A	from 630 to 2500 A	from 630 to 2500 A	from 1250 to 3150 A
--------------------	--------------------	--------------------	---------------------

Evolis 24 kV



EVOset 24 kV



Fixed version
Operating mechanism
on the front

Withdrawable version
Operating mechanism
on the front

Fixed version
Operating mechanism
on the side

Fixed version
Integrated protection system
Operating mechanism
on the side

Rated voltage U_r (kV, 50/60 Hz)

24

24

24

24

Short circuit rated breaking capacity (I_{sc})

from 16 to 31.5 kA

from 16 to 31.5 kA

from 12.5 to 25 kA

from 12.5 to 20 kA

Rated current (I_r)

from 630 to 2500 A

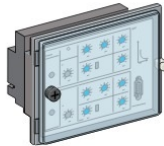
from 630 to 2500 A

630 and 1250 A

630 and 1250 A

Protection, monitoring and control

Protection



VIP30
for phase protection

VIP35
for phase and earthing protection

VIP300P
for phase protection

VIP300LL
for phase and earthing protection

Protection and control



Sepam series 20
for normal applications

Sepam series 40
for demanding applications

Sepam series 80
for full applications

Metering



PM700
for basic metering

PM800
for advanced metering

CM3000, CM4000
for full metering and power quality

Electrical characteristics according to IEC 62271-100

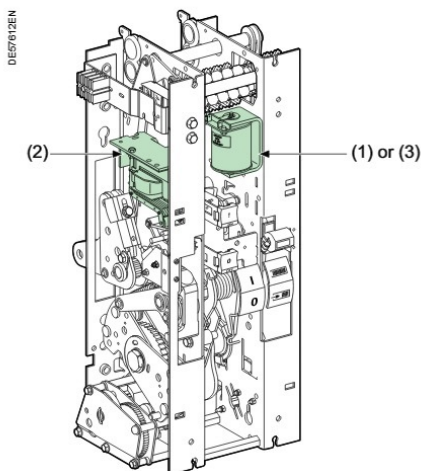
Phase to phase			230			250		
Rated voltage	Ur	kV 50/60 Hz	24			24		
Insulation level								
- power frequency withstand	Ud	kV 50 Hz 1 min	50			50		
- lightning impulse withstand	Up	kV peak	125			125		
Rated current	Ir	A	630	■	■	■	■	■
			1250	■	■	■	■	■
			2000	–	–	■	■	■
			2500	–	–	■	■	■
Short circuit current	Isc	kA	16	25	16	25	31.5	
Short time withstand current	Ik/tk	kA/3 s	16	25	16	25	31.5	
Short-circuit making current	Ip	kA peak	50 Hz	40	63	40	63	79
			60 Hz	42	65	42	65	82

Common characteristics according to IEC 62271-100

Rated switching sequence	O-3 min-CO-3 min-CO	■
	O-0.3 s-CO-3 min-CO	■
	O-0.3 s-CO-15 s-CO	■
Operating times	Opening ms	< 50
	Breaking ms	< 65
	Closing ms	< 85
Mechanical endurance	Class	M2
	Number of switching operations	10 000
Electrical endurance	Class	E2
Number of switching operations at full Isc value	16 kA	100
	25 kA	100
	31.5 kA	100
Capacitive current breaking capacity	Class	C1-C2 (for certain applications)
Service temperature		– 25°C to 40°C
Average relative humidity	over 24 h	< 95%
	over 1 month	< 90%

■ Available
– Not available

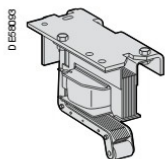




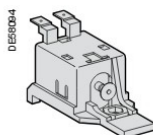
Operating mechanism



Shunt opening release (1)



Undervoltage release (2)



Low energy release (3)

Composition

The opening circuit can be produced using the following components:

- Shunt opening release (on energizing) (YO1)
- second shunt opening release (on energizing) (YO2)
- undervoltage release (YM)
- low energy release (Mitop).

Note: see the table of the releases' combinations on the "Order form" page.

Shunt opening release (YO1 and YO2)

Energizing this release causes instant opening of the circuit breaker.

Characteristics

Power supply	See "Order form" page	
Threshold	V AC	0.85 to 1.1 Ur
	V DC	0.7 to 1.1 Ur
Consumption	V AC	160 VA
	V DC	50 W

Undervoltage release (YM)

This release unit causes the systematic opening of the circuit breaker when its supply voltage drops below a value less than 35% of the rated voltage, even if this drop is slow and gradual. It can open the circuit breaker between 35% and 70% of its rated voltage. If the release unit is not supplied power, manual or electrical closing of the circuit breaker is impossible. Closing of the circuit breaker is possible when the supply voltage of the release unit reaches 85% of its rated voltage.

