

Life Is On

Schneider
Electric

Easy Offer

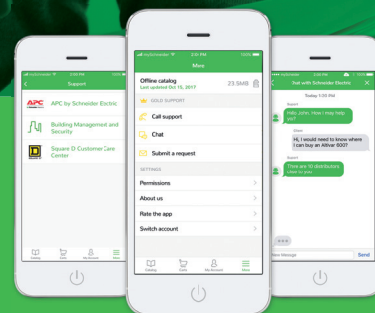
Product Catalogue



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Schneider Electric in figures

€27

billion in sales in FY2017

160,000+

employees in more than
100 countries.

~5%

of revenues devoted to
R&D

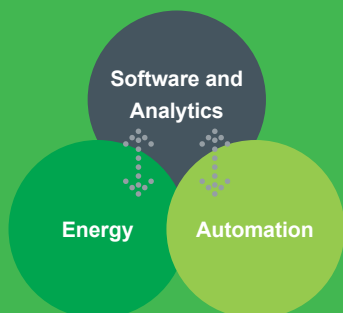


Our team serving your business...

- are the 20,000 sales and marketing professionals deeply engaged in your business
- are the expert 20,000 R&D, Software & Application engineers ensuring the most innovative solution for your business
- are the 2800+ customer care team providing 24/7 support to you
- are the 100,000+ industrialization team in over 200 factories close to you, securing quality and cost advantage and proximity logistics with tailored supply chain support
- are our community of millions of certified, professional, expert partners worldwide

At Schneider Electric, we call this Life Is On

At Schneider Electric,
we combine **Energy Management,**
Automation and Software
serving 4 markets, i.e. 70% of the world
energy consumption

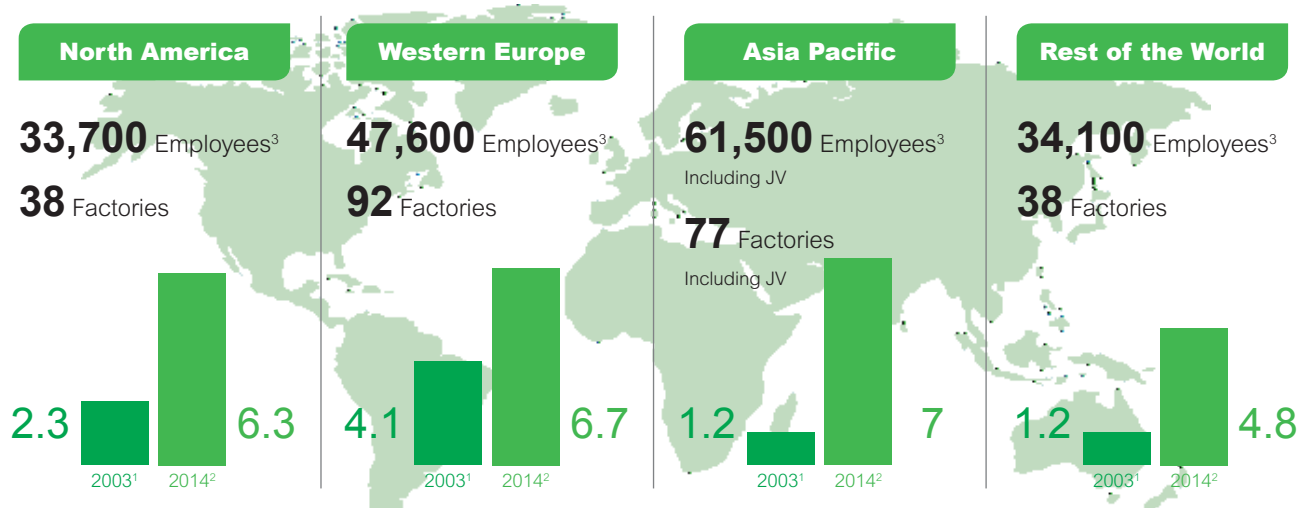


% are calculated on final energy



Source: IEA Explore 2015

Schneider Electric Global Business in Over 100 Countries



1: Published figures in billion € restated to reflect country-market view
2: Billion € pro-forma basis including LTM Sep 2014 revenue for Invensys
3: Including Invensys, excluding Delixi and Fuji

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Schneider Electric Easy Offers



> EasyPact MVS



> EasyPact CVS



> EasyPact EZC



> Easylogic



> Acti9-K



> Easyline



> Easycan

Low voltage power circuit breakers from 800A to 2500A ► **9-14**

Moulded-case circuit breakers from 100 to 630A ► **15-20**

Moulded-case circuit breakers from 15 to 630 A ► **21-30**

Power Monitoring ► **31-34**

Miniature Circuit Breakers (MCBs) ► **35-42**

Pushbuttons, switches and pilot lights ► **43-58**

The new generation LV power factor correction capacitors ► **59-67**

EasyPact MVS

Low voltage power circuit breakers and switch-disconnectors from 800A to 4000A

Features

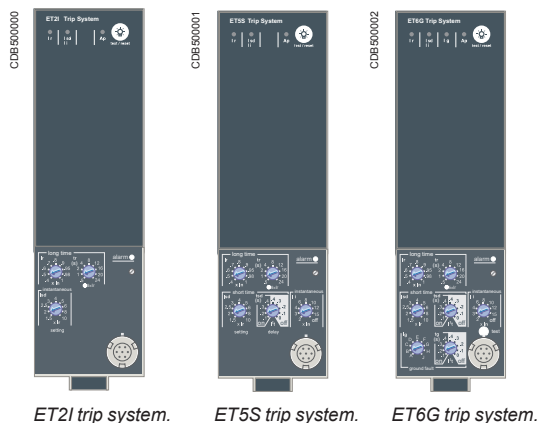
- Single frame size from 800 to 4000A with identical door cut-outs
- Suitable for Copper & Aluminium termination with a single pole pitch of 115 mm
- Terminal orientation can be converted from horizontal to vertical and vice-versa at workshop
- Direct mounting Door frames (escutcheon) without drilling any holes
- Front fitted accessories like undervoltage release, shunt release & closing coil for complete range
- Conversion of manual operated breaker into electrical operated, with single bolt fixing



EasyPact MVS with single frame size, common accessories helps to increase the shop floor efficiency, enabling faster delivery of Switchboards.



Low voltage power circuit breakers
from 800A to 2500A



Circuit breakers and switch-disconnectors

- Ratings:
 - EasyPact MVS 800 to 4000A
- Circuit breakers type N, H
- Switch-disconnectors type NA, HA
- 3 or 4 poles
- Fixed or draw-out versions
- Option with neutral on the right

ET trip system

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

ETA trip system with current measurement

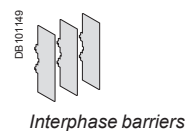
- 2I basic protection
- 5S selective protection
- 6G selective + earth-fault protection
- Standard long-time rating plug:
 - Current setting (A) 0.4 to 1 x I_n
- External power-supply module

ETV trip system with voltage measurement

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

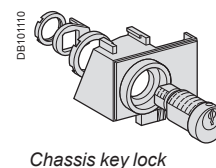
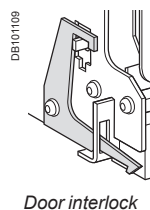
Connections

- Rear connection:
 - Horizontal
 - Vertical
- Optional accessories:
 - Interphase barriers
 - Safety shutters and shutter locking blocks

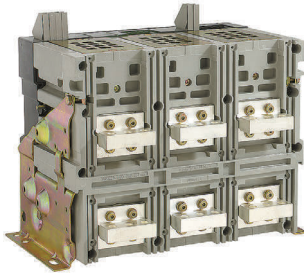


Locking

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



PB104354A40

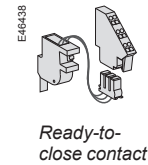


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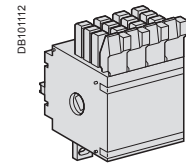


Indication contacts

- Standard:
 - ON/OFF indication (OF)
 - "Fault" trip indication (SDE)
- Optional:
 - Additional ON/OFF indication (OF)
 - Ready-to-close contact (PF)
 - Carriage switches for connected (CE) disconnected (CD) and test (CT) positions



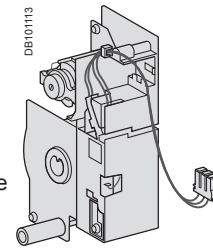
Ready-to-close contact



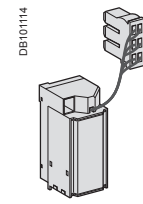
OF contact

Remote operation

- Remote ON/OFF:
 - Gear motor
 - XF closing or MX opening voltage releases
- Remote tripping function:
 - MN voltage release
 - Standard
 - Adjustable or non-adjustable delay



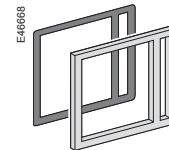
Gear motor



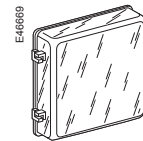
MX, XF and MN voltage releases

Accessories

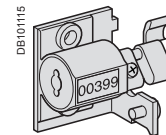
- Auxiliary terminal shield
- Operation counter
- Escutcheon (Door sealing frame)
- Transparent cover for escutcheon
- Escutcheon blanking plate



Escutcheon



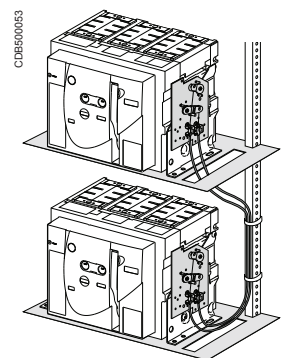
Transparent cover



Mechanical operation counter

Source-changeover systems

- Mechanical interlocking using cables:
 - Interlocking between two devices
 - Interlocking between three devices



Interlocking of two devices

Common characteristics

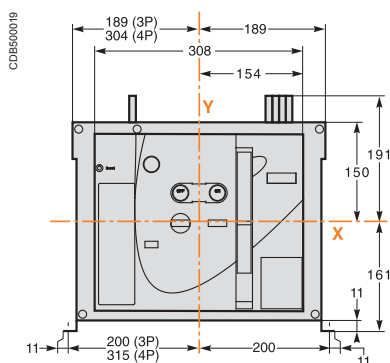
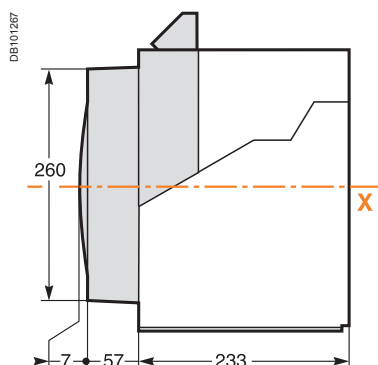
Number of poles		3/4
Rated insulation voltage (V)	Ui	1000
Impulse withstand voltage (kV)	Uimp	12
Rated operational voltage (V AC 50/60 Hz)	Ue	690
Suitability for isolation	IEC 60947-2	Yes
Degree of pollution	IEC 60664-1	4

Basic circuit-breaker				MVS08	MVS10	MVS12	MVS16	MVS20	MVS25
Circuit-breaker as per IEC 60947-2									
Rated current (A)	In	at 40°C ⁽¹⁾		800	1000	1250	1600	2000	2500
Rating of 4th pole (A)				800	1000	1250	1600	2000	2500
Sensor ratings (A)				800	1000	1250	1600	2000	2500
Type of circuit breaker				N	H	N	H	N	H
Ultimate breaking capacity (kA rms)	Icu	220...440V		50	65	50	65	50	65
V AC 50/60 Hz		690 V		42	50	42	50	42	50
Rated service breaking capacity (kA rms)	Ics	% Icu		100%	100%	100%	100%	100%	100%
Utilisation category				B	B	B	B	B	B
Rated short-time withstand current (kA rms)	Icw	1s	220...440 V	50	65	50	65	50	65
V AC 50/60 Hz			690V	42	50	42	50	42	50
		3s	440/690V	25	36	25	36	25	36
Rated making capacity (kA peak)	Icm	220...440 V		105	143	105	143	105	143
V AC 50/60 Hz		690 V		88	105	88	105	88	105
Breaking time (ms) between tripping order and arc extinction				25	25	25	25	25	25
Closing time (ms)				<70	<70	<70	<70	<70	<70

Maintenance/Connection/Installation

Service life	Mechanical	with maintenance		20	20	20	20	20	20
C/O cyclesx1000		without maintenance		10	10	10	10	10	10
	Electrical	without maintenance	440 V	6000	6000	6000	6000	6000	5000
			690 V	4000	4000	4000	4000	4000	2500
Connection	Horizontal			Yes					
	Vertical			Yes					
Dimensions (mm)	Draw-out	3P		439 x 441 x 395					
(H x W x D)		4P		439 x 556 x 395					
	Fixed	3P		352 x 422 x 297					
		4P		352 x 537 x 297					
Weight (kg)	Draw-out	3P/4P		70/85					90/120
(approximate)	Fixed	3P/4P		40/50					60/80

Dimensions



Easypact MVS08 to MVS40 circuit breakers

A EasyPact MVS circuit breaker consist of:

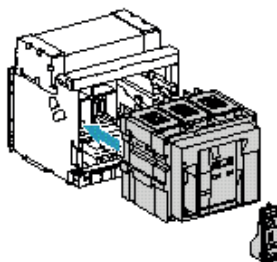
- a basic circuit breaker
- a ET2I control unit
- horizontal connections for both top and bottom
- 4 auxiliary contacts (4OF)
- 1 trip indication contact (SDE)

Additional equipped for drawout breaker

- chassis with safety shutter
- door frame
- disconnected position locking (padlocks excluded)

Additional equipped for electrically operated breaker

- gear motor on/off mechanism (MCH)
- closing release (XF)
- opening release (MX)



Basic drawout circuit breaker <4000 A
Basic drawout circuit breaker <4000 A
Basic drawout circuit breaker <4000 A

In (A at 40°C)	Icu/Ics (kA @ 220/415V)	Icw (1sec)	Icw (3sec)	Fixed (Manual)	
Type H				3 Pole	4 Pole
800	65/65	65	36	MVS08H3MF2L	MVS08H4MF2L
1000	65/65	65	36	MVS10H3MF2L	MVS10H4MF2L
1250	65/65	65	36	MVS12H3MF2L	MVS12H4MF2L
1600	65/65	65	36	MVS16H3MF2L	MVS16H4MF2L
2000	65/65	65	36	MVS20H3MF2L	MVS20H4MF2L
2500	65/65	65	36	MVS25H3MF2L	MVS25H4MF2L
3200	65/65	65	36	MVS32H3MF2L	MVS32H4MF2L
4000	65/65	65	36	MVS40H3MF2L	MVS40H4MF2L

In (A at 40°C)	Icu/Ics (kA @ 220/415V)	Icw (1sec)	Icw (3sec)	Drawout (Manual)	Drawout (Manual)
Type H				3 Pole	4 Pole
800	65/65	65	36	MVS08H3MW2L	MVS08H4MW2L
1000	65/65	65	36	MVS10H3MW2L	MVS10H4MW2L
1250	65/65	65	36	MVS12H3MW2L	MVS12H4MW2L
1600	65/65	65	36	MVS16H3MW2L	MVS16H4MW2L
2000	65/65	65	36	MVS20H3MW2L	MVS20H4MW2L
2500	65/65	65	36	MVS25H3MW2L	MVS25H4MW2L
3200	65/65	65	36	MVS32H3MW2L	MVS32H4MW2L
4000	65/65	65	36	MVS40H3MW2L	MVS40H4MW2L

In (A at 40°C)	Icu/Ics (kA @ 220/415V)	Icw (1sec)	Icw (3sec)	Fixed (Electrical) (1)	Fixed (Electrical) (1)
Type H				3 Pole	4 Pole
800	65/65	65	36	MVS08H3NF2L	MVS08H4NF2L
1000	65/65	65	36	MVS10H3NF2L	MVS10H4NF2L
1250	65/65	65	36	MVS12H3NF2L	MVS12H4NF2L
1600	65/65	65	36	MVS16H3NF2L	MVS16H4NF2L
2000	65/65	65	36	MVS20H3NF2L	MVS20H4NF2L
2500	65/65	65	36	MVS25H3NF2L	MVS25H4NF2L
3200	65/65	65	36	MVS32H3NF2L	MVS32H4NF2L
4000	65/65	65	36	MVS40H3NF2L	MVS40H4NF2L

In (A at 40°C)	Icu/Ics (kA @ 220/415V)	Icw (1sec)	Icw (3sec)	Drawout (Electrical) (1)	Drawout (Electrical) (1)
Type H				3 Pole	4 Pole
800	65/65	65	36	MVS08H3NW2L	MVS08H4NW2L
1000	65/65	65	36	MVS10H3NW2L	MVS10H4NW2L
1250	65/65	65	36	MVS12H3NW2L	MVS12H4NW2L
1600	65/65	65	36	MVS16H3NW2L	MVS16H4NW2L
2000	65/65	65	36	MVS20H3NW2L	MVS20H4NW2L
2500	65/65	65	36	MVS25H3NW2L	MVS25H4NW2L
3200	65/65	65	36	MVS32H3NW2L	MVS32H4NW2L
4000	65/65	65	36	MVS40H3NW2L	MVS40H4NW2L

Electronic Trip Unit

ET5S selective protection

ET6G selective + earth-fault protection

(1) Supplied with spring charge motor (MCH), opening release (MX) and closing release (XF) with 240VAC control voltage rating.

