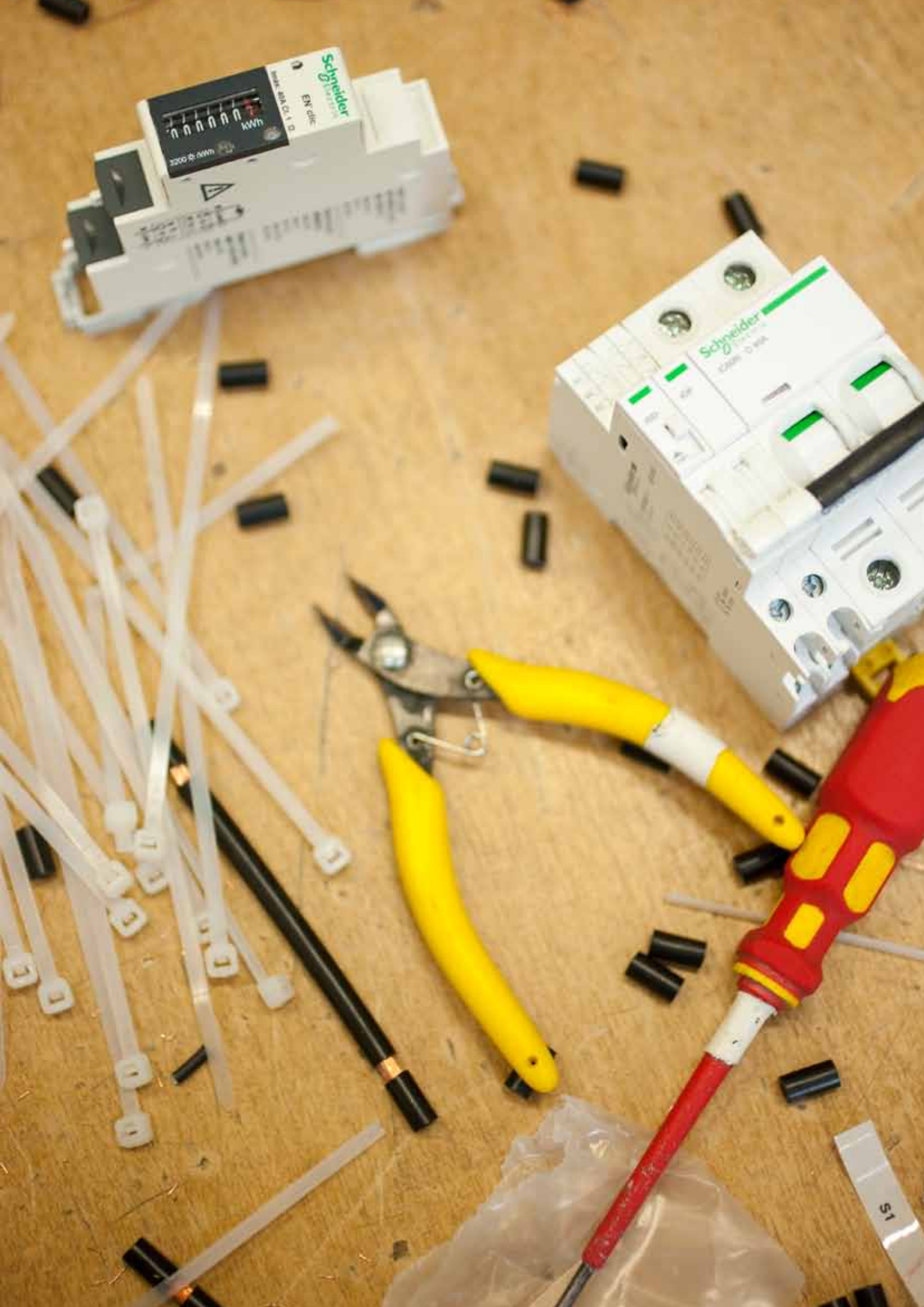
Low voltage

Acti9

the efficiency you deserve

Catalogue
2011 \ 12

Schneider Electric


Schneider
kWh
Schneider
S1

The efficiency you deserve

> Acti 9

The complete high performance modular system for final distribution

Schneider Electric

5 generations

of industry experience and 21 new patents make Acti 9 the new reference in low voltage modular systems.

> Acti 9

'In short, I optimize my own energy'.

The new core modular system that makes your power distribution installation safer, simpler, and more efficient

We leveraged five generations of low voltage expertise to design a precise, high-quality modular system without compromise. The Acti 9 offers the fastest and most flexible installation experience, and completely eliminates safety concerns during maintenance and operation. Engineered to adapt to the most challenging networks and environments while remaining cost-effective over time, it is the most flexible, coordinated, comprehensive, and innovative range of low voltage modular systems available.

> High-quality modular system without compromise

\+ The Acti 9 gives you safety, simplicity, and efficiency for the life span of your installation.

★ Acti 9: The **5th** generation of modular systems

Acti 9

The safest, simplest, and most efficient system for power distribution solutions

rotection Systems

Miniature circuit breaker
Integrated control circuit breaker
Residual current circuit breaker
Vigi module
Surge arrester
Automatic recloser auxiliary
Remote control auxiliary
Electrical auxiliaries

Safer

VisiSafe and Classes give complete safety for the life of your installation

More Efficient

VisiTrip, Super immunization, and automatic reclosers increase continuity of service and enhance reliability

Control Systems

Contactors
Impulse relays
Indicator lights
Push buttons
Selector switches

Installation Systems

IP 0B terminals
Splitter block
Full range of mounting
and wiring accessories

Simpler and Smarter

Two certifications for one product, 100 MCB
and RCD coordination, and easy ordering design

Fully BMS compatible, up to 50 less wiring, control
mode flexibility adapts to changes, and 100 recyclable

Safe

Safest operation guaranteed even in the most demanding environments

100%

safe for installers and users in the most severe environments

>

The best choice for industrial and tertiary buildings

Designed for safety, even in the most demanding environments

Safety matters most, and the Acti 9 system gives you, your customers, and their installations the highest level of protection available. It guarantees 100 percent safe operation and maintenance for you and your customers; its international certifications and numerous protection innovations mean the Acti 9 system exceeds even the most demanding requirements to give you total safety during maintenance, for the lifetime of your installation.

Comprehensive certification

Delivers complete industry-approved protection

The Acti 9 is fully tested, approved, and certified by national and international third parties. It guarantees that your installation is safe and compliant with all relevant safety standards, and demonstrates to your customers that you use industry-approved materials and best practices.

‘I have no worries about the safety of the electrical installation, the buildings, and everyone inside’.

Guarantees total safety during maintenance

Available only from Schneider Electric

VisiSafe
VisiSafe guarantees the downstream circuit is always safe, regardless of overvoltage conditions, wear, or operator experience, even in the most demanding environments.

The green strip indicates the safe position of contacts.

Unique safety features:

- Highest Impulse voltage withstand: Uimp = 6 kV
  - Guarantees longer equipment service life despite overvoltage conditions.
- Highest pollution resistance among modular devices: Pollution degree level 3
  - A true “all-terrain” product ideally suited for all environments.
- Leading edge insulation voltage: 500 V
  - Complete safety for operators maneuvering the operating handle.

Protects the load and guarantees long service life

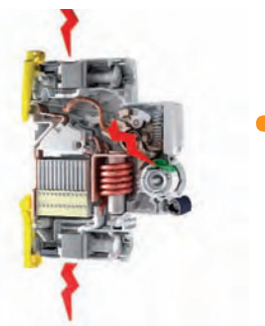
Fast Closing Mechanism
Fast closure of all Acti 9 MCBs and RCCBs limits wear and reduces voltage drops, helping to prevent premature equipment aging and overheating.

Ensures error-free linkages

Note: this QuickVigi section must be locally adapted in compliance with the local offer

QuickVigi
Fast, safe and screwless ‘on-click’ connections between MCB and add-on RCD modules. One click is all it takes. Complete operator safety is guaranteed.

Promises absolute protection against electric shocks



Available only from Schneider Electric

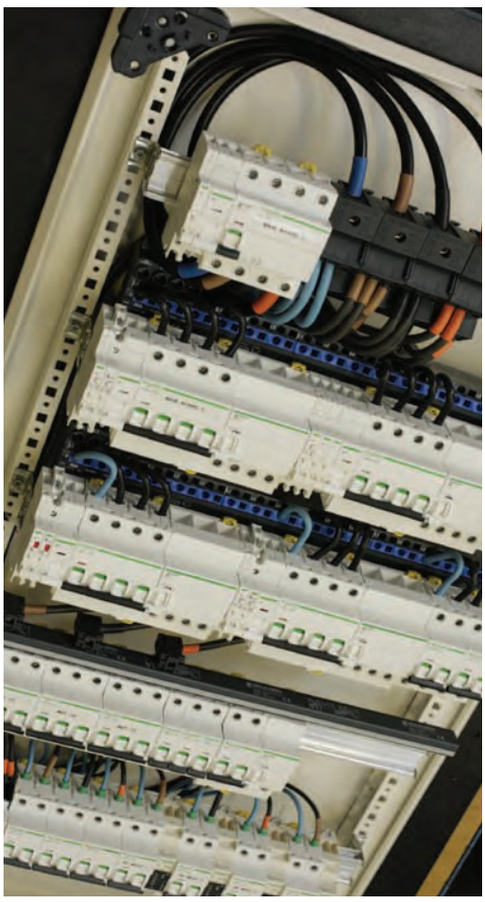
Class 2 Front Face
The Acti 9 is the only device available with this level of safety. Clearances between breaker surfaces and internal parts are over double the industry standard. It guarantees risk-free handling during the life of the installation, regardless of environment or operator experience.

Provides zero-risk lockdown to guarantee protection and safety

Integrated Padlocking
Available for Acti 9 remote control devices, the rugged, integrated padlock allows complete lockdown for guaranteed protection and safety. It prevents toggle device movement and inadvertent or unauthorized access, so you can ensure employee or contractor safety at all times.

Efficient

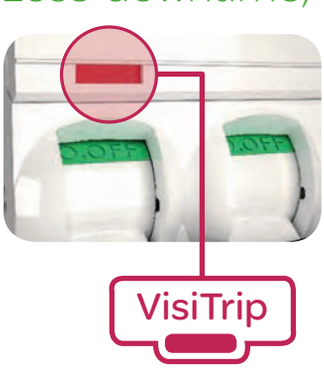
The system that streamlines your operations workflow



Designed to minimize downtime and avoid nuisance trips

With features like VisiTrip, which greatly reduces diagnostic and repair time, and super immunization of the RCDs to guarantee the highest continuity of service available, the Acti 9 system allows easier building management, eliminates downtime, and makes your business even more competitive, limiting intervention costs on distant infrastructure sites.

Less downtime, more continuity of service



VisiTrip minimizes downtime and reduces repair times

Identify faults in one glance, and easily see the operating status of your network. VisiTrip indicates only the faulty outgoer, allowing fast diagnosis, resolution, and re-closing loads for easier building management and reduced downtime.

Available only from Schneider Electric

‘When I install the Acti 9 I know I don’t have to come back to the job’.

100%
preventative maintenance

0
downtime

Prevents unnecessary trips

Available only from Schneider Electric

Super immunization (SI) of the RCDs guarantees the highest continuity of service and electrical immunity, especially where switchgear contends with electromagnetic or chemical interference. It also meets the high continuity of service requirements in all critical power applications (hospitals, data centres, telecoms, and tunnels).

No need for on-site intervention

The Acti 9 introduces a new automatic recloser auxiliary (ARA iC60) designed to limit the cost of intervention on far away infrastructure sites. No need to have permanent on-site teams responding to transient faults, limiting distant site intervention costs.

Enhances service reliability

Acti 9 devices provide maximum continuity of service. Extended discrimination ranges allow for a variety of solutions for continuity of service, restricting downtime to only the affected circuit and leaving the rest of your installation intact.

Simple and Smart

The right solution for every application

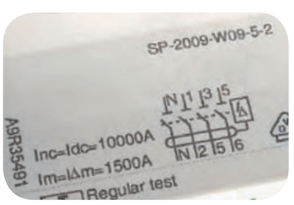
The Acti 9 simplifies final distribution operations in buildings and industrial facilities, giving you the right solution with the right technical characteristics, for every application. As new installation standards emerge or building requirements are modified, the Acti 9 system can easily scale to meet your needs. It s a flexible, open system with all-in-one, integrated components that can communicate with any building management system.

Designed to be simple to choose, easy to design, and straightforward to install

Easy to design and choose

The Acti 9 complies with IEC EN 947 (industrial) and IEC EN 898 (tertiary) standards ©two certifications in one product ©making it perfect for commercial and industrial applications.

Supports intuitive ordering and design



Meaningful part numbers mean no mistakes and no doubts when ordering or designing. Get the product type, poles and rating in one glance.

A9XXX 225 2P, 25A

Conforms to any BMS

Re ex iC60 has integrated signal auxiliaries for complete simplicity. Its control mode exibility easily adapts to changes in your installation, optimizing design time for lighting and building control.

Guarantees 100 coordination

100 percent coordination between RCDs and MCBs means no more searching through technical guides or coordination tables. Plus, in the Re ex iC60 the MCB and internal actuator are a unique all-in-one concept fully covered by the manufacturer warranty.

30%

of switchboards are modified at design, cabling, or commissioning stages, increasing pro ect start-up times.

Offers a new, economic MCB and RCCB range

The Acti 9 is optimized for simple applications. Its economic MCB and RCCB ranges are perfect for basic applications in tertiary and industrial operations.
- MCB: i 60N complies with IEC898 (single breaking capacity Icn=6000A)
- RCCB: iD 60 complies with IEC61008 (30mA and 300mA AC sensitivity)

These ranges do not include VisiSafe, VisiTrip, auxiliaries or accessories (except padlocking feature).

Note: this ic 60 section must be locally adapted in compliance with the local offer

Reflex iC60: the all-in-one concept intgrated control circuit breaker of the Acti 9 system

The Re ex iC60 combines an MCB with an internal actuator. Designed to evolve and adapt with the dynamic requirements of tertiary and industrial lighting control applications, it easily communicates with PLCs and BMS systems without the need for add-ons, retrofits, or extras. Everything you need is included.

Available only from Schneider Electric

Simple and Smart

Easy to install

Up to 50% less wiring

Reflex iC60 all -in-one concept means up to 50% less wiring for reduced cabling and more efficient verification and connection.

Lighting control solution without (left) with (right) Reflex iC60 “all in one concept”

Allows heavy-duty, reliable tightening

Twice the terminal tightening torque for more robust connections.

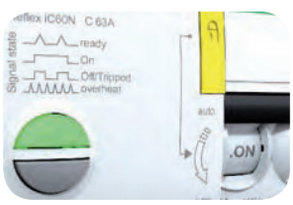
Safe and secure connections

Provides secure connections with quick, ergonomic and safe IP20B terminals shutters.

‘Everything is simpler with Acti 9. Whatever the application, I have no second thoughts’.

Easy to operate

Provides greater readability



Ergonomic interface with specific colour coding for locking padlocking devices. N indicator for easy readability and speed of servicing.

Allows quick intervention

Large area for circuit identification allows quick intervention and leaves no doubt about referenced circuits. Acti 9 label maker gives your installation a professional appearance.

Comes with tailored accessories

The Acti 9 system includes a comprehensive list of accessories: easily-installed padlock system, splitter block, rotary handle mount for switchboard doors, screw shields, sealable terminal shields, plug-in base, interpole barrier, and clip-on markers.

Easy to upgrade

Adapts to your installation

Double DIN rail locker allows circuit changeouts without removing the comb. It adapts to new requirements and simplifies switchboard evolution.

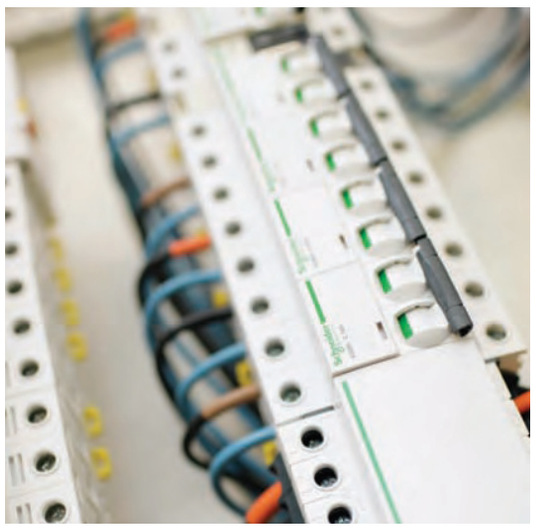
Evolves with changing site requirements

Multiclip distribution system allows you to quickly add outgoers and balance phases. Multiclip offers screwless, safe connections.

100%
coordination between MCB and actuator

15%
time saved on design and installation

Attractive and environmentally friendly



Acti 9 lets you touch and feel the difference.

Advanced ergonomics and attention to all detail

The Acti 9 is designed to be noticed. We incorporated clean lines with distinctive, gently rounded shapes to give the Acti 9 its faultless appearance. It immediately suggests well-designed and user-friendly aesthetics and particular attention to detail. Clarity of identified circuits and elegant appearance will have your customers impressed with their outstanding installations.

High quality, subtle, and precise

Holding the Acti 9 in your hand, you can feel the high quality. Contacts close quickly and precisely, with no hint of dubious noise. The solid fit of its components and its smooth surfaces mean you can feel the difference even before you use it.

"You can tell it's a high Quality product
when you hold it in your hands'.

A better use of energy, from start to finish

The Acti 9 helps you meet developing energy efficiency and environmental certifications or requirements, now and in the future. It minimizes impact from the design stage, through the installation s lifetime of use, and eventual recycling. Through both design and technology, the Acti 9 provides you with the key combination of less impact and more efficiency that is necessary for the environment today.

100%

recyclable and recoverable materials, RoHS compliant, and REACH

The Acti 9 is your safe, efficient, and simple choice for low voltage modular systems.

20%

savings in energy losses

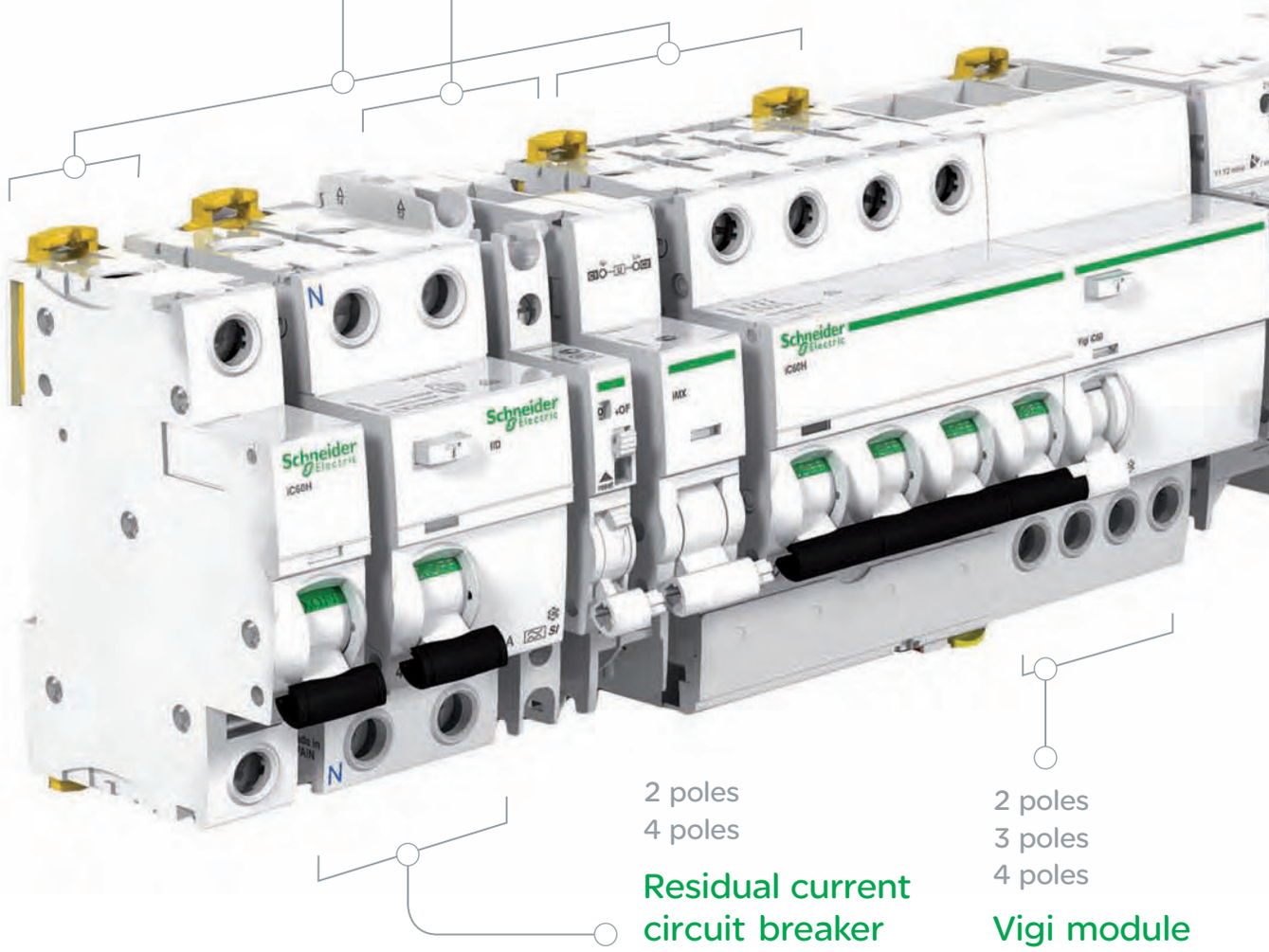
Acti 9 | Safe, efficient, simple, and smart

Circuit breakers

1 pole
2 poles
3 poles
4 poles

Electrical auxiliaries

Tripping, notification, indication, and remote status indication



2 poles
4 poles

Residual current circuit breaker

2 poles
3 poles
4 poles

Vigi module

100%
safe for installers and users in the most severe environments

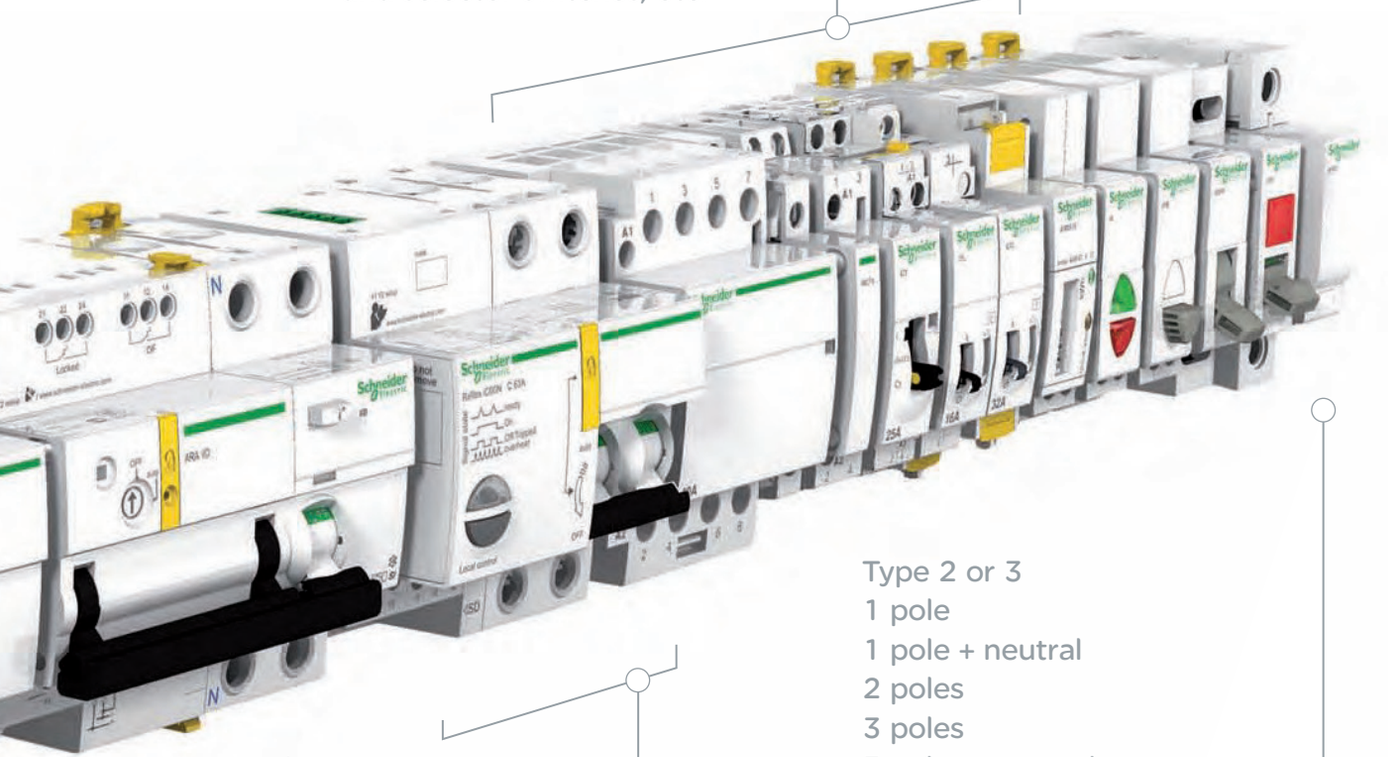
100%
coordination between MCB and actuator

100%
preventative maintenance

‘I always have the right solution, at the right price with the right technical characteristics for each application’.

Control

Contactors,
impulse relays,
indicator lights, push buttons,
and selector switches, etc.



Type 2 or 3
1 pole
1 pole + neutral
2 poles
3 poles
3 poles + neutral
4 poles

Surge Arresters

Automatic recloser auxiliaries

2 poles
3 poles
4 poles

Integrated remote control circuit breaker

15%
time saved on design and installation

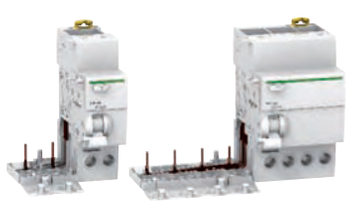
0%
downtime

>
The best choice for industrial and tertiary buildings

Technical characteristics

Circuit breakers	iC60a N, H, L, LMA
ICU (A) at 400V - IEC/EN 60898-1	6000, 10000, 15000
ICU (kA) at 415V - IEC/EN 60947-2	6,10, 15, 20, 25, 50, 70, 100
Type	1P, 2P, 3P, 4P
Rating (A)	0,5 to 63
Curves	B, C, D
Standards	IEC/EN 60947-2, 60898-1
Degree of protection	IP20/IP40

Add-on residual current devices	vigi iC60
RCD Type	Asi AC
Type	2P, 3P, 4P
Rating (A)	25, 40, 63
Standards	IEC/EN 61009-1
Sensitivity (mA)	10, 30, 100, 300, 300 S, 500, 500 S, 1000 S
Degree of protection	IP20/IP40
Connection between iC60 & iC60 vigi	'Quick connection' up to 40A



Residual current circuit-breakers	iID	iIDK
RCD Type	Asi, 2AC	AC
Type	2P, 4P	2P, 4P
Rating (A)	16 to 125	25, 40, 63
Standards	IEC/EN 61008-1	IEC/EN 61008-1
Sensitivity (mA)	10, 30, 100, 300, 300 S, 500, 500 S	30, 300
Degree of protection	IP20/IP40	IP40

Installation and wiring	Multiclip splitter block	Distribloc splitter block
Rating (A)	80	63
Degree of protection	IP20	IP20

Surge arresters type 2 or 3 — iPF, iPRD

Type	1P, 1P+N, 2P, 3P, 3P+N, 4P
I max (kA)	8, 20, 40, 65
Standards	IEC 61643-1, IEC 61643-11
Degree of protection	IP20/IP40

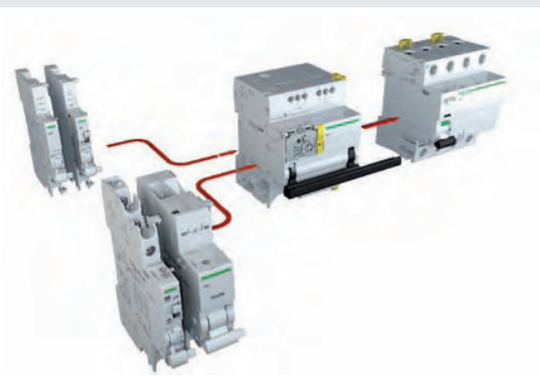
Integrated remote control MCBs — Reflex iC60N, iC60H

Curves	B, C, D
Type	2P, 3P, 4P
Rating (A)	10, 16, 25, 40
Standards	IEC 60947-2
Electrical endurance	30000 cycles (AC1) 6000 cycles (AC5 a/b) 50000 cycles (AC21)
Degree of protection	IP20/IP40

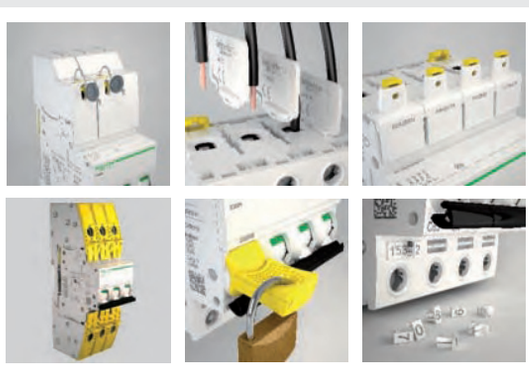
Control — iCT, iTL, iPB, iSSW, iIL, iEN, iME

Function	Contactors	Impulse Relays	Pushbuttons	Switches	Indicator Lights	kilowatt hour meters
Type	1P, 2P, 3P, 4P	1P, 2P	single, double, single + indicator light	1P, 2P, 3P, 4P	single, double, flashing light, voltage presence	single phase, three phases, three phases and neutral
Rating (A)	16, 25, 40	16 & 32	20	20 to 125		40 to 6000
Standards	IEC/EN 61095	EN 60669-1, EN 60669-2-2	IEC 60669-1, IEC 60947-5-1	IEC 60669-1, IEC 60669-2-4, IEC 60947-3, IEC 60947-5-1	IEC 60947-5-1	IEC 62053-21, IEC 61557-12
Electrical endurance (O-C operations)	100 per day	100.000 AC22(16A) 200.000 AC22(32A)	30,000 AC22	30,000 AC22		

Electrical auxiliaries and mounting accessories



Combined iOF, iSD, iMN, iMX, and iMSU electrical auxiliaries between iC60 circuit breakers and iID residual current circuit breakers, automatic recloser and remote control auxiliaries.



Terminal shields, interpole barrier, screw shields, plug-in base, padlocking device, clip-on terminal markers, and rotary handle.

