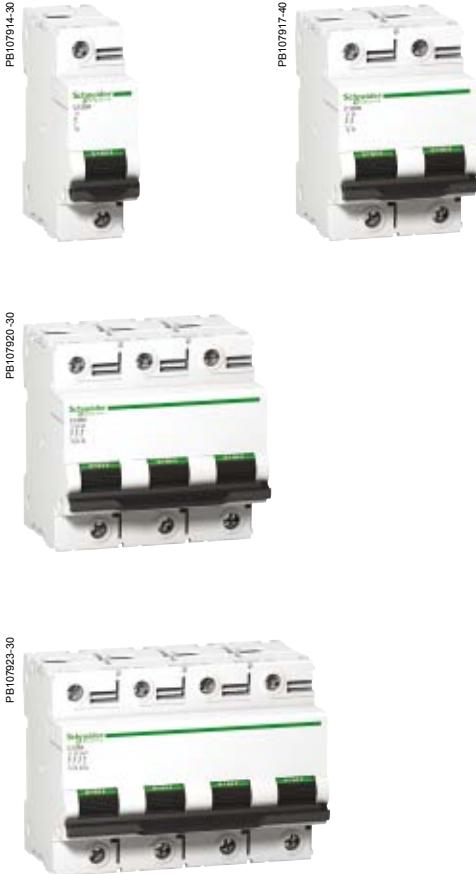


C120N circuit breakers (curves B, C, D)



IEC/EN 60898-1, IEC 60947-2

C120N circuit breakers are multistandard circuit breakers that combine the following functions:

- circuit protection against short-circuit currents,
- circuit protection against overload currents,
- suitability for isolation in the industrial sector to IEC/EN 60947-2,
- fault tripping and indication by adding auxiliaries.

Alternating current (AC) 50/60 Hz

Breaking capacity (Icu) to IEC/EN 60947-2						Service breaking capacity (Ics)
Type	Voltage (V)					
1P	12 to 130 V	220 to 240 V	380 to 415 V	440 V		75 % of Icu
Rating (In) 63 to 125 A	20 kA	10 kA	3 kA ⁽¹⁾	-		
2P/3P/4P	12 to 130 V	220 to 240 V	380 to 415 V	440 V		75 % of Icu
63 to 125 A	-	20 kA	10 kA	6 kA		

Breaking capacity (Icn) to IEC/EN 60898-1		
Type	Voltage (V)	
1P, 2P, 3P, 4P	230 to 400 V	
Rating (In) 63 to 125 A	10000 A	
	75 % of Icn	

⁽¹⁾ One-pole breaking capacity in IT isolated neutral system (double fault).

Direct current (DC)

Breaking capacity (Icu) according to IEC/EN 60947-2							Service breaking capacity (Ics)
Between +/-	Voltage (Ue)						
	12 to 125 V	≤ 144 V	≤ 250 V	≤ 375 V	≤ 500 V		
Number of poles	1P	2P	3P	4P			
Rating (In) 63 to 125 A	15 kA	10 kA	10 kA	10 kA	10 kA	100 % of Icu	

Catalogue numbers

C120N circuit breaker

Type	1P	2P
Auxiliaries	Remote indication and tripping, module CA907008 and CA907013	Remote indication and tripping, module CA907008 and CA907013
Vigi C120	Vigi C120 add-on residual current device, module CA902016	Vigi C120 add-on residual current device, module CA902016
Rating (In)	Curve	Curve
	B C D	B C D
63 A	A9N18340 A9N18356 A9N18378	A9N18344 A9N18360 A9N18382
80 A	A9N18341 A9N18357 A9N18379	A9N18345 A9N18361 A9N18383
100 A	A9N18342 A9N18358 A9N18380	A9N18346 A9N18362 A9N18384
125 A	A9N18343 A9N18359 A9N18381	A9N18347 A9N18363 A9N18385
Width in 9-mm modules	3	6
Accessories	Module CA907012 and CA907013	Module CA907012 and CA907013

⁽¹⁾ Country France only

C120N circuit breakers (curves B, C, D) (cont.)

PB107817-40

■ Terminals insulated to IP20



■ Location for 4 clip-on terminal markers

Positive contact indication

- Suitability for isolation in the industrial sector to IEC/EN 60947-2.
- The presence of the green strip guarantees that the contacts open physically and allows work to be carried out safely on the downstream circuit.

- Longer product service life thanks to:
 - good overvoltage withstand capacity: products designed to offer a high industrial performance level (degree of pollution, rated impulse withstand voltage and insulation voltage).
 - high limitation performances (see limitation curves).
 - fast closure independent of toggle operating speed.
- Remote indication of the open/closed/tripped state by auxiliary contacts (optional).
- Power supply from above or below.