MVSxxHx_xxx	Control voltage rating
N	200/240 V AC
O	110/130 V AC
P	380/415 V AC
Q	200/250 V DC
R	100/125 V DC
S	48/60 V DC
T	24/30 V DC

For references on customization and accessories refer to Singapore 2018 Price Catalogue

MVS switch-disconnectors

A EasyPact MVS switch-disconnector

consist of:

- the basic switch-disconnector
- horizontal connections for both top and bottom
- 4 auxiliary contacts (4OF)
- 4 auxiliary contacts (4OF)
- 1 trip indication contact (SDE)

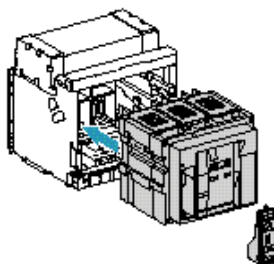
In (A at 40°C)	Icm (kA 220/415V)	Icw (1sec)	Icw (3sec)	Fixed 3 Pole	Fixed 4 Pole
Type H					
800	143	65	36	MVS08H3MF0D	MVS08H4MF0D
1000	143	65	36	MVS10H3MF0D	MVS10H4MF0D
1250	143	65	36	MVS12H3MF0D	MVS12H4MF0D
1600	143	65	36	MVS16H3MF0D	MVS16H4MF0D
2000	143	65	36	MVS20H3MF0D	MVS20H4MF0D
2500	143	65	36	MVS25H3MF0D	MVS25H4MF0D
3200	143	65	36	MVS32H3MF0D	MVS32H4MF0D
4000	143	65	36	MVS40H3MF0D	MVS40H4MF0D

Additional equipped for drawout switch
disconnectors

- chassis with safety shutter

- arc chute cover
- door frame
- disconnected position locking
(padlocks excluded)

In (A at 40°C)	Icm (kA 220/415V)	Icw (1sec)	Icw (3sec)	Drawout 3 Pole	Drawout 4 Pole
Type H					
800	143	65	36	MVS08H3MW0D	MVS08H4MW0D
1000	143	65	36	MVS10H3MW0D	MVS10H4MW0D
1250	143	65	36	MVS12H3MW0D	MVS12H4MW0D
1600	143	65	36	MVS16H3MW0D	MVS16H4MW0D
2000	143	65	36	MVS20H3MW0D	MVS20H4MW0D
2500	143	65	36	MVS25H3MW0D	MVS25H4MW0D
3200	143	65	36	MVS32H3MW0D	MVS32H4MW0D
4000	143	65	36	MVS40H3MW0D	MVS40H4MW0D



Basic switch-disconnector < 4000 A

EasyPact CVS

LV circuit breakers from 100 to 630A

Features

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

- Conforms to IEC 60947-1 & 2
- Breaking Capacities: 25kA (100-250A), 36kA (100A-630A), 50kA (400&630A)
- Complete range with Service breaking capacity, $I_{cs}=100\%$ Ultimate breaking capacity, I_{cu}
- Two frame sizes for complete range helps is faster design & delivery of distribution systems
- Thermal magnetic trip units (100-630A) & electronic trip units (400 & 630A)
- Fault current limitation technology helps to reduce the thermal stresses & thus increases the life of cables and installation
- Front accessible common snap fit auxiliaries simplifies the installation procedures & reduces inventory costs
- Suitability for Isolation ensures that the circuit is isolated from the remainder of the system thus the personnel carry out work with complete safety
- Class 2 front face reinforces safety with unique modular construction where the auxiliaries are isolated from the main current path
- MCCB's can be either pad locked or key locked, thus ensuring safety and better control on installation
- High electrical & mechanical endurances



EasyPact CVS MCCBs
100-250A



EasyPact CVS MCCBs
400-630A



Moulded-case circuit breakers from 100 to 630A

Common characteristics

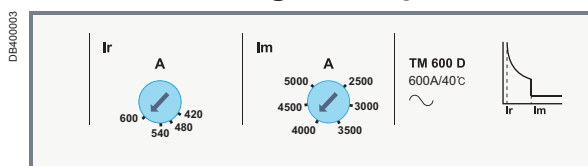
Rated voltages			
Insulation voltage (V)	Ui		690
Impulse withstand voltage (kV)	Uimp		8
Operational voltage (V)	Ue	AC 50/60 Hz	440
Suitability for isolation		IEC/EN 60947-2	yes
Utilisation category			A
Pollution degree		IEC 60664-1	3

Circuit breakers

Performance															
Electrical characteristics as per IEC 60947-2															
Rated current (A)		In	40 °C	100		160		250		400		630			
Number of poles				3, 4		3, 4		3, 4		3, 4		3, 4			
Breaking capacity levels				B		F		B		F		B		F	
Breaking capacity (kA rms)															
		Icu	AC 50/60 Hz	220/240 V	40	70	40	70	40	70	40	70	40	70	
				380/415 V	25	36	25	36	25	36	36	50	36	50	
				440 V	20	36	20	36	20	36	30	42	30	42	
Service breaking capacity (kA rms)															
		Ics	AC 50/60 Hz	220/240 V	40	70	40	70	40	70	40	70	40	70	
				380/415 V	25	36	25	36	25	36	36	50	36	50	
				440 V	15	18	15	18	15	18	23	32	23	32	
Durability (C-O cycles)			Mechanical		30000		25000		20000		15000		15000		
			Electrical	415V In/2 In	30000		25000		20000		12000		8000		
					12000		12000		10000		6000		4000		
Protection															
Short-circuit protection		Magnetic only		■		■		■		■		■			
Overload/short-circuit protection		Thermal magnetic		■		■		■		■		■			
		Electronic		-		-		-		■		■			
		with neutral protection (Off-0.5-1)		-		-		-		■		■			
Earth-leakage protection		By Vigi module		■		■		■		■		■			
Installation/connections															
Dimensions and weights															
Dimensions (mm) W x H x D		Fixed, front connections		3P	105 x 161 x 86		105 x 161 x 86		105 x 161 x 86		140 x 255 x 110		140 x 255 x 110		
				4P	140 x 161 x 86		140 x 161 x 86		140 x 161 x 86		185 x 255 x 110		185 x 255 x 110		
Weight (kg)		Fixed, front connections		3P	1.8		1.8		2.0		4.7		5.2		
				4P	2.2		2.3		2.6		6.3		7.1		
Connections															
Connection terminals		Pitch		Without/With spreaders		35/45 mm		35/45 mm		35/45 mm		45/52.5 mm 45/70 mm		45/52.5 mm 45/70 mm	
Large Cu or Al cables		Cross-section		mm²		300		300		300		4 x 240		4 x 240	

TM-D thermal-magnetic trip units can be used on EasyPact CVS100-630 circuit breakers with performance levels B/F/N.

TM-D thermal-magnetic trip units



Thermal-magnetic trip units		TM16D to 250D					TM320D to 600D							
Ratings (A)	In at 40 °C ⁽¹⁾	100	125	160	200	250	320	400	500	600				
Circuit breaker	CVS100	■	-	-	-	-								
	CVS160	■	■	■	-	-								
	CVS250	-	-	■	■	■								
	CVS400						■	■	-	-				
	CVS630						-	-	■	■				
Magnetic protection														
Pick-up (A)	Im	fixed					adjustable							
accuracy ±20 %	CVS100	800					1600 to 3200 (320A), 2000 to 4000 (400A) 2500 to 5000							
	CVS160/250	800	1250	1250	2000	2500								
	CVS400													
	CVS630													
Thermal protection														
Pick-up (A) tripping between 1.05 and 1.30 Ir	Ir = In x ...	adjustable in amps from 0.7 to 1 x In												
Neutral protection														
Unprotected neutral	4P 3D	no detection												
Fully protected neutral	4P 4D	1 x Ir												

⁽¹⁾ For temperatures not equal to 40°C, the thermal protection characteristics are modified. See the temperature derating table on page B-2.

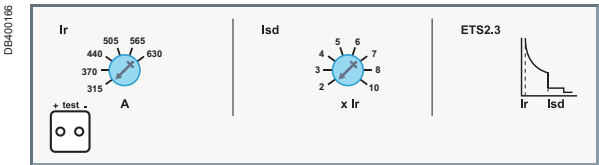
Note: All the trip units have a transparent lead-sealable cover that protects access to the adjustment dials.

Protection of distribution systems

ETS 2.3 electronic trip unit and accessories

Add-on protection against insulation faults using a Vigi module

ETS 2.3 electronic trip unit



Trip units		ETS 2.3	
Ratings (A) of circuit breaker	In 20 to 70 °C	400	630
Circuit breaker	CVS400 F/N	■	-
	CVS630 F/N	-	■
Overload protection (Long time)			
current setting	$I_r = I_n \times \dots$	0.5...1 adj., 6 setting	
Time delay (s) (min...max.)		fixed	
	at 1.5 x I_r	90...180	
	at 6 x I_r	5...7.5	
	at 7.2 x I_r	3.2...5.0	
Overload protection (Short time)			
Pick-up (A) accuracy $\pm 15\%$	$I_{sd} = I_r \times \dots$	2..10 adj., 8 setting	
Time delay (ms)		fixed	
	max. resettable time	≤ 40	
	max. break time	≤ 60	
Overload protection (instantaneous)			
Pick-up (A)	$I_i = I_n \times \dots$	11	
Protection of the fourth pole			
Neutral unprotected	4P 3D	no protection	
Neutral protection at 0.5 I_n	4P 3D + N/2	0.5 x I_r	
Neutral protection at I_n	4P 4D	1 x I_r	
Thermal memory			
	CVS400 F/N	Yes	
	CVS630 F/N	Yes	

PB103590-36



Circuit breaker with add-on Vigi module (Vigi CVS)

A Vigi module can be added to any three or four-pole CVS100 to 630 circuit breaker to form a Vigi CVS.

Dimensions and weights		CVS100/160/250	CVS400/630
Dimensions	3-pole	105 x 236 x 86	140 x 355 x 110
W x H x D (mm)	4-pole	140 x 236 x 86	185 x 355 x 110
Weight (kg)	3-pole	2.5	8.8
	4-pole	3.2	10.8



EasyPact CVS 100-250A



OF/SD or SDE/SDV contact



Vigi Module

EasyPact CVS 100/160/250B

With TM-D thermal-magnetic trip unit

EasyPact CVS100B (25 kA at 380/415V)

Rating	3P 3d	4P 3d
TM16D	LV510300	LV510310
TM25D	LV510301	LV510311
TM32D	LV510302	LV510312
TM40D	LV510303	LV510313
TM50D	LV510304	LV510314
TM63D	LV510305	LV510315
TM80D	LV510306	LV510316
TM100D	LV510307	LV510317

EasyPact CVS160B (25 kA at 380/415V)

Rating	3P 3d	4P 3d
TM100D	LV516301	LV516311
TM125D	LV516302	LV516312
TM160D	LV516303	LV516313

EasyPact CVS250B (25 kA at 380/415V)

Rating	3P 3d	4P 3d
TM160D	LV525301	LV525311
TM200D	LV525302	LV525312
TM250D	LV525303	LV525313

EasyPact CVS100/160/250F

With TM-D thermal-magnetic trip unit

EasyPact CVS100F (36 kA at 380/415V)

Rating	3P 3d	4P 3d
TM16D	LV510330	LV510340
TM25D	LV510331	LV510341
TM32D	LV510332	LV510342
TM40D	LV510333	LV510343
TM50D	LV510334	LV510344
TM63D	LV510335	LV510345
TM80D	LV510336	LV510346
TM100D	LV510337	LV510347

EasyPact CVS160F (36 kA at 380/415V)

Rating	3P 3d	4P 3d
TM100D	LV516331	LV516341
TM125D	LV516332	LV516342
TM160D	LV516333	LV516343

EasyPact CVS250F (36 kA at 380/415V)

Rating	3P 3d	4P 3d
TM160D	LV525331	LV525341
TM200D	LV525332	LV525342
TM250D	LV525333	LV525343

EasyPact CVS100/160/250F

With MA magnetic trip unit

EasyPact CVS100F (36 kA at 380/415V)

Rating	3P 3d
MA2.5	LV510440
MA6.3	LV510441
MA12.5	LV510442
MA25	LV510443
MA50	LV510444
MA100	LV510445

EasyPact CVS160F (36 kA at 380/415V)

Rating	3P 3d
MA100	LV516439
MA150	LV516440

EasyPact CVS250F (36 kA at 380/415V)

Rating	3P 3d
MA150	LV525438
MA220	LV525439

EasyPact CVS100/160/250

With NA switch-disconnector unit

EasyPact CVS100NA

Rating	3P	4P
100	LV510425	LV510426

EasyPact CVS160NA

Rating	3P	4P
160	LV516425	LV516426

EasyPact CVS250NA

Rating	3P	4P
250	LV525425	LV525426

Electrical auxiliaries

Description	
OF or SD or SDE or SDV	29450
OF or SD or SDE or SDV low level	29452
SDE adapter, mandatory for trip unit TM, MA	LV429451

+ Vigi module or insulation monitoring module.