Make the most of your energy

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Principle of catalogue numbers
iID, iC60, Vigi iC60, Reflex iC60

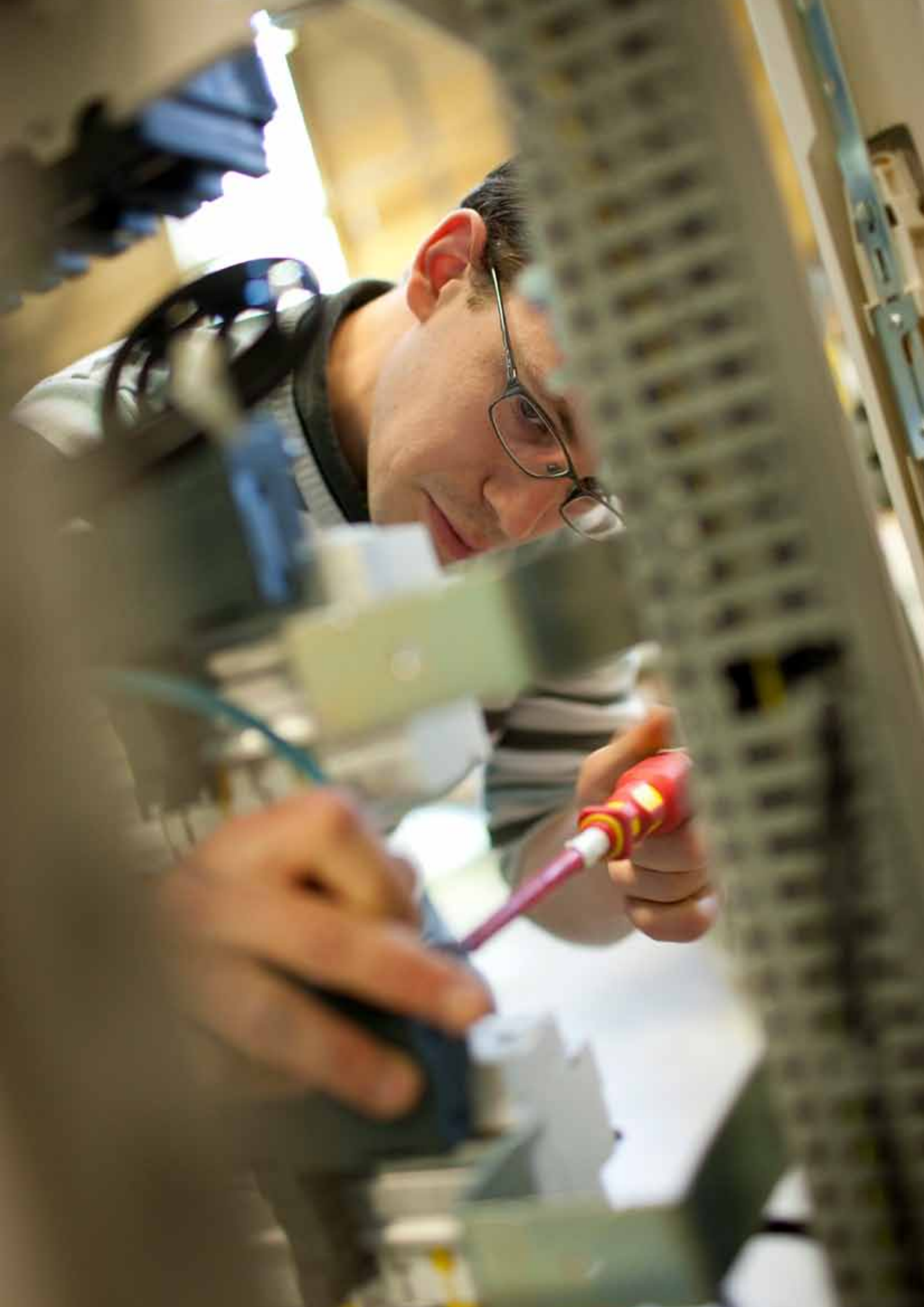
Description

Range	Family	Code
Acti9 (A9)	**iID**	**R**
	Vigi iC60	**V**
	iC60	**F**
	iK60	**K**
	Auxiliaries and accessories	**A**
	Switches	**S**
	Reflex iC60	**C**

Internal code

Poles	Code
0	**0**
1P	**1**
2P	**2**
3P	**3**
4P	**4**
1N	**5**
1P+N	**6**
3P+N	**7**

Rating (A)	Code
0	**00**
0.5	**70**
0.75	**71**
1	**01**
1.6	**72**
2	**02**
2.5	**73**
3	**03**
4	**04**
6	**06**
6.3	**76**
8	**08**
10	**10**
12.5	**82**
13	**13**
16	**16**
20	**20**
25	**25**
32	**32**
40	**40**
50	**50**
63	**63**
80	**80**
100	**91**
125	**92**



Circuit breaker panorama

Selection guide

Circuit breakers

Type			iC60A		iC60N	
						
Standard			IEC/EN 60898-1, 60947-2		IEC/EN 60947-2, 60898-1	
Quality label			Country approval pictogram		Country approval pictogram	
Number of poles			1P	2, 3, 4P –	1P, 1P+N	2, 3, 4P
Add-on residual current devices (Vigi)			■		■	
Auxiliaries for remote tripping and indication			■		■	
Electrical characteristics						
Curves			C		B, C, D	
Ratings (A)	In		1 to 63		0.5 to 63	
Maximum operational voltage (V)	Ue max	AC (50/60 Hz)	415		440	
		DC	–		250	
Minimum operational voltage (V)	Ue min	AC (50/60 Hz)	220		12	
		DC	–		12	
Insulation voltage (V AC)	Ui		500		500	
Rated impulse withstand voltage (kV)	Uimp		6		6	
Breaking capacity						
AC-Breaking capacity		**Ue (50/60 Hz)**	**Ph / N**	**Ph / Ph**	**Ph / N**	**Ph / Ph**
IEC 60947-2 (kA)	Icu	12...60 V	–	–	**50** (0.5 to 4 A) **36** (6 to 63 A)	–
		12...133 V	–	–	–	**50** (0.5 to 4 A) **36** (6 to 63 A)
		100...133 V	–	–	**50** (0.5 to 4 A) **20** (6 to 63 A)	–
		220...240 V	**6**	**10**	**50** (0.5 to 4 A) **10** (6 to 63 A)	**50** (0.5 to 4 A) **20** (6 to 63 A)
		380...415 V	–	**6**	–	**50** (0.5 to 4 A) **10** (6 to 63 A)
		440 V	–	–	–	**25** (0.5 to 4 A) **6** (6 to 63 A)
	Ics		100 % of Icu		100 % of Icu (0.5 to 4 A) 75 % of Icu (6 to 63 A)	
EN 60898 (A)	Icn	230/400 V	4500	4500	6000	6000
DC-Breaking capacity		**Ue DC**				
IEC 60947-2 (kA)	Icu	12...60 V (1P)	–	–	**15**	–
		100...133 V (2P)	–	–	–	**20**
		100...133 V (3P)	–	–	–	**30**
		220...250 V (4P)	–	–	–	**40**
	Ics		100 % of Icu		100 % of Icu	
Other characteristics						
Suitable for industrial isolation according to IEC/EN 60947-2			■		■	
Fault tripping indication			Visi-trip window		Visi-trip window	
Positive contact indication			■		■	
Fast closing			■		■	
Dismounting with comb busbar in place			Upstream connection		Upstream connection	
Degree of protection	IP	Device only	IP20		IP20	
		Device in modular enclosure	IP40 Insulation class II		IP40 Insulation class II	
For more detail, see module			**Page 32**		**Page 36**	
Accessories			**Pages 123 and 136**		**Pages 123 and 136**	
Auxiliaries			**Pages 123 and 136**		**Pages 155 and 168**	
Add-on residual current devices (Vigi)			**Page 82**		**Page 82**	

(1) 100 % of Icu for ratings 6 to 25 A under Ue 100 to 133 V AC Ph/Ph and Ue 12 to 60 V AC Ph/N.

Circuit breaker panorama (cont.)

	iC60H		iC60L		iC60LMA
					
	IEC/EN 60947-2, 60898-1		IEC/EN 60947-2, 60898-1		IEC/EN 60947-2
	Country approval pictogram		Country approval pictogram		Country approval pictogram
	1P	2, 3, 4P	1P	2, 3, 4P	2, 3
	■		■		■
	■		■		■
	B, C, D		B, C, K		MA
	0.5 to 63		0.5 to 63		1.6 to 40
	440		440		440
	250		250		250
	12		12		12
	12		12		12
	500		500		500
	6		6		6
	Ph / N	**Ph / Ph**	**Ph / N**	**Ph / Ph**	**Ue (50/60 Hz)**
	70 (0.5 to 4 A) **42** (6 to 63 A)	–	**100** (0.5 to 4 A) **70** (6 to 63 A)	**100** (0.5 to 4 A) **80** (6 to 63 A)	–
	–	**70** (0.5 to 4 A) **42** (6 to 63 A)	–	–	–
	70 (0.5 to 4 A) **30** (6 to 63 A)	–	**100** (0.5 to 4 A) **50** (6 to 25 A) **36** (32/40 A) **30** (50/63 A)	**100** (0.5 to 4 A) **70** (6 to 63 A)	–
	70 (0.5 to 4 A) **15** (6 to 63 A)	**70** (0.5 to 4 A) **30** (6 to 63 A)	**100** (0.5 to 4 A) **25** (6 to 25 A) **20** (32/40 A) **15** (50/63 A)	**100** (0.5 to 4 A) **50** (6 to 25 A) **36** (32/40 A) **30** (50/63 A)	**100** (1.6 to 4 A) **50** (6.3 to 25 A) **36** (40 A)
	–	**70** (0.5 to 4 A) **15** (6 to 63 A)	–	**100** (0.5 to 4 A) **25** (6 to 25 A) **20** (32/40 A) **15** (50/63 A)	**100** (1.6 to 4 A) **25** (6.3 to 25 A) **20** (40 A)
	–	**50** (0.5 to 4 A) **10** (6 to 63 A)	–	**70** (0.5 to 4 A) **20** (6 to 25 A) **15** (32/40 A) **10** (50/63 A)	**50** (1.6 to 4 A) **20** (6.3 to 25 A) **15** (40 A)
	100 % of Icu (0.5 to 4 A) 50 % of Icu (6 to 63 A)		100 % of Icu (0.5 to 4 A) 50 % of Icu (6 to 63 A)[1]		50 % of Icu (1.6 to 40 A)
	10000	10000	15000	15000	–
	20	–	**25**	–	–
	–	**25**	–	**30**	–
	–	**40**	–	**50**	–
	–	**50**	–	**70**	–
	100 % of Icu		100 % of Icu		–
	■		■		■
	Visi-trip window		Visi-trip window		Visi-trip window
	■		■		■
	■		■		■
	Upstream connection		Upstream connection		Upstream connection
	IP20		IP20		IP20
	IP40 Insulation class II		IP40 Insulation class II		IP40 Insulation class II
	Page 40		**Page 44**		**Page 48**
	Pages 123 and 136		**Pages 123 and 136**		**Pages 155 and 168**
	Pages 155 and 168		**Pages 155 and 168**		**Pages 155 and 168**
	Page 82		**Page 82**		**Page 82**

Circuit breaker panorama (cont.)

Selection guide (cont.)

Circuit breakers						
Type			**C120N**		**C120H**	
						
Standard			IEC 60947-2, IEC/EN 60898-1		IEC 60947-2, IEC/EN 60898-1	
Quality label			Country approval pictogram		Country approval pictogram	
Number of poles			1P	2, 3, 4P	1P	2, 3, 4P
Add-on residual current devices (Vigi)			■		■	
Auxiliaries for remote tripping and indication			■		■	
Electrical characteristics						
Curves			B, C, D		B, C, D	
Ratings (A)	In		63, 80, 100, 125		10 to 125	
Maximum operational voltage (V)	Ue max	AC (50/60 Hz)	240/440		240/440	
		DC	125 per pole		125 per pole	
Minimum operational voltage (V)	Ue min	AC (50/60 Hz)	12		12	
		DC	12		12	
Insulation voltage (V AC)	Ui		500		500	
Rated impulse withstand voltage (kV)	Uimp		6		6	
Breaking capacity						
AC-Breaking capacity		**Ue (50/60 Hz)**	**Ph / N**	**Ph / Ph**	**Ph / N**	**Ph / Ph**
IEC 60947-2 (kA)	Icu	110...130 V	–	–	–	–
		130 V	**20**	–	**30**	–
		220...240 V	–	–	–	–
		230/400 V	**10**	**20**	**15**	**30**
		380...415 V	–	–	–	–
		400/415 V	**3** (1)	**10**	**4.5** (1)	**15**
		440 V	–	**6**	–	**10**
		500 V	–	–	–	–
	Ics		75 % of Icu		50 % of Icu	
EN 60898 (A)	Icn	230/400 V	10000	10000	15000	15000
DC-Breaking capacity		**Ue DC**				
IEC 60947-2 (kA)	Icu	60 V (1P)	**10**	–	**15**	–
		125 V (1P)	**10**	–	**15**	–
		250 V (2P)	–	**10**	–	**15**
		500 V (4P)	–	–	–	–
	Ics		100 % of Icu		100 % of Icu	
Other characteristics						
Suitable for industrial isolation according to IEC/EN 60947-2			■		■	
Fault tripping indication			–		–	
Positive contact indication			■		■	
Fast closing			■		■	
Dismounting with comb busbar in place			Special comb busbar		Special comb busbar	
Degree of protection	IP	Device only	IP20		IP20	
		Device in modular enclosure	IP40		IP40	
For more detail, see module			**Page 60**		**Page 64**	
Accessories			**Page 123**		**Page 123**	
Auxiliaries			**Page 123**		**Page 123**	
Earth leakage module (Vigi)			**Page 89**		**Page 89**	

(1) Breaking capacity under 1 pole with IT isolated neutral system (case of double fault).

iC60a circuit breakers (curve C)

DB116619 DB123398 DB123399

IEC/EN 60947-2
IEC/EN 60898-1

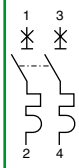
PB104439-40

PB104449-40

■ iC60a circuit breakers are multi-standard circuit breakers which combine the following functions:
- □ circuit protection against short-circuit currents,
- □ circuit protection against overload currents,
- □ suitable for industrial isolation according to IEC/EN 60947-2, standard.
- □ fault tripping indication by a red mechanical indicator in circuit breaker front face.

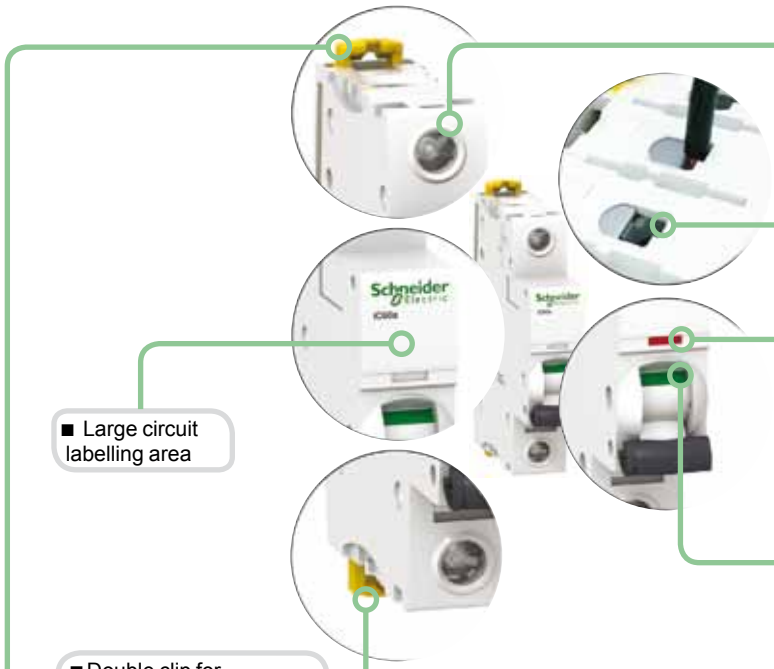
Alternating current (AC) 50/60 Hz				
Breaking capacity (Icu) according to IEC/EN 60947-2				**Service breaking capacity (Ics)**
		Voltage (Ue)		
Ph/Ph (2P, 3P, 4P)		**220 to 240 V**	**380 to 415 V**	
Ph/N (1P)			**220 to 240 V**	
Rating (In)	1 to 63 A	10 kA	6 kA	100 % of Icu
Breaking capacity (Icn) according to IEC/EN 60898-1				
		Voltage (Ue)		
Ph/Ph		**400 V**		
Ph/N		**230 V**		
Rating (In)	1 to 63 A	4500 A		

Catalogue numbers

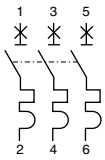
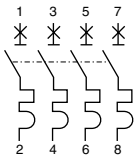
iC60a circuit breaker			
Type		**1P**	**2P**
			
Auxiliaries		**Remote tripping and indication, pages 123 and 136**	**Remote tripping and indication, pages 123 and 136**
Vigi iC60		**Vigi iC60 add-on residual current device, page 82**	**Vigi iC60 add-on residual current device, page 82**
Rating (In)	**Quality label**	**Curve**	**Curve**
		C	**C**
1 A		**A9F64101**	**A9F64201**
2 A		**A9F64102**	**A9F64202**
3 A		**A9F64103**	**A9F64203**
6 A		**A9F64106**	**A9F64206**
10 A		**A9F64110**	**A9F64210**
16 A		**A9F64116**	**A9F64216**
20 A		**A9F64120**	**A9F64220**
25 A		**A9F64125**	**A9F64225**
32 A		**A9F64132**	**A9F64232**
40 A		**A9F64140**	**A9F64240**
50 A		**A9F64150**	**A9F64250**
63 A		**A9F64163**	**A9F64263**
Width in 9-mm modules		2	4
Accessories		**Pages 123 and 136**	**Pages 123 and 136**

iC60a circuit breakers (curve C) (cont.)

PB104433-40

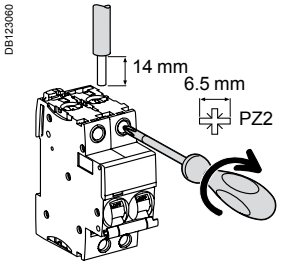


■ Increased product service life thanks to:
□ overvoltage resistance by high level of industrial performances conception (pollution degree, rated impulse withstand voltage and insulation voltage),
□ high performance limitation (see limitation curves),
□ fast closing independent of the speed of actuation of the toggle.
■ Remote indication, open/closed/tripped, by optional auxiliary contacts.
■ Top or bottom electrical feeding.

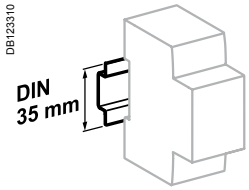
	3P	4P
		
	Remote tripping and indication, pages 123 and 136	**Remote tripping and indication, pages 123 and 136**
	Vigi iC60 add-on residual current device, page 82	**Vigi iC60 add-on residual current device, page 82**
	Curve	**Curve**
	C	**C**
	A9F64301	**A9F64401**
	A9F64302	**A9F64402**
	A9F64303	**A9F64403**
	A9F64306	**A9F64406**
	A9F64310	**A9F64410**
	A9F64316	**A9F64416**
	A9F64320	**A9F64420**
	A9F64325	**A9F64425**
	A9F64332	**A9F64432**
	A9F64340	**A9F64440**
	A9F64350	**A9F64450**
	A9F64363	**A9F64463**
	6	8
	Pages 123 and 136	**Pages 123 and 136**

iC60a circuit breakers (curve C) (cont.)

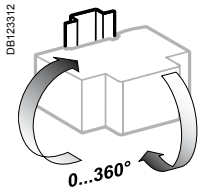
Connection



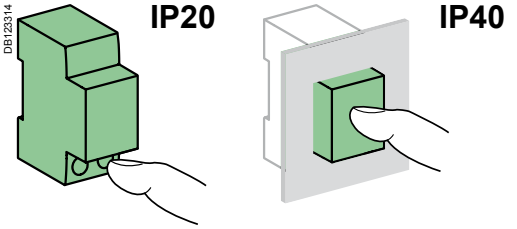
		Without accessory		With accessories			
Rating	Tightening torque	Copper cables		50 mm² Al terminal	Screw-on connection for ring terminal	Multi-cables terminal	
		Rigid	Flexible or ferrule			Rigid cables	Flexible cables
		DB122945	DB122946 DB122935	Al DB118789	DB118787		
1 to 25 A	2 N.m	1 to 25 mm²	1 to 16 mm²	-	Ø 5 mm	-	-
32 to 63 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²	50 mm²		3 x 16 mm²	3 x 10 mm²



Clip on DIN rail 35 mm.



Indifferent position of installation.



Technical data

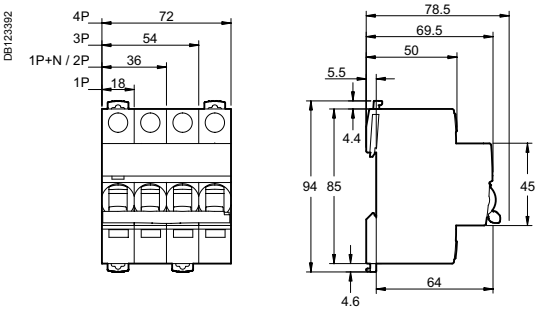
Main characteristics		
According to IEC/EN 60947-2		
Insulation voltage (Ui)		500 V AC
Pollution degree		3
Rated impulse withstand voltage (Uimp)		6 kV
Thermal tripping	Reference temperature	50 °C
	Temperature derating	See page 233
Magnetic tripping	C curve	8 In ± 20 %
Utilization category		A
According to IEC/EN 60898-1		
Limitation class		3
Rated making and breaking capacity of an individual pole (Icn1)		Icn1 = Icn
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40 Insulation class II
Endurance (O-C)	Electrical	10,000 cycles
	Mechanical	20,000 cycles
Overvoltage category (IEC 60364)		IV
Operating temperature		-35°C to +70°C
Storage temperature		-40°C to +85°C
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95 % to 55°C)

iC60a circuit breakers (curve C) (cont.)

Weight (g)

Circuit-breaker	
Type	**iC60a**
1P	125
2P	250
3P	375
4P	500

Dimensions (mm)



iC60N circuit breakers (curve B, C, D)

DB106604 DB123398 DB116619


PB104437-40


PB104450-40

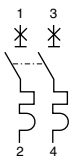
IEC/EN 60947-2
IEC/EN 60898-1

■ iC60N circuit breakers are multi-standard circuit breakers which combine the following functions:
- □ circuit protection against short-circuit currents,
- □ circuit protection against overload currents,
- □ suitable for industrial isolation according to IEC/EN 60947-2, standard.
- □ fault tripping indication by a red mechanical indicator in circuit breaker front face.

Alternating current (AC) 50/60 Hz						
Breaking capacity (Icu) according to IEC/EN 60947-2						**Service breaking capacity (Ics)**
		Voltage (Ue)				
Ph/Ph (2P, 3P, 4P)		**12 to 133 V**	**220 to 240 V**	**380 to 415 V**	**440 V**	
Ph/N (1P, 1P+N)		**12 to 60 V**	**100 to 133 V**	**220 to 240 V**	**-**	
Rating (In)	0.5 to 4 A	50 kA	50 kA	50 kA	25 kA	100 % of Icu
	6 to 63 A	36 kA	20 kA	10 kA	6 kA	75 % of Icu
Breaking capacity (Icn) according to IEC/EN 60898-1						
		Voltage (Ue)				
Ph/Ph		**400 V**				
Ph/N		**230 V**				
Rating (In)	0.5 to 63 A	6000 A				

Direct current (DC)						
Breaking capacity (Icu) according to IEC/EN 60947-2						**Service breaking capacity (Ics)**
		Voltage (Ue)				
Between +/-		**12 to 72 V**	**100 to 133 V**		**220 to 250 V**	
Number of poles		**1P**	**2P (in series)**	**3P (in series)**	**4P (in series)**	
Rating (In)	1 to 63 A	6 kA	6 kA	6 kA	6 kA	100 % of Icu

Catalogue numbers

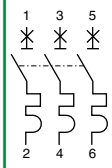
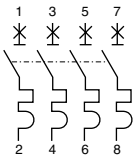
iC60N circuit breaker						
Type	**1P**			**2P**		
						
Auxiliaries	**Remote tripping and indication, pages 123 and 136**			**Remote tripping and indication, pages 123 and 136**		
Vigi iC60	**Vigi iC60 add-on residual current device, page 82**			**Vigi iC60 add-on residual current device, page 82**		
Rating (In)	**Curve**			**Curve**		
	B(2)	**C**	**D**(1)	**B**(2)	**C**	**D**(1)
0.5 A(1)	**A9F73170**	**A9F74170**	**A9F75170**	**A9F73270**	**A9F74270**	**A9F75270**
1 A(1)	**A9F73101**	**A9F74101**	**A9F75101**	**A9F73201**	**A9F74201**	**A9F75201**
2 A(1)	**A9F73102**	**A9F74102**	**A9F75102**	**A9F73202**	**A9F74202**	**A9F75202**
3 A(1)	**A9F73103**	**A9F74103**	**A9F75103**	**A9F73203**	**A9F74203**	**A9F75203**
4 A(1)	**A9F73104**	**A9F74104**	**A9F75104**	**A9F73204**	**A9F74204**	**A9F75204**
6 A	**A9F76106**	**A9F77106**	**A9F75106**	**A9F76206**	**A9F77206**	**A9F75206**
10 A	**A9F76110**	**A9F77110**	**A9F75110**	**A9F76210**	**A9F77210**	**A9F75210**
13 A(1)	**A9F73113**	**A9F74113**	**A9F75113**	**A9F73213**	**A9F74213**	**A9F75213**
16 A	**A9F76116**	**A9F77116**	**A9F75116**	**A9F76216**	**A9F77216**	**A9F75216**
20 A	**A9F76120**	**A9F77120**	**A9F75120**	**A9F76220**	**A9F77220**	**A9F75220**
25 A	**A9F76125**	**A9F77125**	**A9F75125**	**A9F76225**	**A9F77225**	**A9F75225**
32 A	**A9F76132**	**A9F77132**	**A9F75132**	**A9F76232**	**A9F77232**	**A9F75232**
40 A	**A9F76140**	**A9F77140**	**A9F75140**	**A9F76240**	**A9F77240**	**A9F75240**
50 A	**A9F76150**	**A9F77150**	**A9F75150**	**A9F76250**	**A9F77250**	**A9F75250**
63 A	**A9F76163**	**A9F77163**	**A9F75163**	**A9F76263**	**A9F77263**	**A9F75263**
Width in 9-mm modules	2			4		
Accessories	**Pages 123 and 136**			**Pages 123 and 136**		

(1) VDE approved only. *(2) only NF and VDE.*

iC60N circuit breakers (curve B, C, D) (cont.)

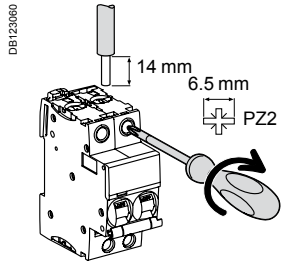
PB104434-40

■ Increased product service life thanks to:
□ overvoltage resistance by high level of industrial performances conception (pollution degree, rated impulse withstand voltage and insulation voltage),
□ high performance limitation (see limitation curves),
□ fast closing independent of the speed of actuation of the toggle.
■ Remote indication, open/closed/tripped, by optional auxiliary contacts.
■ Top or bottom electrical feeding.

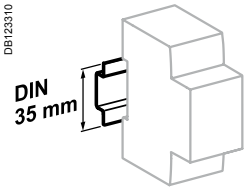
	3P			4P		
						
	Remote tripping and indication, pages 123 and 136			**Remote tripping and indication, pages 123 and 136**		
	Vigi iC60 add-on residual current device, page 82			**Vigi iC60 add-on residual current device, page 82**		
	Curve			**Curve**		
	B(2)	**C**	**D**(1)	**B**(2)	**C**	**D**(1)
	A9F73370	**A9F74370**	**A9F75370**	**A973470**	**A9F74470**	**A9F75470**
	A9F73301	**A9F74301**	**A9F75301**	**A9F73401**	**A9F74401**	**A9F75401**
	A9F73302	**A9F74302**	**A9F75302**	**A9F73402**	**A9F74402**	**A9F75402**
	A9F73303	**A9F74303**	**A9F75303**	**A9F73403**	**A9F74403**	**A9F75403**
	A9F73304	**A9F74304**	**A9F75304**	**A9F73404**	**A9F74404**	**A9F75404**
	A9F76306	**A9F77306**	**A9F75306**	**A9F76406**	**A9F77406**	**A9F75406**
	A9F76310	**A9F77310**	**A9F75310**	**A9F76410**	**A9F77410**	**A9F75410**
	A9F73313	**A9F74313**	**A9F75313**	**A9F73413**	**A9F74413**	**A9F75413**
	A9F76316	**A9F77316**	**A9F75316**	**A9F76416**	**A9F77416**	**A9F75416**
	A9F76320	**A9F77320**	**A9F75320**	**A9F76420**	**A9F77420**	**A9F75420**
	A9F76325	**A9F77325**	**A9F75325**	**A9F76425**	**A9F77425**	**A9F75425**
	A9F76332	**A9F77332**	**A9F75332**	**A9F76432**	**A9F77432**	**A9F75432**
	A9F76340	**A9F77340**	**A9F75340**	**A9F76440**	**A9F77440**	**A9F75440**
	A9F76350	**A9F77350**	**A9F75350**	**A9F76450**	**A9F77450**	**A9F75450**
	A9F76363	**A9F77363**	**A9F75363**	**A9F76463**	**A9F77463**	**A9F75463**
	6			8		
	Pages 123 and 136			**Pages 123 and 136**		

iC60N circuit breakers (curve B, C, D) (cont.)

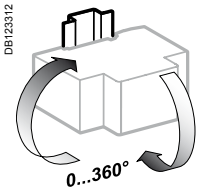
Connection



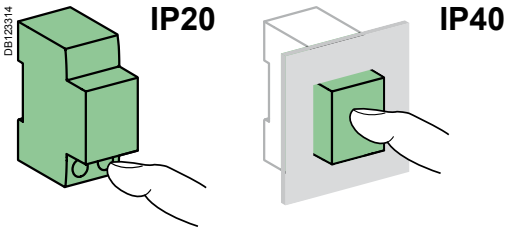
Rating	Tightening torque	Without accessory: Copper cables – Rigid	Without accessory: Copper cables – Flexible or ferrule	With accessories: 50 mm² Al terminal	With accessories: Screw-on connection for ring terminal	With accessories: Multi-cables terminal – Rigid cables	With accessories: Multi-cables terminal – Flexible cables
		DB122945	DB122946 DB122935	Al DB118789	DB118787 Ø		
0.5 to 25 A	2 N.m	1 to 25 mm²	1 to 16 mm²	-	Ø 5 mm	-	-
32 to 63 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²	50 mm²		3 x 16 mm²	3 x 10 mm²



Clip on DIN rail 35 mm.



Indifferent position of installation.



Technical data

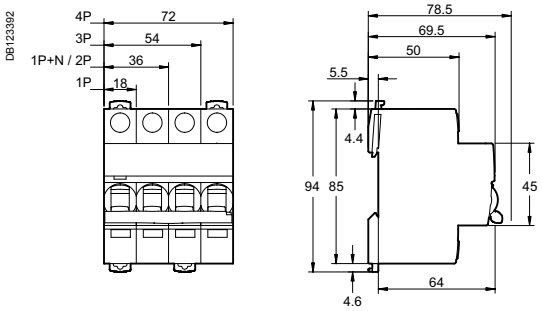
Main characteristics		
According to IEC/EN 60947-2		
Insulation voltage (Ui)		500 V AC
Pollution degree		3
Rated impulse withstand voltage (Uimp)		6 kV
Thermal tripping	Reference temperature	50 °C
	Temperature derating	See page 233
Magnetic tripping	B curve	4 In ± 20 %
	C curve	8 In ± 20 %
	D curve	12 In ± 20 %
Utilization category		A
According to IEC/EN 60898-1		
Limitation class		3
Rated making and breaking capacity of an individual pole (Icn1)		Icn1 = Icn
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40 Insulation class II
Endurance (O-C)	Electrical	10,000 cycles
	Mechanical	20,000 cycles
Overvoltage category (IEC 60364)		IV
Operating temperature		-35°C to +70°C
Storage temperature		-40°C to +85°C
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95 % to 55°C)

iC60N circuit breakers (curve B, C, D) (cont.)

Weight (g)

Circuit-breaker	
Type	**iC60N**
1P	125
2P	250
3P	375
4P	500

Dimensions (mm)



iC60H circuit breakers (curve B, C, D)

DB106604 DB123398 DB116619


PB104441-40


PB104451-40

IEC/EN 60947-2
IEC/EN 60898-1

■ iC60H circuit breakers are multi-standard circuit breakers which combine the following functions:
□ circuit protection against short-circuit currents,
□ circuit protection against overload currents,
□ suitable for industrial isolation according to IEC/EN 60947-2, standard.
□ fault tripping indication by a red mechanical indicator in circuit breaker front face.

Alternating current (AC) 50/60 Hz

Breaking capacity (Icu) according to IEC/EN 60947-2						Service breaking capacity (Ics)
		Voltage (Ue)				
Ph/Ph (2P, 3P, 4P)		12 to 133 V	220 to 240 V	380 to 415 V	440 V	
Ph/N (1P, 1P+N)		12 to 60 V	100 to 133 V	220 to 240 V	-	
Rating (In)	0.5 to 4 A	70 kA	70 kA	70 kA	50 kA	100 % of Icu
	6 to 40 A	42 kA	30 kA	15 kA	10 kA	50 % of Icu
	50/63 A	42 kA	-	15 kA	10 kA	50 % of Icu

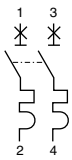
Breaking capacity (Icn) according to IEC/EN 60898-1		
		Voltage (Ue)
Ph/Ph		400 V
Ph/N		230 V
Rating (In)	0.5 to 63 A	10000 A

Direct current (DC)

Breaking capacity (Icu) according to IEC/EN 60947-2						Service breaking capacity (Ics)
		Voltage (Ue)				
Between +/-		12 to 72 V	100 to 133 V		220 to 250 V	
Number of poles		1P	2P (in series)	3P (in series)	4P (in series)	
Rating (In)	1 to 63 A	10 kA	10 kA	10 kA	10 kA	100 % of Icu

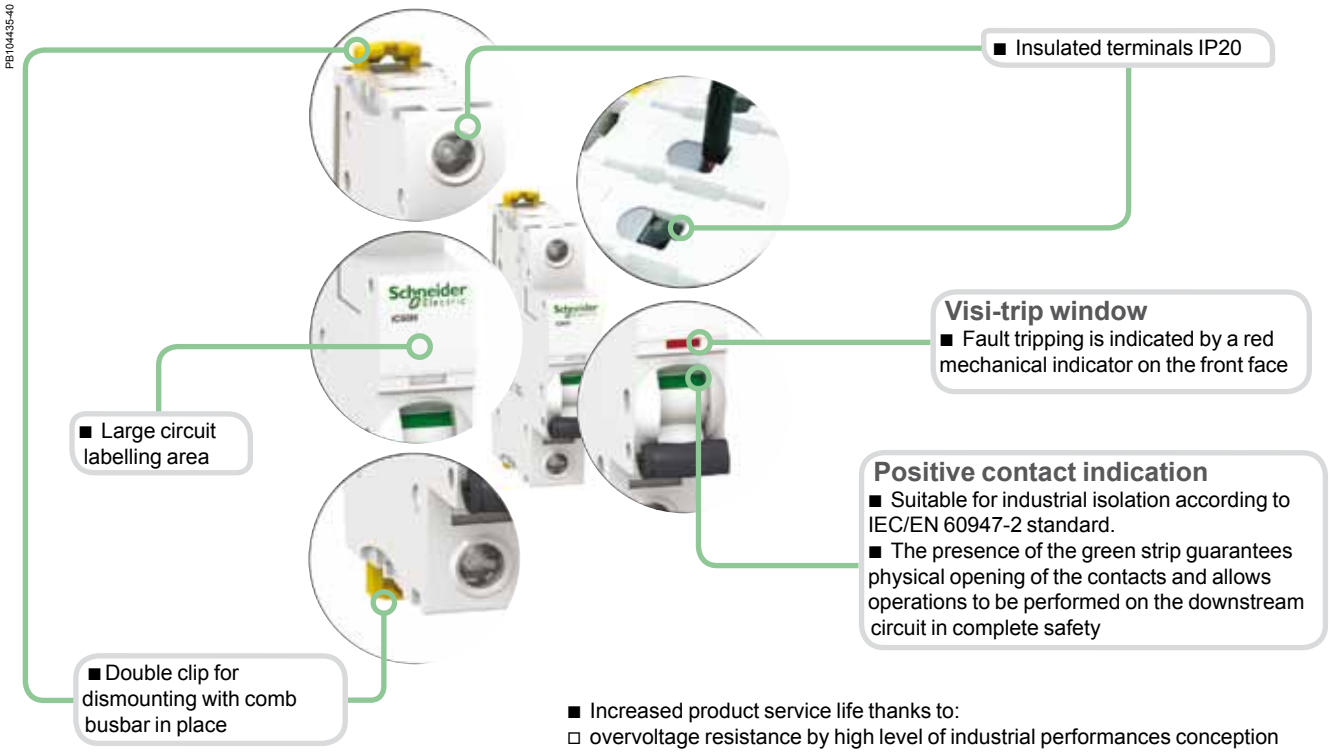
Catalogue numbers

iC60H circuit breaker

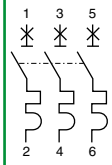
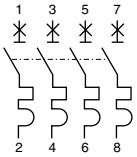
Type	1P			2P		
						
Auxiliaries	Remote tripping and indication, pages 123 and 136			Remote tripping and indication, pages 123 and 136		
Vigi iC60	Vigi iC60 add-on residual current device, page 82			Vigi iC60 add-on residual current device, page 82		
Rating (In)	Curve			Curve		
	B[2]	C	D[1]	B[2]	C	D[1]
0.5 A[1]	A9F83170	A9F84170	A9F85170	A9F83270	A9F84270	A9F85270
1 A[1]	A9F83101	A9F84101	A9F85101	A9F83201	A9F84201	A9F85201
2 A[1]	A9F83102	A9F84102	A9F85102	A9F83202	A9F84202	A9F85202
3 A[1]	A9F83103	A9F84103	A9F85103	A9F83203	A9F84203	A9F85203
4 A[1]	A9F83104	A9F84104	A9F85104	A9F83204	A9F84204	A9F85204
6 A	A9F86106	A9F87106	A9F85106	A9F86206	A9F87206	A9F85206
10 A	A9F86110	A9F87110	A9F85110	A9F86210	A9F87210	A9F85210
13 A[1]	A9F83113	A9F84113	A9F85113	A9F83213	A9F84213	A9F85213
16 A	A9F86116	A9F87116	A9F85116	A9F86216	A9F87216	A9F85216
20 A	A9F86120	A9F87120	A9F85120	A9F86220	A9F87220	A9F85220
25 A	A9F86125	A9F87125	A9F85125	A9F86225	A9F87225	A9F85225
32 A	A9F86132	A9F87132	A9F85132	A9F86232	A9F87232	A9F85232
40 A	A9F86140	A9F87140	A9F85140	A9F86240	A9F87240	A9F85240
50 A	A9F86150	A9F87150	A9F85150	A9F86250	A9F87250	A9F85250
63 A	A9F86163	A9F87163	A9F85163	A9F86263	A9F87263	A9F85263
Width in 9-mm modules	2			4		
Accessories	Pages 123 and 136			Pages 123 and 136		

(1) VDE approved only. *(2) only NF and VDE.*

iC60H circuit breakers (curve B, C, D) (cont.)