3P				4P		
Remote indication and tripping, module CA907008 and CA907013				Remote indication and tripping, module CA907008 and CA907013		
Vigi C120 add-on residual current device, module CA902016				Vigi C120 add-on residual current device, module CA902016		
Curve				Curve		
B	C	D		B	C	D
A9N18348	A9N18364	A9N18386		A9N18352	A9N18371	A9N18390
A9N18349	A9N18365	A9N18387		A9N18353	A9N18372	A9N18391
A9N18350	A9N18367	A9N18388		A9N18354	A9N18373(1)	A9N18392
A9N18351	A9N18369	A9N18389		A9N18355	A9N18374	A9N18392
					A9N18375(1)	
					A9N18376	A9N18393
					A9N18377(1)	
9				12		
Module CA907012 and CA907013				Module CA907012 and CA907013		

DC main switch for photovoltaic installations **C60NA-DC**

PB109404-50



The C60NA-DC is a direct current switch-disconnector dedicated to disconnection of the string of photovoltaic modules and the PV inverter.

It is designed to isolate the string of photovoltaic modules and the inverter from the rest of the photovoltaic installation for maintenance operations in complete safety.

Combined with a circuit breaker (of the C60PV-DC type, for example), the C60NA-DC will be installed in a string PV protection enclosure close to the strings of photovoltaic modules. It can also be installed near the PV inverter.

It can be locked (by a padlocking device) in OFF position to ensure safety during maintenance operations.

Since a fault current can flow in the reverse direction to the normal operating current, the C60NA-DC can switch a multi-directional current.

C60NA-DC is not polarity sensitive: (+) and (-) wires can be inverted without any risk.

The C60NA-DC is delivered with three inter-pole barriers to provide increased isolation distance between two adjacent connectors.

IEC / EN 60947-3



DB6404541



Main characteristics

Operating voltage (Ue)	20 A: 1000 V CC
	32 A: 800 V CC
	50 A: 700 V CC
Rated insulation voltage (Ui)	1,000 V DC
Rated operational current (Ie)	50 A
Impulse voltage (Uimp)	6 kV
Permissible rated short-time withstand current (Icw)	600 A
Rated short-circuit closing current (Icm)	1 kA
Electrical connection	By the top for In and Out
Number of poles	2P
Number of modules of 9 mm	8
Diagrams	
Standards	IEC 60947-3 EN 60947-3
Catalogue number	A9N61690
Auxiliaries	See modules CA907008 and CA907013

PB109406-50



The SW60-DC is a direct current switch-disconnector dedicated to disconnection of the string of photovoltaic modules and the PV inverter.

It is designed to isolate the inverter from the rest of the photovoltaic installation for maintenance operations in complete safety.

Combined with a circuit breaker (of the C60PV-DC type, for example) and a switch (of the C60NA-DC type, for example), the SW60-DC will be installed in the string PV protection enclosure close to the PV inverter (see application diagram).

It can be locked (by a padlocking device) in OFF position to ensure safety when removing the PV inverter.

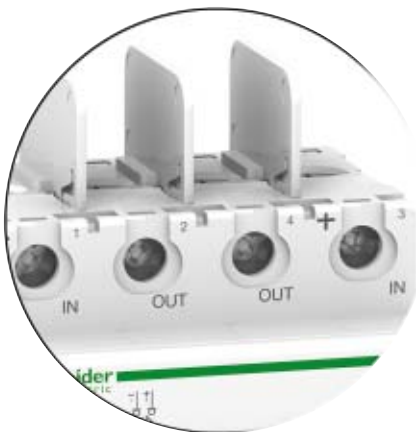
SW60-DC is polarity sensitive: (+) and (-) has to be respected for connection.

The SW60-DC is delivered with three inter-pole barrier to provide increased isolation distance between two adjacent connectors.

IEC / EN 60947-3

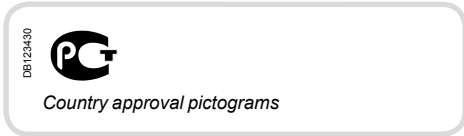


DB404942



General technical data

Operating voltage (Ue)	1000 V DC
Rated insulation voltage (Ui)	1000 V DC
Rated operational current (Ie)	50 A
Impulse voltage (Uimp)	6 kV
Permissible rated short-time withstand current (Icw)	600 A
Rated short-circuit closing current (Icm)	1 kA
Electrical connection	By the top for In and Out
Number of poles	2P
Number of modules of 9 mm	8
Diagrams	
Standards	IEC 60947-3 EN 60947-3
Catalogue number	A9N61699



EN 61009

When a Vigi C120 device is combined with a C120 circuit breaker, it provides the following functions:

- protection of persons against electric shock by direct contact (30 mA),
- protection of persons against electric shock by indirect contact (≥ 300 mA),
- protection of installations against fire hazards (300 mA to 1000 mA).