Description	3P	4P
ME type for CVS100/160 (200 to 440 V)	LV429212	LV429213
MH type for CVS100/160 (200 to 440 V)	LV429210	LV429211
MH type for CVS250 (200 to 440 V)	LV431535	LV431536

EasyPact CVS MCCBs
400-630A

OF/SD or SDE/SDV contact



Vigi Module

EasyPact CVS400/630F

With TM-D thermal-magnetic trip unit

EasyPact CVS400F (36 kA at 380/415V)
with spreader 52.5 mm pitch

Rating	3P 3d	4P 3d
TM320D	LV540305SPDR	LV540308SPDR
TM400D	LV540306SPDR	LV540309SPDR

EasyPact CVS630F (36 kA at 380/415V)
with 70 mm pitch

Rating	3P 3d	4P 3d
TM500D	LV563305SPDR	LV563308SPDR
TM600D	LV563306SPDR	LV563309SPDR

EasyPact CVS400/630N

With TM-D thermal-magnetic trip unit

EasyPact CVS400N (50 kA at 380/415V)
with spreader 52.5 mm pitch

Rating	3P 3d	4P 3d
TM320D	LV540315SPDR	LV540318SPDR
TM400D	LV540316SPDR	LV540319SPDR

EasyPact CVS630N (50 kA at 380/415V)
with 70 mm pitch

Rating	3P 3d	4P 3d
TM500D	LV563315SPDR	LV563318SPDR
TM600D	LV563316SPDR	LV563319SPDR

EasyPact CVS400/630F/N

With ETS 2.3 electronic trip unit (LSOI protection)

EasyPact CVS400/630F (36 kA at 380/415 V)
with spreader 52.5/70 mm pitch

Rating	3P 3d	4P 3d, 4d, 3d + N/2
CVS400F 400A	LV540505SPDR	LV540506SPDR
CVS630F 630A	LV563505SPDR	LV563506SPDR

With ETS 2.3 electronic trip unit (LSOI protection)

EasyPact CVS400/630N (50 kA at 380/415 V)
with spreader 52.5/70 mm pitch

Rating	3P 3d	4P 3d, 4d, 3d + N/2
CVS400N 400A	LV540510SPDR	LV540511SPDR
CVS630N 630A	LV563510SPDR	LV563511SPDR

EasyPact CVS400/630F/N

With MA thermal-magnetic trip unit

EasyPact CVS400F (36 kA at 380/415V)
with spreader 52.5 mm pitch

Rating	3P 3d
MA320	LV540550SPDR

EasyPact CVS400N (50 kA at 380/415V)
with spreader 52.5 mm pitch

Rating	3P 3d
MA320	LV540552SPDR

EasyPact CVS400/630

With NA switch-disconnector unit

EasyPact CVS400NA
with spreader 52.5 mm pitch

Rating	3P 3d	4P
400A	LV540400SPDR	LV540401SPDR

EasyPact CVS630NA with 70 mm pitch

Rating	3P	4P
630A	LV563400SPDR	LV563401SPDR

EasyPact CVS630F (36 kA at 380/415V) with 70 mm pitch

Rating	3P 3d
MA500	LV563550SPDR

EasyPact CVS630N (50 kA at 380/415V) with 70 mm pitch

Rating	3P 3d
MA500	LV563552SPDR

Electrical auxiliaries

Description	
OF or SD or SDE or SDV	29450
OF or SD or SDE or SDV low level	29452
SDE adapter, mandatory for trip unit TM, MA	LV540050

+ Vigi module or insulation monitoring module.

Description	3P	4P
Type MB	200 to 440 V	LV432455
Connection for a 4P Vigi on a 3P breaker		LV432457

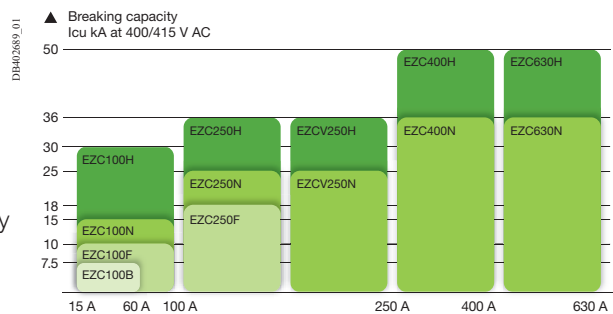
EasyPact EZC

Moulded-case circuit breakers from 15 to 630 A

Easy to choose

EasyPact™ EZC brings you easy solutions

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



Easy to install

- Fixed front mounting
- Plug-in mounting
- Front connections
- Bare cables connected through cable lugs, screwed inside the breaker
- Field-installable auxiliaries and accessories
- Built-in earth-leakage protection
- Interchangeable MCCB and ELCB
- EasyPact EZC 250 ELCB
Built-in Integrated Earth-Leakage Circuit Breaker (ECLB) function
 - fully interchangeable with MCCB
 - same MCCB foot print and panel cut

Easy to use

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



Timely
delivery,
wherever
you are

Schneider Electric offers a world-renowned logistics network capable of getting EasyPact™ EZC products to you fast, wherever you are.

Moulded-case circuit breakers from 15 to 630A

CD850601



CD850601.2

Ui=690V~ 50/60Hz	Uimp=6kV	Cat.A	40°C
IEC 60947-2	Ue (V)	Icu/Ics (kA)	
JIS C8201-2-1	230/240~	85 / 43	
	400/415~	36 / 18	
	440 ~	25 / 13	
	550 ~	10 / 5	
	250 ~	30 / 15	
NEMA - AB1	U (V)	HIC (kAmps)	
	240 ~	85	
	277/480~	25	
DL 06253			



Standardised characteristics indicated on the rating plate:

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

Compliance with standards

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

- IEC 60947-1 - general rules
- IEC 60947-2 - low-voltage switchgear and controlgear, part 2 (circuit breakers)
- European (EN 60947-1 and EN 60947-2) and the corresponding national standards
- GB 14048.2
- JIS C8201-2-1 Annex 1 and Annex 2, for molded case circuit breakers
- JIS C8201-2-2 Annex 1 and Annex 2, for earth-leakage circuit breakers
- NEMA-AB1 (High Interrupting Capacity): American standard
- UL 60947-4-1 (old UL508)/CSA 22-2 no. 14.

Approvals and Certifications

- IEC certification by independent laboratories (ASEFA, KEMA, TÜV)

- marking

- certified by third party Tilva

- UL 60947-4-1 (old UL508) certified by third party Underwriter Laboratories as a "Manual Motor Controller" (EVC100/EVC250/EVCV250).

Vibration and shock withstand test

EasyPact EZC circuit breakers resist mechanical vibrations and shocks.

Tests are carried out in compliance with standard IEC 60068-2-6 for the levels required by merchant-marine inspection organisation IACS:

International Association of Classification Societies up to 250 A (ABS, BV, DNV, LR, KRS, RINA, NK):

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

Pollution degree

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

Tropicalisation

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

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

Positive contact indication

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

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

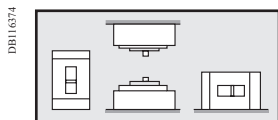
The isolation function is certified by tests guaranteeing:

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

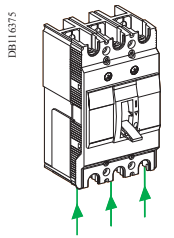
EasyPact EZC circuit breakers take into account important concerns for environmental protection. Most components are recyclable and the parts are marked as specified in applicable standards.

CT8100602





Installation positions.



Reverse feeding.

Ambient temperature

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

Installation

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

Power supply

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

Degree of protection

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

Circuit breaker installed in a switchboard

DB116378		With toggle	IP40	IK07
DB116379		With direct rotary handle standard/VDE MCC	IP54	IK07
DB116380		With extended rotary handle	IP54	IK08
DB116381		With extended rotary handle	IP54	IK08



Earth-leakage protection

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

CPB100600



EZC100-1P.

CPB100601



EZC100-2P.

CPB100602



EZC100-3P.

CPB100603



EZC100-4P.

CPB100604



EZC250-3P.

EasyPact EZC circuit breakers

Fixed version

Plug-in version

Number of poles

Rated current (A)

In

at 40 °C

Rated insulation voltage (V)

Ui

Rated impulse withstand voltage (kV)

Uimp

Rated operational voltage (V)

Ue

AC 50/60 Hz

DC

Electrical characteristics as per IEC 60947-2, EN 60947-2, JIS C8201-2-1

Ultimate breaking capacity (kA rms)

Icu

AC 50/60 Hz 110/130 V

220/230/240 V

380 V

400/415 V

440 V

550 V

DC

125 V (1P)

250 V

(2P in series)

Rated service breaking capacity (kA rms)

Ics

% Icu

110-400 V

415-550 V

Suitability for isolation

Utilisation category

Pollution degree

Endurance (C-O cycles)

Mechanical

Electrical

In/415 V

Electrical characteristics as per NEMA-AB1

Breaking capacity (kA rms)

HIC

AC 50/60 Hz 240 V

277/480 V

Protection

Overload protection

Bimetal

Instantaneous protection

Magnetic

Fixed (±20 %)

Auxiliaries

Indication contacts

Auxiliary switch

AX

Alarm switch

AL

Combined AX + AL

AXAL

Voltage releases

Shunt trip release

SHT

Undervoltage release

UVR

Installation

Connection

Crimp lugs/bars

Accessories

Box lugs for bare cables

Rotary handles

Direct

Extended

Terminal extensions

Spreaders

Phase barriers

Terminal shields

Padlocking system

DIN rail adaptor

Dimension and weight

Dimensions (mm)

D x H

W

Weight (kg)

	EZC100B	EZC100F	EZC100N		EZC100H		EZC250F	EZC250N	EZC250H
	■	■	■	■	■	■	■	■	■
	■	■	-	■ ⁽⁴⁾	-	■ ⁽⁴⁾	■	■	■
	3	3	1	3-4	1	2-3-4	3	3	2-3
	15, 16, 20, 25, 30, 32, 40, 45, 50, 60	15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100	15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100	15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100	15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100	15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100	100, 125, 150, 160, 175, 200, 225, 250	100, 125, 150, 160, 175, 200, 225, 250	100, 125, 150, 160, 175, 200, 225, 250
	690	690	690	690	690	690	690	690	690
	6	6	6	6	6	6	6	6	6
	550	550	415	550	415	550	550	550	550
	-	250	125	250	125	250	250	250	250
	10	25	25	25	50	100	25	50	85
	10	25	18	25	25	100 ⁽¹⁾	25	50	85
	7.5	10	2.5	18	5	30	18	25	36
	7.5	10	2.5	15	5	30	18	25	36
	5	7.5	-	10	-	20	15	20	25
	2.5	5	-	5	-	10	5	8	10
	-	5	5	5	10	10	5	20	30
	-	5	-	5	-	10	5	20	30
	25 %	50 %	50 %	50 %	50 %	50 %	50 %	50 %	50 %
	25 %	50 %	50 %	50 %	50 %	25 %	50 %	50 %	50 %
	■	■	■	■	■	■	■	■	■
	A	A	A	A	A	A	A	A	A
	3	3	3	3	3	3	3	3	3
	13 000	13 000	13 000	13 000	13 000	13 000	10 000	10 000	10 000
	4 000	4 000	4 000	4 000	4 000	4 000	5 000	5 000	5 000
	-	-	10	25	18	100	25	50	85
	-	-	10 ⁽²⁾	10	18 ⁽²⁾	18 ⁽³⁾	15	18	25 ⁽³⁾
	fixed	fixed	fixed	fixed	fixed	fixed	fixed	fixed	fixed
	fixed	fixed	fixed	fixed	fixed	fixed	10 In	10 In	10 In
	■	■	-	■	-	■	■	■	■
	■	■	-	■	-	■	■	■	■
	■	■	-	■	-	■	■	■	■
	■	■	-	■	-	■	■	■	■
	■	■	-	■	-	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	-	■	-	■ ⁽³⁾	■	■	■
	■	■	-	■	-	■ ⁽³⁾	■	■	■
	-	-	-	-	-	-	■	■	■
	■	■	-	■	-	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	-	■	-	■ ⁽³⁾	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	-	-	-
	60 x 130	60 x 130	60 x 130	60 x 130	60 x 130	60 x 130	60 x 165	60 x 165	60 x 165
	75	75	25	75 (3P) 100 (4P)	25	50 (2P) 75 (3P) 100 (4P)	105	105	105
	0.78	0.78	0.28	0.78 (3P) 1.0 (4P)	0.28	0.6 (2P) 0.78 (3P) 1.0 (4P)	1.3	1.3	1.1 (2P) 1.3 (3P)

(1) 50 kA for 2 poles.

(2) For 277 V only.

(3) For 3 and 4 poles only.

(4) For 3P only.

CPB100605



EZC250-4P.

CPB100606



EZCV250-4P.

CPB100607



EZC400-3P.

EasyPact EZC circuit breakers

Fixed version		
Plug-in version		
Number of poles		
Rated current (A)	I_n	at 40 °C
Rated insulation voltage (V)	U_i	
Rated impulse withstand voltage (kV)	U_{imp}	
Rated operational voltage (V)	U_e	AC 50/60 Hz DC

Electrical characteristics as per IEC 60947-2, EN 60947-2 and JIS C8201-2-1/C8201-2-2

Ultimate breaking capacity (kA rms)	I _{cu}	AC 50/60 Hz	220/230 V
			380 V
			400/415 V
			440 V
			550 V
		DC	125 V (1P)
250 V (2P in series)			
Rated service breaking capacity (kA rms)	I _{cs}	% I _{cu}	
Suitability for isolation			
Utilisation category			
Pollution degree			
Endurance (C-O cycles)	Mechanical		
	Electrical	In/415 V	

Electrical characteristics as per NEMA-AB1

Breaking capacity (kA rms)	HIC	AC 50/60 Hz	240 V 277/480 V
----------------------------	------------	-------------	--------------------

Protection

Overload protection	Bimetal	
Instantaneous protection	Magnetic	fixed (± 20 %)

Earth-leakage protection

Sensitivity (A)	I_{Δn}	adjustable
Time-delay (ms)	Δt	adjustable
Max. breaking time (s)	at 2 I _{Δn}	

Auxiliaries

Indication contacts	Auxiliary switch	OF/AX
	Alarm switch	SD/AL
	Combined AX + AL	AXAL
	Earth-alarm switch	ALV
Voltage releases	Shunt trip release	MX/SHT
	Undervoltage release	MN/UVR

Installation

Connection	Crimp lugs / bars	
Accessories	Box lugs for bare cables	
	Rotary handles	Direct
		Extended
	Terminal extensions	
	Spreaders	
	Phase barriers	
	Terminal shields	
	Padlocking system	

Dimension and weight

Dimensions (mm)	D x H
	W
Weight (kg)	

	EZC250N	EZC250H	EZCV250N	EZCV250H	EZC400N	EZC400H	EZC630N	EZC630H
	■	■	■	■	■	■	■	■
	■	■	■	■	-	-	-	-
	4	4	3-4	3-4	3-4	3-4	3-4	3-4
	63, 80, 100, 125, 150, 160, 175, 200, 225, 250	63, 80, 100, 125, 150, 160, 175, 200, 225, 250	63, 80, 100, 125, 150, 160, 175, 200, 225, 250	63, 80, 100, 125, 150, 160, 175, 200, 225, 250	320, 350, 400	320, 350, 400	400, 500, 600	400, 500, 600
	690	690	440	440	690	690	690	690
	6	6	6	6	6	6	6	6
	550	550	440	440	440	440	440	440
	250	250	-	-	250	250	250	250
	50	85	85	100	40	70	40	70
	25	36	25	36	36	50	36	50
	25	36	25	36	36	50	36	50
	20	25	20	25	36	50	36	50
	8	10	-	-	-	-	-	-
	20	30	-	-	-	-	-	-
	20	30	-	-	-	-	-	-
	50 %	50 %	50 %	50 %	50 %	50 %	100% (220-415V) 50% (440V)	100% (220-415V) 50% (440V)
	■	■	■	■	■	■	■	■
	A	A	A	A	A	A	A	A
	3	3	3	3	3	3	3	3
	10 000	10 000	10 000	10 000	10 000	10 000	10 000	10 000
	5 000	5 000	5 000	5 000	4 000	4 000	3 000	3 000
	50	85	50	85	50	85	50	85
	18	25	-	-	25	35	25	35
	fixed	fixed	fixed	fixed	fixed	fixed	fixed	fixed
	10 In	10 In	10 In	10 In	10 In	10 In	10 In (400/500A) 5000A (600A)	10 In (400/500A) 5000A (600A)
	-	-	0.1/0.3/0.5/1	0.1/0.3/0.5/1	-	-	-	-
	-	-	0/200/500/1000	0/200/500/1000	-	-	-	-
	-	-	0.15/0.4/1/2	0.15/0.4/1/2	-	-	-	-
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	-	-	-	-
	-	-	■	■	-	-	-	-
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	68 x 165	68 x 165	68 x 165	68 x 165	110 x 255	110 x 255	110 x 255	110 x 255
	140	140	105 (3P) 140 (4P)	105 (3P) 140 (4P)	140 (3P) 185 (4P)	140 (3P) 185 (4P)	140 (3P) 185 (4P)	140 (3P) 185 (4P)
	1.8	1.8	1.6 (3P) 2.1 (4P)	1.6 (3P) 2.1 (4P)	4.8 (3P) 6.4 (4P)	4.8 (3P) 6.4 (4P)	4.8 (3P) 6.4 (4P)	4.8 (3P) 6.4 (4P)

EasyPact EZC 100-250 Circuit breakers

CPB100602



EZC100-3P.