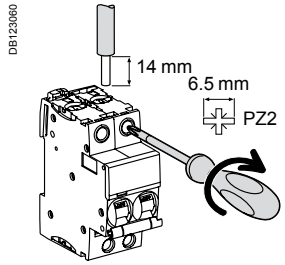


■ Increased product service life thanks to:
□ overvoltage resistance by high level of industrial performances conception (pollution degree, rated impulse withstand voltage and insulation voltage),
□ high performance limitation (see limitation curves),
□ fast closing independent of the speed of actuation of the toggle.
■ Remote indication, open/closed/tripped, by optional auxiliary contacts.
■ Top or bottom electrical feeding.

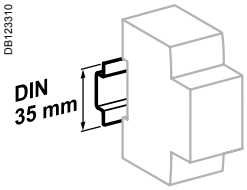
	3P			4P		
						
	Remote tripping and indication, pages 123 and 136			**Remote tripping and indication, pages 123 and 136**		
	Vigi iC60 add-on residual current device, page 82			**Vigi iC60 add-on residual current device, page 82**		
	Curve			**Curve**		
	B(2)	**C**	**D**(1)	**B**(2)	**C**	**D**(1)
	A9F83370	**A9F84370**	**A9F85370**	**A9F83470**	**A9F84470**	**A9F85470**
	A9F83301	**A9F84301**	**A9F85301**	**A9F83401**	**A9F84401**	**A9F85401**
	A9F83302	**A9F84302**	**A9F85302**	**A9F83402**	**A9F84402**	**A9F85402**
	A9F83303	**A9F84303**	**A9F85303**	**A9F83403**	**A9F84403**	**A9F85403**
	A9F83304	**A9F84304**	**A9F85304**	**A9F83404**	**A9F84404**	**A9F85404**
	A9F86306	**A9F87306**	**A9F85306**	**A9F86406**	**A9F87406**	**A9F85406**
	A9F86310	**A9F87310**	**A9F85310**	**A9F86410**	**A9F87410**	**A9F85410**
	A9F83313	**A9F84313**	**A9F85313**	**A9F83413**	**A9F84413**	**A9F85413**
	A9F86316	**A9F87316**	**A9F85316**	**A9F86416**	**A9F87416**	**A9F85416**
	A9F86320	**A9F87320**	**A9F85320**	**A9F86420**	**A9F87420**	**A9F85420**
	A9F86325	**A9F87325**	**A9F85325**	**A9F86425**	**A9F87425**	**A9F85425**
	A9F86332	**A9F87332**	**A9F85332**	**A9F86432**	**A9F87432**	**A9F85432**
	A9F86340	**A9F87340**	**A9F85340**	**A9F86440**	**A9F87440**	**A9F85440**
	A9F86350	**A9F87350**	**A9F85350**	**A9F86450**	**A9F87450**	**A9F85450**
	A9F86363	**A9F87363**	**A9F85363**	**A9F86463**	**A9F87463**	**A9F85463**
	6			8		
	Pages 123 and 136			**Pages 123 and 136**		

iC60H circuit breakers (curve B, C, D) (cont.)

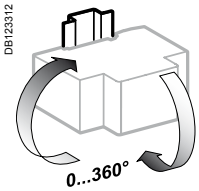
Connection



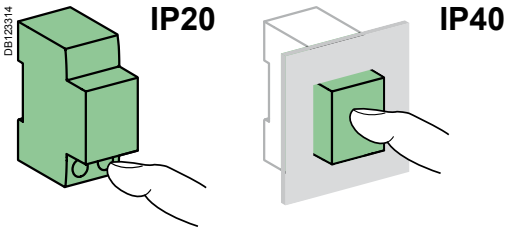
Rating	Tightening torque	Without accessory: Copper cables – Rigid	Without accessory: Copper cables – Flexible or ferrule	With accessories: 50 mm² Al terminal	With accessories: Screw-on connection for ring terminal	With accessories: Multi-cables terminal – Rigid cables	With accessories: Multi-cables terminal – Flexible cables
		DB122945	DB122946	DB122935	DB118789 DB118787		
0.5 to 25 A	2 N.m	1 to 25 mm²	1 to 16 mm²	-	Ø 5 mm	-	-
32 to 63 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²	50 mm²		3 x 16 mm²	3 x 10 mm²



Clip on DIN rail 35 mm.



Indifferent position of installation.



Technical data

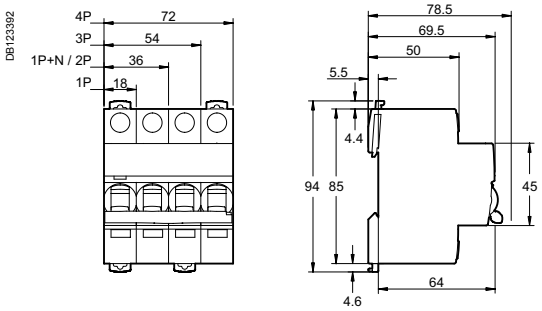
Main characteristics		
According to IEC/EN 60947-2		
Insulation voltage (Ui)		500 V AC
Pollution degree		3
Rated impulse withstand voltage (Uimp)		6 kV
Thermal tripping	Reference temperature	50 °C
	Temperature derating	See page 233
Magnetic tripping	B curve	4 In ± 20 %
	C curve	8 In ± 20 %
	D curve	12 In ± 20 %
Utilization category		A
According to IEC/EN 60898-1		
Limitation class		3
Rated making and breaking capacity of an individual pole (Icn1)		Icn1 = Icn
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40 Insulation class II
Endurance (O-C)	Electrical	10,000 cycles
	Mechanical	20,000 cycles
Overvoltage category (IEC 60364)		IV
Operating temperature		-35°C to +70°C
Storage temperature		-40°C to +85°C
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95 % to 55°C)

iC60H circuit breakers (curve B, C, D) (cont.)

Weight (g)

Circuit-breaker	
Type	**iC60H**
1P	125
2P	250
3P	375
4P	500

Dimensions (mm)



iC60L circuit breakers (curve B, C, K)

DB116619 DB123925


PB104442-40


PB104452-40

IEC/EN 60947-2
IEC/EN 60898-1 up to 40 A

■ iC60L circuit breakers are multi-standard circuit breakers which combine the following functions:
□ circuit protection against short-circuit currents,
□ circuit protection against overload currents,
□ suitable for industrial isolation according to IEC/EN 60947-2, standard.
□ fault tripping indication by a red mechanical indicator in circuit breaker front face.

Alternating current (AC) 50/60 Hz

Breaking capacity (Icu) according to IEC/EN 60947-2						Service breaking capacity (Ics)
		Voltage (Ue)				
Ph/Ph (2P, 3P, 4P)		12 to 133 V	220 to 240 V	380 to 415 V	440 V	
Ph/N (1P)		12 to 60 V	100 to 133 V	220 to 240 V	-	
Rating (In)	0.5 to 4 A	100 kA	100 kA	100 kA	70 kA	100 % of Icu
	6 to 25 A	70 kA	-	25 kA	20 kA	50 % of Icu (1)
	32 / 40 A	70 kA	-	20 kA	15 kA	50 % of Icu
	50 / 63 A	70 kA	-	15 kA	10 kA	50 % of Icu

Breaking capacity (Icn) according to IEC/EN 60898-1		
		Voltage (Ue)
Ph/Ph		400 V
Ph/N		230 V
Rating (In)	0.5 to 40 A	15000 A

Direct current (DC)

Breaking capacity (Icu) according to IEC/EN 60947-2						Service breaking capacity (Ics)
		Voltage (Ue)				
Between +/-		12 to 72 V	100 to 144 V		220 to 250 V	
Number of poles		1P	2P (in series)	3P (in series)	4P (in series)	
Rating (In)	1 to 63 A	15 kA	15 kA	15 kA	15 kA	100 % of Icu

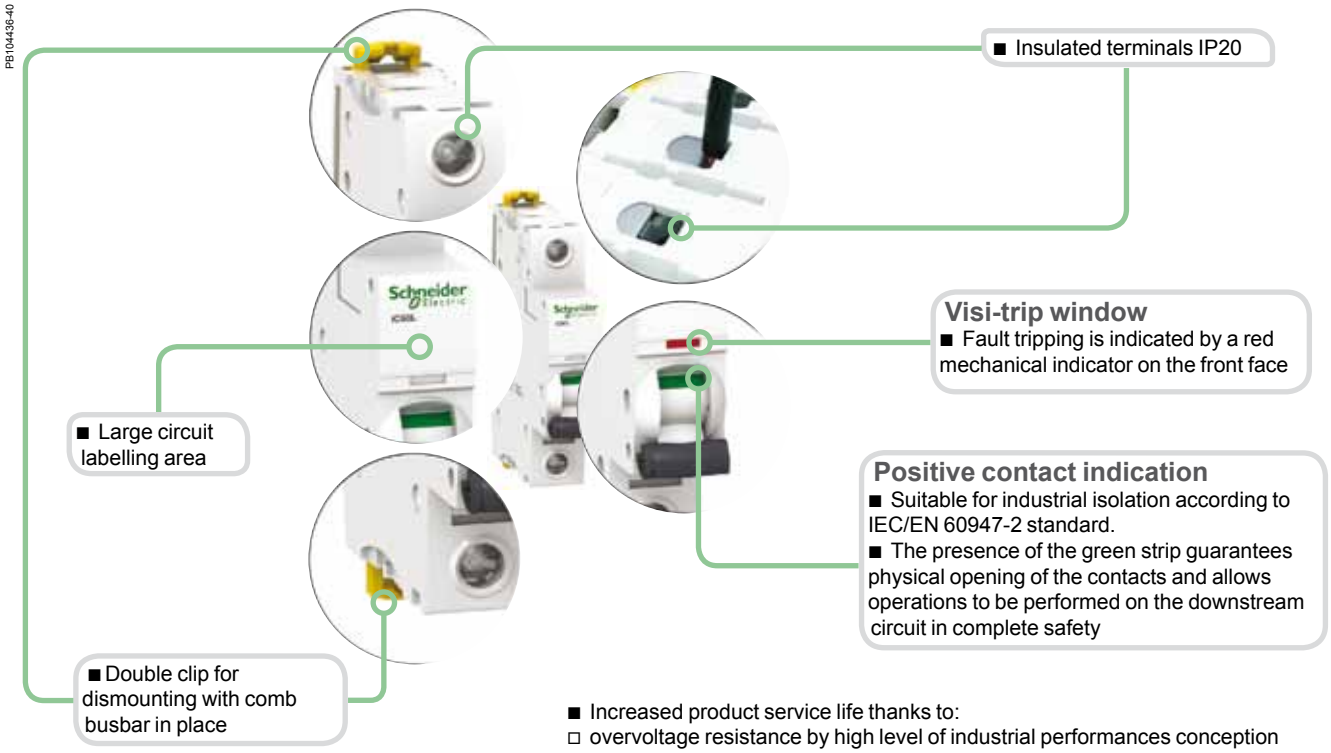
Catalogue numbers

iC60L circuit breaker

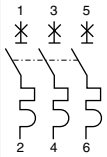
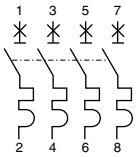
Type		1P			2P		
							
Auxiliaries		Remote tripping and indication, pages 123 and 136			Remote tripping and indication, pages 123 and 136		
Vigi iC60		Vigi iC60 add-on residual current device, page 82			Vigi iC60 add-on residual current device, page 82		
Rating (In)	Quality label (2)	Curve			Curve		
		B	C	K	B	C	K
0.5 A		A9F93170	A9F94170	A9F95170	A9F93270	A9F94270	A9F95270
1 A		A9F93101	A9F94101	A9F95101	A9F93201	A9F94201	A9F95201
1.6 A		-	-	A9F95172	-	-	A9F95272
2 A		A9F93102	A9F94102	A9F95102	A9F93202	A9F94202	A9F95202
3 A		A9F93103	A9F94103	A9F95103	A9F93203	A9F94203	A9F95203
4 A		A9F93104	A9F94104	A9F95104	A9F93204	A9F94204	A9F95204
6 A		A9F93106	A9F94106	A9F95106	A9F93206	A9F94206	A9F95206
10 A		A9F93110	A9F94110	A9F95110	A9F93210	A9F94210	A9F95210
16 A		A9F93116	A9F94116	A9F95116	A9F93216	A9F94216	A9F95216
20 A		A9F93120	A9F94120	A9F95120	A9F93220	A9F94220	A9F95220
25 A		A9F93125	A9F94125	A9F95125	A9F93225	A9F94225	A9F95225
32 A		A9F93132	A9F94132	A9F95132	A9F93232	A9F94232	A9F95232
40 A		A9F93140	A9F94140	A9F95140	A9F93240	A9F94240	A9F95240
50 A		A9F93150	A9F94150	A9F95150 (3)	A9F93250	A9F94250	A9F95250
63 A		A9F93163	A9F94163	A9F95163 (3)	A9F93263	A9F94263	A9F95263
Width in 9-mm modules		2			4		
Accessories		Pages 123 and 136			Pages 123 and 136		

(1) 100 % of Icu for ratings 6 to 25 A under Ue 100 to 133 V AC Ph/Ph and Ue 12 to 60 V AC Ph/N.
(2) Information to be provided by the country.
(3) Without approval.

iC60L circuit breakers (curve B, C, K) (cont.)

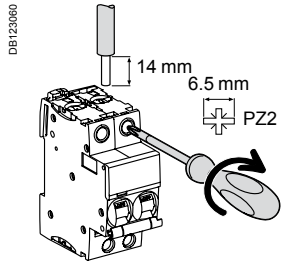


■ Increased product service life thanks to:
□ overvoltage resistance by high level of industrial performances conception (pollution degree, rated impulse withstand voltage and insulation voltage),
□ high performance limitation (see limitation curves),
□ fast closing independent of the speed of actuation of the toggle.
■ Remote indication, open/closed/tripped, by optional auxiliary contacts.
■ Top or bottom electrical feeding.

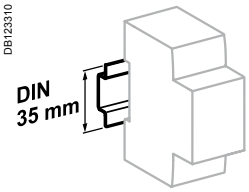
	3P			4P		
						
	Remote tripping and indication, pages 123 and 136			**Remote tripping and indication, pages 123 and 136**		
	Vigi iC60 add-on residual current device, page 82			**Vigi iC60 add-on residual current device, page 82**		
	Curve			**Curve**		
	B	**C**	**K**	**B**	**C**	**K**
	A9F93370	**A9F94370**	**A9F95370**	**A9F93470**	**A9F94470**	**A9F95470**
	A9F93301	**A9F94301**	**A9F95301**	**A9F93401**	**A9F94401**	**A9F95401**
	-	**-**	**A9F95372**	**-**	**-**	**A9F95472**
	A9F93302	**A9F94302**	**A9F95302**	**A9F93402**	**A9F94402**	**A9F95402**
	A9F93303	**A9F94303**	**A9F95303**	**A9F93403**	**A9F94403**	**A9F95403**
	A9F93304	**A9F94304**	**A9F95304**	**A9F93404**	**A9F94404**	**A9F95404**
	A9F93306	**A9F94306**	**A9F95306**	**A9F93406**	**A9F94406**	**A9F95406**
	A9F93310	**A9F94310**	**A9F95310**	**A9F93410**	**A9F94410**	**A9F95410**
	A9F93316	**A9F94316**	**A9F95316**	**A9F93416**	**A9F94416**	**A9F95416**
	A9F93320	**A9F94320**	**A9F95320**	**A9F93420**	**A9F94420**	**A9F95420**
	A9F93325	**A9F94325**	**A9F95325**	**A9F93425**	**A9F94425**	**A9F95425**
	A9F93332	**A9F94332**	**A9F95332**	**A9F93432**	**A9F94432**	**A9F95432**
	A9F93340	**A9F94340**	**A9F95340**	**A9F93440**	**A9F94440**	**A9F95440**
	A9F93350	**A9F94350**	**A9F95350**	**A9F93450**	**A9F94450**	**A9F95450**
	A9F93363	**A9F94363**	**A9F95363**	**A9F93463**	**A9F94463**	**A9F95463**
	4			6		
	Pages 123 and 136			**Pages 123 and 136**		

iC60L circuit breakers (curve B, C, K) (cont.)

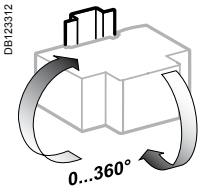
Connection



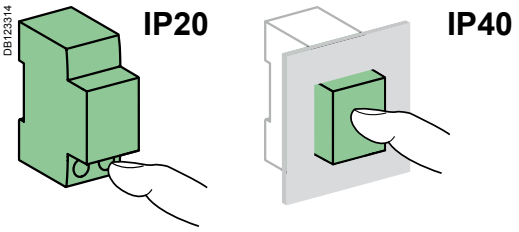
Rating	Tightening torque	Without accessory: Copper cables – Rigid	Without accessory: Copper cables – Flexible or ferrule	With accessories: 50 mm² Al terminal	With accessories: Screw-on connection for ring terminal	With accessories: Multi-cables terminal – Rigid cables	With accessories: Multi-cables terminal – Flexible cables
		DB122945	DB122946 DB122935	Al DB118789	DB118787 Ø		
0.5 to 25 A	2 N.m	1 to 25 mm²	1 to 16 mm²	-	Ø 5 mm	-	-
32 to 63 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²	50 mm²		3 x 16 mm²	3 x 10 mm²



Clip on DIN rail 35 mm.



Indifferent position of installation.



Technical data

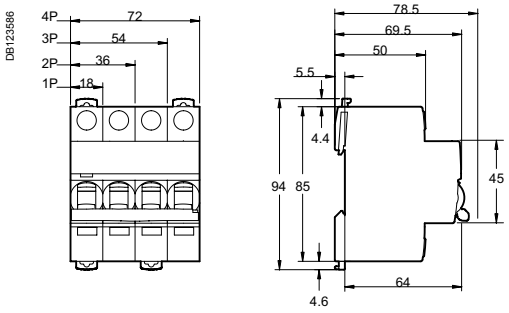
Main characteristics		
According to IEC/EN 60947-2		
Insulation voltage (Ui)		500 V AC
Pollution degree		3
Rated impulse withstand voltage (Uimp)		6 kV
Thermal tripping	Reference temperature	50 °C
	Temperature derating	See page 233
Magnetic tripping	B curve	4 In ± 20 %
	C curve	8 In ± 20 %
	K curve	12 In ± 20 %
Utilization category		A
According to IEC/EN 60898-1		
Limitation class		3
Rated making and breaking capacity of an individual pole (Icn1)		Icn1 = Icn
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40 Insulation class II
Endurance (O-C)	Electrical	10,000 cycles
	Mechanical	20,000 cycles
Overvoltage category (IEC 60364)		IV
Operating temperature		-35°C to +70°C
Storage temperature		-40°C to +85°C
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95 % to 55°C)

iC60L circuit breakers (curve B, C, K) (cont.)

Weight (g)

Circuit-breaker	
Type	**iC60L**
1P	125
2P	250
3P	375
4P	500

Dimensions (mm)



iC60L circuit breakers instantaneous circuit breakers (curve MA)

DB116619

IEC/EN 60947-2

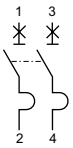
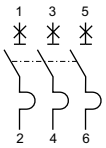

PB104443-40


PB104453-40

- iC60L curve MA circuit breakers combine the following functions:
- circuit protection against short-circuit currents,
- suitability for industrial isolation according to IEC/EN 60947-2, standard,
- fault tripping indication by a red mechanical indicator in circuit breaker front face,
- to be associated with overload protection for motor.

Alternating current (AC) 50/60 Hz					
Breaking capacity (Icu) according to IEC/EN 60947-2					Service breaking capacity (Ics)
		Voltage (Ue)			
Ph/Ph (2P, 3P, 4P)		220 to 240 V	380 to 415 V	440 V	
Rating (In)	1.6 to 4 A	100 kA	100 kA	50 kA	50 % of Icu
	6.3 to 25 A	50 kA	25 kA	20 kA	50 % of Icu
	40 A	36 kA	20 kA	15 kA	50 % of Icu

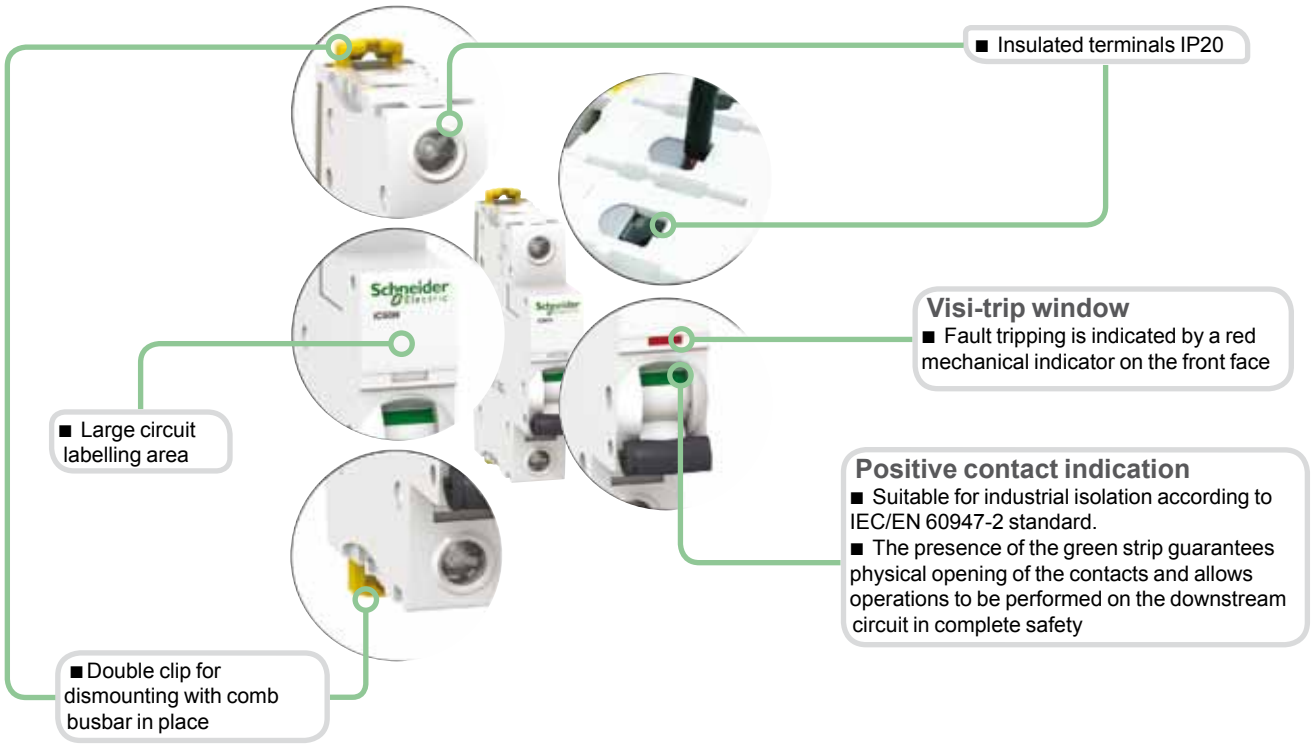
Catalogue numbers

iC60L instantaneous trip circuit breaker			
Type		2P	3P
			
Auxiliaries		Remote tripping and indication, pages 123 and 136	Remote tripping and indication, pages 123 and 136
Vigi iC60		Vigi iC60 add-on residual current device, page 82	Vigi iC60 add-on residual current device, page 82
Rating (In)	Quality label (1)	Curve MA	Curve MA
1.6 A		A9F90272	A9F90372
2.5 A		A9F90273	A9F90373
4 A		A9F90204	A9F90304
6.3 A		A9F90276	A9F90376
10 A		A9F90210	A9F90310
12.5 A		A9F90282	A9F90382
16 A		A9F90216	A9F90316
25 A		A9F90225	A9F90325
40 A		A9F90240	A9F90340
Width in 9-mm modules		4	6
Accessories		Pages 123 and 136	Pages 123 and 136

(1) Information to be provided by the country.

iC60L circuit breakers instantaneous circuit breakers (curve MA) (cont.)

PB104434-40

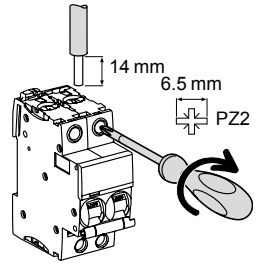


■ Increased product service life thanks to:
□ overvoltage resistance by high level of industrial performances conception (pollution degree, rated impulse withstand voltage and insulation voltage),
□ high performance limitation (see limitation curves),
□ fast closing independent of the speed of actuation of the toggle.
■ Remote indication, open/closed/tripped, by optional auxiliary contacts.
■ Top or bottom electrical feeding.

iC60L circuit breakers instantaneous circuit breakers (curve MA) (cont.)

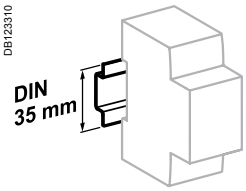
Connection

DB123060



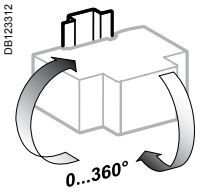
Rating	Tightening torque	Without accessory: Copper cables – Rigid	Without accessory: Copper cables – Flexible or ferrule	With accessories: 50 mm² Al terminal	With accessories: Screw-on connection for ring terminal	With accessories: Multi-cables terminal – Rigid cables	With accessories: Multi-cables terminal – Flexible cables
		DB122945	DB122946	DB122935 Al DB118789	DB118787 Ø		
1.6 to 25 A	2 N.m	1 to 25 mm²	1 to 16 mm²	-	Ø 5 mm	-	-
40 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²	50 mm²		3 x 16 mm²	3 x 10 mm²

DB123310



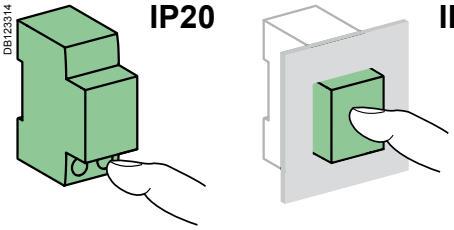
Clip on DIN rail 35 mm.

DB123312



Indifferent position of installation.

DB123314



Technical data

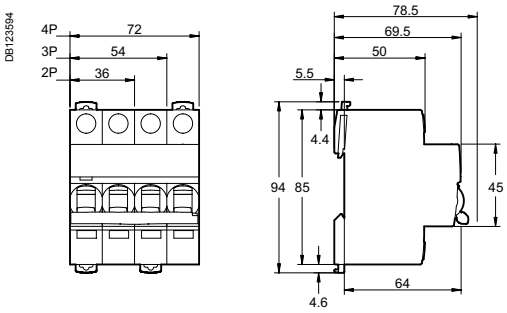
Main characteristics		
According to IEC/EN 60947-2		
Insulation voltage (Ui)		500 V AC
Pollution degree		3
Rated impulse withstand voltage (Uimp)		6 kV
Thermal tripping	Reference temperature	50 °C
	Temperature derating	See page 233
Magnetic tripping	MA curve	12 In ± 20 %
Utilization category		A
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40 Insulation class II
Endurance (O-C)	Electrical	10,000 cycles
	Mechanical	20,000 cycles
Overvoltage category (IEC 60364)		IV
Operating temperature		-35°C to +70°C
Storage temperature		-40°C to +85°C
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95 % to 55°C)

iC60L circuit breakers instantaneous circuit breakers (curve MA) (cont.)

Weight (g)

Circuit-breaker	
Type	**iC60L**
2P	250
3P	375

Dimensions (mm)



C60H-DC
C curve

DB105730 DB123431 A016325

IEC/EN 60947-2, GB 14048.2, UL1077 (Supplementary Protector TC 3)

PB104013-34

PB104014-34

CE

The C60H-DC supplementary protectors are used in direct current circuits (Industrial control and automations, transport, renewable energy...).
They combine the following functions of circuit protection against short-circuit and overload currents, control and isolation.

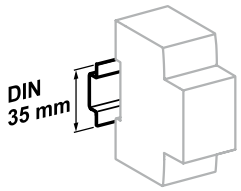
Catalogue numbers

C60H-DC				
Operating voltage (Ue)	12…250 V DC		12…500 V DC	
Rated voltage (Un)	250 V DC		500 V DC	
Number of poles	1P		2P	
Curve	C		C	
Number of modules of 9 mm	2		4	
Diagrams	DB116587 Supply from above or below, observing the polarity		DB116588 Supply from above *or* Supply from below	
Standards	UL1077	IEC 60947-2 EN 60947-2 GB 14048.2	UL1077	IEC 60947-2 EN 60947-2 GB 14048.2
Breaking capacity	5 kA / 250 V DC	20 kA / 110 V DC 10 kA / 220 V DC 6 kA / 250 V DC	5 kA / 500 V DC	20 kA / 220 V DC 10 kA / 440 V DC 6 kA / 500 V DC
Rating (A)*	**UL 1077, IEC 60947-2, EN 60947-2, GB 14048.2**			
0.5	MGN61500		MGN61520	
1	MGN61501		MGN61521	
2	MGN61502		MGN61522	
3	MGN61503		MGN61523	
4	MGN61504		MGN61524	
5	MGN61505		MGN61525	
6	MGN61506		MGN61526	
10	MGN61508		MGN61528	
13	MGN61509		MGN61529	
15	MGN61510		MGN61530	
16	MGN61511		MGN61531	
20	MGN61512		MGN61532	
25	MGN61513		MGN61533	
30	MGN61514		MGN61534	
32	MGN61515		MGN61535	
40	MGN61517		MGN61537	
Rating (A)*	**IEC 60947-2, EN 60947-2, GB 14048.2**			
50	MGN61518		MGN61538	
63	MGN61519		MGN61539	

** At 25°C / 77°F see temperature derating module 92515.*

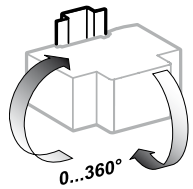
C60H-DC (cont.)
C curve

DB123310



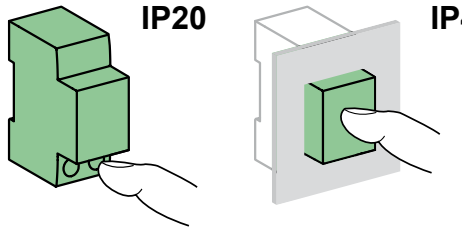
Clip on DIN rail 35 mm.

DB123312

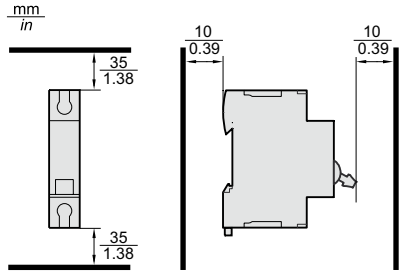


Indifferent position of installation.

DB123314



DB123538



Details of minimum distance between circuit-breaker and earthed metal parts for circuit-breaker intended for use without enclosure.

Technical data

- Tripping curves: C curve - Overcurrent protection for any type of application.
- Positive break indication - the green strip indicates that all the poles are open and allows work to be carried out on the downstream circuit in complete safety.
- Suitable for isolation as defined in IEC / EN 60947-2.
- Increase in the service life of the product: thanks to fast closure independent of the speed of action on the handle.
- Current limitation in the event of a fault: fast opening of the contacts prevents the loads from being destroyed in the event of a short-circuit.