2P



3P



4P

Catalogue numbers

Vigi C120 add-on residual current devices							
Type	AC						Width in 9 mm modules
Product	Vigi C120						
Auxiliaries	Without auxiliary						
2P	Sensitivity	30 mA	300 mA	500 mA	300 mA	1000 mA	7
		A9N18563	A9N18564	A9N18565	A9N18544	A9N18545	
	3P	Sensitivity	30 mA	300 mA	500 mA	300 mA	1000 mA
		A9N18566	A9N18567	A9N18568	A9N18546	A9N18547	
	4P	Sensitivity	30 mA	300 mA	500 mA	300 mA	1000 mA
		A9N18569	A9N18570	A9N18571	A9N18548	A9N18549	
		A9N18542 ⁽¹⁾	A9N18543 ⁽¹⁾				
Operating voltage (Ue)	230...415 V						
Operating frequency	50/60 Hz						
Accessories	Module CA907012 and CA907013						

(1) specific offer for France

The iPF multi-pole single-piece surge arrester range is adapted for earthing systems: TT, TN-S, TN-C.

Type 2 surge arresters are tested with a 8/20 μ s current wave.

Type 3 surge arresters are tested with a 12/50 μ s and 8/20 μ s combined wave.

Each surge arrester in the range has a specific application:

■ **incoming protection (type 2):**

- the iPF65(r) is recommended for a very high risk level (strongly exposed site)
- the iPF40(r) is recommended for a high risk level
- the iPF20 is recommended for a medium risk level

■ **secondary protection (type 2 or 3):**

- the iPF8 ensures secondary protection of loads to be protected and is placed in cascade with the incoming surge arresters. This surge arrester is required when the loads to be protected are at a distance of more than 30 m from the incoming surge arrester.

The iPF surge arresters with “r” indication have remote transfer of the information: “surge arrester to be replaced”.

Rated discharge current (I _{max}) / Nominal discharge current (I _n)	Type of protection		Network								
	Incoming	Secondary (type 2 or 3)	1P+N		3P+N		1P	2P	3P	4P	
65 kA / 20 kA											
	iPF65		A9L15684		A9L15685		A9L15683				
					A9L15586			A9L15584			
									A9L15581		
											A9L15585
40 kA / 15 kA											
High risk level	iPF40		A9L15687				A9L15686				
								A9L15587			
					A9L15690					A9L15582	
					A9L15688						A9L15590
											A9L15588
20 kA / 5 kA											
Medium risk level	iPF20		A9L15692				A9L15691				
								A9L15592			
					A9L15693					A9L15597	
											A9L15593
8 kA / 2.5 kA											
Secondary protection: placed near the loads to be protected when they are at a distance of more than 30 m from the incoming surge arrester		iPF8	A9L15695				A9L15694				
								A9L15595			
					A9L15696					A9L15598	
											A9L15596



1P+N.



3P+N.

Surge arrester/circuit breaker association

Type of surge arrester	Associated circuit breaker
iPF65	Curve C 50 A
iPF40	Curve C 40 A
iPF20	Curve C 25 A
iPF8	Curve C 20 A

Withdrawable surge arrester iQuick PRD Type 2 or Type 3

Withdrawable surge arrester iQuick PRD allow damaged cartridges to be replaced quickly. They offer remote reporting of the "cartridge must be changed" message.



EN 61643-11: 2012 Type 2, IEC 61643-11: 2011 T2

They protect electrical and electronic equipment against lightning-induced surges. Withdrawable surge arrester iQuick PRD surge arresters are prewired, incorporating their end-of-life disconnecter.

Each surge arrester in the range has a specific use:

■ **incoming protection (type 2):**

- iQuick PRD40r is recommended for a high risk level
- iQuick PRD20r is recommended for a moderate risk level

■ **secondary protection (type 2 or 3):**

- iQuick PRD8r provides secondary protection for the loads to be protected and is cascade-mounted with the incoming surge arresters. This surge arrester is required as close as possible to the loads to be protected when they are located more than 30 metres away from the incoming surge arrester.



Replacement cartridges.

Maximum discharge current (I _{max}) / Nominal discharge current (I _n)	Type of protection		Network		
	Incoming protection	Secondary protection	1P+N	3P+N	3P
40 kA / 20 kA					
High risk level	iQuick PRD40r		A9L16292		A9L16293
				A9L16294	
20 kA / 5 kA					
Moderate risk level	iQuick PRD20r		A9L16295		A9L16296
				A9L16297	
8 kA / 2 kA					
Secondary protection: placed near the loads to be protected when they are at a distance of more than 30 m from the incoming surge arrester		iQuick PRD8r	A9L16298		A9L16299
				A9L16300	

Replacement cartridges

Type	Replacement cartridges for	Cat. no.
C 40-350	iQuick PRD40r	A9L16310
C 20-350	iQuick PRD20r	A9L16311
C 8-350	iQuick PRD8r	A9L16312
C neutral-350	All products	A9L16313