CPB100603



EZC100-4P.

CPB100604



EZC250-3P.

CPB100605



EZC250-4P.

EasyPact EZC100B 3P 7.5 kA 400/415 V

With thermal magnetic trip unit

EasyPact EZC100B 3P 7.5 kA 400/415 V

Rating	3P 3t
15 A	EZC100B3015
20 A	EZC100B3020
25 A	EZC100B3025
30 A	EZC100B3030
40 A	EZC100B3040
50 A	EZC100B3050
60 A	EZC100B3060

Rating	3P 3t
15 A	EZC100B3015
20 A	EZC100B3020
25 A	EZC100B3025
30 A	EZC100B3030
40 A	EZC100B3040
50 A	EZC100B3050
60 A	EZC100B3060

EasyPact EZC100F 3P 10 kA 400/415 V

With thermal magnetic trip unit

	EasyPact EZC100F 3P 10 kA 400/415 V	EasyPact EZC100N 3P/4P 15 kA 400/415 V	EasyPact EZC100H 3P/4P 30 kA 400/415 V
Rating	3P 3t	3P 3t	3P 3t
15 A	EZC100F3015	EZC100N3015	EZC100H3015
20 A	EZC100F3020	EZC100N3020	EZC100H3020
25 A	EZC100F3025	EZC100N3025	EZC100H3025
30 A	EZC100F3030	EZC100N3030	EZC100H3030
40 A	EZC100F3040	EZC100N3040	EZC100H3040
50 A	EZC100F3050	EZC100N3050	EZC100H3050
60 A	EZC100F3060	EZC100N3060	EZC100H3060
75 A	EZC100F3075	EZC100N3075	EZC100H3075
80 A	EZC100F3080	EZC100N3080	EZC100H3080
100 A	EZC100F3100	EZC100N3100	EZC100H3100

Rating	3P 3t	3P 3t	4P 3t	3P 3t	4P 3t
15 A	EZC100F3015	EZC100N3015	EZC100N4015	EZC100H3015	EZC100H4015
20 A	EZC100F3020	EZC100N3020	EZC100N4020	EZC100H3020	EZC100H4020
25 A	EZC100F3025	EZC100N3025	EZC100N4025	EZC100H3025	EZC100H4025
30 A	EZC100F3030	EZC100N3030	EZC100N4030	EZC100H3030	EZC100H4030
40 A	EZC100F3040	EZC100N3040	EZC100N4040	EZC100H3040	EZC100H4040
50 A	EZC100F3050	EZC100N3050	EZC100N4050	EZC100H3050	EZC100H4050
60 A	EZC100F3060	EZC100N3060	EZC100N4060	EZC100H3060	EZC100H4060
75 A	EZC100F3075	EZC100N3075	EZC100N4075	EZC100H3075	EZC100H4075
80 A	EZC100F3080	EZC100N3080	EZC100N4080	EZC100H3080	EZC100H4080
100 A	EZC100F3100	EZC100N3100	EZC100N4100	EZC100H3100	EZC100H4100

EasyPact EZC 250F-N-H - TMD

With thermal magnetic trip unit

	EasyPact EZC250F 3P 18 kA 400/415 V	EasyPact EZC250N 3P 25 kA 400/415 V	EasyPact EZC250H 2/3P 36 kA 400/415 V
Rating	3P 3t	3P 3t	2P 2t

Rating	3P 3t	3P 3t	2P 2t	3P 3t
100 A	EZC250F3100	EZC250N3100	EZC250H2100	EZC250H3100
125 A	EZC250F3125	EZC250N3125	EZC250H2125	EZC250H3125
150 A	EZC250F3150	EZC250N3150	EZC250H2150	EZC250H3150
160 A	EZC250F3160	EZC250N3160	EZC250H2160	EZC250H3160
175 A	EZC250F3175	EZC250N3175	EZC250H2175	EZC250H3175
200 A	EZC250F3200	EZC250N3200	EZC250H2200	EZC250H3200
225 A	EZC250F3225	EZC250N3225	EZC250H2225	EZC250H3225
250 A	EZC250F3250	EZC250N3250	EZC250H2250	EZC250H3250

EasyPact EZC250 N-H - TMD

With thermal magnetic trip unit

	EasyPact EZC250N 4P 25 kA 400/415 V	EasyPact EZC250H 4P 36 kA 400/415 V
Rating	4P 3t	4P 3t

Rating	4P 3t	4P 3t
63A	EZC250N4063	EZC250H4063
80A	EZC250N4080	EZC250H4080
100 A	EZC250N4100	EZC250H4100
125 A	EZC250N4125	EZC250H4125
150 A	EZC250N4150	EZC250H4150
160 A	EZC250N4160	EZC250H4160
175 A	EZC250N4175	EZC250H4175
200 A	EZC250N4200	EZC250H4200
225 A	EZC250N4225	EZC250H4225
250 A	EZC250N4250	EZC250H4250

EasyPact EZC 250

Earth Leakage Circuit Breaker

CPB100605



EZC250-4P.



EasyPact EZCV250N 3P 25 kA 400/415 V

With thermal magnetic trip unit earth leakage protection

Rating	3P 3t	4P 3t
63A	EZCV250N3063	EZCV250N4063
80A	EZCV250N3080	EZCV250N4080
100 A	EZCV250N3100	EZCV250N4100
125 A	EZCV250N3125	EZCV250N4125
150 A	EZCV250N3150	EZCV250N4150
160 A	EZCV250N3160	EZCV250N4160
175 A	EZCV250N3175	EZCV250N4175
200 A	EZCV250N3200	EZCV250N4200
225 A	EZCV250N3225	EZCV250N4225
250 A	EZCV250N3250	EZCV250N4250

EasyPact EZCV250H 3P 36 kA 400/415 V

With thermal magnetic trip unit earth leakage protection

Rating	3P 3t	4P 3t
63A	EZCV250H3063	EZCV250H4063
80A	EZCV250H3080	EZCV250H4080
100 A	EZCV250H3100	EZCV250H4100
125 A	EZCV250H3125	EZCV250H4125
150 A	EZCV250H3150	EZCV250H4150
160 A	EZCV250H3160	EZCV250H4160
175 A	EZCV250H3175	EZCV250H4175
200 A	EZCV250H3200	EZCV250H4200
225 A	EZCV250H3225	EZCV250H4225
250 A	EZCV250H3250	EZCV250H4250

EasyPact EZC 100-250 Accessories

Electrical auxiliaries

Indication contacts	Reference
Auxiliary switch (AX)	EZEAX
Alarm switch (AL)	EZEAL
Auxiliary switch/Alarm switch (AX/AL)	EZEAXAL
Earth-leakage alarm switch (ALV) (only for EZCV250)	EZEALV

Voltage releases

	Voltage	MX/SHT	
AC	100-120 V	EZESHT100AC	
	120-130 V	EZESHT120AC	
	200-240 V	EZESHT200AC	
	277 V	EZESHT277AC	
	380-440 V	EZESHT400AC	
	440-480 V	EZESHT440AC	
DC	24 V	EZESHT024DC	
	48 V	EZESHT048DC	
		MN/UVR	MN/UVR (1)
AC	110-130 V	EZEUVR110AC	EZEUVRN110AC
	200-240 V	EZEUVR200AC	EZEUVRN200AC
	277 V	EZEUVR277AC	EZEUVRN277AC
	380-415 V	EZEUVR400AC	EZEUVRN400AC
	440-480 V	EZEUVR440AC	EZEUVRN440AC
DC	24 V	EZEUVR024DC	EZEUVRN024DC
	48 V	EZEUVR048DC	EZEUVRN048DC
	125 V	EZEUVR125DC	EZEUVRN125DC

(1) Only EZC250-4P and EZCV250-3/4P

Rotary handles

Direct rotary handle	Reference
Direct rotary handle (black)	EZEROTDS
Extended rotary handle (black)	EZEROTE

EasyPact EZC 400-630

Circuit breakers

CPB100607



EasyPact EZC400N-H

With thermal magnetic trip unit

EasyPact EZC400N 3P/ 4P 36 kA 400/415 V

Rating	3P 3t	4P 3t	4P 4t
320A	EZC400N3320N	EZC400N4320N	EZC400N44320N
350A	EZC400N3350N	EZC400N4350N	EZC400N44350N
400A	EZC400N3400N	EZC400N4400N	EZC400N44400N

EasyPact EZC400H 3P/4P 50 kA 400/415 V

Rating	3P 3t	4P 3t	4P 4t
320A	EZC400H3320N	EZC400N4320H	EZC400H44320N
350A	EZC400H3350N	EZC400N4350H	EZC400H44350N
400A	EZC400H3400N	EZC400N4400H	EZC400H44400N

EasyPact EZC630N-H

With thermal magnetic trip unit

EasyPact EZC630N 3P/ 4P 36 kA 400/415 V

Rating	3P 3t	4P 3t	4P 4t
400A	EZC630N3400N	EZC630N4400N	EZC630N44400N
500A	EZC630N3500N	EZC630N4500N	EZC630N44500N
600A	EZC630N3600N	EZC630N4600N	EZC630N44600N

EasyPact EZC630H 3P/4P 50 kA 400/415 V

Rating	3P 3t	4P 3t	4P 4t
400A	EZC630H3400N	EZC630H4400N	EZC630H44400N
500A	EZC630H3500N	EZC630H4500N	EZC630H44500N
600A	EZC630H3600N	EZC630H4600N	EZC630H44600N

EasyPact EZC 400-630 - Accessories

Electrical auxiliaries

Indication contacts	Reference
Auxiliary switch (AX)	EZEAX
Alarm switch (AL)	EZEAL
Auxiliary switch/Alarm switch (AX/AL)	EZEAXAL
Earth-leakage alarm switch (ALV) (only for EZCV250)	EZEALV

Auxiliaries and Voltage releases

Auxiliary contacts (changeover)

OF or SD or SDE or SDV	29450
OF or SD or SDE or SDV low level	29452
SDE adaptor mandatory for trip unit TM	LV540050

Voltage releases

AC	Voltage	MX	MN
	24 V 50/60 Hz	LV429384	LV429404
	48 V 50/60 Hz	LV429385	LV429405
	110-130 V 50/60 Hz	LV429386	LV429406
	220-240 V 50/60 Hz and 208-277 V 60 Hz	LV429387	LV429407
	380-415 V 50 Hz and 440-480 V 60 Hz	LV429388	LV429408
DC	Voltage		
	12 V	LV429382	LV429402
	24 V	LV429390	LV429410
	30 V	LV429391	LV429411
	48 V	LV429392	LV429412
	60 V	LV429383	LV429403
	125 V	LV429393	LV429413
	250 V	LV429394	LV429414

Rotary handles

Direct rotary handle	Reference
Direct rotary handle (black)	LV432597
Extended rotary handle (black)	LV432598

EasyLogic™ meters

The easy choice for performance, quality, and value

- Performance without compromise - exceptional reliability in its class
- Assured quality that you can trust to meet your needs throughout its lifecycle
- Outstanding value for an optimized feature set
- Simple to choose and easy to install and use for many applications

DM1000/3000 series

The EasyLogic™ DM1000 series : 1-Ph V A F panel meters, DM3000 series: 3-Ph V A panel meters

The universal, user-programmable DM1000 and DM3000 series panel meters for AC circuits are ideal replacements for analogue meters. These five compact, flexible and customizable models will meet all your panel metering requirements.



METSEDM1110



METSEDM3110

DM6x00H series

The EasyLogic™ DM6000H & DM6200H VAF PF digital panel meters

Introducing EasyLogic™ DM6000H/ DM6200H meters that are ideal replacement for multiple analogue meters for stand-alone metering in custom panels, switch boards, switch-gear, genset panels, motor control centres, power factor improvement panels and OEM panel board.

DM6x00H series meters offer large 8-segment alpha-numeric LED display type, intuitive navigation with self-guided 4 buttons, bright LED's of 14.2 mm height with 12 LEDs for indicating percentage of load in the circuit.



METSEDM6000
HCL10RS

PM2000 series

The EasyLogic™ PM2000 multi-function power and energy meter

Offering all the measurement capabilities required to monitor and electrical installation in a single 96 x 96 mm unit, with LED or LCD display options.

Cost management applications

- Bill checking to verify that you are only charged for the energy you use
- Aggregation of energy consumption, including WAGES, and cost allocation per area, per usage, per shift or per time within the same facility
- Energy cost and usage analysis per zone, per usage or per time period to optimise energy usage

Network management applications

- Metering of electrical parameters to better understand the behaviour of your electrical distribution system
- Power quality analysis



METSEPM2110

PM2200R Quick Click series

The EasyLogic™ PM2200R multi-function power and energy meter with Quick Click CTs

Offering the same extensive measurement capabilities of the PM2200 meters - now with the option to significantly reduce installation time, cost, and complexity with new plug & play, 3-in-1 Quick Click CTs.

Cost management applications

- Bill checking to verify that you are only charged for the energy you use
- Aggregation of energy consumption and cost allocation per area, per usage, per shift or per time within the same facility
- Energy cost analysis per zone, per usage or per time period to optimise energy consumption

Network management applications

- Metering of electrical parameters to better understand the behaviour of your electrical distribution system
- Power quality analysis



METSEPM2210R

Panorama of the EasyLogic range

Digital panel meters



Family	DM1000			DM3000		DM6000H	
Parameters	DM1110	DM1210	DM1310	DM3110	DM3210	DM6000H	DM6200H
Amps: per phase & 3-ph avg	1-ph			3-ph (per ph)		■	■
Volts: per phase & 3-ph avg		1-ph			3-ph (per ph)	■	■
Frequency			■			■	■
Power Factor per phase & 3-ph avg						■	■
CT Secondary <i>I nominal</i>	5 A or 1 A			5 A or 1 A		5 A or 1 A	5 A or 1 A
Class of Accuracy	0.5	0.5	0.2	0.5	0.5	1	1
RS-485 Modbus RTU							■
Form Factor in mm	96x96x44	96x96x44	96x96x44	96x96x44	96x96x44	96x96x80	96x96x80
Mounting	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel	Flush/Panel

Simple energy cost management

Data aggregation							■
Load profile							■
Bill verification							
Cost allocation							

Basic network management

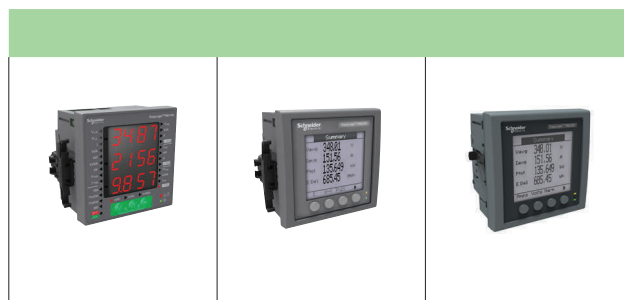
Panel instrumentation	■	■	■	■	■	■	■
Power metering							
Basic harmonic monitoring							
Status monitoring							
Threshold alarming							

Monitoring and verification

Test bench	■	■	■	■	■	■	■
Genset	■	■	■	■	■	■	■
PF Improvement panel						■	■
Labs	■	■	■	■	■	■	■
OEMs	■	■	■	■	■	■	■
Comm. ref. no. (Link to product information)	METSEDM1110	METSEDM1210	METSEDM1310	METSEDM3110	METSEDM3210	METSEDM6000 HCL10NC	METSEDM6200 HCL10RS

Panorama of the EasyLogic range

Digital panel meters (contd.)