Main characteristics	
Rated service breaking capacity (Ics)	75 % of the ultimate breaking capacity (Icu)
Power loss	See module 92517
Magnetic tripping (Ii)	8.5 In (± 20 %) (compatible with curve C)
Rated impulse withstand voltage (Uimp) under frame	6 kV
Insulation voltage (Ui)	500 V DC
Endurance (O-C)	
Electrical	3,000 cycles (where L/R=2 ms)
	6,000 cycles where the circuit is resistive
Mechanical	20,000 cycles
Additional characteristics	
Pollution degree	3
Utilization category	A (no delay in accordance with IEC/EN 60947-2 standards)
Tropicalization (IEC 60068-2 and GB 14048.2)	Relative humidity: 95 % at 55°C / 131°F
Operating temperature	-25°C to 70°C / -13°F to 158°F
Storage temperature	-40°C to 85°C / -40°F to 185°F

PB104015-24

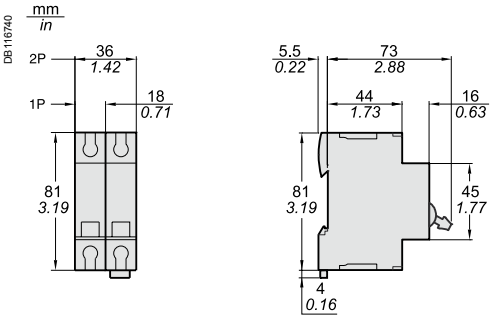
Failure to match polarity during connection may lead to a fire hazard and/or serious injury.
- The connection polarity must be observed (marked on the front panel).
- Use only with direct current.
- If two poles are used in series for the American network, use at least a 12 inch / 30 cm cable.

Weight (g)

Circuit-breaker	
Type	**C60H-DC**
1P	128 g / 4.51 oz
2P	256 g / 9.03 oz

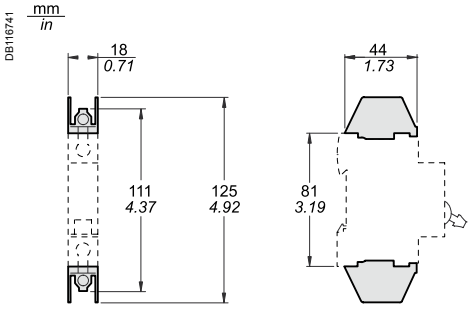
Dimensions (mm/in)

DB116740



C60H-DC

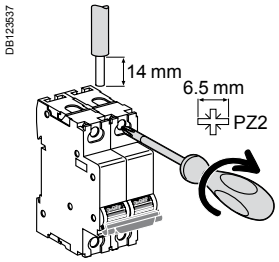
DB116741



Kit for ring terminals

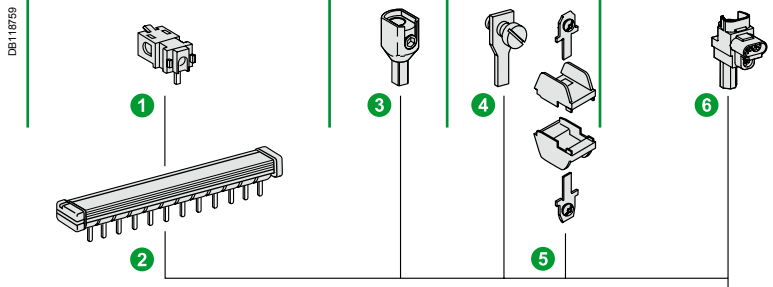
C60H-DC (cont.)
C curve

Connection



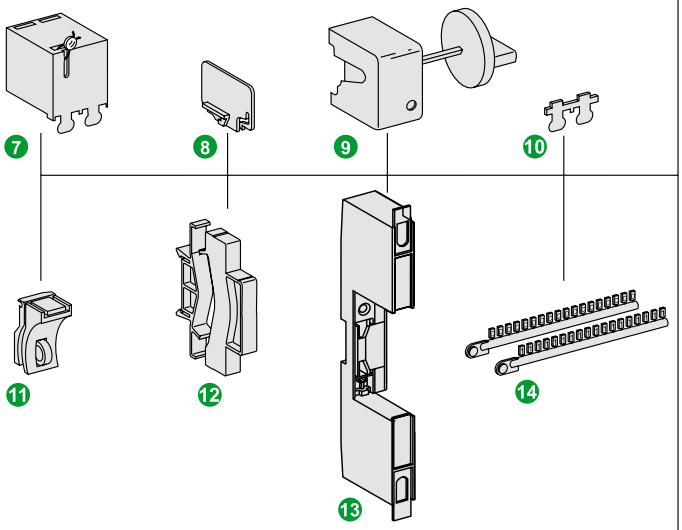
Rating	Tightening torque	Without accessory: Copper cables – Rigid / Stranded	Without accessory: Copper cables – Flexible or ferrule	With accessories: 50 mm² Al terminal	With accessories: Screw-on connection for ring terminal	With accessories: Multi-cables terminal – Rigid cables	With accessories: Multi-cables terminal – Flexible cables
		DB122945	DB122946	DB122935 Al	DB118789	DB118787	
≤ 25 A	2.5 N.m / 22 lb.in	1 to 25 mm² #18 - #4 AWG	1 to 16 mm² #18 - #6 AWG	50 mm² 1 AWG	Ø 5 mm	3 x 16 mm² 3 x 6 AWG	3 x 10 mm² 3 x 8 AWG
> 25 A	3.5 N.m / 31 lb.in	1 to 35 mm² #18 - #2 AWG	1 to 25 mm² #18 - #4 AWG	-			

1	Insulated connector	see module	91906
2	Comb busbar	see module	91906
3	Terminal 50 mm² Al / Cu		27060
4	Ring tongue terminal screw connection		27053
5	Ring tongue terminal connections kit Ø 5 mm, (upstream/downstream)		17400
6	Insulated distribution terminal	4 pieces	19091
		3 pieces	19096



Mounting accessories

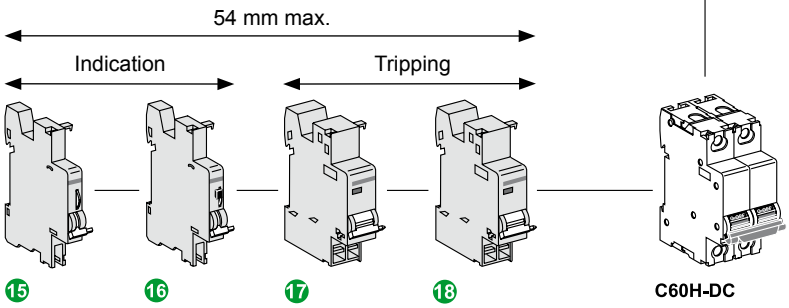
7	Sealable terminal shield	26976
8	Inter-pole barrier	27001
9	Rotary handle	
	Switching sub-assembly	27046
	Disconnectable handle	27047
	Fixed handle	27048
10	Screw shield	26981
11	Padlocking accessory (to be locked in the "open" position)	26970
12	Spacer	27062
13	Dividable mounting plate	26996
14	Marker strip	see module 91900



Electrical auxiliaries

Indication			
15	SD fault indicating switch	see module	90081
16	OF open/closed contact	see module	90081

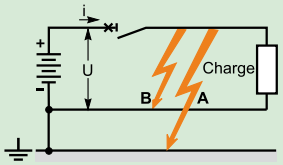
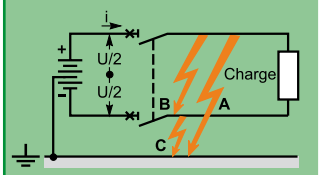
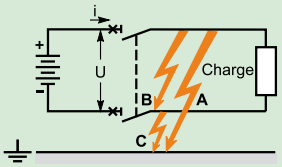
Tripping			
17	MN undervoltage release	see module	90081
18	MX + OF shunt release	see module	90081

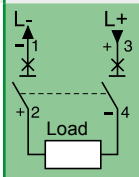
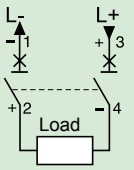
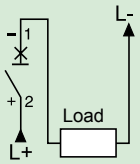
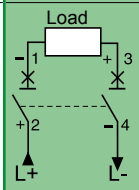
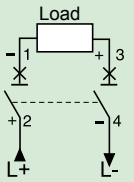
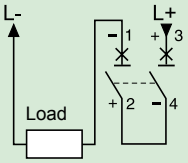
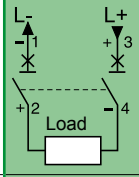
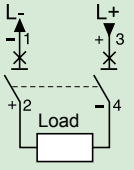
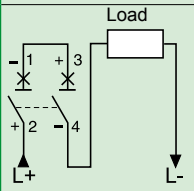
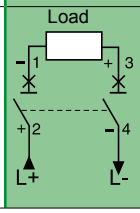
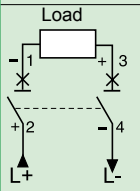


■ The electrical auxiliaries must be installed to the left of the circuit breaker and within a width of 54 mm.
■ If the auxiliary SD contacts are associated with the tripping auxiliaries (MN, MX, etc.), they must be installed to the left of these auxiliaries.

C60H-DC (cont.)
C curve

Poles connected in series

Network selection			
Type	**Earthed**		**Isolated from earth**
Source	Earthed polarity + or –	Earthed central point	Isolated polarities
Protected polarities	1 (1P isolation)	2	2
Diagrams (and type of faults)	*Example : negative polarity to the earth* DB118851 	DB118852 	DB118853 

Selection of supplementary protector and pole connection			
24 V ≤ Un ≤ 250 V	**Single-pole**	**Two-pole**	**Two-pole**
Upstream connection	Only if L+ polarity is earthed	DB116735 	DB116735 
Downstream connection	DB116752 	DB116738 	DB116738 
250 V < Un ≤ 500 V	**Two-pole**	**Two-pole**	**Two-pole**
Upstream connection	DB116736 	DB116735 	DB116735 
Downstream connection	DB116737 	DB116738 	DB116738 

Fault analysis (low earth connection resistance)			
Fault A	***b*** Isc maximum at U ***b*** Only protected polarity concerned ***b*** All the poles of the protected polarity must have a breaking capacity ≥ Isc max. at U	***b*** Isc maximum at U/2 ***b*** Only positive polarity concerned ***b*** All the positive polarity poles must have a breaking capacity ≥ Isc max. at U/2	***b*** Not relevant ***b*** The fault must be indicated by a permanent insulation monitor (PIM) and cleared (IEC/EN 60364)
Fault B	***b*** Isc maximum at U ***b*** If one polarity (in this case positive) is protected: all the poles of this polarity must have a breaking capacity ≥ Isc max. at U ***b*** If two polarities are protected, to ensure isolation: all the protections of the two polarities must have a breaking capacity ≥ Isc max. at U	***b*** Isc maximum at U ***b*** The 2 polarities are concerned ***b*** All the poles of the two polarities must have a breaking capacity ≥ Isc max. at U	***b*** Isc maximum at U ***b*** The 2 polarities are concerned ***b*** All the poles of the two polarities must have a breaking capacity ≥ Isc max. at U
Fault C		***b*** As for fault A ***b*** All the negative polarity poles must have a breaking capacity ≥ Isc max. at U/2	***b*** As for fault A with the same requirements

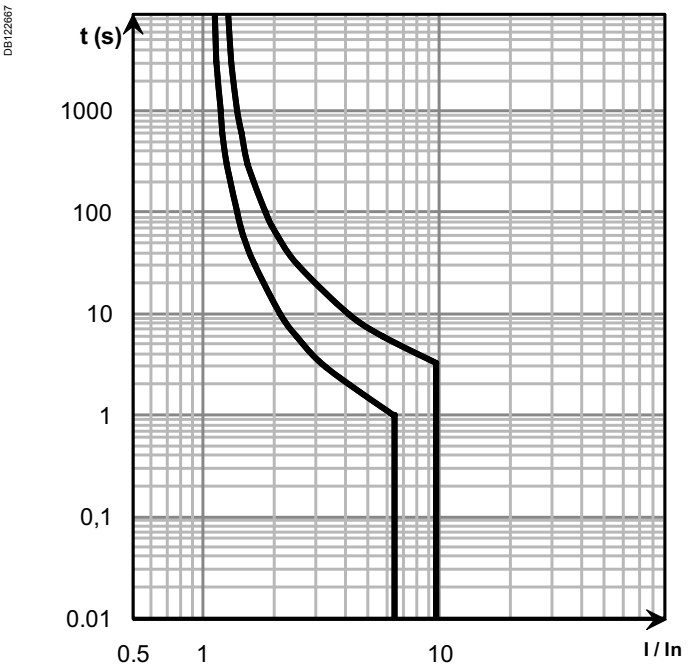
C60H-DC (cont.)
C curve

Curves

Tripping curves

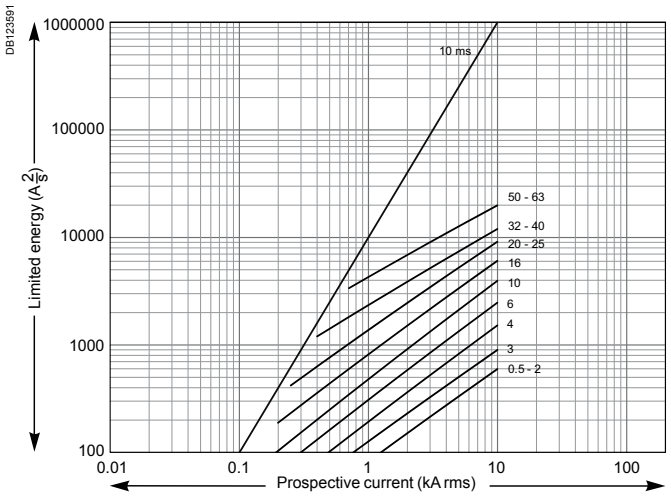
C curve as in standard IEC 60947.2

- The operating range of the magnetic release is as follows between 7 In and 10 In.
- The curves show the cold thermal tripping limits when poles are charged and the electromagnetic tripping limits with 2 charged poles.
- The curves are used without any derating.

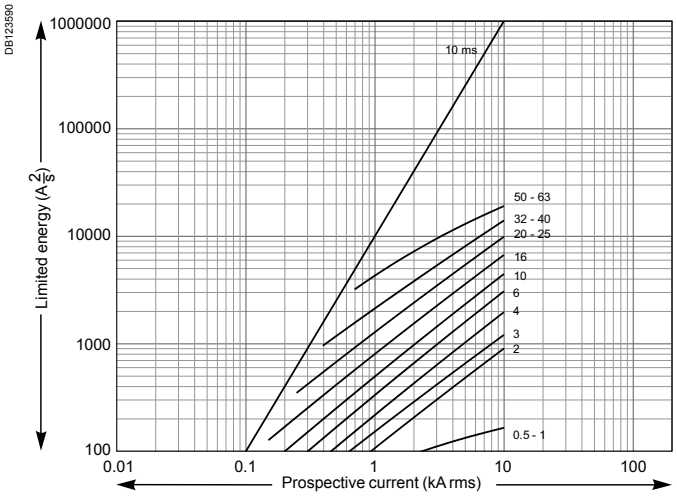


Short circuit current limiting

220 V with 1P, 440 V with 2P



250 V with 1P, 500 V with 2P

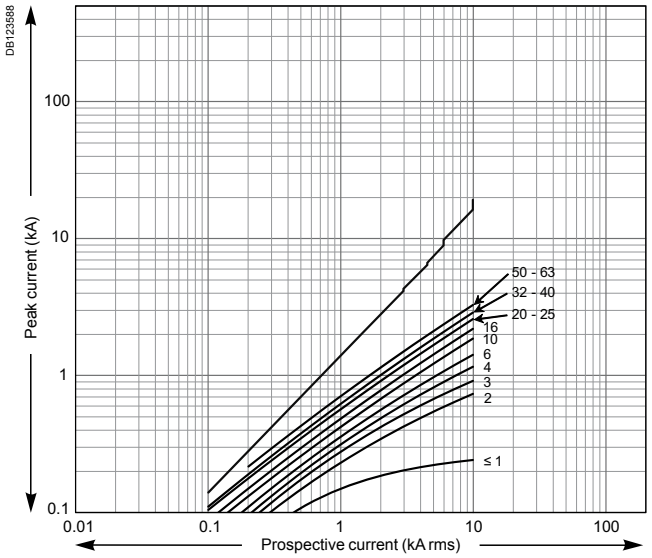


C60H-DC (cont.)
C curve

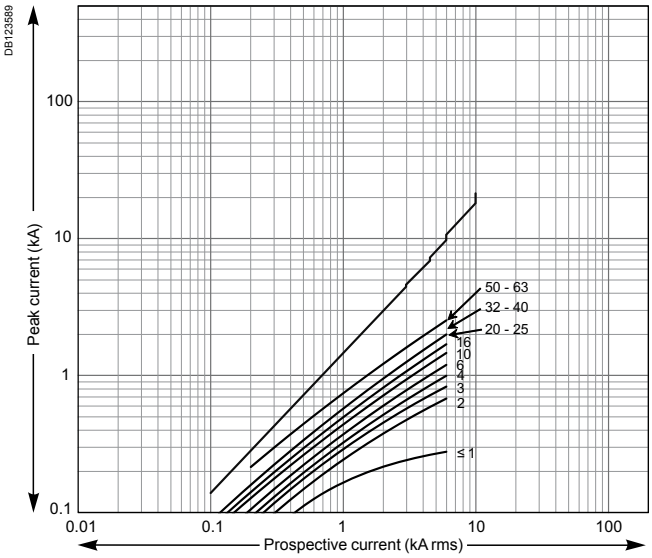
Curves (cont.)

Thermal stress limitation curve

220 V with 1P, 440 V with 2P



250 V with 1P, 500 V with 2P



Temperature derating (according to UL 1077/ CSA22.2/ UL489A/ UL489/ IEC 60947-2 standards)

The maximum permissable current in a device depends on the ambient temperature in which it is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the devices have been installed.
The reference temperature is in the coloured column.
When several simultaneously operating devices are mounted side by side in a small enclosure, the temperature rise inside the enclosure causes a reduction in the current rating. A reduction cœffficient of the order of 0.8 must therefore be allocated to the rating (already derated if it depends on the ambient temperature).

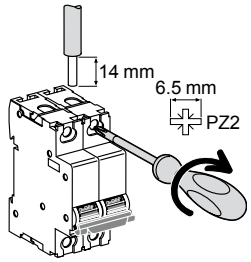
Temperature (°C)	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
Ratings (A)																					
0.5	0.63	0.62	0.61	0.60	0.59	0.58	0.56	0.55	0.54	0.53	0.51	0.5	0.49	0.47	0.46	0.44	0.43	0.41	0.39	0.38	0.36
1	1.18	1.17	1.15	1.14	1.12	1.10	1.09	1.07	1.05	1.04	1.02	1	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82
1.2	1.45	1.43	1.41	1.39	1.37	1.34	1.32	1.30	1.27	1.25	1.22	1.2	1.17	1.15	1.12	1.09	1.07	1.04	1.01	0.98	0.95
1.5	1.86	1.83	1.80	1.77	1.74	1.71	1.67	1.64	1.61	1.57	1.54	1.5	1.46	1.42	1.39	1.34	1.30	1.26	1.22	1.17	1.12
2	2.54	2.50	2.45	2.41	2.36	2.31	2.26	2.21	2.16	2.11	2.06	2	1.94	1.88	1.82	1.76	1.70	1.63	1.56	1.48	1.41
3	3.78	3.71	3.65	3.58	3.51	3.45	3.38	3.30	3.23	3.16	3.08	3	2.92	2.84	2.75	2.66	2.57	2.48	2.38	2.27	2.17
4	5.08	4.99	4.90	4.81	4.71	4.62	4.52	4.42	4.32	4.22	4.11	4	3.89	3.77	3.65	3.53	3.40	3.27	3.13	2.98	2.83
5	6.00	5.92	5.83	5.74	5.66	5.57	5.48	5.39	5.29	5.20	5.10	5	4.90	4.80	4.69	4.58	4.47	4.36	4.24	4.12	4.00
6	7.26	7.15	7.04	6.94	6.83	6.71	6.60	6.48	6.37	6.25	6.12	6	5.87	5.74	5.61	5.47	5.33	5.19	5.04	4.89	4.73
7	8.76	8.62	8.47	8.32	8.17	8.01	7.85	7.69	7.52	7.35	7.18	7	6.82	6.63	6.44	6.24	6.03	5.82	5.60	5.37	5.13
8	9.64	9.50	9.36	9.22	9.08	8.93	8.78	8.63	8.48	8.32	8.16	8	7.83	7.67	7.49	7.31	7.13	6.95	6.76	6.56	6.36
10	12.59	12.38	12.16	11.94	11.71	11.49	11.25	11.01	10.77	10.52	10.26	10	9.73	9.45	9.17	8.87	8.57	8.25	7.92	7.58	7.22
13	15.49	15.28	15.07	14.85	14.63	14.41	14.19	13.96	13.72	13.49	13.25	13	12.75	12.49	12.23	11.97	11.69	11.41	11.13	10.83	10.53
15	18.61	18.31	18.01	17.70	17.38	17.06	16.74	16.40	16.07	15.72	15.36	15	14.63	14.25	13.85	13.45	13.03	12.60	12.16	11.69	11.21
16	19.43	19.14	18.85	18.55	18.25	17.95	17.64	17.32	17.00	16.68	16.34	16	15.65	15.29	14.93	14.56	14.17	13.78	13.37	12.95	12.52
20	24.06	23.72	23.37	23.02	22.67	22.31	21.94	21.56	21.18	20.80	20.40	20	19.59	19.17	18.74	18.30	17.85	17.39	16.92	16.43	15.93
25	30.35	29.91	29.45	28.99	28.52	28.05	27.56	27.07	26.57	26.06	25.53	25	24.46	23.90	23.33	22.74	22.14	21.53	20.89	20.24	19.56
30	37.35	36.74	36.12	35.50	34.86	34.21	33.54	32.86	32.17	31.46	30.74	30	29.24	28.46	27.66	26.83	25.98	25.10	24.19	23.24	22.25
32	38.45	37.91	37.36	36.80	36.24	35.66	35.08	34.48	33.88	33.27	32.64	32	31.35	30.68	30.00	29.31	28.59	27.86	27.11	26.34	25.54
35	44.15	43.40	42.63	41.86	41.06	40.25	39.42	38.58	37.72	36.83	35.93	35	34.05	33.06	32.05	31.01	29.93	28.81	27.64	26.42	25.14
40	48.92	48.17	47.42	46.65	45.87	45.08	44.28	43.45	42.62	41.76	40.89	40	39.09	38.16	37.20	36.22	35.21	34.17	33.10	31.99	30.84
50	59.93	59.09	58.25	57.39	56.52	55.63	54.74	53.82	52.89	51.95	50.98	50	49.00	47.97	46.93	45.86	44.77	43.64	42.49	41.31	40.09
60	76.16	74.83	73.48	72.11	70.71	69.28	67.82	66.33	64.81	63.25	61.64	60	58.31	56.57	54.77	52.92	50.99	48.99	46.90	44.72	42.43
63	78.16	76.91	75.63	74.33	73.01	71.67	70.30	68.90	67.47	66.02	64.53	63	61.44	59.83	58.18	56.49	54.74	52.93	51.06	49.12	47.10

C60H-DC (cont.)
C curve

Multi-cables connection

Without accessory

DB123537



Rating	Tightening torque	2 Copper cables		3 Multi-cables / Different wires	
		Rigid / Stranded	Flexible or ferrule	Flexible / Stranded	Flexible / Stranded / Rigid
	DB122945	DB122946	DB118787		
≤ 25 A	2.5 N.m / 22 lb.in	2 x 1 mm² to 2 x 10 mm² 2 x 18 AWG - 2 x 8 AWG		3 x 1 mm² 3 x 18 AWG	2 x 2.5 mm² + 1 x 1.5 mm² 2 x 13 AWG + 1 x 15 AWG
> 25 A	3.5 N.m / 31 lb.in	2 x 1 mm² to 2 x 16 mm² 2 x 18 AWG - 2 x 6 AWG		3 x 4 mm² 3 x 6 AWG	2 x 10 mm² + 1 x 6 mm² 2 x 8 AWG + 1 x 9 AWG

C120N circuit breakers (curves B, C, D)

DB126596 DB126597 (*) DB126598


056799N_SE-32

18360


056801N_SE-32

18376

IEC/EN 60898-1, CEI 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	**130 V**	**230 to 400 V**	**400 to 415 V**	**440 V**	
Rating (In) 63 to 125 A	20 kA	10 kA	3 kA (1)	-	75 % Icu
2P/3P/4P	**130 V**	**230 to 400 V**	**400 to 415 V**	**440 V**	
63 to 125 A	-	20 kA	10 kA	6 kA	75 % Icu
Breaking capacity (Icu) to CEI/EN 60898-1					
Type	**Voltage (V)**				
1P, 2P, 3P, 4P	**230 to 400 V**				
Rating (In) 63 to 125 A	10000 A				75 % Icu

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

Direct current (DC)				
Breaking capacity (Icu) to IEC/EN 60947-2				**Service breaking capacity (Ics)**
Type	**Voltage (V)**			
1P	**24/48 V**	**125 V**	**250 V**	
Rating (In) 63 to 125 A	10 kA	10 kA	-	100 % Icu
2P (in series)	**24/48 V**	**125 V**	**250 V**	
63 to 125 A		-	10 kA	100 % Icu

Catalogue numbers

C120N circuit breaker

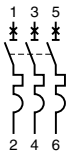
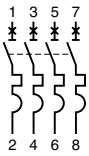
Type	**1P**			**2P**		
						
Auxiliaries	**Remote indication and tripping, page 136**			**Remote indication and tripping, page 136**		
Vigi C120	**Vigi C120 add-on residual current device, page 89**			**Vigi C120 add-on residual current device, page 89**		
Rating (In)	**Curve**			**Curve**		
	B	**C**	**D**	**B**	**C**	**D**
63 A	**18340**	**18356**	**18378**	**18344**	**18360**	**18382**
80 A	**18341**	**18357**	**18379**	**18345**	**18361**	**18383**
100 A	**18342**	**18358**	**18380**	**18346**	**18362**	**18384**
125 A	**18343**	**18359**	**18381**	**18347**	**18363**	**18385**
Largeur en pas de 9 mm	3			6		
Accessories	**Page 136**			**Page 136**		

(*) NF B and C curves only.

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

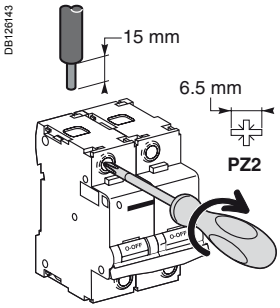
Positive contact indication
■ Suitability for isolation in the industrial sector to IEC/EN 60947-2.
■ The presence of the green strip guarantees that the contacts open physically and allows work to be carried out safely on the downstream circuit.

■ 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, page 136			**Remote indication and tripping, page 136**		
	Vigi C120 add-on residual current device, page 89			**Vigi C120 add-on residual current device, page 89**		
	Curve			**Curve**		
	B	**C**	**D**	**B**	**C**	**D**
	18348	**18364**	**18386**	**18352**	**18371**	**18390**
	18349	**18365**	**18387**	**18353**	**18372**	**18391**
	18350	**18367**	**18388**	**18354**	**18374**	**18392**
	18351	**18369**	**18389**	**18355**	**18376**	**18393**
	9			12		
	Page 136			**Page 136**		

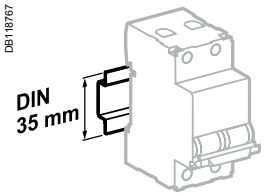
C120N circuit breakers (curves B, C, D) (cont.)

Connection

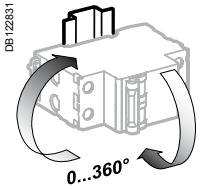


		Without access.		With accessories			
Rating	Tightening torque	Copper cables		50 mm² Al Terminal	Screw-on connection for ring terminal (1)	Multi-cable terminal	
		Rigid/ semi-rigid	Flexible or with ferrule			Rigid cables	Flexible cables
		DB122945	DB122946	Al DB122935	DB118789	DB118787	
63 to 125 A	3.5 N.m	1 to 50 mm²	1.5 to 35 mm²	16 to 50 mm²	Ø 5 mm	3 x 16 mm²	3 x 10 mm²

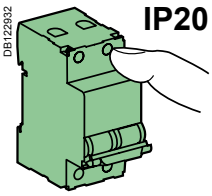
(1) For lugs up to 63 A, front or rear access.

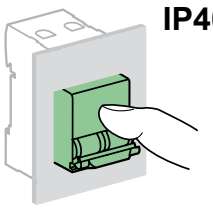


Clips onto 35 mm DIN rail.



Any installation position.





Technical data

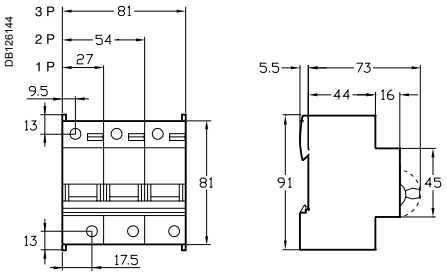
Main characteristics			
To IEC/EN 60947-2			
Insulation voltage (Ui)			500 V AC
Degree of pollution			3
Rated impulse withstand voltage (Uimp)			6 kV
Thermal tripping	Reference temperature		50 °C
To IEC/EN 60898-1			
Magnetic tripping	Curve B		3 and 5 In
	Curve C		5 and 10 In
	Curve D		10 and 14 In
Limitation class			3
Additional characteristics			
Degree of protection (IEC 60529)	Device only		IP20
	Device in a modular enclosure		IP40
Endurance (O-C)	Electrical	63 A	10000 cycles (O-C)
		80...125 A	5000 cycles (O-C)
	Mechanical		20000 cycles
Operating temperature			-25 °C to +70 °C
Storage temperature			-40 °C to +85 °C
Tropicalisation (IEC 60068-1)			Treatment 2 (relative humidity 95 % at 55 °C)

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

Weight (g)

Circuit breaker	
Type	**C120N**
1P	205
2P	410
3P	615
4P	820

Dimensions (mm)



C120H circuit breakers (curves B, C, D)

DB126596 DB126597 (*) DB126598

IEC/EN 60898-1, CEI 60947-2

C120H 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.

18503

18437

Alternating current (AC) 50/60 Hz

Breaking capacity (Icu) to IEC/EN 60947-2						Service breaking capacity (Ics)
Type		**Voltage (V)**				
1P		**130 V**	**230 to 240 V**	**400 to 415 V**	**440 V**	
Rating (In)	10 to 125 A	30 kA	15 kA	4,5 kA (1)	-	50 % Icu
2P, 3P, 4P		**130 V**	**230 to 240 V**	**400 to 415 V**	**440 V**	
	10 to 125 A	-	30 kA	15 kA	10 kA	50 % Icu
Breaking capacity (Icu) to CEI/EN 60898-1						
Type		**Voltage (V)**				
1P, 2P, 3P, 4P		**230 to 400 V**				
Rating (In)	10 to 125 A	15000 A				50 % Icu

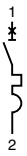
(1) One-pole breaking capacity in IT isolated neutral system (double fault).

Direct current (DC)

Breaking capacity (Icu) to IEC/EN 60947-2					Service breaking capacity (Ics)
Type		**Voltage (V)**			
1P		**24/48 V**	**125 V**	**250 V**	
Rating (In)	10 to 125 A	15 kA	15 kA	-	100 % Icu
2P (in series)		**24/48 V**	**125 V**	**250 V**	
	10 to 125 A	-	-	15 kA	100 % Icu

Catalogue numbers

C120H circuit breaker

Type	**1P**			**2P**		
						
Auxiliaries	**Remote indication and tripping, page 136**			**Remote indication and tripping, page 136**		
Vigi C120	**Vigi C120 add-on residual current device, page 89**			**Vigi C120 add-on residual current device, page 89**		
Rating (In)	**Curve**			**Curve**		
	B	**C**	**D**	**B**	**C**	**D**
10 A	**18394**	**18438**	**18482**	**18405**	**18449**	**18493**
16 A	**18395**	**18439**	**18483**	**18406**	**18450**	**18494**
20 A	**18396**	**18440**	**18484**	**18407**	**18451**	**18495**
25 A	**18397**	**18441**	**18485**	**18408**	**18452**	**18496**
32 A	**18398**	**18442**	**18486**	**18409**	**18453**	**18497**
40 A	**18399**	**18443**	**18487**	**18410**	**18454**	**18498**
50 A	**18400**	**18444**	**18488**	**18411**	**18455**	**18499**
63 A	**18401**	**18445**	**18489**	**18412**	**18456**	**18500**
80 A	**18402**	**18446**	**18490**	**18413**	**18457**	**18501**
100 A	**18403**	**18447**	**18491**	**18414**	**18458**	**18502**
125 A	**18404**	**18448**	**18492**	**18415**	**18459**	**18503**
Width in 9 mm modules	3			6		
Accessories	**Page 136**			**Page 136**		

(*) NF B and C curves only.

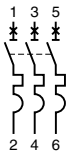
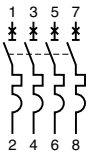
C120H circuit breakers (curves B, C, D)

Positive contact indication

■ Suitability for isolation in the industrial sector to IEC/EN 60947-2.

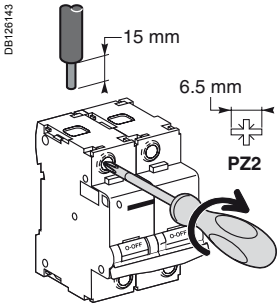
■ The presence of the green strip guarantees that the contacts open physically and allows work to be carried out safely on the downstream circuit.