Characteristics

Power supply	See "Order form" page		
Threshold	Opening	0.35 to 0.7 Ur	
	Closing	0.85 Ur	
Consumption	Triggering	V AC	400 VA
		V DC	100 W
	Latched	V AC	100 VA
		V DC	10 W

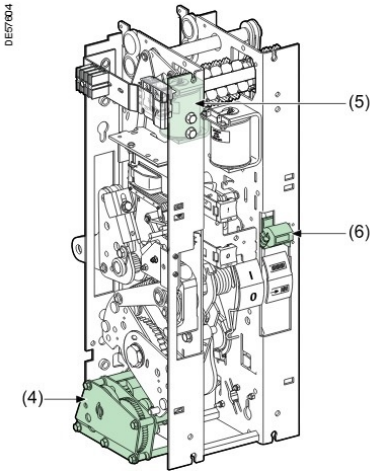
Low energy release (Mitop)

This release includes a low consumption unit and is specifically used with the Sepam 100LA self-powered relay ("REFLEX MODULE"), or the VIP relay.

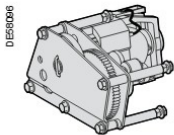
Characteristics

Power supply	Direct current
Threshold	0.6 A < I < 3 A

Any tripping due to the Mitop release unit is momentarily indicated by an SDE type changeover contact (option).



Operating mechanism



Electrical motor and gearing (4)



Shunt closing release (5)



Operation counter (6)

Function

Remote control enables the remote opening and closing of the circuit breaker.

Composition

The remote control mechanism comprises:

- an electrical motor with gearing
- a shunt closing release (YF) combined with an anti-pumping device
- an operation counter.

Electrical motor with gearing (M)

The electrical motor carries out the automatic rearming of the stored energy unit as soon as the circuit breaker is closed. This allows the instant reclosing of the device after opening. The arming lever is only used as a backup operating mechanism in the case of the absence of the auxiliary power supply.

The M3 contact indicates the end of arming operations.

Characteristics

Power supply	See "Order form" page	
Threshold	V AC/ V DC	0.85 to 1.1 Ur
Consumption	V AC	380 VA
	V DC	380 W

Shunt closing release (YF)

This release allows the remote closing of the circuit breaker when the operating mechanism is armed.

Characteristics

Power supply	See "Order form" page	
Threshold	V AC	0.85 to 1.1 Ur
	V DC	0.85 to 1.1 Ur
Consumption	V AC	160 VA
	V DC	50 W

The shunt closing release is combined with an anti-pumping relay that enables priority to be given to opening in the case of a permanent closing order. This thus avoids the device being caught in an uncontrolled opening-closing cycle.

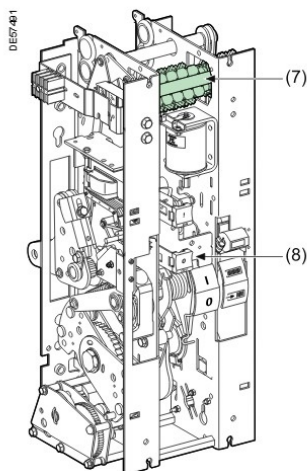
Operation counter

The operation counter is visible on the front panel.

It displays the number of switching cycles (CO) that the device has carried out.

Description of functions

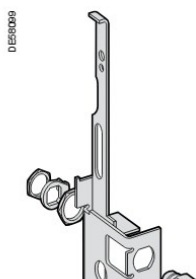
Indication and locking/interlocking



Operating mechanism



Auxiliary contacts (7)



Keylocking kit (8)

“Open/closed” auxiliary contacts

The number of contacts available depends on the options chosen on the operating mechanism.

■ In the basic configuration, the circuit breaker operating mechanism comprises a total of:

- 6 normally closed contacts (NC)
- 7 normally open contacts (NO)
- 1 changeover contact (CHG).

The usage mode for auxiliary contacts is given in the following table:

Options	NC contact	NO contact
Remote control	1	1
Shunt opening release (each one)	0	1
Undervoltage release	0	0
Low energy release Mitop	0	0

To know the final number of available contacts, you must deduct the total number of contacts included in the circuit breaker (6 NC + 7 NO + 1 CHG) from the number of contacts used indicated in the table above.

E.g.: a circuit breaker equipped with a remote control and a shunt release has the following contacts available:

6 NC + 5 NO + 1 CHG.

With an undervoltage release instead of a shunt release, this circuit breaker would have the following available contacts:

6 NC + 6 NO + 1 CHG.

■ Using a 21-pin LV plug (for withdrawable applications) the maximum number of available contacts is:

3 NC + 3 NO + 1 CHG.

(Instead of 5 NC-6 NO-1 CHG with a 42-pin socket).

Contact characteristics

Rated current		10 A
Breaking capacity	AC	220 V ($\cos \varphi \geq 0.3$)
	DC	110/220 V ($L/R \leq 0.02$ s)
		1 A
		0.3 A

Operating mechanism with electrical motor

Shunt opening release combination

	1st release	Shunt opening release YO1	Undervoltage release YM	Mitop
2nd release				
Without		6NC+5NO+1CHG	6NC+6NO+1CHG	6NC+6NO+1CHG
Shunt opening release YO2		6NC+4NO+1CHG		
Undervoltage release YM		6NC+5NO+1CHG		
Mitop		6NC+5NO+1CHG	6NC+6NO+1CHG	

Locking of the circuit breaker in the “open” position

This locking system enables the fitting of a Profalux or Ronis captive key type keylock (right turn type keylock).

The keylock is not part of the kit but can be supplied as an option.