Family	PM2100 LED	PM2200 LCD	PM2200R
Parameters			
Amps: per phase & 3-ph avg	■	■	■
Volts: per phase & 3-ph avg	■	■	■
Frequency	■	■	■
Power Factor per phase & 3-ph avg	■	■	■
W, Wh	■	■	■
VAR, VARh	■	■	■
VA, VAh	■	■	■
DI/DO	2 (PM2130)	2 (PM2230)	2
Class of Accuracy*	1.0 active (0.5S PM2x30) 1.0 reactive	1.0 active (0.5S PM2x30) 1.0 reactive	1.0 active
Analogue IO	2 (PM2130)	2 (PM2230)	2
RS-485 Modbus RTU	■	■	■
CT Secondary I nominal	5 A or 1 A	5 A or 1 A	5 A or 1 A
Form Factor in mm with IO module	96x96x54	96X96X54	96X96X54
	96X96X72	96X96X72	96X96X72
Mounting	Flush/Panel	Flush/Panel	Flush/Panel

Simple energy cost management

Data aggregation	■	■	■
Load profile	■	■	■
Bill verification	■	■	■
Cost allocation	■	■	■

Basic network management

Panel instrumentation	■	■	■
Power metering	■	■	■
Basic harmonic monitoring	■	■	■
Status monitoring	■	■	■
Threshold alarming	■	■	■

Monitoring and verification

Test bench	■	■	■
Genset	■	■	■
PF Improvement panel	■	■	■
Labs	■	■	■
OEMs	■	■	■
Comm. ref. no. (Link to product information)	METSEPM2110 METSEPM2120 METSEPM2130	METSEPM2210 METSEPM2220 METSEPM2230	

* Refer data sheet for operating range □ One power vector at a time (W/Wh or VA/VAh or VAR/ VARh)

Acti9-K

Protection Devices

Miniature Circuit Breakers (MCBs)

Key Features

- Ensures no accidental contact with live part - Fingerproof IP20 terminals
- Operational Safety Downstream - Suitability for Isolation
- Avoids false insertion of cables and loose termination : Pull up terminals
- Total Wiring Flexibility : Line-Load reversibility
- Flexible termination of Busbars and Cables - Bi-Connect terminals

Schneider Electric's range of K60 circuit breakers consists of different products to enable it to be the most competitive range possible in each country, allowing for the special characteristics of each market:

- usual installation procedure
- price

accreditations by local bodies.



Miniature Circuit Breakers (MCBs)

Protection

Circuit protection

K60H Biconnect circuit breakers

Country approval pictograms

IEC/EN 60898-1



- b K60H Biconnect circuit breakers are circuit breakers which combine the following functions:
- ✓ circuit protection against short-circuit currents,
 - ✓ circuit protection against overload currents,
 - ✓ disconnection, opening and closing.

K60H Biconnect circuit breaker 50/60 Hz

Breaking capacity in short circuit (I _{cn}) as per IEC/EN 60898-1		Service breaking capacity (I _{cs})
Ph/Ph	400 V	
Ph/N	230 V	
Rating (I _n)	6 to 63 A	10000 A

75 % of I_{cn}

Catalogue numbers

K60H Biconnect circuit breaker								
Type	1P		2P		3P		4P	
								
Auxiliaries	Without auxiliaries		Without auxiliaries		Without auxiliaries		Without auxiliaries	
Rating (In)	Curve		Curve		Curve		Curve	
	B	C	B	C	B	C	B	C
6 A	A9K11106	A9K12106	A9K11206	A9K12206	A9K11306	A9K12306	A9K11406	A9K12406
10 A	A9K11110	A9K12110	A9K11210	A9K12210	A9K11310	A9K12310	A9K11410	A9K12410
16 A	A9K11116	A9K12116	A9K11216	A9K12216	A9K11316	A9K12316	A9K11416	A9K12416
20 A	A9K11120	A9K12120	A9K11220	A9K12220	A9K11320	A9K12320	A9K11420	A9K12420
32 A	A9K11132	A9K12132	A9K11232	A9K12232	A9K11332	A9K12332	A9K11432	A9K12432
40 A	A9K11140	A9K12140	A9K11240	A9K12240	A9K11340	A9K12340	A9K11440	A9K12440
50 A	A9K11150	A9K12150	A9K11250	A9K12250	A9K11350	A9K12350	A9K11450	A9K12450
63 A	A9K11163	A9K12163	A9K11263	A9K12263	A9K11363	A9K12363	A9K11463	A9K12463
Width in 9-mm modules	2		4		6		8	
Accessories	Padlocking device cat. no. 26970							

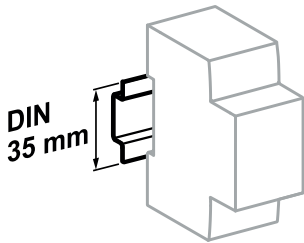
Overview

K60 Circuit Breaker Technical Specification

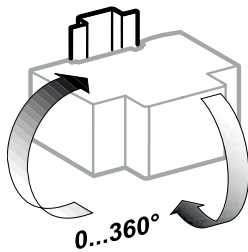
				MCB		RCCB	
K60 Circuit Breaker				K60N		K60H	
						ID K	
Number of poles				1	2-3-4	1	2-3-4
Electrical characteristics							
Rated current (A)	In			6-63		6-63	
Rated Insulation Voltage (V)	Ui			440		440	
Maximum operational voltage (V)	Ue	AC 50/60 Hz		230	400	230	400
Fast closing				■		■	
Suitability for isolation				■		■	
AC breaking capacity							
IEC 60898 (EN 60898)	Icn (A)	230/400 V		6000		10000	
	Ics	(%of Icn)		100%	100%	75%	75%
Trip units (non adjustable)							
Curve type		B (Im = 3 to 5 In)		■		■	
		C (Im = 5 to 10 In)		■		■	
		D (Im = 10 to 14 In)		-		-	
Earth leakage protection							
Integrated				-		■	
Sensitivity type (mA)		 AC		-		■	
Electrical auxiliaries							
Auxiliary and alarm switches (OF-SD)				-		-	
Shunt trip (MX); undervoltage release (MN)				-		-	
Emergency stop opening switch (MNx)				-		-	
Voltage threshold release (MSU)				-		-	
Connection							
Cable maxi capacity (mm²)	Flexible			16(≤20A)	25 (>20A)	25	
	Rigid			16(≤20A)	25 (>20A)	35	
Installation							
Dimensions (mm)	W			18 per pole		36	72
	D x H			74 x 81		68 x 81	

Circuit protection

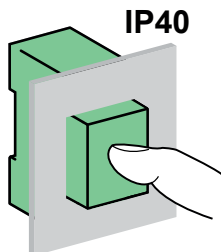
K60 Biconnect circuit breakers



Clip on DIN rail 35 mm.



Indifferent position of installation.



Technical Data

Main characteristics		K60N	K60H
Insulation voltage (Ui)	Phase-to-phase	440 V AC	
	Phase-to-neutral	230 V AC	
Voltage rating (Ue)	Phase-to-phase	400 V AC	
	B curve 3 to 5 In	■	
Magnetic tripping	C curve 5 to 10 In	■	

According to EN 60898-1

Limitation class	3	
Rated breaking capacity (Icn)	6000 A	10000 A
Service breaking capacity (Ics)	100 % of Icn	75 % of Icn
Rated breaking and making capacity on a single pole (Icn1)	Icn1 = Icn	

Additional characteristics

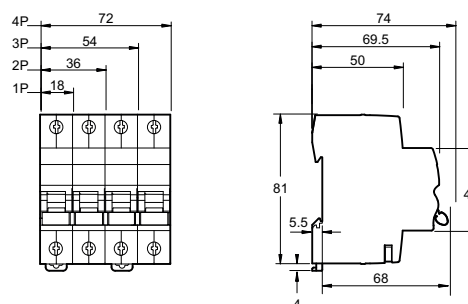
Degree of protection (IEC 60529)	Device in modular enclosure	IP40 Insulation class II
Endurance (O-C)	Electrical >20 A	20,000 cycles
	Electrical <32 A	10,000 cycles
	Mechanical	20,000 cycles
Operating temperature		-5°C to +55°C
Storage temperature		-25°C to +85°C
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95% at 55°C)

Weight (g)

Circuit-breaker

Type	1P	2P	3P	4P
K60 Biconnect	120	240	360	480

Dimensions (mm)



Protection

Circuit protection

K60N Biconnect circuit breakers

Country approval pictograms

IEC/EN 60898-1

PB111241-40



- b K60N Biconnect circuit breakers are circuit breakers which combine the following functions:
- ✓ circuit protection against short-circuit currents,
 - ✓ circuit protection against overload currents,
 - ✓ disconnection, opening and closing.

K60N Biconnect circuit breaker 50/60 Hz

Breaking capacity in short circuit (I _{cn}) as per IEC/EN 60898-1		Service breaking capacity (I _{cs})
Ph/Ph	400 V	100 % of I _{cn}
Ph/N	230 V	
Rating (I _n)	6 to 63 A	
	6000 A	

Catalogue numbers

K60N Biconnect circuit breaker								
Type	1P		2P		3P		4P	
								
Auxiliaries	Without auxiliaries		Without auxiliaries		Without auxiliaries		Without auxiliaries	
Rating (In)	Curve		Curve		Curve		Curve	
	B	C	B	C	B	C	B	C
6 A	A9K01106	A9K02106	A9K01206	A9K02206	A9K01306	A9K02306	A9K01406	A9K02406
10 A	A9K01110	A9K02110	A9K01210	A9K02210	A9K01310	A9K02310	A9K01410	A9K02410
16 A	A9K01116	A9K02116	A9K01216	A9K02216	A9K01316	A9K02316	A9K01416	A9K02416
20 A	A9K01120	A9K02120	A9K01220	A9K02220	A9K01320	A9K02320	A9K01420	A9K02420
32 A	A9K01132	A9K02132	A9K01232	A9K02232	A9K01332	A9K02332	A9K01432	A9K02432
40 A	A9K01140	A9K02140	A9K01240	A9K02240	A9K01340	A9K02340	A9K01440	A9K02440
50 A	A9K01150	A9K02150	A9K01250	A9K02250	A9K01350	A9K02350	A9K01450	A9K02450
63 A	A9K01163	A9K02163	A9K01263	A9K02263	A9K01363	A9K02363	A9K01463	A9K02463
Width in 9-mm modules	2		4		6		8	
Accessories	Padlocking device cat. no. 26970							

Protection

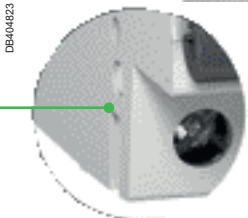
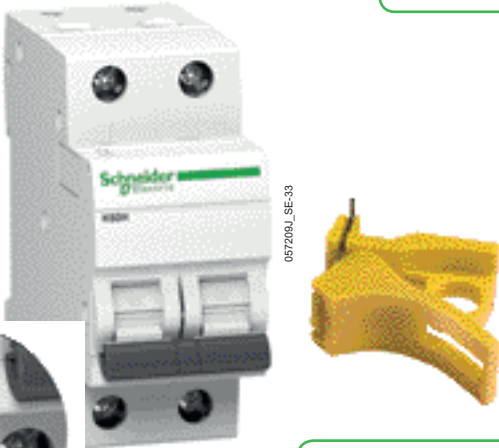
Circuit protection

K60 Biconnect circuit breakers (cont.)

PB114837-60

b Reinforced cable pull-out strength: serrated terminals

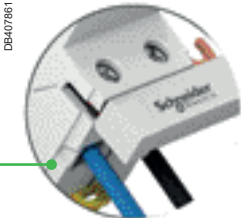
b Fast closing independent of the speed of actuation of the toggle.



DB404823

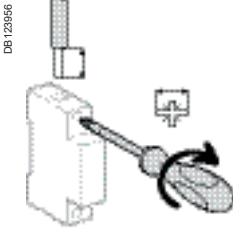
Padlocking device
 b Padlocking possible for work to be carried out on live parts

Connection
 b Downstream by Biconnect comb busbar
 b Upstream/downstream by tunnel terminals



DB407861

Connection



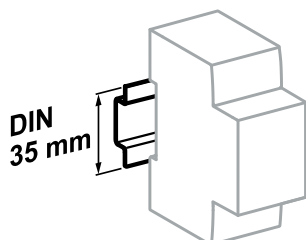
DB123956

Type	Rating	Tightening torque	Copper cables	
			Rigid	Flexible or with ferrule
K60 Biconnect	6 to 20 A	2 N.m		
	32 to 63 A	3.5 N.m		

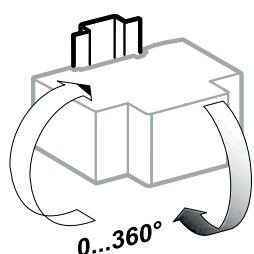
b Connection by comb busbar or cables (conforms to EN 50027).

Earth leakage protection

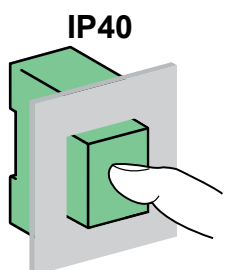
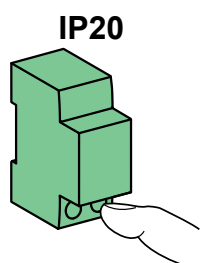
ID K Biconnect residual current circuit breakers



Clip on DIN rail 35 mm.



Indifferent position of installation.



Technical Data

Main characteristics

Insulation voltage (Ui)		440 V
Degree of pollution		2
Rated impulse withstand voltage (Uimp)		4 kV
Making and breaking capacity (Im/I m Lc)	25 - 40 A	500 A
	63 A	630 A
Impulse current withstand (8/20 μs) without dripping		Up to 200 Å
Conditional rated short-circuit current (Im/I m Lc)	With circuit break	6000 A
	With fuse	4500 A
Behaviour in case of voltage drop		Residual current protection down to 0 V according to IEC/EN 61008-1 § 3.3.4

Additional characteristics

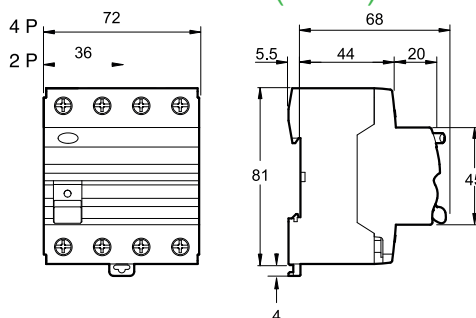
Degree of protection	Device only Device in modular enclosure	IP20 IP40 Insulation class II
Endurance (O-C)	Electrical Mechanical	4000 cycles (AC1) 5000 cycles
Operating temperature	AC type	-5°C to +55°C
Storage temperature		-25°C to +85°C
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95% at 55°C)

Weight (g)

Residual current circuit breakers

Type	2P	4P
ID K Biconnect	180	350

Dimensions (mm)



Earth leakage protection

ID K Biconnect residual current circuit breakers



IEC/EN 61008-1

The ID K Biconnect residual current circuit breakers offer the following functions:

- Protection of persons against electric shock by direct contact (30 mA)
- Protection of persons against electric shock by indirect contact (> 100 mA)
- Protection of installations against the risks of fire (300 mA)

Product Reference

ID K Biconnect residual current circuit breakers					
Type		AC 			Width in 9 mm modules
2P	Sensitivity	30 mA	100 mA	300 mA	
	Rating	25 A	A9KR13225S	-	A9KR16225
		40 A	A9KR13240S	A9KR15240	A9KR16240
		63 A	A9KR13263S	A9KR15263	A9KR16263
4P	Sensitivity				
	Rating	40 A	A9KR13440S	A9KR15440	A9KR16440
		63 A	A9KR13463S	A9KR15463	A9KR16463
Operating voltage (Ue)	2P	230 V			
	4P	415 V			
Operating frequency		50 Hz			

Easyline

Control and signaling units Ø 22

Harmony Easy XA2, plastic

Pushbuttons, switches and pilot lights

Fit for purpose

All the products composing the Harmony™ Easy XA2 range have been designed to be used in numerous control and signaling applications:

- customers can easily select the key functions for standard applications
- their diameter, Ø 22 mm /0.866 in. makes them suitable for standard OEM and panel builder applications.
- with plastic material, they provide a solution for industrial applications demanding a high resistance to chemical agents.