■ Longer product service life thanks to:
□ good overvoltage withstand capacity: products designed to provide 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, page 136			**Remote indication and tripping, page 136**		
	Vigi C120 add-on residual current device, page 89			**Vigi C120 add-on residual current device, page 89**		
	Curve			**Curve**		
	B	**C**	**D**	**B**	**C**	**D**
	18416	**18460**	**18504**	**18427**	**18471**	**18515**
	18417	**18461**	**18505**	**18428**	**18472**	**18516**
	18418	**18462**	**18506**	**18429**	**18473**	**18517**
	18419	**18463**	**18507**	**18430**	**18474**	**18518**
	18420	**18464**	**18508**	**18431**	**18475**	**18519**
	18421	**18465**	**18509**	**18432**	**18476**	**18520**
	18422	**18466**	**18510**	**18433**	**18477**	**18521**
	18423	**18467**	**18511**	**18434**	**18478**	**18522**
	18424	**18468**	**18512**	**18435**	**18479**	**18523**
	18425	**18469**	**18513**	**18436**	**18480**	**18524**
	18426	**18470**	**18514**	**18437**	**18481**	**18525**
	9			12		
	Page 136			**Page 136**		

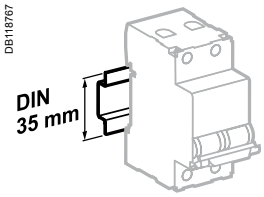
C120H circuit breakers (curves B, C, D) (cont.)

Connection

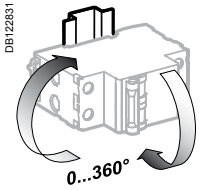


Rating	Tightening torque	Without access. Copper cables		With accessories 50 mm² Al term.	Screw-on connection for ring terminal (1)	Multi-cable terminal	
		Rigid	Flexible or with ferrule			Rigid cables	Flexible cables
		DB122945	DB122946	Al DB122935	DB118789 Ø	DB118787	
10 to 125 A	3.5 N.m	1 to 50 mm²	1.5 to 35 mm²	16 to 50 mm²	Ø 5 mm	3 x 16 mm²	3 x 10 mm²

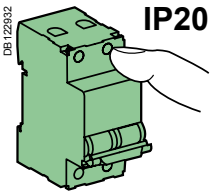
(1) For lugs up to 63 A, front or rear accessories.

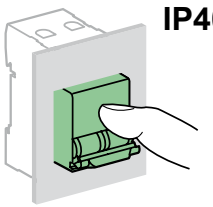


Clips onto 35 mm DIN rail.



Any installation position.





Technical data

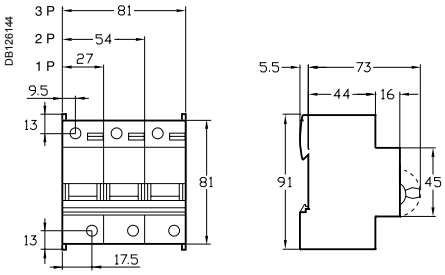
Main characteristics			
To IEC/EN 60947-2			
Insulation voltage (Ui)			500 V AC
Degree of pollution			3
Rated impulse withstand voltage (Uimp)			6 kV
Thermal tripping	Reference temperature		50 °C
To IEC/EN 60898-1			
Magnetic tripping	Curve B		3 and 5 In
	Curve C		5 and 10 In
	Curve D		10 and 14 In
Limitation class			3
Additional characteristics			
Degree of protection (IEC 60529)	Device only		IP20
	Device in a modular enclosure		IP40 (IPXXD)
Endurance (O-C)	Electrical	63 A	10000 cycles (O-C)
		80...125 A	5000 cycles (O-C)
	Mechanical		20000 cycles
Operating temperature			-30 °C to +60 °C
Storage temperature			-40 °C to +70 °C
Tropicalisation (IEC 60068-1)			Treatment 2 (relative humidity 95% at 55°C)

C120H circuit breakers (curves B, C, D) (cont.)

Weight (g)

Circuit breaker	
Type	**C120H**
1P	205
2P	410
3P	615
4P	820

Dimensions (mm)



NG125NA switches

DB116619

IEC/EN 60947-3

■ The NG125NA is a switch-disconnector with free tripping for making and breaking under load.
■ It is especially suitable for the modular enclosure incoming feeder with remote breaking (e.g. emergency cutoff) or earth leakage protection functions.

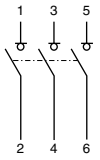
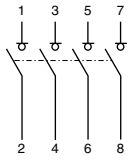
059909N_SE-30

NG125NA 3P

059909N_SE-30

NG125NA 4P

Catalogue numbers

NG125NA switch			
Type		**3P**	**3P+N**
			
Auxiliaries		**Remote indication and tripping, module CM907005 – Vigi NG125 add-on residual current device, module CM902008**	
Rating (In)	**Quality label (1)**		
63 A		**18889**	**18897**
80 A		**18890**	**18898**
100 A		**18891**	**18899**
125 A		**18892**	**18900**
Width in 9 mm modules		9	12
Accessories		**Module CM907006**	

(1) Information to be supplied by the country concerned.

NG125NA switches (cont.)

DB116619

IEC/EN 60947-3

■ The NG125NA is a switch-disconnector with free tripping for making and breaking under load.
■ It is especially suitable for the modular enclosure incoming feeder with remote breaking (e.g. emergency cutoff) or earth leakage protection functions.

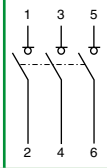
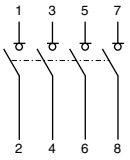
056908N_SE-30

NG125NA 3P

056909N_SE-30

NG125NA 4P

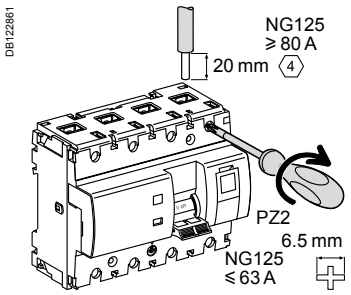
Catalogue numbers

NG125NA switch			
Type		**3P**	**3P+N**
			
Auxiliaries		**Remote indication and tripping, module CM907005 – Vigi NG125 add-on residual current device, module CM902008**	
Rating (In)	**Quality label (1)**		
63 A		**18889**	**18893**
80 A		**18890**	**18894**
100 A		**18891**	**18895**
125 A		**18892**	**18896**
Width in 9 mm modules		9	12
Accessories		**Module CM907006**	

(1) Information to be supplied by the country concerned.

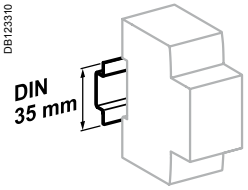
NG125NA switches (cont.)

Connection

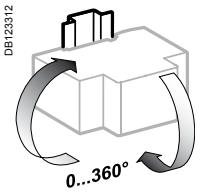


Rating	Tightening torque	Without accessories: Copper cables – Rigid	Without accessories: Copper cables – Flexible or with ferrule	With accessories: 70 mm² Al terminal	With accessories: Screw-on connection for ring terminal	With accessories: Small ring terminal	With accessories: Multi-cable terminal – Rigid cables	With accessories: Multi-cable terminal – Flexible cables
	DB122945	DB122946	DB123410	DB123488	DB118789	DB118787		
						Ø 6 mm		
63 A	3.5 N.m	1.5 to 50 mm²	1 to 35 mm²	-	-	-	3 x 16 mm²	3 x 10 mm²
80 to 125 A	6 N.m	16 to 70 mm²	10 to 50 mm²	25 to 70 mm²	2 x 35 mm² 1 x 50 mm²	1 x 70 mm²		

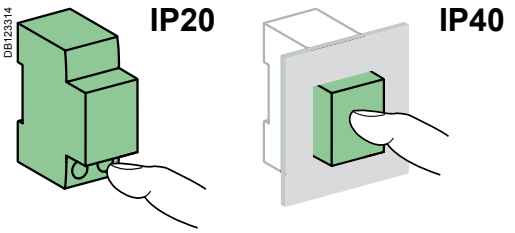
■ Upstream voltage taps for each pole, by 6.35 mm Fast-on terminal.



Clips onto 35 mm DIN rail.



Any installation position.



Technical data

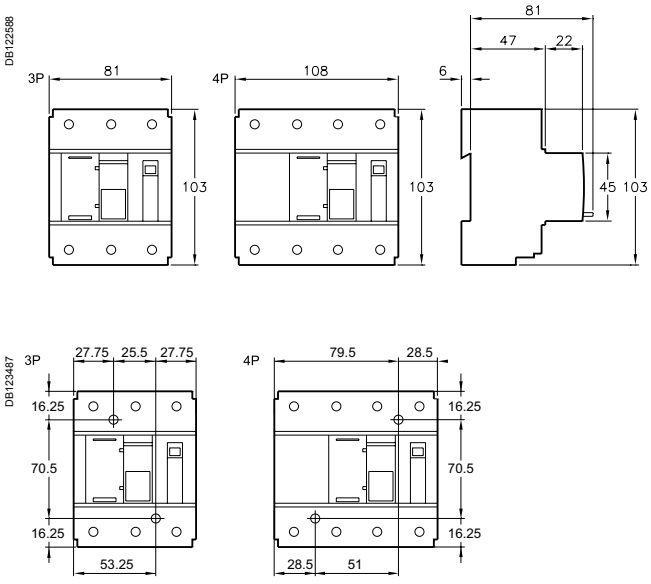
Main characteristics				
According to IEC/EN 60947-3				
Max. voltage rating (Ue)			500 V AC	
Insulation voltage (Ui)			690 V AC	
Degree of pollution			3	
Rated impulse withstand voltage (Uimp)			8 kV	
Short time withstand current (50 ms) Icw			1.5 kA	
Utilization category			AC22A/B - AC23B	
Additional characteristics				
Degree of protection (IEC 60529)	Device only		IP20	
	Device in modular enclosure		IP40	
Endurance (O-C)			**Category A**	**Category B**
	Electrical (except AC20 and DC20)	≤ 100 A	1500 cycles	300 cycles
		125 A	1000 cycles	200 cycles
	Mechanical		20,000 cycles	
Operating temperature			-10°C to +60°C	
Storage temperature			-40°C to +70°C	
Tropicalization (IEC 60068-1)			Treatment 2 (relative humidity of 95% at 55°C)	

NG125NA switches (cont.)

Weight (g)

Switch	
Type	**NG125NA**
3P	720
4P	960

Dimensions (mm)



Spacing for mounting on panel

NG125NA switches (cont.)

■ Voltage taps:
□ auxiliaries power supply
□ measurement
□ emergency stop
□ remote reporting

■ Cable strength:
□ ribbed cage
□ terminal depth
□ tightening by Allen hex key (NG125 ≥ 80 A)

■ Integrated padlocking device

0569168N_SE-90

■ Test button to check satisfactory operation of the tripping mechanism

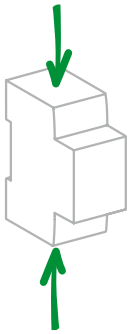
■ Pull-out strength:
□ metallic lock

■ Impact and vibration resistance:
□ high-strength enclosure
□ IK 05

■ Central manual control, 3 positions:
□ ON
□ tripped on fault
□ open

■ Circuit breaker tripped indicator

■ Electric power supply through the top or bottom



DB123493

■ Positive contact indication:
□ suitability for isolation in the industrial sector to IEC/EN 60947-3;
□ 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 due to:
□ good overvoltage withstand capacity;
□ high limitation performances;
□ fast closure independent of the speed of actuation of the toggle.

STI isolatable fuse-carriers

15646

15668

STI	Cartridges
IEC EN 60947-3	NF C 60-200, NF C 63-210 and IEC 60269-1/2

- The STI isolatable fuse-carriers provide overload and short-circuit protection.
- They are used for industrial applications requiring a high breaking capacity.
- They perform the isolation function and must not be used as switches.
- They can be equipped with an indicator light indicating blowing of the fuse cartridge.
- Isolation of all poles is guaranteed for the 2P, 3P, and 3P+N versions during factory assembly.

The general purpose fuse (gG fuse) provides overload and short-circuit protection.
The fuse for motor application **(aM fuse)** only provides short-circuit protection.
It is used for protection of loads with a high peak current (motors, transformer primaries, etc.).

Accessories

Comb busbar
- Used to quickly bridge several STI of the same kind.

Busbar connectors
- Used to supply the busbar.
- For 25 mm² cable.

230 V neon indicator light
- Indicates fuse blowing (off in normal operation and lit red after fuse blowing).
- 400 V maxi.

Padlocking device
- Locks the toggle in the "open" or "closed" position. Used with an 8 mm max. diameter padlock (not supplied).

Clip-on markers (C60 type)
- Used to identify:
  - ☐ either on the front face of the device
  - ☐ or on the downstream terminals.

Catalogue numbers

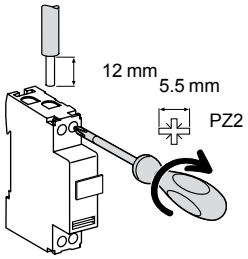
Fuse cartridge							STI fuse holder				
Type							Network type				
	Rating	Voltage rating (Ue)	Short-circuit current (Isc)								
			aM	gG	aM	gG	1P	1P+N (1)	2P	3P	3P+N (1)
							 DB112797	 DB112798	 DB112799	 DB112800	 DB110801
8.5 x 31.5	2 A	400 V AC	20 kA	20 kA	**15733**	**15767**	**15635**	**15645**	**15650**	**15655**	**15657**
	4 A	400 V AC	20 kA	20 kA	**15734**	**15768**					
	6 A	400 V AC	20 kA	20 kA	**15735**	**15769**	2 modules of 9 mm	2 modules of 9 mm	4 modules of 9 mm	6 modules of 9 mm	6 modules of 9 mm
	10 A	400 V AC	20 kA	-	**15737**	-					
10.3 x 38	2 A	500 V AC	120 kA	120 kA	**15742**	**15775**	**15636**	**15646**	**15651**	**15656**	**15658**
	4 A	500 V AC	120 kA	120 kA	**15743**	**15776**					
	6 A	500 V AC	120 kA	120 kA	**15744**	**15777**	2 modules of 9 mm	2 modules of 9 mm	4 modules of 9 mm	6 modules of 9 mm	6 modules of 9 mm
	10 A	500 V AC	120 kA	120 kA	**15746**	**15779**					
	25 A	400 V AC	120 kA	-	**15750**	-					
	32 A	400 V AC	-	-	-	-					
							Operating frequency : 50/60 Hz				

(1) The neutral pole comes equipped with a locked tube.

STI isolatable fuse-carriers (cont.)

Connection

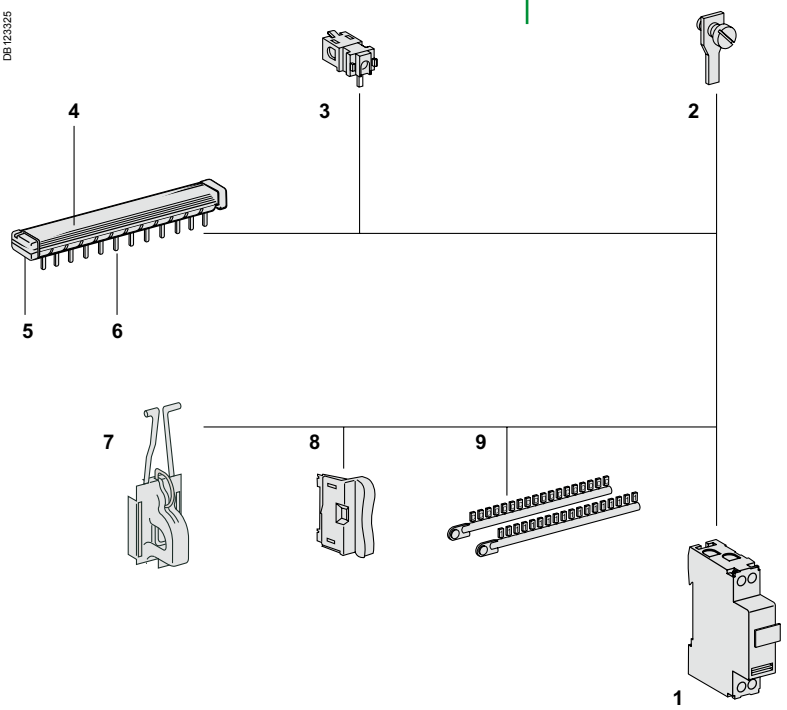
DB123241



Type	Rating	Tightening torque	Without accessory: Copper cables – Rigid	Without accessory: Copper cables – Flexible or ferrule	Without accessory: Multi-cables terminal – Rigid cables	Without accessory: Multi-cables terminal – Flexible cables	With accessories: Screw-on connection for ring terminal
			DB122945	DB122946	DB118787	DB118789	
STI	All	2 N.m	0.75 to 10 mm²	0.33 to 6 mm²	0.75 to 10 mm²	0.33 to 6 mm²	Ø 5 mm

2	Screw-on connection for ring terminal			**27053**
3	Insulated connectors		(set of 4)	**14885**
4	Comb busbar	24 pas	1P	**14881**
		26 pas	1P+N	**14880**
		24 pas	2P	**14882**
		24 pas	3P	**14883**
		24 pas	4P	**14884**
5	Flange for comb busbars (set of 40)		For 1P, 2P	**14886**
			For 3P, 4P	**14887**
6	Teeth shield		(set of 40)	**14888**

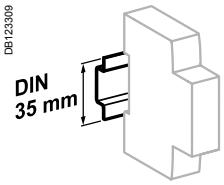
DB123325



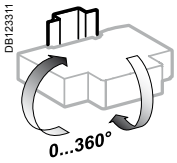
Mounting accessories

7	Padlocking device		**15669**
8	Neon indicator light	1 piece blister	**15668**
9	Clip-on terminal markers	See module	**CA907001**

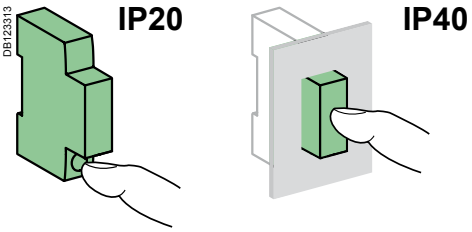
STI isolatable fuse-carriers (cont.)



Clip on DIN rail 35 mm.



Indifferent position of installation.



Technical data

Main characteristics		
Insulation voltage (Ui)		690 V
Pollution degree		3
Additional characteristics		
Degree of protection	Device only	IP20
	Device in modular enclosure	IP40 Insulation classe II
Operating temperature		-20°C to +60°C
Storage temperature		-40°C to +80°C
Isolation with positive contact indication by tilting the fuse-carrier		Captive fuse-carrier
		Additional housing is provided for a spare fuse
Cartridge blowing signalling (option)		By indicator light ON after blowing

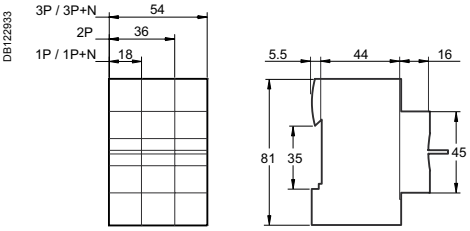
To be equiped with aM or gG (gL - gl) type fuse cartridge without striker, with or without fuse blowing indicator:

Fuse cartridge type		Ith	Pmax*
8.5 x 31 mm	aM	10 A	3 W
	gG	20 A	3 W
10.3 x 38 mm	aM	25 A	3.5 W
	gG	32 A	3.5 W

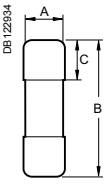
**Pmax: maximum dissipated power per fuse cartridge.*

Specific technical data STI 1P+N and 3P+N
Disconnection of the phase and neutral in the normal dimensions of the phase (2 mod. of 9 mm)
Phase opening causes compulsory opening of the neutral
The phase opens before the neutral on isolation and closes after the neutral on circuit closing

Dimensions (mm)



STI



aM, gG fuse cartridge			
Type	A	B	C
8.5 x 31.5 mm	8.5	31.5	10.3
10.3 x 38 mm	10.3	38	10.5

aM, gG

Choice of earth leakage protection devices

Choice of sensitivity

The sensitivity of an earth leakage protection device depends mainly on the function it has to perform:
- Protection from electric shock by direct contact.
- Protection from electric shock by indirect contact.
- Protection from fire due to current leakage.

The following table gives a reminder of:
- The circuits that must be protected against these various risks (obligation or recommendation).
- The type of earth leakage protection device to be used in each case, its sensitivity, and its location in the distribution diagram.

Type of protection	Obligations		Recommended by Schneider Electric	Sensitivity (IΔn)		
	National standard *To be filled in according to the country standard*	International standard IEC 60364		30 mA (*)	100 mA to 3000 mA (depending on the earthing system)	300 mA (or 500 mA)
Protection from electric shock by direct contact						
DB123167 	*To be filled in according to the country standard*	Power supply for ■ General-purpose power sockets, up to 20 A ■ Appliances in the vicinity of a bathtub, shower, pond or swimming pool ■ Portable appliances for outdoor use, up to 32 A ■ Lighting for exhibition stands and shows ■ Outdoor lighting *To be modified according to national obligations (above)*	■ Lighting in the home	**Setup in final distribution switchboard** ■ Residual current device protecting a circuit ■ Residual current circuit breaker protecting a group of circuits		
Protection from electric shock by indirect contact						
DB123168 	*To be filled in according to the country standard*	The entire power distribution system, except for devices: ■ With class II insulation ■ Operating at Safety Extra Low Voltage (class III) *To be modified according to national obligations (above)*	–		**Setup in final distribution switchboard** ■ Residual current circuit breaker or device, on incoming feeder **Setup in subdistribution board or main switchboard** ■ Residual current device protecting a circuit ■ Residual current device or circuit breaker protecting a group of circuits ■ On incoming feeder: residual current circuit breaker or device	
Protection from fire due to current leakage						
DB123169 	*To be filled in according to the country standard*	■ High-risk premises: □ explosion (BE3) □ fire (BE2) ■ Agricultural and horticultural buildings ■ Equipment for fairs, exhibitions and shows ■ Temporary outdoor recreational installations *To be modified according to national obligations (above)*	■ Dilapidated buildings or electrical installations ■ Humid atmospheres: agricultural buildings, public swimming pools ■ Presence of chemical agents			**Setup in final distribution switchboard** ■ Residual current circuit breaker or device, on incoming feeder **Setup in subdistribution board or main switchboard** ■ Residual current device protecting each circuit to a high-risk zone ■ Residual current device or circuit breaker protecting a group of circuits ■ On incoming feeder: residual current circuit breaker or device

(*) The 10 mA sensitivity is useful for certain very specific applications, where there is a risk that someone could sustain a non-dangerous current (10 to 30 mA) without being able to get free. Example: healthcare equipment for hospital beds. Generally, devices with this very high sensitivity are liable to cause frequent tripping, due to the natural leakage currents of the installation.

Choice of earth leakage protection devices (cont.)

Interference immunity

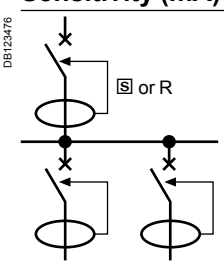
Schneider Electric provides various equipment technologies capable of overcoming the consequences of interference of all kinds.

Operating conditions		Examples	Types AC	A	A si	B
Loads						
 DB123165	With no special characteristics	■ General-purpose power sockets ■ Incandescent lighting ■ Household appliances: microwave oven, dishwasher, clothes dryer ■ Electric heating, water heater	■	■	■	■
	Including a rectifier – Single phase	■ Household appliances: induction cooking appliances, washing machines (variable speed) ■ Single-phase variable speed drives	–	■	■	–
	Including a rectifier – Three phase	■ Three-phase variable speed industrial drives ■ Three-phase uninterruptible power supplies	–	–	–	■
	Generating high-frequency interference (current peaks, harmonics)	■ Fluorescent lighting powered by extra low voltage transformer, by electronic ballast ■ Variable luminosity lighting ■ Powerful IT equipment ■ Single-phase variable speed industrial drives ■ Air conditioning ■ Telecommunications equipment ■ Capacitor banks	–	–	■	■
	Including an anti-harmonic filter in the power supply	■ Microcomputer systems ■ Computer peripherals (printers, scanners, etc.)	–	–	■	■
Electrical environment						
 DB123166	Vicinity of equipment generating transient overvoltages	■ High-powered switching devices ■ Reactive energy compensation banks	–	–	■	■
	Circuits powered by an uninterruptible power supply	■ Backed-up networks	–	–	■	■
	"Isolated neutral" (IT) earthing system	–	–	–	■	■
	Major risk of lightning strokes	■ Buildings protected by a lightning protection system ■ Mountainous or humid regions ■ Regions with high keraunic level	–	–	■	■
Atmosphere						
 DB123164	Ambient temperature which could be less than -5°C	–	–	■	■	■
	Presence of corrosive agents (AF2 to AF4) or dust	■ Indoor swimming pools ■ Yacht harbours, marinas, camping grounds ■ Water treatment ■ Chemical industries, heavy industries, paper mills ■ Mines and cellars, road tunnels ■ Markets, stock raising, food processing industries	–	–	■ (1)	–

(1) SiE for C120 and NG125 circuit-breakers

Discrimination

Residual current devices of average sensitivity (100 mA and more) are available in a selective (Ⓢ) and delayed (R) version.
This option ensures that, in the event of an earth fault downstream of the installation, only the defective part is switched off.
The table below shows (in green) which upstream/downstream equipment combinations provide this discrimination.



DB123476

Sensitivity (mA) - Downstream		Sensitivity (mA) - Upstream: Instantaneous 30	100	300	500	1000	3000	Selective Ⓢ 100	300	500	1000	3000	Delayed R 1000	3000
Instantaneous	30	-	-	-	-	-	-							
	100	-	-	-	-	-	-	-						
	300	-	-	-	-	-	-	-	-	-				
	500	-	-	-	-	-	-	-	-	-	-		-	
	1000	-	-	-	-	-	-	-	-	-	-		-	
	3000	-	-	-	-	-	-	-	-	-	-	-	-	-
Selective Ⓢ	100	-	-	-	-	-	-	-	-	-	-	-		
	300	-	-	-	-	-	-	-	-	-	-	-	-	
	500	-	-	-	-	-	-	-	-	-	-	-	-	
	1000	-	-	-	-	-	-	-	-	-	-	-	-	
	3000	-	-	-	-	-	-	-	-	-	-	-	-	-
Delayed R	1000	-	-	-	-	-	-	-	-	-	-	-	-	-
	3000	-	-	-	-	-	-	-	-	-	-	-	-	-

Overview of the earth leakage protection product range

Selection guide

Type			Residual current circuit breakers		
			iID K	**iID**	**RCCB-ID type B**
			PB104497-35 	PB104472-35 	62074_SE-35 
Standards			IEC/EN 61008	IEC/EN 61008	IEC/EN 61008 and VDE 0664
Number of poles		1P+N	–	–	–
		2P	■	■	–
		3P	–	–	–
		4P	–	■	■
Type		AC	■	■	–
		A	–	■	–
		si(E)	–	■	–
		B	–	–	■
Voltage (V)	Ue		230/400	230/400	230/400
Impulse voltage (kV)	Uimp		4	6	4
Insulation voltage (V)	Ui		440	500	400
Current rating (A)	In		25 - 40 - 63	16 to 100	25 to 125
Frequency (Hz)			50/60	50/60	50
Rated breaking capacity (A)	Icn		–	–	–
Rated residual breaking and making capacity (A)	(IΔm)		10 In (500 A min.)	1500	10 In (500 A min.)
Curve			–	–	–
Sensitivity (mA)	(IΔn)	10	–	■	–
		30	■	■	■
		100	–	■	–
		300	■	■	■
		500	–	■	■
		1000	–	–	–
		3000	–	–	–
		300 S	–	■	■
		500 S	–	■	–
		1000 S	–	–	–
		3000 S	–	–	–
Electrical characteristics					
Curves		B	–	–	–
		C	–	–	–
		D	–	–	–
		L	–	–	–
		K	–	–	–
		MA	–	–	–
For more details, see page			**Page 102**	**Page 97**	**Page 104**
Accessories			**–**	**Page 123 and 136**	**Page 104**

Overview of the earth leakage protection product range (cont.)

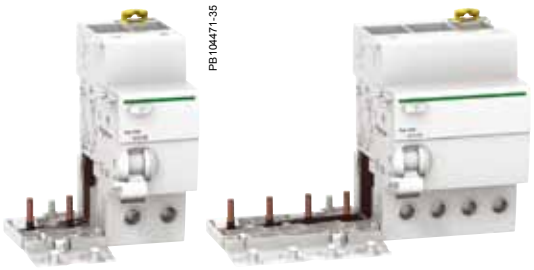
	Add-on residual current devices	
	Vigi iC60	**Vigi C120**
PB101616_SE-35		
PB104466-40		
056776_SE-35		
	IEC/EN 60947-2 and IEC/EN 61009	IEC/EN 60947-2 and IEC/EN 61009
	–	–
	■	■
	■	■
	■	■
	■	■
	■	■
	■	■
	–	–
	130, 230/400	230/400
	6	6
	500	500
	25 - 40 - 63	10 - 125
	50/60	50/60
	–	–
	–	–
	–	–
	■	–
	■	■
	■	–
	■	■
	■	■
	–	–
	–	–
	■	■
	■	■
	–	■
	–	–
	Depending on circuit breaker used	Depending on circuit breaker used
	Page 82	**Page 88**
	Page 123 and 136	**Page 123 and 136**

Vigi iC60 add-on residual current devices (AC type)

DB116619 DB123430

IEC/EN 61009-1

PB104466-35 PB104471-35



- Combined with iC60 circuit breaker, the Vigi iC60 provide:
  - 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 risk of fire (300 mA or 500 mA).

Catalogue numbers

Vigi iC60 add-on residual current devices

Type			AC ~					Width in 9 mm modules
Product			**Vigi iC60**					
Auxiliaries			**Without auxiliaries**					
2P		**Sensitivity**	**30 mA**	**100 mA**	**300 mA**	**500 mA**	**300 mA S**	
DB122462	Rating	25 A	**A9V41225** *A9V01225**	**A9V12225**	**A9V44225** *A9V04225**	**A9V16225**	-	3
		40 A	**A9V41240** *A9V01240**	-	**A9V44240** *A9V04240**	**A9V16240**	-	4
		63 A	**A9V41263** *A9V01263**	**A9V12263**	**A9V44263** *A9V04263**	**A9V16263**	**A9V15263**	4
3P		**Sensitivity**	**30 mA**	**100 mA**	**300 mA**	**500 mA**	**300 mA S**	
DB122463	Rating	25 A	**A9V41325**	-	**A9V44325**	**A9V16325**	-	6
		40 A	**A9V41340**	-	**A9V44340**	**A9V16340**	-	7
		63 A	**A9V41363**	-	**A9V44363**	**A9V16363**	**A9V15363**	7
4P		**Sensitivity**	**30 mA**	**100 mA**	**300 mA**	**500 mA**	**300 mA S**	
DB122464	Rating	25 A	**A9V41425**	**A9V12425**	**A9V44425**	**A9V16425**	-	6
		40 A	**A9V41440**	-	**A9V44440**	**A9V16440**	-	7
		63 A	**A9V41463**	**A9V12463**	**A9V44463**	**A9V16463**	**A9V15463**	7
Voltage rating (Ue)			230 - 240 V, 400 - 415 V *Except * 130 V*					
Operating frequency			50/60 Hz					
Accessories			**Page 123**					

Vigi iC60 add-on residual current devices (Asi type)

DB116619 DB123430

IEC/EN 61009-1

PB104466-35 PB104471-35

- Combined with iC60 circuit breaker, the Vigi iC60 provide:
  - 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 the risk of fire (300 mA).

The Asi type provides increased immunity from electrical interference and polluted or corrosive environments.

Catalogue numbers

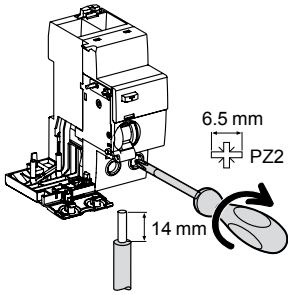
Vigi iC60 add-on residual current devices

Type			Asi			Width in 9 mm modules
Product			Vigi iC60			
Auxiliaries			Without auxiliaries			
2P		Sensitivity	10 mA	30 mA	300 mA S	
DB122462	Rating	25 A	A9V30225	A9V61225	-	3
		40 A	-	A9V61240	-	4
		63 A	-	A9V61263	A9V65263	4
3P		Sensitivity	10 mA	30 mA	300 mA S	
DB122463	Rating	25 A	-	A9V61325	-	6
		40 A	-	A9V61340	-	7
		63 A	-	A9V61363	A9V65363	7
4P		Sensitivity	10 mA	30 mA	300 mA S	
DB122464	Rating	25 A	-	A9V61425	-	6
		40 A	-	A9V61440	-	7
		63 A	-	A9V61463	A9V65463	7
Voltage rating (Ue)			230 - 240 V, 400 - 415 V			
Operating frequency			50/60 Hz			
Accessories			Page 123			

Vigi iC60 add-on residual current devices (AC, A, Asi types)

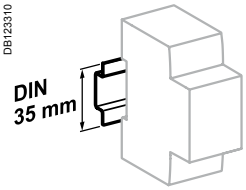
Connection

DB122948



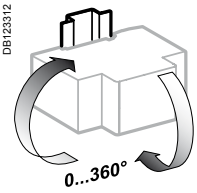
Type	Rating	Tightening torque	Copper cables	
			Rigid	Flexible or ferrule
		DB122945	DB122946	
Vigi iC60	**25 A**	2 N.m	1 to 25 mm²	1 to 16 mm²
	40 to 63 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²

DB123310



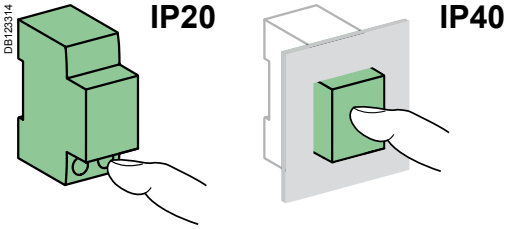
Clip on DIN rail 35 mm.

DB123312



Indifferent position of installation.

DB123314



Technical data

Main characteristics		
According to IEC 60947-2		
Insulation voltage (Ui)		500 V
Pollution degree		3
Rated impulse withstand voltage (Uimp)		6 kV
According to IEC/EN 61009-1		
Surge current withstand (8/20 µs) without tripping	AC and A types (no selective Ⓢ)	250 Â
	AC, A types (selective Ⓢ)	3 kÂ
	Asi type	3 kÂ
Additional characteristics		
Degree of protection	Device only	IP20
	Device in modular enclosure	IP40 Insulation classe II
Operating temperature	AC type	-5°C to +60°C
	A and Asi types	-25°C to +60°C
Storage temperature		-40°C to +85°C

Vigi iC60 add-on residual current devices (AC, A, Asi types) (cont.)

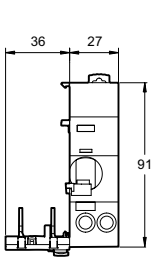
Weight (g)

Add-on residual current devices	
Type	**Vigi iC60**
2P	165
3P	210
4P	245

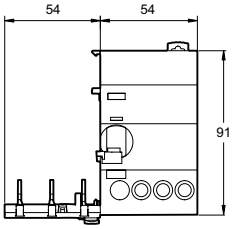
Dimensions (mm)

Vigi iC60 25 A

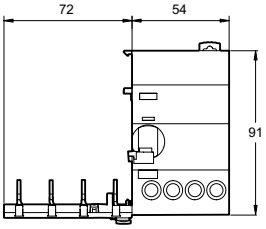
DB122766



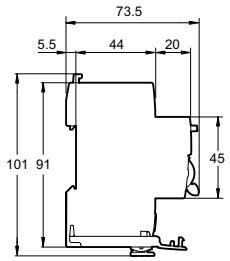
2P



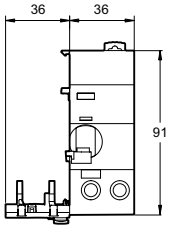
3P



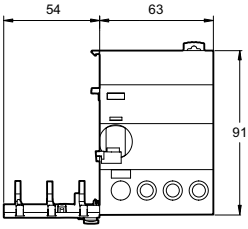
4P



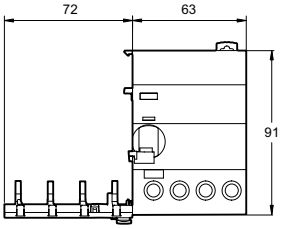
Vigi iC60 40 and 63 A



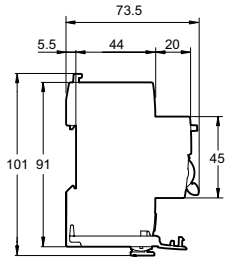
2P



3P



4P



Vigi iC60 add-on residual current devices (AC, A, Asi types) (cont.)

DB123612

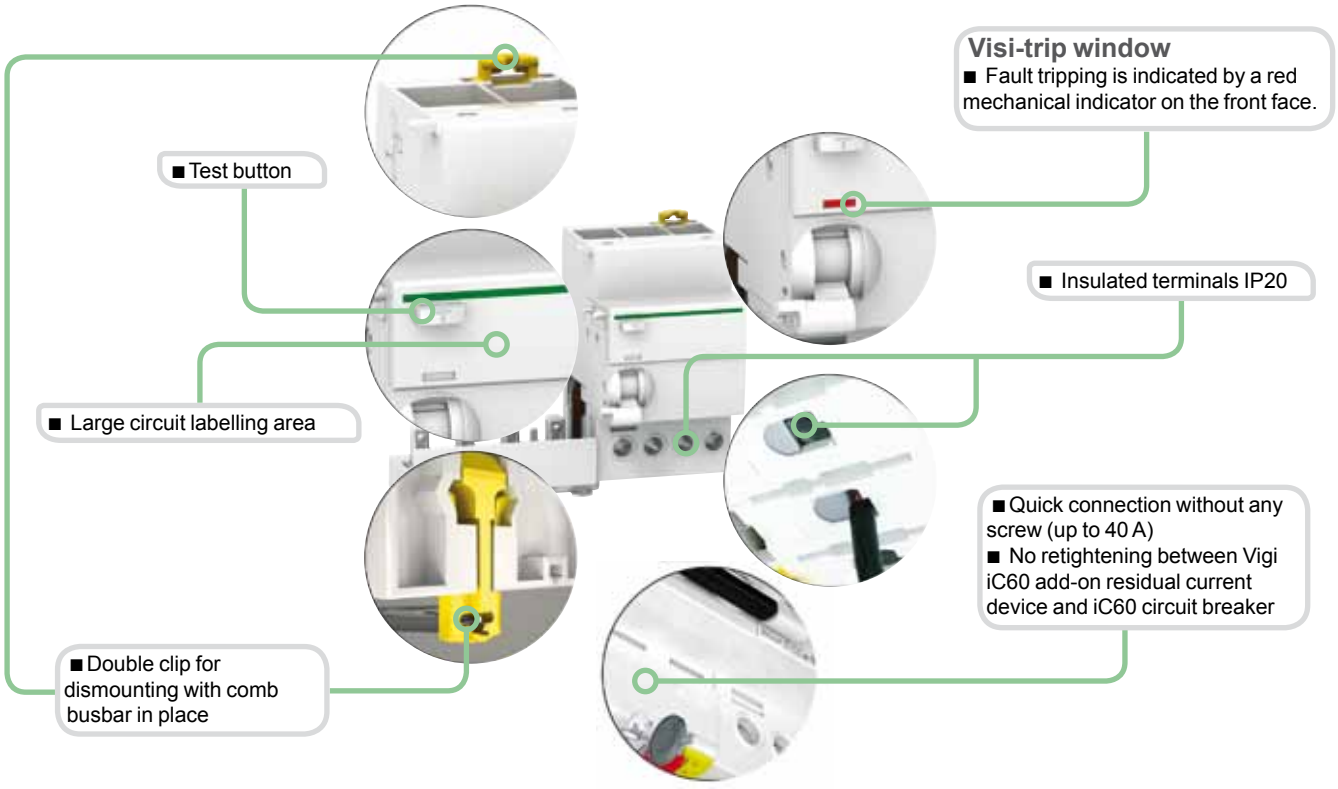
Association iC60a, N, H, L + Vigi iC60

iC60	Vigi iC60 25 A	Vigi iC60 40 A	Vigi iC60 63 A
0.5 A to 25 A	■	■	■
32 A - 40 A	NO	■	■
50 A - 63 A	NO	NO	■

Association iC60L-MA + Vigi iC60

iC60	Vigi iC60 25 A	Vigi iC60 40 A	Vigi iC60 63 A
1.6 A to 16 A	■	■	■
25 A - 40 A	NO	■	■

DB123515



Asi type

The Asi type provides increased immunity from electrical interference and polluted or corrosive environments.

Vigi C120 add-on residual current devices (type AC)

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).

056773_SE-44

2P

056774_SE-43

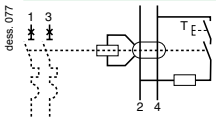
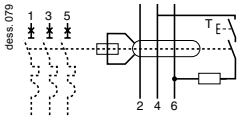
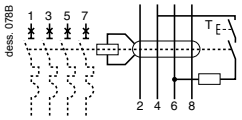
3P

056775_SE-55

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**	**300 mA S**	**1000 mA S**	
dess. 077 	**18538**	**18539**	**18544**	**18545**	7
3P **Sensitivity**	**30 mA**	**300 mA**	**300 mA S**	**1000 mA S**	
dess. 079 	**18540**	**18541**	**18546**	**18547**	10
4P **Sensitivity**	**30 mA**	**300 mA**	**300 mA S**	**1000 mA S**	
dess. 078B 	**18542**	**18543**	**18548**	**18549**	10
Operating voltage (Ue)	230...415 V				
Operating frequency	50/60 Hz				
Accessories	**Page 136**				

Vigi C120 add-on residual current devices (type A)

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).

056773_SE-44

2P

056774_SE-43

3P

056775_SE-55

4P

Catalogue numbers

Vigi C120 add-on residual current devices

Type	A ~						Width in 9 mm modules
Product	**Vigi C120**						
Auxiliaries	**Without auxiliary**						
2P **Sensitivity**	**30 mA**	**300 mA**	**500 mA**	**300 mA S**	**500 mA S**	**1000 mA S**	
dess. 077	**18572**	**18573**	**18574**	**18581**	**18582**	**18583**	7
3P **Sensitivity**	**30 mA**	**300 mA**	**500 mA**	**300 mA S**	**500 mA S**	**1000 mA S**	
dess. 079	**18575**	**18576**	**18577**	**18584**	**18585**	**18586**	10
4P **Sensitivity**	**30 mA**	**300 mA**	**500 mA**	**300 mA S**	**500 mA S**	**1000 mA S**	
dess. 078B	**18578**	**18579**	**18580**	**18587**	**18588**	**18559**	10
Operating voltage (Ue)	230...415 V						
Operating frequency	50/60 Hz						
Accessories	**Page 136**						

Vigi C120 residual current devices (types A "si" and "SiE")

2P

3P

4P

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).

Special feature of type A "si" :
They are appropriate for operating in environments with:
- high risk of nuisance tripping: frequent lightning strikes, IT system, presence of electronic ballasts, frequency converters, presence of switchgear incorporating lighting type interference filters, computer system, etc.
- blind sources:
  - presence of harmonics or high frequency rejections
  - presence of DC components: diodes, diode bridges, switch-mode power supplies, etc.
- protected against nuisance tripping caused by transient voltage surges (lightning strike, operation of switchgear on the network, etc.)

Special feature of type A "SiE" :
They are appropriate for operation in a humid atmosphere and/or an atmosphere polluted by aggressive agents: swimming pools, marinas, agro-food industry, water treatment plants, etc.

Catalogue numbers

Vigi C120 add-on residual current devices

Type	"si"				Width in 9 mm modules
Product	**Vigi C120**				
Auxiliaries	**Without auxiliary**				
2P **Sensitivity**	**30 mA**	**300 mA**	**300 mA S**	**1000 mA S**	
dess. 077	**18591**	**18592**	**18556**	**18557**	7
3P **Sensitivity**	**30 mA**	**300 mA**	**300 mA S**	**1000 mA S**	
dess. 079	**18594**	**18595**	**18558**	**18559**	10
4P **Sensitivity**	**30 mA**	**300 mA**	**300 mA S**	**1000 mA S**	
dess. 078B	**18597**	**18598**	**18560**	**18561**	10

Type	"SiE"				Width in 9 mm modules
Product	**Vigi C120**				
Auxiliaries	**Without auxiliary**				
3P **Sensitivity**	**30 mA**	**300 mA**	**300 mA S**	**1000 mA S**	
dess. 079	**18676**	**18677**	-	-	10
4P **Sensitivity**	**30 mA**	**300 mA**	**300 mA S**	**1000 mA S**	
dess. 078B	**18602**	**18678**	**18600**	**18601**	10
Operating voltage (Ue)	230...415 V				
Operating frequency	50 Hz				
Accessories	**Page 136**				

Vigi C120 add-on residual current devices (type AC)

DB123430

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).

056773_SE-44

2P

056774_SE-43

3P

056775_SE-55

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** S	**1000 mA** S	
dess. 077		**18563**	**18564**	**18565**	**18544**	**18545**	7
3P	**Sensitivity**	**30 mA**	**300 mA**	**500 mA**	**300 mA** S	**1000 mA** S	
dess. 079		**18566**	**18567**	**18568**	**18546**	**18547**	10
4P	**Sensitivity**	**30 mA**	**300 mA**	**500 mA**	**300 mA** S	**1000 mA** S	
dess. 078B		**18569**	**18570**	**18571**	**18548**	**18549**	10
Operating voltage (Ue)		230...415 V					
Operating frequency		50/60 Hz					
Accessories		**Page 136**					

Vigi C120 add-on residual current devices (type A)

DB123430

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).

056773_SE-44

2P

056774_SE-43

3P

056775_SE-55

4P

Catalogue numbers

Vigi C120 add-on residual current devices								
Type		**A**						**Width in 9 mm modules**
Product		**Vigi C120**						
Auxiliaries		**Without auxiliary**						
2P	**Sensitivity**	**30 mA**	**300 mA**	**500 mA**	**300 mA S**	**500 mA S**	**1000 mA S**	
dess. 077		**18572**	**18573**	**18574**	**18581**	**18582**	**18583**	7
3P	**Sensitivity**	**30 mA**	**300 mA**	**500 mA**	**300 mA S**	**500 mA S**	**1000 mA S**	
dess. 079		**18575**	**18576**	**18577**	**18584**	**18585**	**18586**	10
4P	**Sensitivity**	**30 mA**	**300 mA**	**500 mA**	**300 mA S**	**500 mA S**	**1000 mA S**	
dess. 078B		**18578**	**18579**	**18580**	**18587**	**18588**	**18589**	10
Operating voltage (Ue)		230...415 V						
Operating frequency		50/60 Hz						
Accessories		**Page 136**						

Vigi C120 residual current devices (types A "si" and "SiE")

DB123430

2P

3P

4P

EN 61009

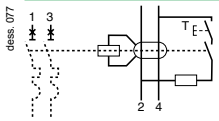
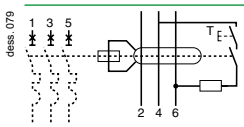
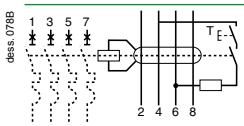
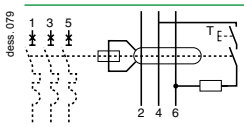
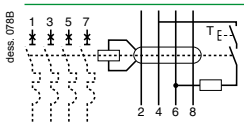
When a Vigi C120 device is combined with a C120 circuit breaker, it provides the following functions:
- protection of persons against electric shock by direct contact (30 mA),
- protection of persons against electric shock by indirect contact (≥ 300 mA),
- protection of installations against fire hazards (300 mA to 1000 mA).

Special feature of type A "si" :
They are appropriate for operating in environments with:
- high risk of nuisance tripping: frequent lightning strikes, IT system, presence of electronic ballasts, frequency converters, presence of switchgear incorporating lighting type interference filters, computer system, etc.
- blind sources:
  - presence of harmonics or high frequency rejections
  - presence of DC components: diodes, diode bridges, switch-mode power supplies, etc.
- protected against nuisance tripping caused by transient voltage surges (lightning strike, operation of switchgear on the network, etc.)

Special feature of type A "SiE" :
They are appropriate for operation in a humid atmosphere and/or an atmosphere polluted by aggressive agents: swimming pools, marinas, agro-food industry, water treatment plants, etc.

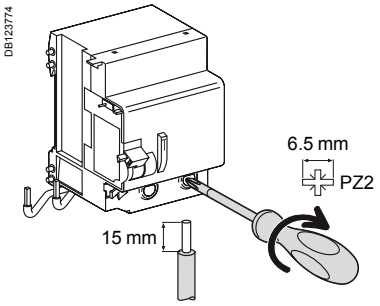
Catalogue numbers

Vigi C120 add-on residual current devices

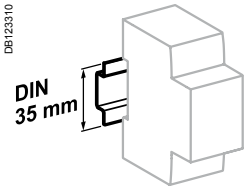
Type	"si"					Width in 9 mm modules
Product	Vigi C120					
Auxiliaries	Without auxiliary					
2P Sensitivity	30 mA	300 mA	500 mA	300 mA Ⓢ	1000 mA Ⓢ	
 dess. 077	18591	18592	18593	18556	18557	7
3P Sensitivity	30 mA	300 mA	500 mA	300 mA Ⓢ	1000 mA Ⓢ	
 dess. 079	18594	18595	18596	18558	18559	10
4P Sensitivity	30 mA	300 mA	500 mA	300 mA Ⓢ	1000 mA Ⓢ	
 dess. 078B	18597	18598	18599	18560	18561	10
Type	"SiE"					Width in 9 mm modules
Product	Vigi C120					
Auxiliaries	Without auxiliary					
3P Sensitivity	30 mA	300 mA	500 mA	300 mA Ⓢ	1000 mA Ⓢ	
 dess. 079	18676	18677	-	-	-	10
4P Sensitivity	30 mA	300 mA	500 mA	300 mA Ⓢ	1000 mA Ⓢ	
 dess. 078B	18602	18678	-	18600	18601	10
Operating voltage (Ue)	230...415 V					
Operating frequency	50 Hz					
Accessories	Page 136					

Vigi C120 residual current devices (types AC, A, "si" and "SiE")

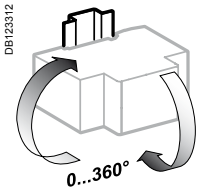
Connection



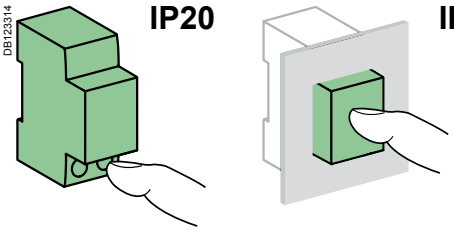
Type	Sensitivity	Tightening torque	Copper cables	
			Rigid	Flexible or with ferrule
		DB122945	DB122946	
Vigi C120	30...1000 mA	3.5 N.m	1 to 50 mm²	1 to 35 mm²



Clips onto 35 mm DIN rail.



Any installation position.



Caractéristiques techniques

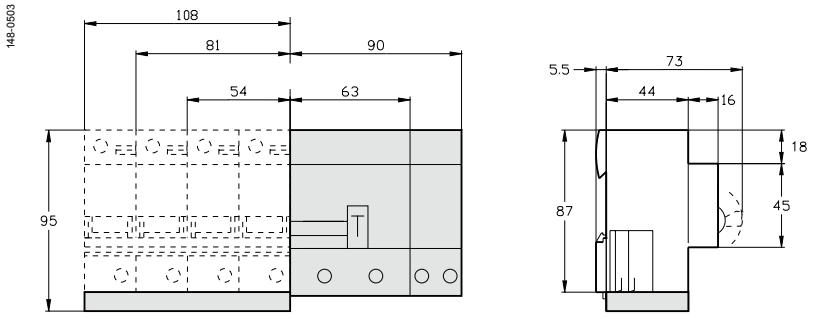
Main characteristics		
To IEC 60947-2		
Insulation voltage (Ui)		500 V AC
Degree of pollution		3
Rated impulse withstand voltage (Uimp)		6 kV
To EN 61009		
Impulse current withstand (8/20 µs) without tripping	Types AC and A (non-selective Ⓢ)	250 Â
	Types AC and A (selective Ⓢ)	3 kÂ
	Types "si" and "SiE" (non-selective Ⓢ)	3 kÂ
	Types "si" and "SiE" (selective Ⓢ)	5 kÂ
Additional characteristics		
Degree of protection	Device only	IP20
	Device in a modular enclosure	IP40 Insulation class II
Operating temperature	Type AC	-5 °C to +60 °C
	Types A, "si" and "SiE"	-25 °C to +60 °C
Storage temperature		-40 °C to +85 °C

Weight (g)

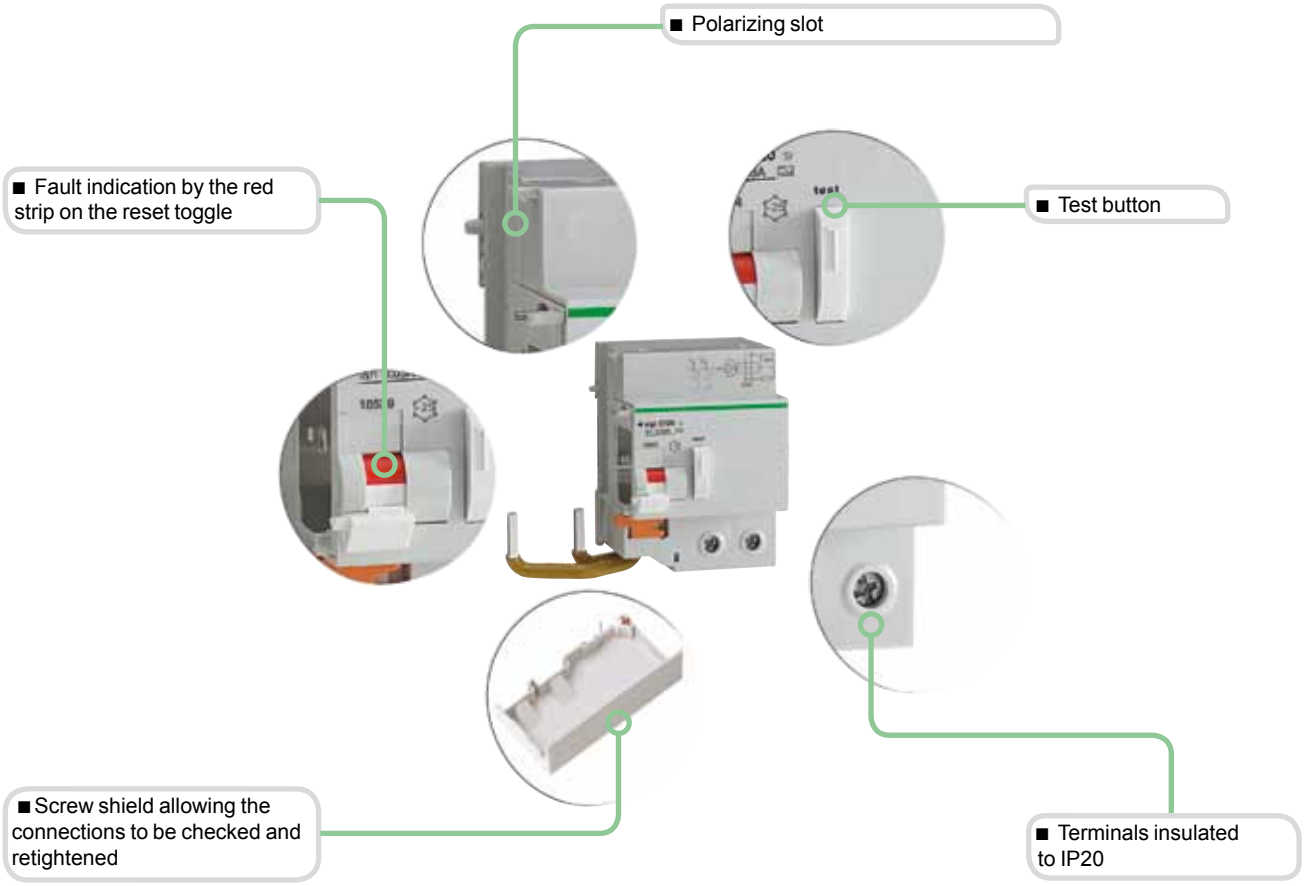
Add-on residual current devices	
Type	**Vigi C120**
2P	325
3P	500
4P	580

Dimensions (mm)

C120 + Vigi C120



Vigi C120 residual current devices (types AC, A, "si" and "SiE") (cont.)



Type Asi

The Asi type provides increased immunity from electrical interference and polluted or corrosive environments.

iID residual current circuit breakers (AC type)

DB116619 DB123430 DB122858

Country approval pictograms

IEC/EN 61008-1

PB104472-40

PB104473-40

■ The iID residual current circuit breakers provide:
□ 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 risk of fire (300 mA or 500 mA).

Catalogue numbers

iID residual current circuit breakers

Type			AC ~						Width in 9 mm module
Product			iID						
Auxiliaries			Can accept auxiliaries, page 168						
2P		Sensitivity	30 mA	100 mA	300 mA	500 mA	300 mA S	500 mA S	
DB122476 N 1 IΔ N 2	Rating	16 A	-	-	-	-	-	-	4
		25 A	A9R41225	-	A9R44225	A9R16225	-	-	
		40 A	A9R41240	A9R12240	A9R44240	A9R16240	-	-	
		63 A	A9R41263	A9R12263	A9R44263	A9R16263	A9R15263	-	
		80 A	A9R11280	A9R12280	A9R14280	-	A9R15280	-	
		100 A	A9R11291	A9R12291	A9R14291	-	A9R15291	-	
4P		Sensitivity	30 mA	100 mA	300 mA	500 mA	300 mA S	500 mA S	
DB122477 N 1 3 5 IΔ N 2 4 6	Rating	25 A	A9R41425	-	A9R44425	A9R16425	-	-	8
		40 A	A9R41440	A9R12440	A9R44440	A9R16440	A9R15440	A9R17440	
		63 A	A9R41463	A9R12463	A9R44463	A9R16463	A9R15463	A9R17463	
		80 A	A9R11480	A9R12480	A9R14480	A9R16480	A9R15480	A9R17480	
		100 A	A9R11491	A9R12491	A9R14491	-	A9R15491	-	
Voltage rating (Ue)		2P	230 - 240 V						
		4P	400 - 415 V						
Operating frequency			50/60 Hz						
Accessories			Pages 123 and 136						

iID residual current circuit breakers (Asi type)

DB116619 DB123430 DB122858

Country approval pictograms

IEC/EN 61008-1

PB104472-40

PB104473-40

■ The iID residual current circuit breakers provide:
□ 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 the risk of fire (300 mA or 500 mA).

The Asi type provides increased immunity from electrical interference and polluted or corrosive environments.

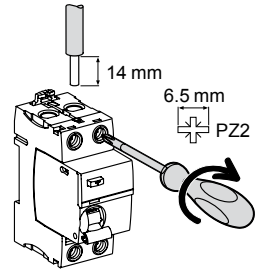
Catalogue numbers

iID residual current circuit breakers								
Type			**Asi**					**Width in 9 mm module**
Product			**iID**					
Auxiliaries			**Can accept auxiliaries, page 168**					
2P		**Sensitivity**	**10 mA**	**30 mA**	**300 mA**	**300 mA S**	**500 mA S**	
DB122476	Rating	16 A	-	-	-	-	-	4
		25 A	**A9R30225**	**A9R61225**	-	-	-	
		40 A	-	**A9R61240**	-	**A9R35240**	-	
		63 A	-	**A9R61263**	-	**A9R35263**	-	
		100 A	-	-	-	**A9R35291**	-	
4P		**Sensitivity**	**10 mA**	**30 mA**	**300 mA**	**300 mA S**	**500 mA S**	
DB122477	Rating	25 A	-	**A9R61425**	-	-	-	8
		40 A	-	**A9R61440**	-	**A9R35440**	**A9R37440**	
		63 A	-	**A9R61463**	**A9R34463**	**A9R35463**	**A9R37463**	
		80 A	-	**A9R31480**	-	**A9R35480**	**A9R37480**	
		100 A	-	**A9R31491**	**A9R34491**	**A9R35491**	-	
Voltage rating (Ue)		2P	230 - 240 V					
		4P	400 - 415 V					
Operating frequency			50/60 Hz					
Accessories			**Pages 123 and 136**					

iID residual current circuit breakers (AC, Asi types)

Connection

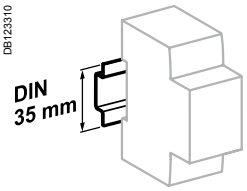
DB122947



		Without accessory		With accessories*			
Type	Tightening torque	Copper cables		50 mm² Al terminal	Screw-on connection for ring terminal	Multi-cables terminal	
		Rigid	Flexible or ferrule			Rigid cables	Flexible cables
	DB122945	DB122946	DB122935	Al DB118789	Ø DB118787		
iID	3.5 N.m	1 to 35 mm²	1 to 25 mm²	50 mm²	Ø 5 mm	3 x 16 mm²	3 x 10 mm²

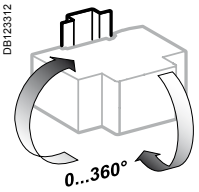
** See module CA907000*

DB123310



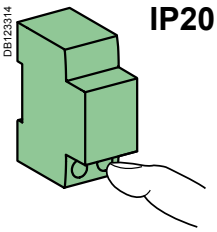
Clip on DIN rail 35 mm.

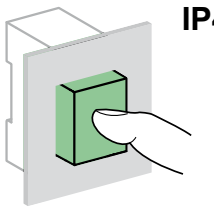
DB123312



Indifferent position of installation.

DB123314





Technical data

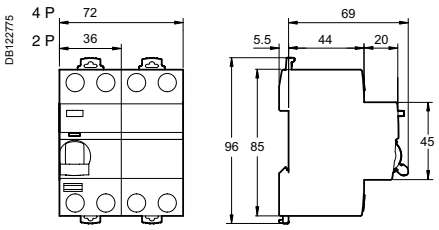
Main characteristics			
According to IEC 60947			
Insulation voltage (Ui)			500 V
Pollution degree			3
Rated impulse withstand voltage (Uimp)			6 kV
According to IEC/EN 61008-1			
Making and breaking capacity (Im/IDm)			1500 A
Surge current withstand (8/20 µs) without tripping	AC (no selective Ⓢ)		250 Â
	AC (selective Ⓢ)		3 kÂ
	Asi type		3 kÂ
Conditional rated short circuit current (Inc/IDc)	With iC60N/H/L		Equal to breaking capacity of iC60
	With fuse		10,000 A
Additional characteristics			
Degree of protection	Device only		IP20
	Device in modular enclosure		IP40 Insulation class II
Endurance (O-C)	Electrical (AC1)	16 to 63 A	15,000 cycles
		80 to 100 A	10,000 cycles
	Mechanical		20,000 cycles
Operating temperature	AC type		-5°C to +60°C
	Asi types		-25°C to +60°C
Storage temperature			-40°C to +85°C

iID residual current circuit breakers (AC, Asi types) (cont.)

Weight (g)

Residual current circuit breakers	
Type	**iID**
2P	210
4P	370

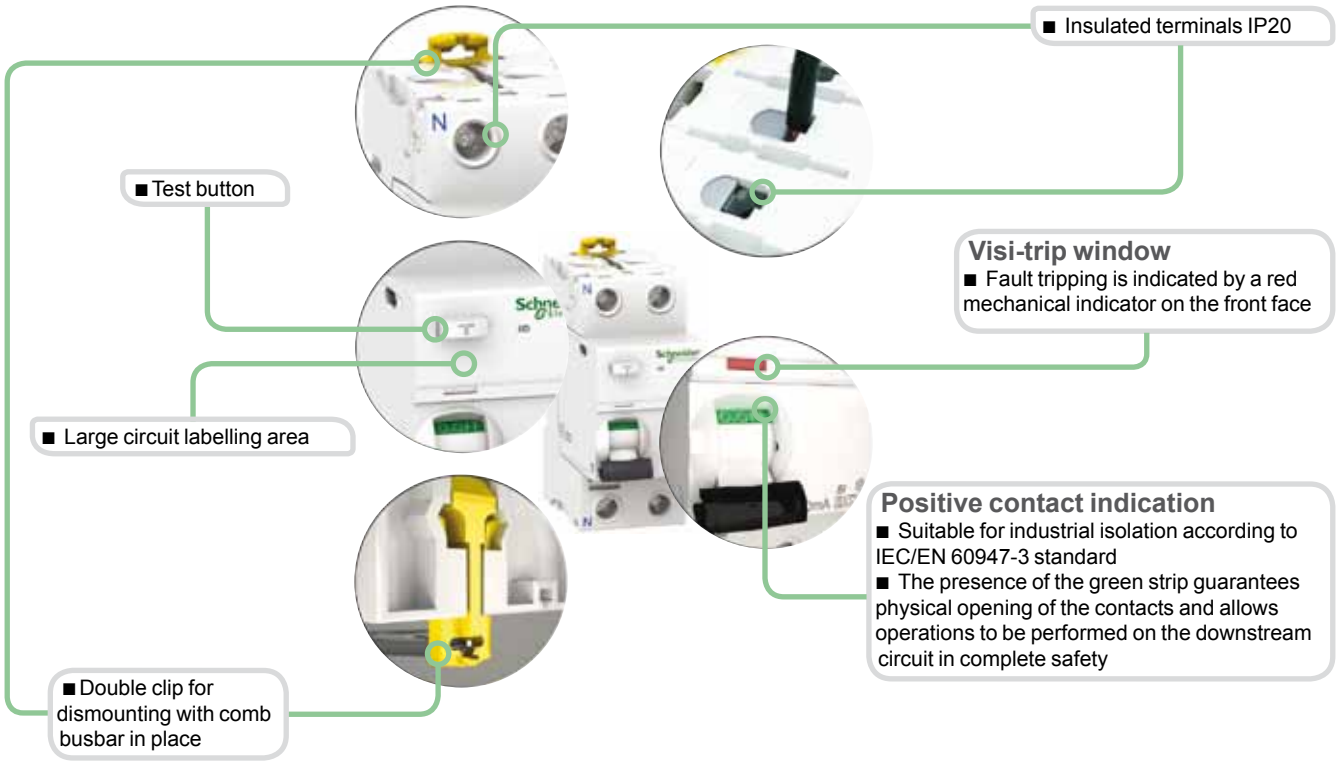
Dimensions (mm)



iID residual current circuit breakers (AC, Asi types) (cont.)