Ease and comfort of choice

The range is available in the form of complete units. It involves:

- modular, plastic pushbuttons and switches with metallic-look ring
The modular design allows flexible and simple setup for complete products: the right product can be chosen among various types of heads and 2 types of functions are proposed (contact and signaling)
- complete pilot lights, provided with integral LED.

All products are fitted with screw clamp terminals allowing fast and easy connection.



Harmony Easy XA2:

- modular, plastic pushbuttons and switches with metallic-look ring,
- complete, plastic pilot lights with integral LED

Control and signaling units Ø 22

Harmony Easy XA2, plastic

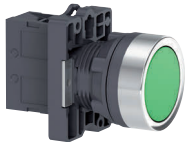
Pushbuttons, switches and pilot lights

Type of products	Contact functions			Contact and signaling functions	Signaling functions
	Pushbuttons	Emergency switching off pushbuttons	Selector and key switches	Illuminated pushbuttons	Pilot lights

Description of range	■ Pushbuttons, spring return: flush push, mushroom head, and push-push	■ Emergency switching off pushbuttons: turn to release and push-pull	■ Selector switches, 2 or 3-position: standard or long handle ■ Key switches	■ Illuminated pushbuttons with integral LED, spring return: flush push	■ Pilot lights with integral LED
Drilling or cut-out for mounting	Ø 22 mm/0.866 in.				
Degree of protection	IP 54 conforming to standard IEC 60529				IP 40 conforming to standard IEC 60529
International standards	IEC 60947-5-1, EN 60947-5-1, GB/T 14048.1-93, GB/14048.5-93				
Product certification	CCC, EAC				
Cabling	Screw clamp terminal connections				
Mounting	Panel thickness	Ø 1 to 6 mm/ 0.04 to 0.24 in.			
Type references	XA2EA●●/ EA●●●●/EC●●/ XA2ER●●/EH0●●	XA2ET●●/ES●●●	XA2ED●●/EJ●●/ EG●●	XA2EW3●●●	XB7EV●●●LC, XB7EV●D●LC

Control and signaling units Ø 22

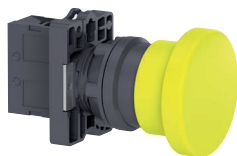
Harmony Easy XA2, plastic
Spring return pushbuttons, marked and unmarked Mushroom head pushbuttons, spring return



XA2EA31



XA2EA4342



XA2EC51

Spring return pushbuttons with flush push

Shape of head	Type of contacts		Color of push	Marking	Reference	Weight kg/lb
						
	N/O	N/C				
Unmarked						
	1	–	White	–	XA2EA11	0.032/0.071
			Black	–	XA2EA21	0.032/0.071
			Green	–	XA2EA31	0.032/0.071
			Yellow	–	XA2EA51	0.032/0.071
			Blue	–	XA2EA61	0.032/0.071
	–	1	Red	–	XA2EA42	0.032/0.071
Marked						
	1	–	Green	"I"	XA2EA3311	0.032/0.071
	1	–	Black	"↑"	XA2EA3351	0.032/0.071
	1	–	White	"↑"	XA2EA3341	0.032/0.071
	–	1	Red	"O"	XA2EA4322	0.032/0.071
	–	1	Red	"STOP"	XA2EA4342	0.032/0.071

Mushroom head pushbuttons, spring return

Shape of head	Type of contacts		Color of push	Diameter Ø (mm)/in.	Reference	Weight kg/lb
						
	N/O	N/C				
	1	–	Black	40/1.575	XA2EC21	0.052/0.115
	1	–	Green	40/1.575	XA2EC31	0.052/0.115
	–	1	Red	40/1.575	XA2EC42	0.052/0.115
	1	–	Yellow	40/1.575	XA2EC51	0.052/0.115
	1	–	Black	60/2.362	XA2ER21	0.058/0.128

Note: Please refer to our website www.schneider-electric.com for information on dimensions

Control and signaling units Ø 22

Harmony Easy XA2, plastic

Pushbuttons, push-push

Emergency switching off pushbuttons



XA2EH021

Pushbuttons, push-push with flush push						
Shape of head	Type of contacts	Color of push	Reference	Weight kg/lb		
	 N/O  N/C					
	1 —	White	XA2EH011	0.04/0.088		
	1 —	Black	XA2EH021	0.04/0.088		
	1 —	Green	XA2EH031	0.04/0.088		
	— 1	Red	XA2EH042	0.04/0.088		
	1 —	Yellow	XA2EH051	0.04/0.088		
	1 —	Blue	XA2EH061	0.04/0.088		



XA2ET42

Emergency switching off pushbuttons						
Shape of head	Type of push	Type of contacts	Color	Diameter Ø (mm)/in.	Reference	Weight kg/lb
		 N/C				
	Push-pull	1	Red	40/1.575	XA2ET42	0.088/0.194
	Turn to release	1	Red	30/1.181	XA2ES442	0.056/0.123
			Red	40/1.575	XA2ES542	0.058/0.128
			Red	60/2.362	XA2ES642	0.064/0.141
			Black	30/1.181	XA2ES422	0.056/0.123

Note: Please refer to our website www.schneider-electric.com for information on dimensions

Control and signaling units Ø 22

Harmony Easy XA2, plastic
Selector switches, with standard or long handle
Key switches



XA2ED53

Selector switches, with standard handle or with long handle

Shape of head	Type of push	Type of contacts		Number and type of positions	Reference	Weight kg/lb
		N/O	N/C			
	Standard handle	1	—	2 - stay put 	XA2ED21	0.04/0.088
		1	1	2 - stay put 	XA2ED25	0.054/0.119
		2	—	3 - stay put 	XA2ED33	0.054/0.119
		2	—	3 - spring return from 2 sides 	XA2ED53	0.054/0.119
		1	—	2 - spring return 	XA2ED41	0.041/0.090
	Long handle	1	—	2 - stay put 	XA2EJ21	0.041/0.090
		1	1	2 - stay put 	XA2EJ25	0.041/0.090
		2	—	3 - stay put 	XA2EJ33	0.055/0.121
		2	—	3 - spring return from 2 sides 	XA2EJ53	0.055/0.121



XA2EG03

Key switches

Shape of head	Type of push	Type of contacts		Number and type of positions	Reference	Weight kg/lb
		N/O	N/C			
	Key	1	—	2 - stay put, one side pull-out 	XA2EG21	0.064/0.141
		2	—	2 - stay put, two sides pull-out 	XA2EG43	0.078/0.172
		2	—	2 - spring return, one side pull-out 	XA2EG63	0.078/0.172
		2	—	3 - spring return from 2 sides, middle pull-out 	XA2EG73	0.078/0.172
		2	—	3 - stay put, middle pull-out 	XA2EG33	0.078/0.172
		2	—	3 - stay put, 3 sides pull-out 	XA2EG03	0.078/0.172

Note: Please refer to our website www.schneider-electric.com for information on dimensions

Control and signaling units Ø 22
Harmony Easy XA2, plastic
Illuminated pushbuttons with flush push
Bulbs for illuminated pushbuttons
Contact functions for all XA2 pushbuttons and switches



XA2EW36B1



DL1LED244



DL1LED246

Illuminated pushbuttons with integral LED						
Shape of head	Type of push	Supply voltage V	Type of contacts		Color	Reference
						
			N/O	N/C		Weight kg/lb
	Flush push	~ / = 24	1		White	XA2EW31B1 0.056/0.123
					Green	XA2EW33B1 0.056/0.123
					Red	XA2EW34B1 0.056/0.123
					Yellow	XA2EW35B1 0.056/0.123
					Blue	XA2EW36B1 0.056/0.123
					Red	XA2EW34B2 0.056/0.123
		~ 220-230	1		White	XA2EW31M1 0.064/0.141
					Green	XA2EW33M1 0.064/0.141
					Red	XA2EW34M1 0.064/0.141
					Yellow	XA2EW35M1 0.064/0.141
					Blue	XA2EW36M1 0.064/0.141
					Red	XA2EW34M2 0.056/0.123
		~ 380-400	1		White	XA2EW31Q1 0.064/0.141
					Green	XA2EW33Q1 0.064/0.141
					Red	XA2EW34Q1 0.064/0.141
					Yellow	XA2EW35Q1 0.064/0.141
					Blue	XA2EW36Q1 0.064/0.141
					Red	XA2EW34Q2 0.056/0.123

Note: For accessories, please consult Schneider Electric catalog.

Control and signaling units Ø 22

Harmony Easy XB7, plastic

Pilot lights with integral LED



Pilot lights with integral LED					
Shape of head	Supply voltage V	Color of lens	Sold in lots of	Reference	Weight kg/lb
	~ / --- 24	White	10	XB7EVB1LC	0.017/0.037
		Green	10	XB7EVB3LC	0.017/0.037
		Red	10	XB7EVB4LC	0.017/0.037
		Yellow	10	XB7EVB5LC	0.017/0.037
		Blue	10	XB7EVB6LC	0.017/0.037
	~ 110	White	10	XB7EVF1LC	0.017/0.037
		Green	10	XB7EVF3LC	0.017/0.037
		Red	10	XB7EVF4LC	0.017/0.037
		Yellow	10	XB7EVF5LC	0.017/0.037
		Blue	10	XB7EVF6LC	0.017/0.037
	--- 110	White	10	XB7EVFD1LC	0.017/0.037
		Green	10	XB7EVFD3LC	0.017/0.037
		Red	10	XB7EVFD4LC	0.017/0.037
		Yellow	10	XB7EVFD5LC	0.017/0.037
		Blue	10	XB7EVFD6LC	0.017/0.037
	~ 220-230	White	10	XB7EVM1LC	0.017/0.037
		Green	10	XB7EVM3LC	0.017/0.037
		Red	10	XB7EVM4LC	0.017/0.037
		Yellow	10	XB7EVM5LC	0.017/0.037
		Blue	10	XB7EVM6LC	0.017/0.037
	--- 220	White	10	XB7EVMD1LC	0.017/0.037
		Green	10	XB7EVMD3LC	0.017/0.037
		Red	10	XB7EVMD4LC	0.017/0.037
		Yellow	10	XB7EVMD5LC	0.017/0.037
		Blue	10	XB7EVMD6LC	0.017/0.037
	~ 380-400	White	10	XB7EVQ1LC	0.017/0.037
		Green	10	XB7EVQ3LC	0.017/0.037
		Red	10	XB7EVQ4LC	0.017/0.037
		Yellow	10	XB7EVQ5LC	0.017/0.037
		Blue	10	XB7EVQ6LC	0.017/0.037

Note: Please refer to our website www.schneider-electric.com for information on dimensions

Control and signaling units Ø 22

Harmony Easy XA2, plastic

Pilot lights with integral LED



Pilot lights with integral LED					
Shape of head	Supply voltage V	Color of lens	Sold in lots of	Reference	Weight kg/lb
	~ / --- 24	White	10	XA2EVB1LC	0.017/0.037
		Green	10	XA2EVB3LC	0.017/0.037
		Red	10	XA2EVB4LC	0.017/0.037
		Yellow	10	XA2EVB5LC	0.017/0.037
		Blue	10	XA2EVB6LC	0.017/0.037
	~ 110	White	10	XA2EVF1LC	0.017/0.037
		Green	10	XA2EVF3LC	0.017/0.037
		Red	10	XA2EVF4LC	0.017/0.037
		Yellow	10	XA2EVF5LC	0.017/0.037
		Blue	10	XA2EVF6LC	0.017/0.037
	--- 110	White	10	XA2EVFD1LC	0.017/0.037
		Green	10	XA2EVFD3LC	0.017/0.037
		Red	10	XA2EVFD4LC	0.017/0.037
		Yellow	10	XA2EVFD5LC	0.017/0.037
		Blue	10	XA2EVFD6LC	0.017/0.037
	~ 220-230	White	10	XA2EVM1LC	0.017/0.037
		Green	10	XA2EVM3LC	0.017/0.037
		Red	10	XA2EVM4LC	0.017/0.037
		Yellow	10	XA2EVM5LC	0.017/0.037
		Blue	10	XA2EVM6LC	0.017/0.037
	--- 220	White	10	XA2EVMD1LC	0.017/0.037
		Green	10	XA2EVMD3LC	0.017/0.037
		Red	10	XA2EVMD4LC	0.017/0.037
		Yellow	10	XA2EVMD5LC	0.017/0.037
		Blue	10	XA2EVMD6LC	0.017/0.037
	~ 380-400	White	10	XA2EVQ1LC	0.017/0.037
		Green	10	XA2EVQ3LC	0.017/0.037
		Red	10	XA2EVQ4LC	0.017/0.037
		Yellow	10	XA2EVQ5LC	0.017/0.037
		Blue	10	XA2EVQ6LC	0.017/0.037

Note: Please refer to our website www.schneider-electric.com for information on dimensions

Variable speed drives

Altivar Easy 610

Supply voltage 380...415 V 50/60Hz



ATV610U07N4



ATV610D18N4



ATV610C11N4

IP 20 three-phase 380...415 V drives with integrated category C3 EMC filter										
Motor			Power part supply				Altivar Easy 610			
Nominal power indicated on rating plate (1)			Max. input current (2)		Apparent power	Max. prospective line Isc	Maximum continuous current (1)	Maximum transient current for 60 s	Reference	Weight
			380 V	415 V	415 V					
ND: Normal duty (3)										
HD: Heavy duty (4)										
kW	HP		A	A	kVA	kA	A	A		kg lb
ND 0.75	1		3.1	2.9	2.1	5	2.2	2.4	ATV610U07N4	2.400/ 5.291
HD 0.37	0.5		1.7	1.5	1.1	5	1.5	2.3		
ND 1.5	2		5.7	5.3	3.8	5	4.0	4.4	ATV610U15N4	2.400/ 5.291
HD 0.75	1		3.1	2.8	2.0	5	2.2	3.3		
ND 2.2	3		7.8	7.1	5.1	5	5.6	6.2	ATV610U22N4	2.400/ 5.291
HD 1.5	2		5.6	5.1	3.7	5	4.0	6.0		
ND 3	4		10.1	9.2	6.6	5	7.2	7.9	ATV610U30N4	2.400/ 5.291
HD 2.2	3		7.6	7.0	5.0	5	5.6	8.4		
ND 4	5		8.8	8.5	6.1	5	9.3	10.2	ATV610U40N4	4.000/ 8.818
HD 3	—		7.2	6.7	4.8	5	7.2	10.8		
ND 5.5	7.5		11.6	11.0	7.9	22	12.7	14.0	ATV610U55N4	4.100/ 9.039
HD 4	5		8.9	8.6	6.2	22	9.3	14.0		
ND 7.5	10		14.7	13.7	9.9	22	15.8	17.4	ATV610U75N4	4.100/ 9.039
HD 5.5	7.5		11.3	10.7	7.7	22	12.7	19.1		
ND 11	15		22.0	20.7	14.9	22	23.5	25.9	ATV610D11N4	7.200/ 15.873
HD 7.5	10		16.4	15.7	11.3	22	16.5	24.8		
ND 15	20		29.4	27.7	19.9	22	31.7	34.9	ATV610D15N4	7.200/ 15.873
HD 11	15		23.0	21.9	15.7	22	23.5	35.3		
ND 18.5	25		37.2	35.2	25.3	22	39.2	43.1	ATV610D18N4	13.300/ 29.321
HD 15	20		31.6	30.3	21.8	22	31.7	47.6		
ND 22	30		41.9	39.0	28.0	22	46.3	50.9	ATV610D22N4	13.900/ 30.644
HD 18.5	25		36.0	33.8	24.3	22	39.2	58.8		
ND 30	40		62.5	59.7	42.9	22	61.5	67.7	ATV610D30N4	26.100/ 57.541
HD 22	30		49.7	46.3	33.3	22	46.3	69.5		
ND 37	50		76.6	72.9	52.4	22	74.5	82.0	ATV610D37N4	26.800/ 59.084
HD 30	40		65.8	61.8	44.4	22	59.6	89.4		
ND 45	60		92.9	88.3	63.5	22	88	97	ATV610D45N4	26.800/ 59.084
HD 37	50		80.5	75.8	54.5	22	74.5	112		
ND 55	75		111.5	105.6	75.9	22	106	117	ATV610D55N4	53.700/ 118.388
HD 45	60		95.9	91.2	65.6	22	88	132		
ND 75	100		147.9	139.0	99.9	22	145	160	ATV610D75N4	53.700/ 118.388
HD 55	75		115.8	110.0	79.1	22	106	159		
ND 90	125		177.8	168.5	121.1	50	173	190	ATV610D90N4	53.700/ 118.388
HD 75	100		155.8	149.1	107.2	50	145	218		
ND 110	149		201.0	165.0	118.6	50	211	232	ATV610C11N4	82.000/ 180.779
HD 90	125		170.0	160.0	115.0	50	173	260		
ND 132	178		237.0	213.0	153.1	50	250	275	ATV610C13N4	82.000/ 180.779
HD 110	149		201.0	188.0	135.1	50	211	317		
ND 160	216		284.0	261.0	187.6	50	302	332	ATV610C16N4	82.000/ 180.779
HD 132	178		237.0	224.0	161.0	50	250	375		

(1) These values are given for a nominal switching frequency of 4 kHz up to **ATV610D45N4**, or 2.5 kHz for **ATV610D55N4...C16N4** for use in continuous operation.