PB104548-40

PB104472-40



Asi type

The Asi type provides increased immunity from electrical interference and polluted or corrosive environments.

iID K residual current circuit breakers

DB116619 DB123430

IEC/EN 61008-1

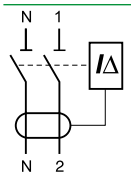
PB104497-40

PB104498-40

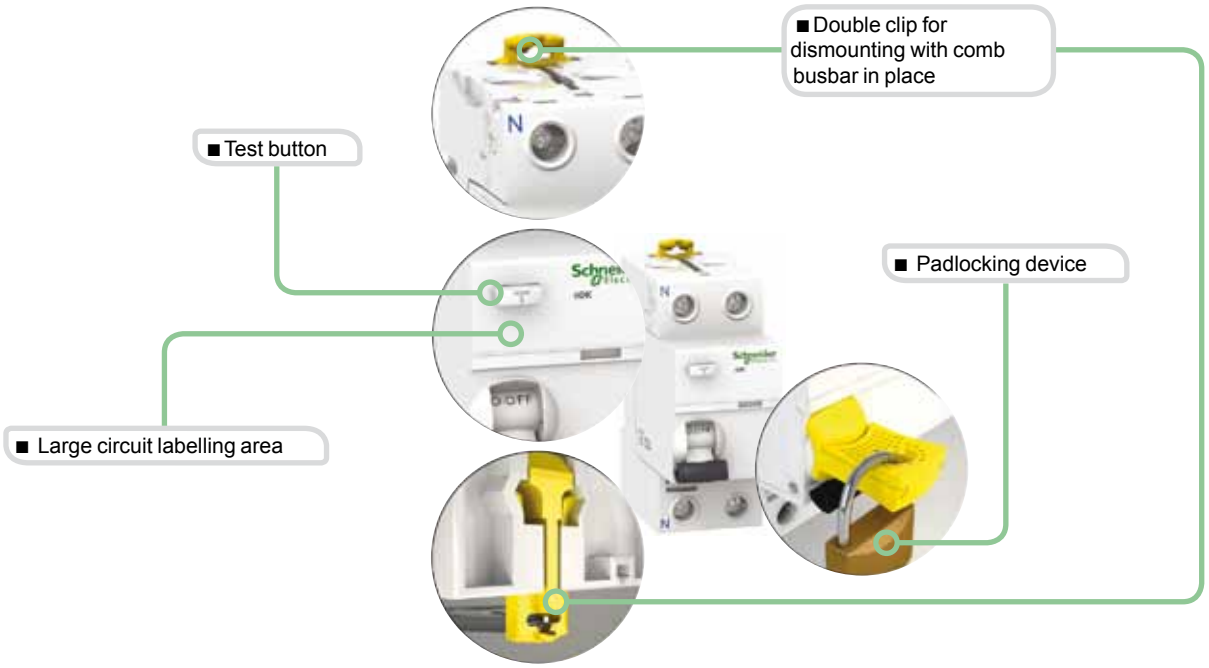
- The iID K residual current circuit breakers provide:
  - protection of persons against electric shock by direct contact (30 mA),
  - protection of persons against electric shock by indirect contact (300 mA)
  - protection of installations against the risk of fire (300 mA).

Catalogue numbers

iID K residual current circuit breakers

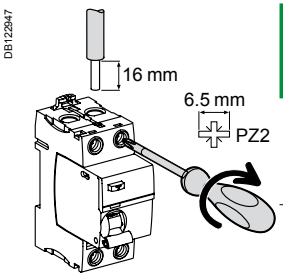
Type			AC ~		Width in 9-mm modules
Product			iID K		
Auxiliaries			Without auxiliaries		
2P		Sensitivity	30 mA	300 mA	
DB122476 	Rating	25 A	A9R50225	A9R75225	4
		40 A	A9R50240	A9R75240	
Voltage rating (Ue)		2P	230 - 240 V		
Operating frequency			50/60 Hz		

PB104497-40



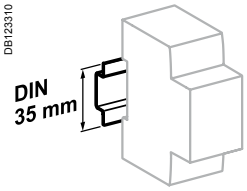
iID K residual current circuit breakers (cont.)

Connection

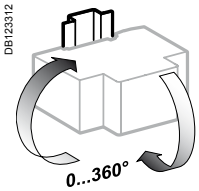


Without accessory

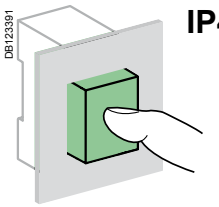
Type	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
	DB122945	DB122946	
iID K	3.5 N.m	1 to 35 mm²	1 to 25 mm²



Clip on DIN rail 35 mm.



Indifferent position of installation.



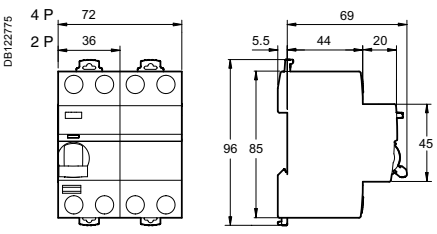
Technical data

Main characteristics		
According to IEC/EN 61008-1		
Insulation voltage (Ui)		440 V
Pollution degree		2
Rated impulse withstand voltage (Uimp)		4 kV
Making and breaking capacity (Im/IDm)	25 to 40 A	500 A
	63 A	630 A
Surge current withstand (8/20 µs) without tripping		Up to 200 Â
Conditional rated short circuit current (Inc/IDc)	With iC60N/H/L, iK60N	6000 A
	With fuse	4500 A
Additional characteristics		
Degree of protection	Device in modular enclosure	IP40
Endurance (O-C)	Electrical	2000 cycles (AC1)
	Mechanical	5000 cycles
Operating temperature		-5°C to +60°C
Storage temperature		-40°C to +85°C

Weight (g)

Residual current circuit breakers	
Type	**iID K**
2P	210

Dimensions (mm)



RCCB-ID 125 A residual current circuit breaker (AC, A, Asi types)

IEC/EN 61008-1, VDE 0664

16973

16921

16940

16938

16939

■ The RCCB-ID 125 A residual current circuit breakers provide:
□ 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 risk of fire (300 mA or 500 mA).

The Asi type provides increased immunity from electrical interference and polluted or corrosive environments.

OFsp auxiliary

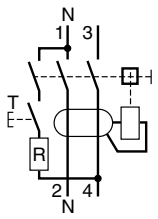
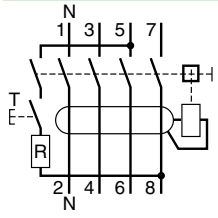
■ Electrical indication: by OFsp auxiliary mounted to the left, it has a double changeover switch indicating the "open" or "closed" position of the RCCB-ID 125 A.

Accessories

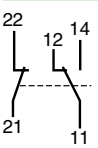
■ 2P and 4P sealable screw shield.

Catalogue numbers

RCCB-ID 125 A residual current circuit breakers

Type			AC				A				Asi		Width in 9 mm module
2P		Sensitivity	30 mA	100 mA	300 mA	500 mA	30 mA	300 mA	300 mA S	500 mA	30 mA	300 mA	
	Rating	125 A	16966	-	16967	-	16970	16971	-	-	16972	16973	4
4P		Sensitivity	30 mA	100 mA	300 mA	500 mA	30 mA	300 mA		500 mA	30 mA	300 mA	
	Rating	125 A	16905	16906	16907	16908	16924	16926	16925	16927	16920	16921	8
Voltage rating (Ue)		2P	230 V										
		4P	400 V										
Operating frequency			50 Hz										

Auxiliary

Type				Width in 9 mm module
Contact OFsp	Contact	Voltage		
	1 A	110 V DC	16940	1
	6 A	230 V AC (AC15)		

Accessory

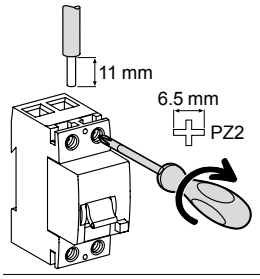
Type	Number of pole	
Screw shield (set of 10) for upstream or downstream	2P	16938
	4P	16939

RCCB-ID 125 A residual current circuit breaker (AC, A, Asi types) (cont.)

Connection

■ By tunnel terminals for:

DB123737



Type	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
	DB112804	DB112805	
RCCB-ID	3 N.m	1 x 1.5 to 50 mm²	1 x 1.5 to 35 mm²
		2 x 1.5 to 16 mm²	2 x 1.5 to 16 mm²
OFsp	0.8 N.m	1 to 1.5 mm²	1 to 1.5 mm²

OFsp contact status, depending on the position of the residual current circuit breaker

Type				
RCCB-ID 125 A	Closed	■	-	-
	Open	-	■	-
	Tripped on fault	-	-	■
Contact OFsp	22/21 12/11	Open	Closed	Closed
	14/11	Closed	Open	Open

DB122835

Indication of the status of the RCCB-ID via the 3-position toggle and front panel indicator

- Closed (red indicator)
- Tripped on fault (green indicator)
- Open (green indicator)

Technical data

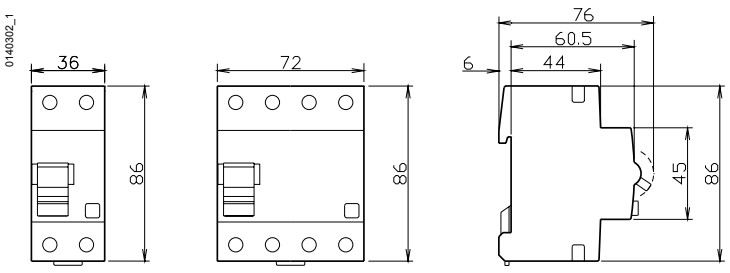
Electrical characteristics		
According to IEC 60947		
Insulation voltage (Ui)		400 V
Pollution degree		3
Rated impulse withstand voltage (Uimp)		4 kV
According to IEC/EN 61008-1		
Making and breaking capacity (Im/IDm)		1250 A
Surge current withstand (8/20 µs) without tripping	AC and A types (no selective Ⓢ)	250 Â
	Asi type (no selective Ⓢ)	3 kÂ
	AC, A and Asi types (selective Ⓢ)	3 kÂ
Conditional rated short circuit current (Inc/IDc)	With FU 125 A gG fuse	10,000 A
Additional characteristics		
Degree of protection	Device only	IP20 IP40 with screw shield
	Device in modular enclosure	IP40 Insulation classe II
Endurance (O-C)	Electrical	> 2 000 cycles
	Mechanical	> 5 000 cycles
Operating temperature		-25°C to +40°C
Storage temperature		-40°C to +85°C

Weight (g)

Residual current circuit breakers and auxiliary		
Type	**RCCB-ID 125 A**	**OFsp**
2P	230	40
4P	420	

Dimensions (mm)

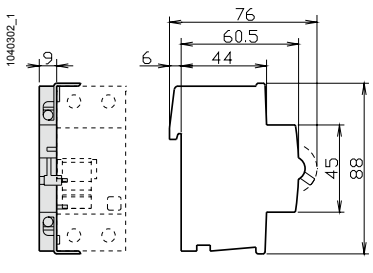
0140302_1



2P
RCCB-ID 125 A

4P

1040302_1



Contact OFsp

RCCB-ID B type

IEC/EN 61008, VDE 0664

PB101616_SE-35

16766

062075N_SE-33

16940

PB100572-18

16939

■ The RCCB-ID 125 A residual current circuit breakers provide:
□ 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 the risk of fire (300 mA or 500 mA).

B type
The RCCB-ID B type residual current circuit breakers provide:
■ protection in the event of a continuous fault current on three-phase networks generated by:
□ controllers and variable speed drives,
□ battery chargers and inverters,
□ backed-up power supplies.

■ They include and also guarantee protection against fault currents:
□ sinusoidal AC residual currents (AC type),
□ pulsed DC residual currents (A type).

They can be adapted to all the application cases defined in standards IEC 60364 and EN 50178.
■ Schneider Electric guarantees that the type B RCCB-ID works correctly in combination with the variable speed drives manufactured by Schneider Electric.

OFsp auxiliary

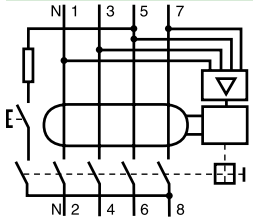
■ Electrical indication: by OFsp auxiliary mounted to the left.
It has a double changeover switch indicating the "open" or "closed" position of the RCCB-ID B type .

Accessories

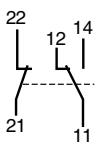
■ 4P sealable screw shield.

Catalogue numbers

RCCB-ID B type residual current circuit breakers

Type			B				Width in 9 mm module
4P		Sensitivity	30 mA	300 mA	300 mA S	500 mA	
DB122726 	Rating	25 A	**16750**	**16751**	**-**	**-**	8
		40 A	**16752**	**16753**	**16754**	**16755**	
		63 A	**16756**	**16757**	**16758**	**16759**	
		80 A	**16760**	**16761**	**16762**	**-**	
		125 A	**16763**	**16764**	**16765**	**16766**	
Voltage rating (Ue)			230/400 V				
Operating frequency			50 Hz				

Auxiliary

Type				Width in 9 mm module
Contact OFsp	Contact	Voltage		
E91415 	1 A	110 V DC	**16940**	1
	6 A	230 V AC (AC15)		

Accessory

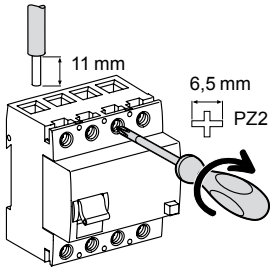
Type	Number of pole	
Screw shield (set of 10) for upstream or downstream	4P	**16939**

RCCB-ID B type (cont.)

Connection

■ By tunnel terminals for:

DB123736



Type	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
	DB112804	DB112805	
RCCB-ID B type	3 N.m	1 x 1.5 to 50 mm²	1 x 1.5 to 35 mm²
		2 x 1.5 to 16 mm²	2 x 1.5 to 16 mm²
OFsp	0.8 N.m	1 to 1.5 mm²	1 to 1.5 mm²

OFsp contact status, depending on the position of the residual current circuit breaker

Type				
RCCB-ID B type	Closed	■	-	-
	Open	-	■	-
	Tripped on fault	-	-	■
Contact OFsp	22/21 12/11	Open	Closed	Closed
	14/11	Closed	Open	Open

DB122842

Indication of the status of the RCCB-ID B type via the 3-position toggle and front panel indicator

- Closed (red indicator)
- Tripped on fault (green indicator)
- Open (green indicator)

Technical data

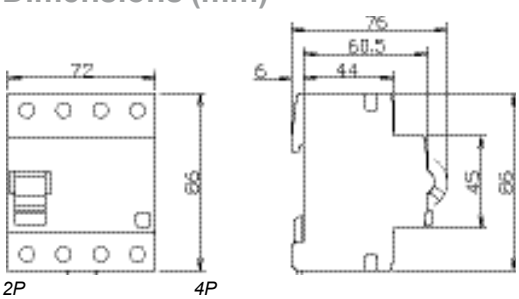
Electrical characteristics		
According to IEC 60947		
Insulation voltage (Ui)		400 V
Pollution degree		3
Rated impulse withstand voltage (Uimp)		4 kV
According to IEC/EN 61008-1		
Making and breaking capacity (Im/IDm)	25/40 A	500 A
	63/80 A	800 A
	125 A	1250 A
Surge current withstand (8/20 µs) without tripping	No selective Ⓢ	250 Â
	Selective Ⓢ	3 kÂ
Conditional rated short circuit current (Inc/IDc)	25/40 A with FU 80 A gG fuse	10,000 A
	63 A with FU 100 A gG fuse	10,000 A
	80/125 A with FU 125 A gG fuse	10,000 A
Additional characteristics		
Degree of protection	Device only	IP20 IP40 with screw shield
	Device in modular enclosure	IP40 Insulation classe II
Endurance (O-C)	Electrical	> 2 000 cycles
	Mechanical	> 5 000 cycles
Operating temperature		-25°C to +40°C
Storage temperature		-40°C to +85°C

Weight (g)

Residual current circuit breakers and auxiliary		
Type	**RCCB-ID B type**	**OFsp**
4P	450	40

Dimensions (mm)

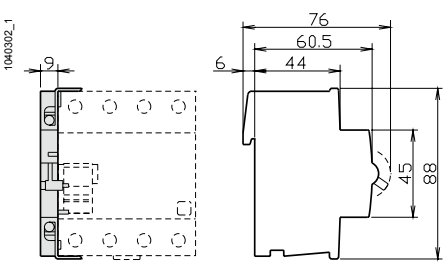
DB122838



2P *4P*

RCCB-ID B type

1040302_1



Contact OFsp

PRF1 12.5r/PRF1 Master/ PRD1 25r/PRD1 Master

Type 1 and 2 LV surge arresters

The Type 1 range of surge arresters meets the normative withstand capability of current wave type 10/350 as (8/20 as for Type 2 surge arresters).
It is suitable for use with TT, TN-S, TN-C and 230 V IT earthing connection systems (neutral point connection).
In addition, the PRF1 Master surge arrester covers the 400 V IT system.
PRF1 12.5r and PRD1 surge arresters are fitted with a remote transfer contact to send «end-of-life indication» information.
PRD1 surge arresters are fitted with easy-to-replace withdrawable cartridges.

PB104275-35

PRF1 12.5r

PB104260-35

PRD1 25r

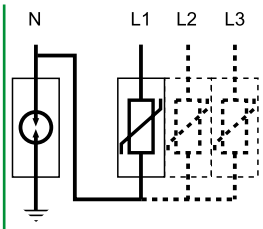
PB104264-35

PRD1 Master

PRF1 12.5r/PRF1 Master/PRD1 25r/PRD1 Master

The Type 1 surge arrester is recommended for electrical installations in the service sector and industrial buildings protected by a lightning conductor or by a meshed cage.
It protects electrical installations against direct lightning strikes.
It is used to conduct the direct lightning current, propagating from the earth conductor to the network conductors.
It must be installed with an upstream disconnection device, such as a fuse or circuit-breaker, whose breaking capacity must be at least equal to the maximum prospective short-circuit current at the installation point.
PRF1 12.5r and PRD1 25r surge arresters also provide Type 2 protection and protect the electrical installation by finely clipping the lightning wave overvoltages.

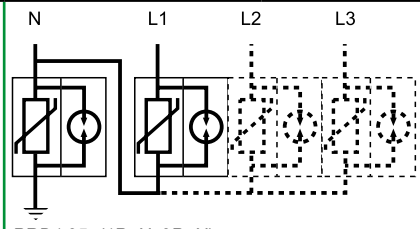
DB119038



PRF1 12.5r (1P+N, 3P+N)

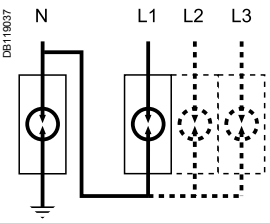
Type of surge arrester	Product solution	
Fixed surge arrester	**1P+N**	**3P+N**
PRF1 12.5r T1, T2	**16632**	**16634**
PRF1 Master T1		

DB119036



PRD1 25r (1P+N, 3P+N)

DB119037

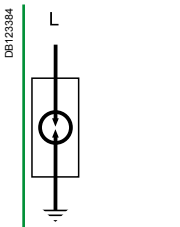


PRD1 Master (1P+N, 3P+N)

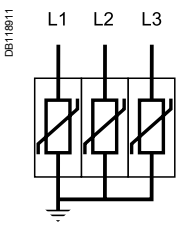
Cartridge surge arrester	1P+N	3P+N
PRD1 25r T1 + T2	**16330**	**16332**
PRD1 Master T1	**16361**	**16363**

PRF1 12.5r/PRF1 Master/ PRD1 25r/PRD1 Master

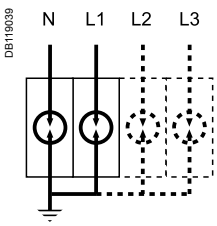
Type 1 and 2 LV surge arresters



PRF1 Master (1P)

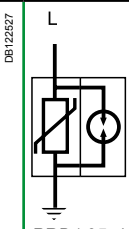


PRF1 12.5r (3P)

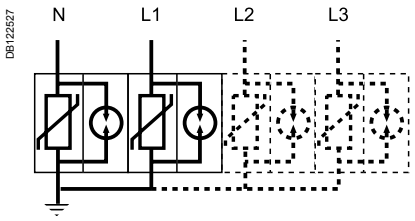


PRF1 Master (2P, 3P, 4P)

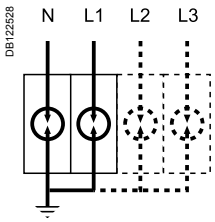
					Neutral point connection	Recommended accessory
	1P	**2P**	**3P**	**4P**		
					TT, TN-S	
			16633		TN-C	
		2 x **16630**			IT [(1)] distributed neutral	**16643**
	16630		3 x **16630**		IT [(1)] non-distributed neutral	**16644**
				4 x **16630**	IT [(1)] distributed neutral	**16645**



PRD1 25r (1P)



PRD1 25r (2P, 3P, 4P)



PRD1 Master (2P, 3P, 4P)

	1P	**2P**	**3P**	**4P**		
					TT, TN-S	
		2 x **16329**		4 x **16329**	IT 230 V	
	16329		**16331**		TN-C	
					TT, TN-S	
		2 x **16360**		4 x **16360**	IT 230 V	
			16362		TN-C	

(1) Version without indicator light.

PRF1 12.5r/PRF1 Master/ PRD1 25r/PRD1 Master

Type 1 and 2 LV surge arresters

Name of the surge arrester	Nb. of poles	Width	I imp (kA) (10/350) Impulse current		I max (kA) (8/20) Maximal discharge current	In - kA Rated discharge current	Up - kV Degree of protection	Un - V Nominal line voltage	Uc - V Maximum steady state voltage	Cat. no.
Fixed surge arrester		**9 mm modules**	**Surge arrester**	**Surge arrester + disconnector**						
PRF1 12.5r	**Type 1 + 2**									
	1P+N	4	12.5/50 N/PE		50	25	1.5	230	350	**16632**
	3P	8	12.5		50	25	1.5	230 / 400	350	**16633**
	3P+N	8	12.5/50 N/PE		50	25	1.5	230 / 400	350	**16634**
PRF1 Master	**Type 1**									
	1P	4	50	35	-	50	1.5	230	440	**16630**
Withdrawable surge arrester										
PRD1 25r	**Type 1 + 2**									
	1P	4	25		40	25	1.5	230	350	**16329**
	1P+N	8	25/100 N/PE		40	25	1.5	230/400	350	**16330**
	3P	12	25		40	25	1.5	230	350	**16331**
	3P+N	16	25/100 N/PE		40	25	1.5	230/400	350	**16332**
PRD1 Master	**Type 1**									
	1P	4	25		-	25	1.5	230	350	**16360**
	1P+N	8	25/100 N/PE		-	25	1.5	230/400	350	**16361**
	3P	12	25		-	25	1.5	230	350	**16362**
	3P+N	16	25/100 N/PE		-	25	1.5	230/400	350	**16363**
Spare cartridge										
C1 Master-350	-	4	-	-	-	25	1.5	-	350	**16314**
C1 25-350	-	23 mm	-	-	-	25	1.5	-	350	**16315**
C2 40-350	-	12 mm	-	-	-	20	1.4	-	350	**16316**
C1 Neutral-350	-	4	-	-	-	-	-	-	350	**16317**

Name of the surge arrester	Spare cartridge		
	Phase		**Neutral**
	Type 1	Type 2	
PRD1 25r			
PRD1 25r 1P	**16315**	**16316**	-
PRD1 25r 1P+N	**16315**	**16316**	**16317**
PRD1 25r 3P	3 x **16315**	3 x **16316**	-
PRD1 25r 3P+N	3 x **16315**	3 x **16316**	**16317**
PRD1 Master			
PRD1 Master 1P	**16314**	-	-
PRD1 Master 1P+N	**16314**	-	**16317**
PRD1 Master 3P	3 x **16314**	-	-
PRD1 Master 3P+N	3 x **16314**	-	**16317**

PRF1 12.5r/PRF1 Master/ PRD1 25r/PRD1 Master

Type 1 and 2 LV surge arresters

Technical data

		PRF1 12.5r	PRF1 Master	PRD1 25r	PRD1 Master
Operating frequency		50 Hz	50/60 Hz	50 Hz	50 Hz
Degree of protection	Front panel	IP40	IP40	IP40	IP40
	Terminals	IP20	IP20	IP20	IP20
	Impacts	IK05	IK05	IK05	IK05
Response time		≤ 25 ns	≤ 1 µs	≤ 25 ns	≤ 100 ns
End-of-life indication		Green: correct operation	-	White: correct operation	White: correct operation
		Red: at end of life	-	Red: at end of life	Red: at end of life
	Remote notification	1 A/250 V AC	-	1 A/250 V AC. 0.2 A/125 V DC	1 A/250 V AC. 0.2 A/125 V DC
By tunnel terminal	Rigid cable	10...35 mm²	10...50 mm²	2.5...35 mm²	10...35 mm²
	Flexible cable	10...25 mm²	10...35 mm²	2.5...25 mm²	10...25 mm²
Operating temperature		-25°C to +60°C	-40°C to +85°C	-25°C to +60°C	-25°C to +60°C
Standards	Type 1	IEC 61643-1 T1. EN 61643-11 Type 1	IEC 61643-1 T1. EN 61643-11 Type 1	IEC 61643-1 T1. EN 61643-11 Type 1	IEC 61643-1 T1. EN 61643-11 Type 1
	Type 2	IEC 61643-1 T2. EN 61643-11 Type 2	-	IEC 61643-1 T2. EN 61643-11 Type 2	-
Certification		CE	KEMAKEUR, CE	KEMAKEUR, CE	CE

Choice of disconnector / surge arrester

Type	Iimp: impulse current	Isc: prospective short-circuit current at the installation point				
		10 kA	15 kA	25 kA	36 kA	50 kA
PRF1 12.5r	12.5 kA	C120N 80 A curve C	C120H 80 A curve C or NG125N 80 A curve C	NG125N 80 A curve C	Contact us	
PRF1 Master	35 kA	Compact NSX160B 160 A TM			Compact NSX160F 160 A	Compact NSX160N 160 A
PRD1 25r	25 kA	NG125N 80 A curve C			-	
PRD1 Master	25 kA	NG125N 80 A curve C			NG125H 80 A curve C	NG125L 80 A curve C

DB123370

Accessories

Type	Number of poles	Cat. no.
4P Wiring comb busbars	4	**16643**
6P Wiring comb busbars	6	**16644**
8P Wiring comb busbars	8	**16645**
200 mm flexible cable (PRF1 Master)		**16646**

iPF surge arresters
Type 2 or 3 LV surge arresters

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 µs current wave.
Type 3 surge arresters are tested with a 12/50 µs and 8/20 µs 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.

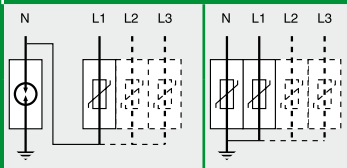
The iPF surge arresters with "r" indication have remote transfer of the information: "surge arrester to be replaced".

PB105278-35

1P+N.

PB105280-35

3P+N.

Rated discharge current (Imax) / Nominal discharge current (In)	Type of protection		Network					
								
	Incoming	Secondary (type 2 or 3)	1P+N	3P+N	1P	2P	3P	4P
65 kA / 20 kA								
	iPF65				A9L15683			
			A9L15684					
						A9L15584		
							A9L15581	
				A9L15685				
				A9L15586				
								A9L15585
40 kA / 15 kA								
High risk level	iPF40				A9L15686			
			A9L15687					
						A9L15587		
							A9L15582	
				A9L15690				
				A9L15688				
								A9L15590
								A9L15588
20 kA / 5 kA								
Medium risk level	iPF20				A9L15691			
			A9L15692					
						A9L15592		
							A9L15597	
				A9L15693				
								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			A9L15694			
			A9L15695					
						A9L15595		
							A9L15598	
				A9L15696				
								A9L15596

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

iPF surge arresters
Type 2 or 3 LV surge arresters (cont.)

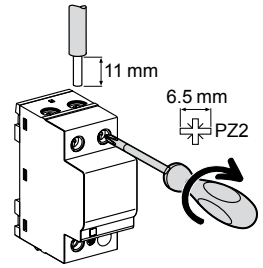
	Earthing system	Transfer	Surge arrester name	Width in mod. of 9 mm	Up - (kV) Voltage protection level			Un - (V) Rated voltage network	Uc - (V) Maximum continuous operating voltage		
					CM*		DM*		CM*		DM*
					L/⏚	N/⏚	L/N		L/⏚	N/⏚	L/N
			iPF65								
	TT & TN		iPF65 1P	2	≤ 1.5	-	-	230	340	-	-
	TT & TN-S		iPF65 1P+N	4	-	≤ 1.5	≤ 1.5		-	260	340
	TN-C		iPF65 2P		≤ 1.5	≤ 1.5	-		340	340	-
	TN-C		iPF65 3P	8	≤ 1.5	-	-	230/400	340	-	-
	TT & TN-S	■	iPF65r 3P+N		-	≤ 1.5	≤ 1.5		-	260	340
	TT & TN-S		iPF65 3P+N		-	≤ 1.5	≤ 1.5		-	260	340
	TN-C	■	iPF65r 4P		≤ 1.5	≤ 1.5	-		340	340	-
			iPF40								
	TT & TN		iPF40 1P	2	≤ 1.5	-	-	230	340	-	-
	TT & TN-S		iPF40 1P+N	4	-	≤ 1.5	≤ 1.5		-	260	340
	TN-C		iPF40 2P		≤ 1.5	≤ 1.5	-		340	340	-
	TN-C		iPF40 3P	8	≤ 1.5	-	-	230/400	340	-	-
	TT & TN-S	■	iPF40r 3P+N		-	≤ 1.5	≤ 1.5		-	260	340
	TT & TN-S		iPF40 3P+N		-	≤ 1.5	≤ 1.5		-	260	340
	TN-C	■	iPF40r 4P		≤ 1.5	≤ 1.5	-		340	340	-
	TN-C		iPF40 4P		≤ 1.5	≤ 1.5	-		340	340	-
			iPF20								
	TT & TN		iPF20 1P	2	≤ 1.1	-	-	230	340	-	-
	TT & TN-S		iPF20 1P+N	4	-	≤ 1.5	≤ 1.1		-	260	340
	TN-C		iPF20 2P		≤ 1.1	≤ 1.1	-		340	340	-
	TN-C		iPF20 3P	8	≤ 1.1	-	-	230/400	340	-	-
	TT & TN-S		iPF20 3P+N		-	≤ 1.5	≤ 1.1		-	260	340
	TN-C		iPF20 4P		≤ 1.1	≤ 1.1	-		340	340	-
			iPF8 (1)		**Type 2 / Type 3**						
	TT & TN		iPF8 1P	2	≤ 1 / ≤ 1.1	-	-	230	340	-	-
	TT & TN-S		iPF8 1P+N	4	-	≤ 1.5 / ≤ 1.2	≤ 1.4 / ≤ 1.1		-	260	340
	TN-C		iPF8 2P		≤ 1 / ≤ 1.1	≤ 1 / ≤ 1.1	-		340	340	-
	TN-C		iPF8 3P	8	≤ 1 / ≤ 1.1	-	-	230/400	340	-	-
	TT & TN-S		iPF8 3P+N		-	≤ 1.5 / ≤ 1.2	≤ 1.4 / ≤ 1.1		-	260	340
	TN-C		iPF8 4P		≤ 1 / ≤ 1.1	≤ 1 / ≤ 1.1	-		340	340	-

** **CM**: common mode (phase to earth and neutral to earth). * **DM**: differential mode (phase to neutral). **(1) Uoc**: combinated waveform voltage: 10 kV.*

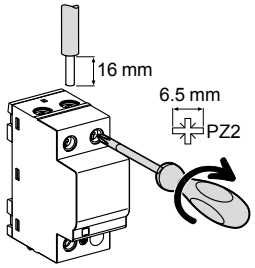
iPF surge arresters
Type 2 or 3 LV surge arresters (cont.)

Connection

DB123129



DB123129



Type		Tightening torque	Copper cables	
			Rigid	Flexible or ferrule
		DB122945	DB122946	
iPF8 / 20	Ph / N	1.2 N.m	16 mm² max.	10 mm² max.
	⏚	2 N.m	25 mm² max.	16 mm² max.
iPF40 / 65	Ph / N	2 N.m	25 mm² max.	16 mm² max.
	⏚	3.5 N.m	50 mm² max.	35 mm² max.

Technical data

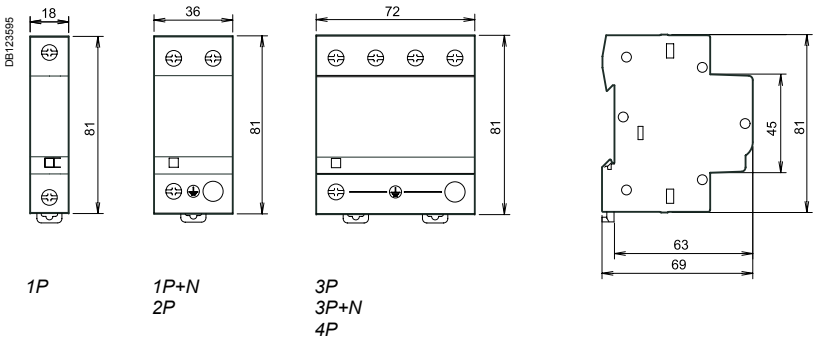
Main characteristics		
Operating frequency		50/60 Hz
Operating voltage (Ue)		230/400 V AC
Permanent operating current (Ic)		< 1 mA
Response time		< 25 ns
End of life indication: by green/red mechanical indicator	Green	In operation
	Red	At end of life
End of life remote indication		By contact NO, NC 250 V / 0.25 A
Additional characteristics		
Operating temperature		-25°C to +60°C
Type of connection terminals		Tunnel terminals, 2.5 to 35 mm²
Standards		IEC 61643-1 T2 and EN 61643-11 Type 2

iPF surge arresters
Type 2 or 3 LV surge arresters (cont.)

Weight (g)

Surge arrester	
Type	**iPF**
1P	125
2P	210
3P	335
4P	420

Dimensions (mm)



1P

1P+N
2P

3P
3P+N
4P

iPRD surge arresters

Type 2 or 3 LV withdrawable surge arresters

iPRD withdrawable surge arresters allow quick replacement of damaged cartridges.