The switching frequency is adjustable from 2...12 kHz up to **ATV610D45N4**, or from 1...8 kHz for **ATV610D55N4...C16N4**. Above 2.5 or 4 kHz (depending on the rating), the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the derating curves on our website).

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) Values given for applications requiring a slight overload (up to 110 % for 60 s or 120 % for 20 s).

(4) Values given for applications requiring a slight overload (up to 150 % for 60 s).



VW3A47803



VW3A9704

Accessories for mounting of variable speed drives

Plates for EMC mounting of variable speed drives

For use with variable speed drives	Power		Reference
	kW	HP	
ATV610U07N4...U75N4	0.75...7.5	1...10.1	VW3A47801
ATV610D11N4, D15N4	11...15	14.9...20.3	VW3A47802
ATV610D18N4...D22N4	18.5...22	25...30	VW3A47803
ATV610D30N4...D45N4	30...45	40...60	VW3A47804
ATV610D55N4...D90N4	55...90	75...125	VW3A47805

Kit for IP 21 conformity

For use with variable speed drives	Power		Reference
	kW	HP	
ATV610C11N4...C16N4	110...160	149...216	VW3A9704



Plain text display terminal

The plain text display terminal is supplied with the drive. It can also be ordered as a spare part.

This terminal can be:

- Connected and mounted on the front of the drive
- Connected and mounted on an enclosure door using a remote mounting accessory

This terminal is used to:

- Control, adjust, and configure the drive
- Display current values (motor, I/O, and process data)
- Store and download configurations (several configuration files can be stored in the memory)
- Duplicate the configuration of one powered-up drive on another powered-up drive

Other features:

- 2 lines
- Languages (Chinese, English, French, German, Italian, Spanish)
- White backlight
- Operating range: -15...50 °C/+5...122 °F
- IP 21 protection
- Removable, easy access with RJ45 port

Description

The front of the display terminal comprises:

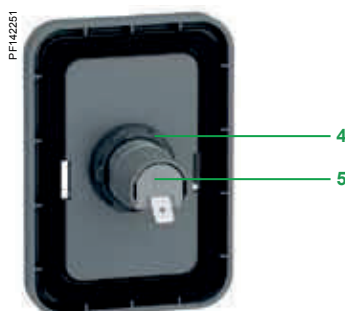
- 1 LCD backlight screen
- 2 "OK" button: saves the current value (ENT)
- 3 "RUN" button: local control of motor run command
- 4 "STOP/RESET" button: local control of motor stop command/clearing detected faults
- 5 "ESC" button: aborts a value, parameter, or menu to return to the previous selection
- 6 Home: root menu
- 7 Turn $\pm$: increases or decreases the value, goes to the next or previous line

References

Description	Reference	Weight kg/ lb
Plain text display terminal	VW3A1113	0.200/ 0.441



Remote mounting kit for mounting plain text display terminal on enclosure door (front panel)



Remote mounting kit for mounting plain text display terminal on enclosure door (rear panel)

Mounting kit for plain text display terminal

- Remote mounting kit for mounting on an enclosure door with IP 43 degree of protection as standard

Description

The kit comprises:

- Tightening tool (also sold separately under the reference ZB5AZ905)

- 1 Mounting plate
- 2 RJ45 port for the plain text display terminal
- 3 Seal
- 4 Fixing nut
- 5 RJ45 port for connecting the remote-mounting cordset

Cordsets must be ordered separately depending on the length required.

Drilling a hole with a standard Ø 22 tool, as used for a pushbutton, allows the unit to be mounted without needing a cut-out in the enclosure (Ø 22.5 mm/Ø 0.89 in. drill hole).

An anti-rotation function is provided and operates as follows: when the kit is locked on the panel tightly by the nut, the gasket on the back cannot rotate.

References

Description	Length m/ ft	IP degree of protection	Reference	Weight kg/ lb
Remote mounting kit Order with remote-mounting cordset VW3A1104R●●●	—	43	VW3A1114	—
Tightening tool for remote mounting kit	—	—	ZB5AZ905	0.016/ 0.035
Remote-mounting cordset equipped with 2 RJ45 connectors	1/ 3.28	—	VW3A1104R10	0.050/ 0.110
	3/ 9.84	—	VW3A1104R30	0.150/ 0.331
	5/ 16.40	—	VW3A1104R50	0.250/ 0.551
	10/ 32.81	—	VW3A1104R100	0.500/ 1.102



Remote graphic display terminal
(Detected fault: the screen's red backlight is activated automatically)



Remote graphic display terminal

Remote graphic display terminal (option)

This terminal can be:

- Connected and mounted on the front of the drive
- Connected and mounted on an enclosure door using a remote mounting accessory

This terminal is used to:

- Control, adjust, and configure the drive
- Display current values (motor, I/O, and process data)
- Duplicate the configuration of one powered-up drive on another powered-up drive

Other characteristics:

- 8 lines, 240 x 160 pixels
- Displays bar charts, gauges, and trend charts
- 23 integrated languages (complete alphabets) covering the majority of countries around the world (other languages can be added; please consult our website www.schneider-electric.com)
- 2-color backlit display (white and red); if an error is detected, the red backlight is activated automatically (function can be disabled)
- Operating range: -15...50 °C/+5...122 °F
- IP 65 protection
- Real-time clock with backup battery for providing data acquisition and event timestamping functions even when the drive is stopped

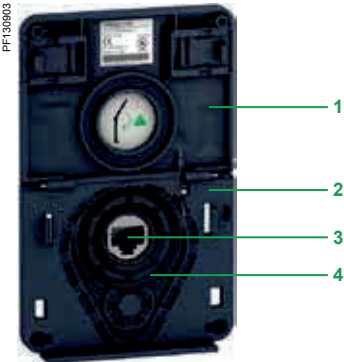
Description

The front of the display terminal comprises:

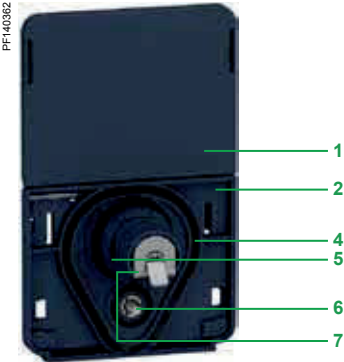
- 1 LCD backlight screen
- 2 "OK" button: saves the current value (ENT)
- 3 "RUN" button: local control of motor run command
- 4 "STOP/RESET" button: local control of motor stop command/clearing detected faults
- 5 "ESC" button: aborts a value, parameter, or menu to return to the previous selection
- 6 Home: root menu
- 7 Turn ±: increases or decreases the value, goes to the next or previous line
- 8 Information (i): contextual help
- 9 4 function keys to facilitate navigation and provide contextual links for enabling functions

References		
Description	Reference (1)	Weight kg/ lb
Remote graphic display terminal	VW3A1111	0.200/ 0.441

(1) Available: Q4 2015.



Remote mounting kit for mounting graphic display terminal on enclosure door (front panel)



Remote mounting kit for graphic display terminal (rear panel)

Mounting kit for remote graphic display terminal

- Remote mounting kit for mounting on an enclosure door with IP 65 degree of protection as standard

Description

The kit comprises:

- Tightening tool (also sold separately under the reference ZB5AZ905)
- 1 Cover plate to maintain IP 65 protection when there is no terminal connected
- 2 Mounting plate
- 3 RJ45 port for the graphic display terminal
- 4 Seal
- 5 Fixing nut
- 6 Anti-rotation pin
- 7 RJ45 port for connecting the remote-mounting cordset

Cordsets must be ordered separately depending on the length required. Drilling a hole with a standard Ø 22 tool, as used for a pushbutton, allows the unit to be mounted without needing a cut-out in the enclosure (Ø 22.5 mm/Ø 0.89 in. drill hole).

References

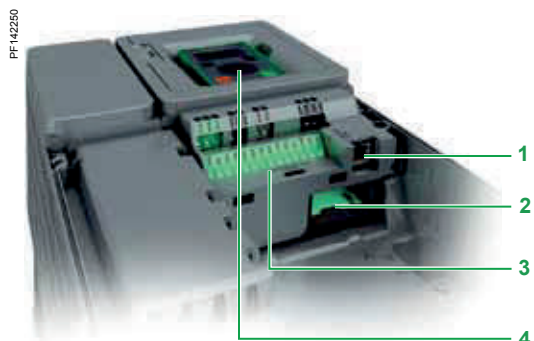
Description	Length m/ ft	IP degree of protection	Reference	Weight kg/ lb
Remote mounting kit Order with remote-mounting cordset VW3A1104R●●●	—	65	VW3A1112	—
Tightening tool for remote mounting kit	—	—	ZB5AZ905	0.016/ 0.035
Remote-mounting cordset equipped with 2 RJ45 connectors	1/ 3.28	—	VW3A1104R10	0.050/ 0.110
	3/ 9.84	—	VW3A1104R30	0.150/ 0.331
	5/ 16.40	—	VW3A1104R50	0.250/ 0.551
	10/ 32.81	—	VW3A1104R100	0.500/ 1.102



VW3A3203



VW3A3204



I/O option modules

Presentation

By installing I/O option modules, Altivar Easy 610 drives can be adapted to meet the needs of applications that manage additional sensors or specific sensors.

2 I/O option modules are available:

- Digital and analog I/O option module
- Relay output module

These I/O option modules as well as the communication modules insert into slot A on Altivar Easy 610 drives **1**.

Digital and analog I/O option module

- 2 differential analog inputs configurable via software as current (0-20 mA/4-20 mA) or probe (PTC, PT100, or 2-wire or 3-wire PT1000) inputs
- 14-bit resolution
- 6 x 24 V $\pm$ positive or negative digital inputs
- sampling: 1 ms max.
- 2 assignable digital outputs

Relay output module

- 3 relay outputs with NO contacts
- 1 fixed screw terminal block

References

Description	I/O type				Reference	Weight kg/ lb
	Digital inputs	Digital outputs	Analog inputs	Relay outputs		
Digital and analog I/O module	6	2	2 (1)	—	VW3A3203	—
Relay output module	—	—	—	3 (2)	VW3A3204	—

Integrated ports and communication protocol

Presentation

Altivar Easy 610 drives have 2 built-in RJ45 communication ports as standard:

- one port dedicated to field network operation for exchanging data with other devices via the Modbus serial link protocol **1**
- a second dedicated port for the multidrop connection of the following HMIs and configuration tools **4**:
 - the remote graphic display terminal or plain text terminal
 - a Magelis industrial HMI terminal

Altivar Easy 610 drives integrate the Modbus serial link communication protocol as standard.

The detailed specifications for serial communication ports and the Modbus protocol are available on our local website.

Description

- 1** RJ45 serial port
- 2** Slot A for I/O expansion or communication modules
- 3** Fixed screw terminal blocks for 24 V $\pm$ power supply and integrated I/O
- 4** RJ45 serial link for HMI (remote plain text or graphic display terminals, Magelis terminal, etc.)

Altivar Easy 610 drives can take one communication module, or digital and analog I/O option module, or relay output module in slot A.

Note: The user manuals and description files (gsd) for devices on the communication buses and networks are available on our website.

(1) Differential analog inputs configurable via software as current (0-20 mA/4-20 mA) or probe (PTC, PT100, or 2-wire or 3-wire PT1000) inputs. When configured as PTC probe inputs, they must never be used to protect an ATEX motor in applications in explosive atmospheres. Please refer to the ATEX guide on our website.

(2) NO contacts.

EasyCan

The new generation LV power factor correction capacitors

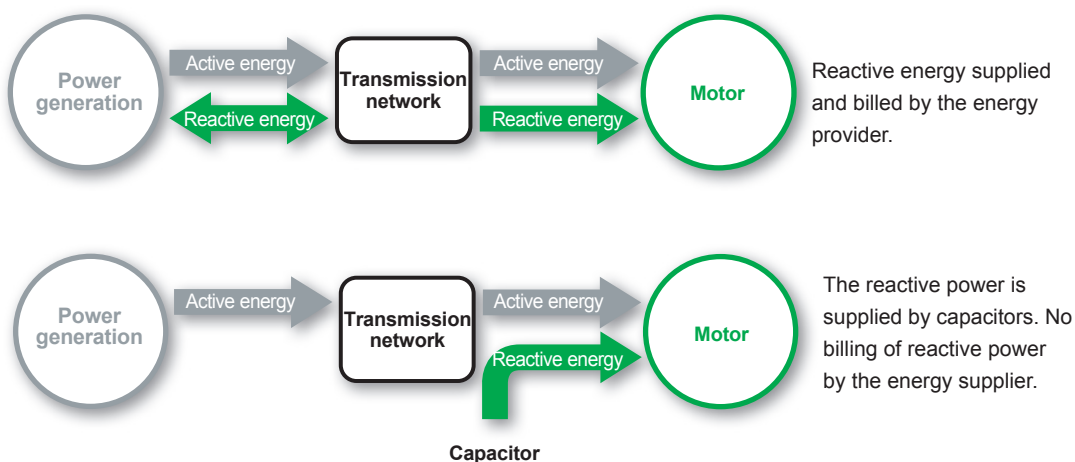
What is power factor correction?

- In electrical networks, reactive power and harmonics result in increased line currents for a given active power transmitted to loads. The principle of power factor correction is to reduce the apparent Power S (kVA) for a given active Power P (kW).
- Preliminary steps proposed to customers include power quality audits and the installation of power monitoring systems. This will provide comprehensive knowledge of the electrical installation characteristics in terms of power factor and harmonic distortion. Compensation of reactive power/ energy or harmonic mitigation will be selected accordingly.



Compensation of reactive power/energy

- An electricity bill generally includes components relating to active and reactive power (or energy) that has been absorbed over time.
- Compensation of reactive energy is typically achieved by producing reactive energy close to the consuming loads through capacitor banks connected to the network. As a result, the energy supplier provides active energy only.



The new generation LV power factor correction capacitors

An easy choice for savings which is optimized to deliver the performance you need. Suitable for standard operating conditions to deliver safe and reliable performance.

GroupDECapacitors



EasyCan three phase

Operating conditions

- For networks with insignificant non-linear loads: ($N_{LL} \leq 10 \%$).
- Standard voltage disturbances.
- Standard operating temperature up to 55 °C.
- Normal switching frequency up to 5000 /year.
- Maximum current (including harmonics) is $1.5 \times I_N$.

Easy installation & maintenance

- Optimized design for low weight, compactness and reliability to ensure easy installation and upto 20% space savings in cubicles.
- New CLAMPTITE terminals that allows maintained tightness.
- Non accessible in-built discharge resistors to ensure safety.
- 1 point for mounting and earthing.
- Simultaneous and safe disconnection of all the phases at end of life in EasyCan.
- Stacked design and resin filled technology for better cooling.

Safety

- Self-healing.
- Pressure-sensitive disconnecter on all three phases.
- Discharge resistors fitted - non removable.
- Finger-proof CLAMPTITE terminals to reduce risk of accidental contact and to ensure firm termination (10 to 30.3 kvar in three phases).

Technology

Constructed internally with single-phase capacitor elements assembled in an optimized design. Each capacitor element is manufactured with metallized polypropylene film.

The active capacitor elements are encapsulated in a specially formulated biodegradable, non-PCB, polyurethane soft resin which ensures thermal stability and heat removal from inside the capacitor.

The unique finger-proof CLAMPTITE termination is fully integrated with discharge resistors and allows suitable access to tightening and allows cable termination without any loose connections.

For lower ratings, double fast-on terminals with wires are provided.

Benefits

- Easy installation
- Easy for reliability and safe usage.
- Easy for quality assurance.
- Easy choice for building your solutions with other Schneider Electric components.
- Easy choice for savings.

EasyCan

Three Phase

EasyCan3000kvar



EasyCan600_5E_0kvar0kvar



Technical specifications

General characteristics

Standards	IEC 60831-1/2
Voltage range	230V to 525V in Three Phase
Frequency	50 Hz
Power range	1 to 30.3 kvar
Losses (dielectric)	< 0.2 W/kvar
Losses (total)	< 0.5 W/kvar
Capacitance tolerance	-5 %, +10 %
Voltage test	Between terminals 2.15 x U _N (AC), 10 s
	Between terminal & container 3 kV (AC), 10 s or 3.66 kV (AC), 2 s
	Impulse voltage 8 kV
Discharge resistor	Fitted, standard discharge time 60 s

Working conditions

Ambient temperature	-25 / 55 °C (Class D)
Humidity	95 %
Altitude	2,000 m above sea level
Overvoltage	1.1 x U _N 8 h in every 24 h
Overcurrent	Up to 1.5 x I _N
Peak inrush current	200 x I _N
Switching operations (max.)	Up to 5,000 switching operations per year
Mean Life expectancy	Up to 100,000 hrs
Harmonic content withstand	N _{LL} ≤ 10 %

Installation characteristics

Mounting position	Indoor, upright
Fastening	Threaded M12 stud at the bottom
Earthing	
Terminals	■ CLAMPTITE - terminals with electric shock protection (finger-proof) & double fast-on terminal in lower kvar ■ Stud type terminal: □ Three way stud type terminals for the ratings above 30.3 kvar in three phase capacitors

Safety features

Safety	Self-healing + Pressure-sensitive disconnecter + Discharge device
Protection	IP20 (for fast-on and clamptite)

Construction

Casing	Extruded Aluminium Can
Dielectric	Metallized polypropylene film with Zn/Al alloy
Impregnation	Biodegradable, Non-PCB, poly urethane soft resin

⚠ WARNING

HAZARD OF ELECTRICAL SHOCK

Wait 5 minutes after isolating supply before handling



Failure to follow these instructions can result in injury or equipment damage

Rated Voltage 380/400/415 V						
50 Hz				μF (X3)	Case Code	Reference Number
Q _N (kvar)			I _N (A)			
380 V	400 V	415 V	at 400 V			
0.9	1.0	1.1	1.4	6.6	EC	BLRCS010A012B40
1.5	1.7	1.8	2.5	11.3	DC	BLRCS017A020B40
1.8	2.0	2.2	2.9	13.3	DC	BLRCS020A024B40
2.3	2.5	2.7	3.6	16.6	DC	BLRCS025A030B40
2.7	3.0	3.2	4.3	19.9	DC	BLRCS030A036B40
3.8	4.2	4.5	6.1	27.8	HC	BLRCS042A050B40
4.5	5.0	5.4	7.2	33.1	HC	BLRCS050A060B40
5.7	6.3	6.8	9.1	41.8	HC	BLRCS063A075B40
6.8	7.5	8.1	10.8	49.7	HC	BLRCS075A090B40
7.5	8.3	8.9	12.0	55.0	LC	BLRCS083A100B40
9.4	10.4	11.2	15.0	68.9	MC	BLRCS104A125B40
11.3	12.5	13.5	18.0	82.9	NC	BLRCS125A150B40
12.5	13.9	15.0	20.1	92.1	NC	BLRCS139A167B40
13.5	15.0	16.1	21.7	99.4	NC	BLRCS150A180B40
15.1	16.7	18.0	24.1	110.7	SC	BLRCS167A200B40
18.1	20.0	21.5	28.9	132.6	SC	BLRCS200A240B40
18.8	20.8	22.4	30.0	137.9	SC	BLRCS208A250B40
20.0	22.2	23.9	32.0	147.0	SC	BLRCS222A266B40
22.6	25.0	26.9	36.1	165.7	SC	BLRCS250A300B40
25.0	27.7	29.8	40.0	184.0	VC	BLRCS277A332B40

Rated Voltage 440 V

50 Hz				μF (X3)	Case Code	Reference Number
Q_N (kvar)			I_N (A)			
400 V	415 V	440 V	at 440 V			
2.5	2.7	3.0	3.9	16.4	DC	BLRCS030A036B44
4.1	4.4	5.0	6.6	27.4	HC	BLRCS050A060B44
6.2	6.7	7.5	9.8	41.1	HC	BLRCS075A090B44
8.3	8.9	10.0	13.1	54.8	LC	BLRCS100A120B44
10.3	11.1	12.5	16.4	68.5	NC	BLRCS125A150B44
11.8	12.7	14.3	18.8	78.3	NC	BLRCS143A172B44
12.4	13.3	15.0	19.7	82.2	NC	BLRCS150A180B44
14.0	15.0	16.9	22.2	92.6	SC	BLRCS169A203B44
15.0	16.2	18.2	23.9	99.7	SC	BLRCS182A218B44
16.5	17.8	20.0	26.2	109.6	SC	BLRCS200A240B44
20.7	22.2	25.0	32.8	137.0	SC	BLRCS250A300B44
23.6	25.4	28.5	37.4	156.1	SC	BLRCS285A342B44
25.0	27.0	30.3	39.8	166.0	SC	BLRCS303A364B44

Rated Voltage 480 V

50 Hz				μF (X3)	Case Code	Reference Number
Q_N (kvar)			I_N (A)			
400 V	415 V	480 V	at 480 V			
2.9	3.1	4.2	5.1	19.3	HC	BLRCS042A050B48
4.7	5.0	6.7	8.1	30.8	HC	BLRCS067A080B48
5.1	5.5	7.5	8.9	34.1	LC	BLRCS075A090B48
6.1	6.6	8.8	10.6	40.5	LC	BLRCS088A106B48
7.2	7.8	10.4	12.5	47.9	MC	BLRCS104A125B48
8.7	9.3	12.5	15.0	57.5	NC	BLRCS125A150B48
10.0	10.8	14.4	17.3	66.3	NC	BLRCS144A173B48
10.8	11.6	15.5	18.6	71.4	NC	BLRCS155A186B48
11.8	12.7	17.0	20.4	78.3	NC	BLRCS170A204B48
12.9	13.9	18.6	22.4	85.6	SC	BLRCS186A223B48
14.4	15.5	20.8	25.0	95.7	SC	BLRCS208A250B48
17.9	19.3	25.8	31.0	118.8	SC	BLRCS258A310B48
20.0	21.5	28.8	34.6	132.6	VC	BLRCS288A346B48
21.9	23.5	31.5	37.9	145.0	VC	BLRCS315A378B48
23.5	25.3	33.9	40.8	156.1	XC	BLRCS339A407B48

Rated Voltage 525 V

50 Hz				μF (X3)	Case Code	Reference Number
Q_N (kvar)			I_N (A)			
415 V	480 V	525 V	at 525 V			
3.1	4.2	5.0	5.5	19.2	HC	BLRCS050A060B52
6.6	8.9	10.6	11.7	40.8	MC	BLRCS106A127B52
7.8	10.4	12.5	13.7	48.1	NC	BLRCS125A150B52
9.6	12.9	15.4	16.9	59.3	NC	BLRCS154A185B52
12.5	16.7	20.0	22.0	77.0	SC	BLRCS200A240B52
15.6	20.9	25.0	27.5	96.2	SC	BLRCS250A300B52

EasyCan harmonic applications

Three Phase Applications

EasyCan capacitors are designed to work in slightly polluted networks with detuned reactors. 480 and 525V range of EasyCan is designed to work with detuned reactors in 400V.



Operating conditions

- For slightly polluted networks.
- Slight voltage disturbances.
- Need of switching frequency up to 5 000 /year.

Rated voltage

In a detuned filter application, the voltage across the capacitors is higher than the network service voltage (U_s). Then, capacitors must be designed to withstand higher voltages.

Depending on the selected tuning frequency, part of the harmonic currents are absorbed by the detuned capacitor bank. Then, capacitors must be designed to withstand higher currents, combining fundamental and harmonic currents.

The rated voltage of EasyCan capacitors is given in the table below, for different values of network service voltage and relative impedance.

Capacitor Rated Voltage U_N (V)		Network Service Voltage U_s (V)
		50 Hz
		400
Relative Impedance (%)	5.7	480
	7	
	14	480

In the following pages, the effective power (kvar) given in the tables is the reactive power provided by the combination of capacitors and reactors.

EasyCan + Detuned Reactor + Contactor + MCCB

FE00104_L20.jpg



EasyCan03 copy eps



28_PB107081 eps



PB106447-02.jpg



Network 400 V, 50 Hz Capacitor Voltage 480 V 5.7 % / 7 % Detuned Filter						
Effective Power (kvar)	Q _N at 480 V	Capacitor Ref.	5.7% fr = 215Hz	7% fr = 190Hz	Switching: Contactor Ref.	Protection: Easypact CVS (I _{cu} =36kA)Ref.
			D R Ref	D R Ref.		
6.5	8.8	BLRCS088A106B48 × 1	LVR05065A40T x 1	LVR07065A40T x 1	LC1D12 × 1	LV510330 × 1
12.5	17	BLRCS170A204B48 × 1	LVR05125A40T x 1	LVR07125A40T x 1	LC1D18 × 1	LV510331 × 1
25	33.9	BLRCS339A407B48 × 1	LVR05250A40T x 1	LVR07250A40T x 1	LC1D38 × 1	LV510334 × 1
50	67.9	BLRCS339A407B48 × 2	LVR05500A40T x 1	LVR07500A40T x 1	LC1D95 × 1	LV510337 × 1
100	136	BLRCS339A407B48 × 4	LVR05X00A40T x 1	LVR07X00A40T x 1	LC1F185 × 1	LV525332 × 1

Network 400 V, 50 Hz Capacitor Voltage 480 V 14 % Detuned Filter						
Effective Power (kvar)	Q _N at 480 V	Capacitor Ref.	14% fr = 135Hz		Switching: Contactor Ref.	Protection: Easypact CVS (I _{cu} =36kA)Ref.
			D R Ref			
6.5	8.8	BLRCS088A106B48 × 1	LVR14065A40T x 1		LC1D12 × 1	LV510330 × 1
12.5	15.5	BLRCS155A186B48 × 1	LVR14125A40T x 1		LC1D18 × 1	LV510331 × 1
25	31.5	BLRCS315A378B48 × 1	LVR14250A40T x 1		LC1D38 × 1	LV510334 × 1
50	63	BLRCS315A378B48 × 2	LVR14500A40T x 1		LC1D95 × 1	LV510337 × 1
100	126	BLRCS315A378B48 × 4	LVR14X00A40T x 1		LC1F185 × 1	LV525332 × 1

Network 400 V, 50 Hz Capacitor Voltage 525 V 5.7 % / 7 % Detuned Filter						
Effective Power (kvar)	Q _N at 525 V	Capacitor Ref.	5.7% fr = 215Hz	7% fr = 190Hz	Switching: Contactor Ref.	Protection: Easypact CVS (I _{cu} =36kA) Ref.
			D R Ref	D R Ref.		
6.5	10.6	BLRCS106A127B52 × 1	LVR05065A40T x 1	LVR07065A40T x 1	LC1D12 × 1	LV510330 × 1
12.5	20	BLRCS200A240B52 × 1	LVR05125A40T x 1	LVR07125A40T x 1	LC1D18 × 1	LV510331 × 1
25	40	BLRCS200A240B52 × 2	LVR05250A40T x 1	LVR07250A40T x 1	LC1D38 × 1	LV510334 × 1
50	80	BLRCS200A240B52 × 4	LVR05500A40T x 1	LVR07500A40T x 1	LC1D95 × 1	LV510337 × 1
100	160	BLRCS200A240B52 × 8	LVR05X00A40T x 1	LVR07X00A40T x 1	LC1F185 × 1	LV525332 × 1

Network 400 V, 50 Hz Capacitor Voltage 525 V 14 % Detuned Filter						
Effective Power (kvar)	Q _N at 525 V	Capacitor Ref.	14% fr = 135Hz		Switching: Contactor Ref.	Protection: Easypact CVS (I _{cu} =36kA)Ref.
			D R Ref.			
6.5	10.6	BLRCS106A127B52 × 1	LVR14065A40T x 1		LC1D12 × 1	LV510330 × 1
12.5	20	BLRCS200A240B52 × 1	LVR14125A40T x 1		LC1D18 × 1	LV510331 × 1
25	40	BLRCS200A240B52 × 2	LVR14250A40T x 1		LC1D38 × 1	LV510334 × 1
50	75	BLRCS250A300B52 × 3	LVR14500A40T x 1		LC1D95 × 1	LV510337 × 1
100	150	BLRCS250A300B52 × 6	LVR14X00A40T x 1		LC1F185 × 1	LV525332 × 1

Varlogic series

RT6, RT8 and RT12

The Varlogic controllers permanently monitor the reactive power of the installation and control the connection and disconnection of capacitor steps in order to obtain the targeted power factor.



Varlogic RT6, RT8 and RT12

Performance

- Permanent monitoring of the network and equipment.
- Information provided about equipment status.
- New control algorithm designed to reduce the number of switching operations and quickly attain the targeted power factor.

Simplicity

- Simplified programming and possibility of intelligent self set-up.
- Ergonomic layout of control buttons.
- Quick and simple mounting and wiring.
- A special menu allows controller self-configuration.

User-friendliness

The large display allows:

- Direct viewing of installation electrical information and capacitor stage condition.
- Direct reading of set-up configuration.
- Intuitive browsing in the various menus (indication, commissioning, configuration).
- Alarm indication.

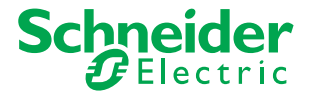
Range

Type	Number of step output contacts	Part number
RT6	6	51207
RT8	8	51209
RT12	12	51213

Technical specifications

General characteristics		
Protection Index		
	Front panel	IP41
	Rear	IP20
	Shock test	IK06
Technical Characteristics		
Display	4 digit 7 segment Red LEDs	
Measuring current	0 to 5 A	
Number of steps	6 (RT6), 8(RT8), 12(RT12)	
Supply voltage (V AC) 50/60 Hz	320 to 460 V	
Dimensions	143 x 143 x 67 mm	
Mounting	Flush panel mounting	
Switch board cut-out	139 x 139 mm	
Weight	0.8 Kg	
Operating temperature	0°C – 55°C	
Alarm contact	1 N/O contact	
Alarm conditions	The alarm relay will activate for 1. Over voltage 2. Low power factor 3. Over compensation	
Output contact	3A/ 250V - 1A/400V	
Connection	Phase-to-phase	
CT range	10000/5 A	
cosφ Setting range	0.85 ind. ... 1	
Possibility of a dual cosφ target	No	
Accuracy	±2 %	
Micro cut voltage protection	Yes, if less than 30% of nominal voltage condition for more than 20ms controller disconnects the steps	
Response delay time	10 to 1800 s	
Reconnection delay time	10 to 1800 s	
4-quadrant operation for generator application	No, Only suitable for 2-quadrant applications	
Standards		
	IEC	EMC - IEC 61326 - IEC 61000-6-2, IEC 61000-6-4
	Safety	EN 61010-1

Life Is On



Schneider Electric

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