PB105274-35

1P+N

PB105275-35

3P

PB105276-35

3P+N

PB105272-35

Cartridge

Rated discharge current (Imax) / Nominal discharge current (In)	Type of protection		Network					
			N L1 L2 L3		N L1 L2 L3			
	Incoming	Secondary	1P+N	3P+N	1P	2P	3P	4P
65 kA / 20 kA								
Very high risk level (strongly exposed site)	iPRD65				A9L16555			
					A9L16556			
			A9L16557					
						A9L16442		
							A9L16558	
							A9L16443	
				A9L16559				
								A9L16659
40 kA / 15 kA								
High risk level	iPRD40				A9L16561			
					A9L16566			
			A9L16562					
			A9L16567					
						A9L16444		
						A9L16667		
							A9L16445	
							A9L16568	
							A9L16563	
				A9L16564				
				A9L16569				
								A9L16597
								A9L16664
								A9L16669
20 kA / 5 kA								
Medium risk level	iPRD20				A9L16571			
			A9L16672					
			A9L16572					
						A9L16446		
							A9L16447	
							A9L16573	
				A9L16674				
				A9L16574				
								A9L16599
								A9L16673
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		iPRD8			A9L16576			
			A9L16677					
			A9L16577					
						A9L16448		
							A9L16449	
							A9L16578	
				A9L16679				
				A9L16579				
								A9L16678
								A9L16680

Spare cartridges

Type	Spare cartridges for	Cat. no
C 65-460	iPRD65r IT	**A9L16682**
C 65-340	iPRD65r	**A9L16681**
C 40-460	iPRD40r IT	**A9L16684**
C 40-340	iPRD40, iPRD40r	**A9L16685**
C 20-460	iPRD20r IT	**A9L16686**
C 20-340	iPRD20, iPRD20r	**A9L16687**
C 8-460	iPRD8r IT	**A9L16688**
C 8-340	iPRD8, iPRD8r	**A9L16689**
C neutral	All products	**A9L16691**

Surge arrester/circuit breaker association

Type of surge arrester	Associated circuit breaker
iPRD65	Curve C 50 A
iPRD40	Curve C 40 A
iPRD20	Curve C 25 A
iPRD8	Curve C 20 A

iPRD surge arresters

Type 2 or 3 LV withdrawable surge arresters (cont.)

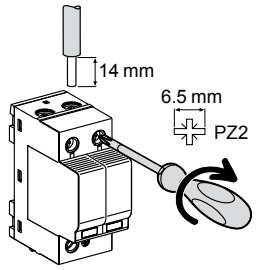
	Earthing system	Transfer	Surge arrester name	Width in mod. of 9 mm	Up - (kV) Voltage protection level			Un - (V) Rated voltage network	Uc - (V) Maximum continuous operating voltage		
					CM*		DM*		CM*		DM*
					L/⏚	N/⏚	L/N		L/⏚	N/⏚	L/N
			iPRD65								
	IT	■	iPRD65r 1P IT	2	≤ 2	-	-	230	460	-	-
	TT & TN	■	iPRD65r 1P		≤ 1.5	-	-	-	340	-	-
	TT & TN-S	■	iPRD65r 1P+N	4	-	≤ 1.5	≤ 1.5	-	-	260	340
	TN-C	■	iPRD65r 2P		≤ 1.5	≤ 1.5	-	-	340	340	-
	IT	■	iPRD65r 3P IT	6	≤ 2	-	-	230/400	460	-	-
	TN-C	■	iPRD65r 3P		≤ 1.5	-	-	-	340	-	-
	TT & TN-S	■	iPRD65r 3P+N	8	-	≤ 1.5	≤ 1.5	-	-	260	340
	TN-C	■	iPRD65r 4P		≤ 1.5	≤ 1.5	-	-	340	340	-
			iPRD40								
	TT & TN	■	iPRD40r 1P	2	≤ 1.4	-	-	230	340	-	-
	TT & TN		iPRD40 1P		≤ 1.4	-	-	-	340	-	-
	TT & TN-S	■	iPRD40r 1P+N	4	-	≤ 1.4	≤ 1.4	-	-	260	340
	TT & TN-S		iPRD40 1P+N		-	≤ 1.4	≤ 1.4	-	-	260	340
	TN-C	■	iPRD40r 2P		≤ 1.4	≤ 1.4	-	-	340	340	-
	TN-C		iPRD40 2P		≤ 1.4	≤ 1.4	-	-	340	340	-
	TN-C	■	iPRD40r 3P	6	≤ 1.4	-	-	230/400	340	-	-
	TN-C		iPRD40 3P		≤ 1.4	-	-	-	340	-	-
	IT	■	iPRD40r 3P IT		≤ 2	-	-	-	460	-	-
	TT & TN-S	■	iPRD40r 3P+N	8	-	≤ 1.4	≤ 1.4	-	-	260	340
	TT & TN-S		iPRD40 3P+N		-	≤ 1.4	≤ 1.4	-	-	260	340
	IT	■	iPRD40r 4P IT		≤ 2	≤ 2	-	-	460	460	-
	TN-C	■	iPRD40r 4P		≤ 1.4	≤ 1.4	-	-	340	340	-
	TN-C		iPRD40 4P		≤ 1.4	≤ 1.4	-	-	340	340	-
			iPRD20								
	TT & TN		iPRD20 1P	2	≤ 1.1	-	-	230	340	-	-
	TT & TN-S	■	iPRD20r 1P+N	4	-	≤ 1.4	≤ 1.1	-	-	260	340
	TT & TN-S		iPRD20 1P+N		-	≤ 1.4	≤ 1.1	-	-	260	340
	TN-C		iPRD20 2P		≤ 1.1	≤ 1.1	-	-	340	340	-
	TN-C		iPRD20 3P	6	≤ 1.1	-	-	230/400	340	-	-
	IT	■	iPRD20r 3P IT		≤ 1.6	-	-	-	460	-	-
	TT & TN-S	■	iPRD20r 3P+N	8	-	≤ 1.4	≤ 1.1	-	-	260	340
	TT & TN-S		iPRD20 3P+N		-	≤ 1.4	≤ 1.1	-	-	260	340
	IT	■	iPRD20r 4P IT		≤ 1.6	≤ 1.6	-	-	460	460	-
	TN-C		iPRD20 4P		≤ 1.1	≤ 1.1	-	-	340	340	-
			iPRD8 (1)		**Type 2 / Type 3**						
	TT & TN		iPRD8 1P	2	≤ 1 / ≤ 1	-	-	230	340	-	-
	TT & TN-S	■	iPRD8r 1P+N	4	-	≤ 1.4 / ≤ 1	≤ 1 / ≤ 1.1	-	-	260	340
	TT & TN-S		iPRD8 1P+N		-	≤ 1.4 / ≤ 1	≤ 1 / ≤ 1.1	-	-	260	340
	TN-C		iPRD8 2P		≤ 1 / ≤ 1	≤ 1 / ≤ 1	-	-	340	340	-
	TN-C		iPRD8 3P	6	≤ 1 / ≤ 1	-	-	230/400	340	-	-
	IT	■	iPRD8r 3P IT		≤ 1.4 / ≤ 1.6	-	-	-	460	-	-
	TT & TN-S	■	iPRD8r 3P+N	8	-	≤ 1.4 / ≤ 1	≤ 1 / ≤ 1.1	-	-	260	340
	TT & TN-S		iPRD8 3P+N		-	≤ 1.4 / ≤ 1	≤ 1 / ≤ 1.1	-	-	260	340
	IT	■	iPRD8r 4P IT				-	-	460	460	-
	TN-C		iPRD8 4P		≤ 1 / ≤ 1	≤ 1 / ≤ 1	-	-	340	340	-

** **CM**: common mode (phase to earth and neutral to earth). * **DM**: differential mode (phase to neutral). **(1) Uoc**: combinated waveform voltage: 10 kV.*

iPRD surge arresters
Type 2 or 3 LV withdrawable surge arresters (cont.)

Connection

DB123130



Type	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
	DB122945	DB122946	
iPRD	2 N.m	2.5 to 25 mm²	2.5 to 16 mm²

Technical data

Main characteristics		
Operating frequency		50/60 Hz
Operating voltage (Ue)		230/400 V AC
Permanent operating current (Ic)		< 1 mA
Response time		< 25 ns
End of life indication: by mechanical indicator	White	In operation
	Red	At end of life
End of life remote indication		By contact NO, NC 250 V / 0.25 A
Additional characteristics		
Operating temperature		-25°C to +60°C
Type of connection terminals		Tunnel terminals, 2.5 to 35 mm²
Standards		IEC 61643-1 T2 and EN 61643-11 Type 2

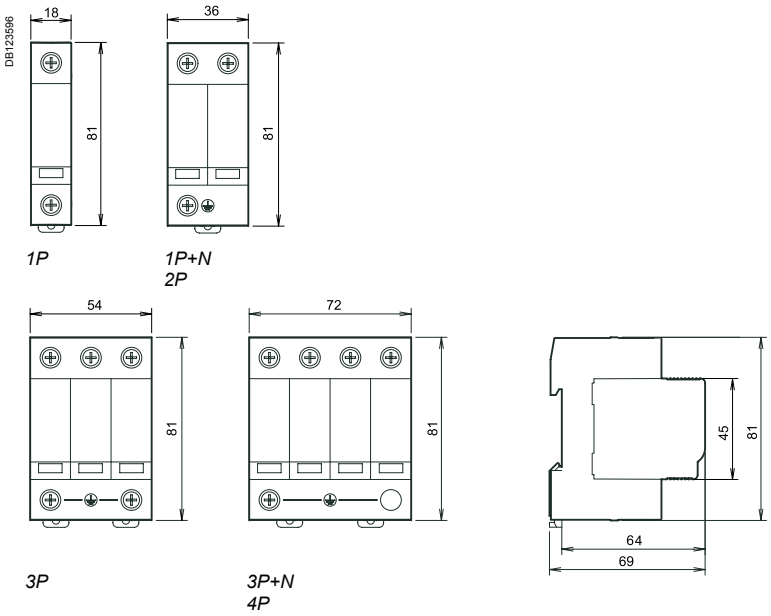
iPRD surge arresters

Type 2 or 3 LV withdrawable surge arresters (cont.)

Weight (g)

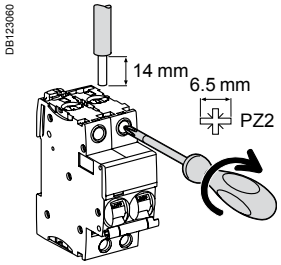
Surge arrester	
Type	**iPRD**
1P	115
2P	220
3P	340
4P	450

Dimensions (mm)



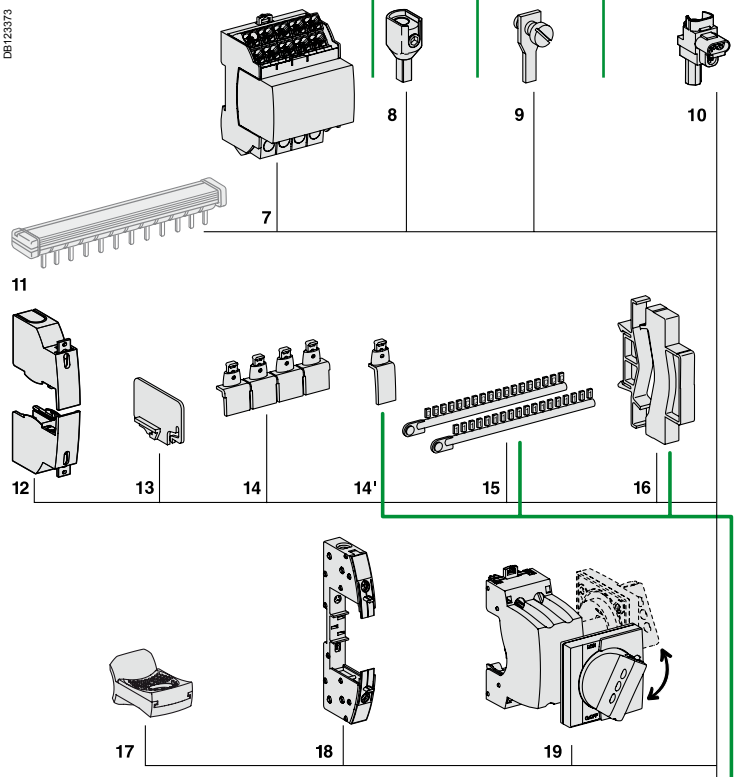
Accessorisation / Auxiliarisation iC60, iID, Vigi iC60

Connection



Type	Rating	Tightening torque	Without accessory: Copper cables – Rigid	Without accessory: Copper cables – Flexible or ferrule	With accessories: 50 mm² Al terminal	With accessories: Screw-on connection for ring terminal	With accessories: Multi-cables terminal – Rigid cables	With accessories: Multi-cables terminal – Flexible cables
			DB122945	DB122946	DB122935 Al	DB118789 Ø	DB118787	
iC60	0.5 to 25 A	2 N.m	1 to 25 mm²	1 to 16 mm²	-	Ø 5 mm	-	-
	32 to 63 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²	50 mm²		3 x 16 mm²	3 x 10 mm²
Vigi iC60	25 A	2 N.m	1 to 25 mm²	1 to 16 mm²	-	-	-	-
	40 to 63 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²				
iID	16 to 100 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²	50 mm²	Ø 5 mm	3 x 16 mm²	3 x 10 mm²

7	Splitter blocks	Multiclip	see module	CA907004
		Distribloc	see module	CA907003
8	50 mm² Al terminal			27060
9	Screw-on connection for ring terminal			27053
10	Multi-cables terminal		4 parts	19091
			3 parts	19096
11	Comb busbar		see module	91906



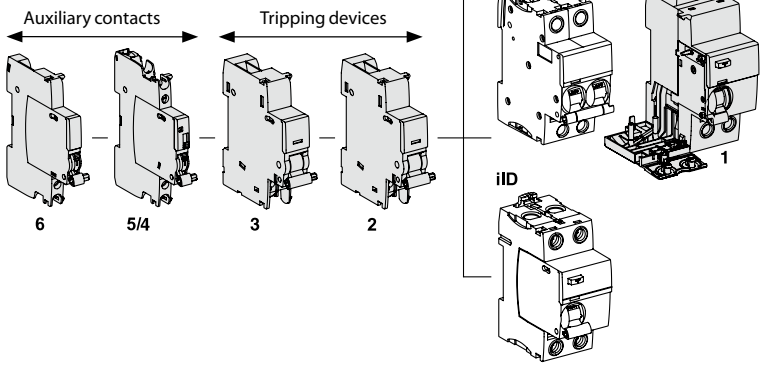
Mounting accessories

12	Sealable terminal shields for top and bottom connection		1P (set of 2)	A9A26975
			2P (set of 2)	A9A26976
			3P	1P + 2P
			4P	2P + 2P
13	Interpole barrier		(set of 10)	A9A27001
14	Screw shields		4P (set of 20)	A9A26981
14'	Screw shields	Vigi iC60	(set of 12)	A9A26982
15	Clip-on terminal markers		see module	CA907001
16	9 mm spacer			A9A27062
17	Padlocking device		(set of 10)	A9A26970
18	Plug-in base			A9A27003
19	Rotary handle			
	With handle black			A9A27005
	With handle red			A9A27006
	Adapter mechanism without handle			A9A27008

Electrical auxiliaries

Indication			
4	iOF/SD+OF auxiliary contact (OF+SD or OF+OF combination switch)		A9A26929
5	iSD fault indicating contact		A9A26927
6	iOF open/close auxiliary contact		A9A26924

Tripping devices			
2	iMN undervoltage release or iMNs undervoltage release delayed or iMNx undervoltage release with external feeding	see module	CA907002
3	Shunt release iMX, iMX+OF overvoltage release iMSU	see module	CA907002



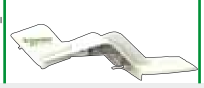
Vigi iC60

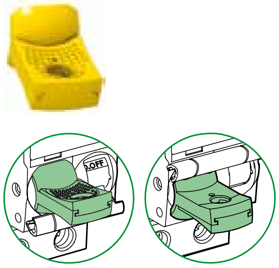
1	Vigi iC60 add-on residual current device	see module	CA902005

Tripping devices must be mounted first.
Respect specified position for SD functions.

Accessories for iC60, iID, iSW-NA, Reflex iC60, RCA and ARA

Mounting

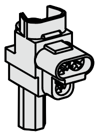


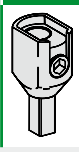


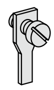
Accessories	Rotary handle			Plug-in base	Padlocking device
Function					
	Front or side-mounted control ■ Degree of protection: IP55 rotary handle ■ Installation: □ the control mechanism is mounted on the device □ the rotary handle is fixed to the front or side of the enclosure ■ Front-mounted (on door or faceplate) ■ Prevents the door from opening when the circuit breaker is in the ON position (can be deactivated) ■ Can be padlocked when the device is in the "open" position (can be padlocked with the device in the "closed" position subject to adaptation) ■ Can be locked by padlock of (dia. 5 to 8 mm), not supplied with the device		■ The Laser Square tool brings the accuracy to align the circuit breaker and the rotary handle.	**Allows a breaker to be removed or replaced quickly, without handling the connections** ■ Degree of protection: IP20 ■ Consists of: □ a base to be fastened on a rail (or panel) □ 2 "blades" to be fastened in the device's terminals ■ Connection: tunnel terminals for cable up to 35 mm² rigid, 25 mm² flexible, ■ Installation: □ in universal enclosure □ on horizontal rail ■ Height: 178 mm ■ Not compatible with Vigi iC60 and auxiliaries ■ Can be locked by padlock (dia. 6 mm), not supplied with the device	**Used to padlock breaker in open or closed position** ■ Padlock diameter 3 to 6 mm ■ Sealable (max. diameter: 1.2 mm) ■ Locking in ON position does not prevent tripping of the breaker in the event of faults ■ Suitable for IEC/EN 60947-2 compliant disconnection
Catalogue numbers	**A9A27005** **black handle**	**A9A27006** **red handle**	**A9A27008 GVP01** **no handle**	**A9A27003** **(1 per pole)**	**A9A26970**
Set of	1	1	1	1	10
Suitability					
iC60	■ 2P, 3P, 4P			■	■
iC60 + Vigi iC60	■ 2P, 3P, 4P			–	■
iID	–			■ ⩽ 63 A	■
Reflex iC60 or RCA+iC60 or ARA+iC60	–			–	■
ARA+iID	–			–	■
iSW-NA	–			■	■

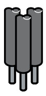
IMN: A9A26960; IMNi: A9A26961; IMN: A9A26959; IMNs: A9A26963; IMNx: A9A26969; IMNx: A9A26971; IMSU: A9A26979; iMSU: A9A26479; iMX: A9A26476; iMX: A9A26477; iMX: A9A26478; iMX+OF: A9A26946; iMX+OF: A9A26947; iMX+OF: A9A26948; iOF: A9A26924; iSD: A9A26927; Marker strip: AB1-GB; Marker strip: AB1-GC; Marker strip: AB1-GD; Marker strip: AB1-GE; Marker strip: AB1-GF; Marker strip: AB1-GG; Marker strip: AB1-GH; Marker strip: AB1-GI; Marker strip: AB1-GJ; Marker strip: AB1-GK; Marker strip: AB1-GL; Marker strip: AB1-GM; Marker strip: AB1-GN; Marker strip: AB1-GO; Marker strip: AB1-GP; Marker strip: AB1-GQ; Marker strip: AB1-GR; Marker strip: AB1-GS; Marker strip: AB1-GT; Marker strip: AB1-GU; Marker strip: AB1-GV; Marker strip: AB1-GW; Marker strip: AB1-GX; Marker strip: AB1-GY; Marker strip: AB1-GZ; Marker strip: AB1-R0; Marker strip: AB1-R1; Marker strip: AB1-R12; Marker strip: AB1-R13; Marker strip: AB1-R2; Marker strip: AB1-R3; Marker strip: AB1-R4; Marker strip: AB1-R5; Marker strip: AB1-R6; Marker strip: AB1-R7; Marker strip: AB1-R8; Marker strip: AB1-R9; Marker strip: AB1-RV; Screw-on connection for ring terminal: 27053; Rotary handle: A9A27005 black handle; Rotary handle: A9A27006 red handle; Rotary handle: A9A27008 no handle; Rotary handle: GVP01; Padlocking device: A9A26970; Screw shield: A9A26981; Terminal shield: A9A26975; Terminal shield: A9A26976; Inter-pole barrier: A9A27001; Spacer: A9A27062

Connection







Accessories	Multi-cable terminal		50 mm² terminal Al	Screw-on connection for ring terminal
Function				
	For 3 copper cables: ■ Rigid up to 16 mm² ■ Flexible up to 10 mm²		**For aluminium cables from 16 to 50 mm²**	**For lug tipped cables, front or rear mounting**
	 DB118787		 DB122935 Al	 DB118789 Ø 5 mm
Catalogue numbers	19091	19096	27060	27053
Set of	4	3	1	8
iC60 ⩽ 25 A **Reflex iC60 ⩽ 25 A**	–	–	–	■
iC60 >25 A **Reflex iC60 40 A**	■	■	■	■
Vigi iC60	–	–	–	–
iID	■	■	■	■
iSW-NA	■	■	■	■
Tightening torque	2 N.m		10 N.m	2 N.m
Lenght stripping	11 mm		13 mm	–
Tools to use	Dia. 5 mm or PZ2		Hc 1/5" or 5 mm	Dia. 5mm

Accessories for iC60, iID, iSW-NA, Reflex iC60, RCA and ARA (cont.)

Security

Accessories	Screw shield		Terminal shield		Inter-pole barrier	Spacer
	PB104489-14 / PB104488-14	PB104502-35	PB104503-35 / PB104484-30		PB104483-35	
Function						
	Prevents any contact with the connecting screws ■ Upgrades degree of protection to IP20D ■ Sealable, max. diameter 1.2 mm		**Prevents any contact with the terminals** ■ Upgrades degree of protection to IP20D ■ Sealable, max. diameter 1.2 mm ■ Set of two, for upstream and downstream terminals ■ For 3 poles: **A9A26975** + **A9A26976** ■ For 4 poles: 2 X **A9A26976**		**Enhances insulation between connections: cables, terminals, lugs, etc**	■ Used to: □ complete rows □ separate devices. Width: 1 x 9 mm module ■ Allows cable routing from one row to another, (above and below), up to 6 mm²
Catalogue numbers	**A9A26982**	**A9A26981**	**A9A26975**	**A9A26976**	**A9A27001**	**A9A27062**
Set of	**12 x 1 pole**	**20 x 4 poles (splittable)**	**2 x 1 pole**	**2 x 2 poles**	**10**	**5**
Suitability						
iC60	–	■	■	■	■	■
Vigi iC60	■	–	–	–	–	■
iID	–	■	–	■	■	■
Reflex iC60 or RCA+iC60 or ARA+iC60	–	■	■	■	■	■
ARA+iID	–	■	–	■	■	■
iSW-NA	–	■	–	■	■	■

Marking

Accessories	Marker strip					
	DB118785					
	Used for connection identification					
Catalogue numbers	0: **AB1-R0** 1: **AB1-R1** 2: **AB1-R2** 3: **AB1-R3** 4: **AB1-R4**	5: **AB1-R5** 6: **AB1-R6** 7: **AB1-R7** 8: **AB1-R8** 9: **AB1-R9**	A: **AB1-GA** B: **AB1-GB** C: **AB1-GC** D: **AB1-GD** E: **AB1-GE** F: **AB1-GF** G: **AB1-GG** H: **AB1-GH** I: **AB1-GI**	J: **AB1-GJ** K: **AB1-GK** L: **AB1-GL** M: **AB1-GM** N: **AB1-GN** O: **AB1-GO** P: **AB1-GP** Q: **AB1-GQ** R: **AB1-GR**	S: **AB1-GS** T: **AB1-GT** U: **AB1-GU** V: **AB1-GV** W: **AB1-GW** X: **AB1-GX** Y: **AB1-GY** Z: **AB1-GZ**	+: **AB1-R12** -: **AB1-R13** blank: **AB1-RV**
Set of	**250**					
iC60 / Reflex iC60	■ 4 markers max. per pole					
Vigi iC60	■ 4 markers max. per device					
iID	■ 4 markers max. per device					
iSW-NA	■ 4 markers max. per device					

Electrical auxiliaries for iC60, iID, iSW-NA, RCA and ARA

■ The electrical auxiliaries are combined with iC60 circuit breakers, iID residual current circuit breakers, remote tripping switch disconnector iSW-NA , RCA remote controls and ARA automatic reclosers; they enable tripping or remote indication of their position (open/closed/tripped) upon a fault.
■ They are fastened by clips (without tools) to the left side of the breaker.
■ The iOF/SD+OF auxiliary is a 2-in-1 product: via a mechanical selector switch, it provides two contacts, OF+SD or OF+OF.

IEC/EN 60947-1

■ Tripping auxiliaries:
□ iMN: undervoltage release
□ iMNs: delayed undervoltage release
□ iMNx: undervoltage release, independant from supply voltage
□ iMSU: overvoltage release
□ iMX: shunt release
□ iMX+OF: shunt release with open/close contact.

IEC/EN 60947-5-1

■ Indication auxiliaries:
□ iOF: open/close contact
□ iSD: fault indicating contact
□ iOF/SD+OF: open/close contact and switchable OF or SD contact.

DB123545

Electrical auxiliaries for iC60, iID, iSW-NA, RCA and ARA (cont.)

Combination table

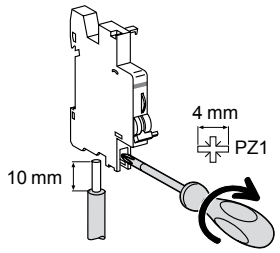
Electrical auxiliaries						Remote control	Devices	
Indication auxiliaries					Tripping auxiliaries	ARA automatic recloser or RCA remote control	iC60/iID/ iSW-NA*	Vigi
Position								
Left		Right			Max quantity			
1 iOF/SD+OF	+	1 iOF/SD+OF	+		1 (iMX or iMN or iMSU)	–	PB104440-25  iC60	PB104466-25  Vigi iC60
Or 1 iOF	+	1 (iSD or iOF or iOF/SD+OF)	+		2 (iMX or iMN or iMSU)			
Or None	+	None	+		3x iMSU		PB104472-25  iID/iSW-NA*	–
None	+	1 (iSD or iOF or iOF/SD+OF)	+		1 (iMX or iMN or iMSU)	PB106256-25  ARA	PB104440-25  iC60	PB104466-25  Vigi iC60
Or 1 iOF	+	1 (iSD or iOF or iOF/SD+OF)	+		None			
							PB104472-25  iID/iSW-NA*	–
None	+	1 (iSD or iOF or iOF/SD+OF)	+		1 (iMX or iMN or iMSU)	PB106253-25  RCA	PB104440-25  iC60	PB104466-25  Vigi iC60
Or 1 iOF	+	1 (iSD or iOF or iOF/SD+OF)	+		None			

Other possible associations: see technical pages

Tripping devices must be mounted first.
***iSW-NA : the iSD auxiliary contact must be associated with an auxiliary (iMN, iMX, iMX+OF); it indicates that the remote tripping switch disconnector has been tripped open.**

Connection

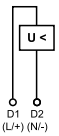
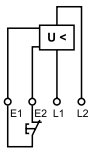
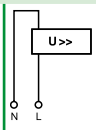
DB123061



Type	Tightening torque	Copper cables		Multi-cables terminal	
		Rigid	Flexible	Rigid	With ferrule
	DB122945	DB123007	DB123011	DB123008	
Indication auxiliaries	1 N.m	1 to 4 mm²	0.5 to 2.5 mm²	2 x 2.5 mm²	2 x 1.5 mm²
Tripping auxiliaries	1 N.m	1 to 6 mm²	0.5 to 4 mm²	2 x 2.5 mm²	2 x 2.5 mm²

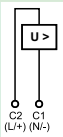
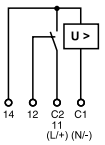
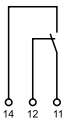
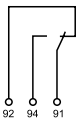
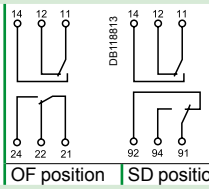
Electrical auxiliaries for iC60, iID, iSW-NA, RCA and ARA (cont.)

Tripping

Auxiliaries	iMN			iMNs	iMNx		iMSU	
Type	**Undervoltage release**						**Overvoltage release**	
	Instantaneous			Delayed	Independent of the supply voltage			
	PB104477-35 			PB104478-35 	PB104480-35 		PB104479-35 	
Function								
	■ Trips the device with which it is combined when its input voltage decreases (between 70 % and 35 % Un). Prevents device closing again until its input voltage is restored						■ Switches off the power supply by opening the breaker with which it is combined, in the event that the phase/neutral voltage is exceeded (loss of neutral). For a four-phase network, use three iMSU tripping auxiliaries	
				■ Not tripping on transient voltage dip (up to 0.2 s)	■ Separate input and power supply		■ Tripping voltage: 275 V AC	■ Tripping voltage: 255 V AC
Wiring diagrams								
	DB118804 				DB118805 		DB118806 	
Use								
	■ Emergency stoppage by normally closed push button ■ Ensures the safety of power supply circuits for several machines by preventing "uncontrolled" restarting				■ Emergency stoppage with fail-safe principle ■ Insensitive to control circuit voltage variation to increase service continuity		■ Protection of equipment against overvoltages on the electrical network (neutral conductor break) ■ Voltage monitoring between phase and neutral conductors	
Catalogue numbers	**A9A26960**	**A9A26961**	**A9A26959**	**A9A26963**	**A9A26969**	**A9A26971**	**A9A26979**	**A9A26479**
Technical specifications								
Rated voltage (Ue) V AC	220…240	48	115	220…240	220…240	380…415	230	230
Rated voltage (Ue) V DC	–	48		–	–		–	
Operating frequency Hz	50/60		400	50/60	50/60		50/60	
Red mechanical indicator	On front face			On front face	On front face		On front face	
Test function	–			–	–		–	
Width in 9 mm modules	2			2	2		2	
Operating current	–			–	–		–	
Number of contacts	–			–	–		–	
Operating temperature °C	-35…+70			-35…+70	-35…+70		-35…+70	
Storage temperature °C	-40…+85			-40…+85	-40…+85		-40…+85	

Electrical auxiliaries for iC60, iID, iSW-NA, RCA and ARA (cont.)

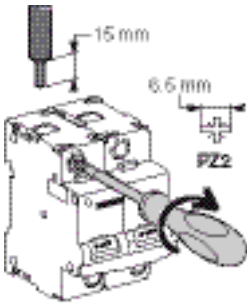
Indication

	iMX	iMX+OF	iOF	iSD	iOF/SD+OF
	Shunt release		**Open/close auxiliary contact**	**Fault indicating contact**	**Double open/close or fault indicating contact**
		With Open/Close auxiliary contact			
	PB104496-35 	PB104481-35 	PB104474-35 	PB104476-35 	PB104475-35 
	■ Trips the breaker when powered		■ Changeover contact indicates "open" or "closed" position of the breaker	■ Changeover contact indicates position of the breaker; upon: □ electrical fault □ action on tripping auxiliary ■ Same indication as VISI-TRIP	■ The iOF/SD+OF auxiliary is a 2-in-1 product: via a mechanical selector switch, it provides two contacts, OF+SD or OF+OF
		■ Includes an open/close contact (OF) to indicate the "open" or "closed" position of the breaker			
	DB123012 	DB118808 	DB118810 	DB118811 	DB118812 DB118813 
	■ Emergency stoppage by normally open push button	■ Emergency stoppage by normally open push button ■ Remote indication of the position of the associated breaker	■ Remote indication of the position of the associated breaker	■ Remote indication of tripping upon a fault of the associated breaker	■ Remote indication of position and/or tripping upon a fault of the associated breaker
	A9A26476 **A9A26477** **A9A26478**	**A9A26946** **A9A26947** **A9A26948**	**A9A26924**	**A9A26927**	**A9A26929**
	100…415 48 12…24	100…415 48 12…24	240…415	240…415	240…415
	110…130 48 12…24	110…130 48 12…24	24…130	24…130	24…130
	50/60	50/60	50/60	50/60	50/60
	On front face	On front face	On front face	On front face	On front face
	–	–	On toggle	On toggle	On toggle
	2	2	1	1	1
	–	≤ 24 V DC 6 A 48 V DC 2 A ≤ 130 V DC 1 A ≤ 240 V AC 6 A 415 V AC 3 A	24 V DC 6 A 48 V DC 2 A 60 V DC 1.5 A 130 V DC 1 A 240 V AC 6 A 415 V AC 3 A		
	–	1 NO/NC	1 NO/NC	1 NO/NC	1 NO/NC + 1 NO/NC
	-35…+70	-35…+70	-35…+70	-35…+70	-35…+70
	-40…+85	-40…+85	-40…+85	-40…+85	-40…+85

Accessories and auxiliaries for C120 and Vigi C120 devices

Connection

DB126143



Type	Rating	Tightening torque	Without access. Copper cables		With accessories 50 mm² Al terminal	Screw-on connection for ring terminal	Multi-cable terminal	
			Rigid	Flexible or with ferrule			Rigid cables	Flexible cables
			DB122945	DB122946	DB122935	DB118789	DB118787	
C120	10 to 125 A	3.5 N.m	1 to 50 mm²	1.5 to 35 mm²	16 to 50 mm²	Ø 5 mm	3 x 16 mm²	3 x 10 mm²
Vigi C120	10 to 125 A	3.5 N.m	1 to 50 mm²	1.5 to 35 mm²	-	-	-	-

7	50 mm² Al terminal		**27060**
8	Screw-on connection for ring terminal	8 parts	**27053**
9	Multi-cable terminal	4 parts	**19091**
		3 parts	**19096**
10	Comb busbar	see module	**91906**

Mounting accessories

11	Sealable terminal shield for connection from above and below	1P (set of 2)	**18526**
12	Interpole barrier	(set of 10)	**27001**
13	Screw shield	4P (set of 2)	**18527**
14	Clip-on terminal markers	see module	**CM907003F**
15	2, 3 and 4-pole label holder on toggle	16 parts	**27150**
16	9 mm spacer		**27062**
17	Padlocking device		**27145**
18	Plug-in base (1)		**26996**
19	Rotary handle Removable handle		**27047**
	Fixed handle		**27048**
	Operating sub-assembly only (2)		**27046**

(1) For 1P, centreline between 2 rows = 200 mm
(2) A complete rotary handle consists of a circuit-breaker operating sub-assembly, cat. no. ***27046****, a handle, cat. no.* ***27047*** *or a handle, cat. no.* ***27048****.*

Electrical auxiliaries

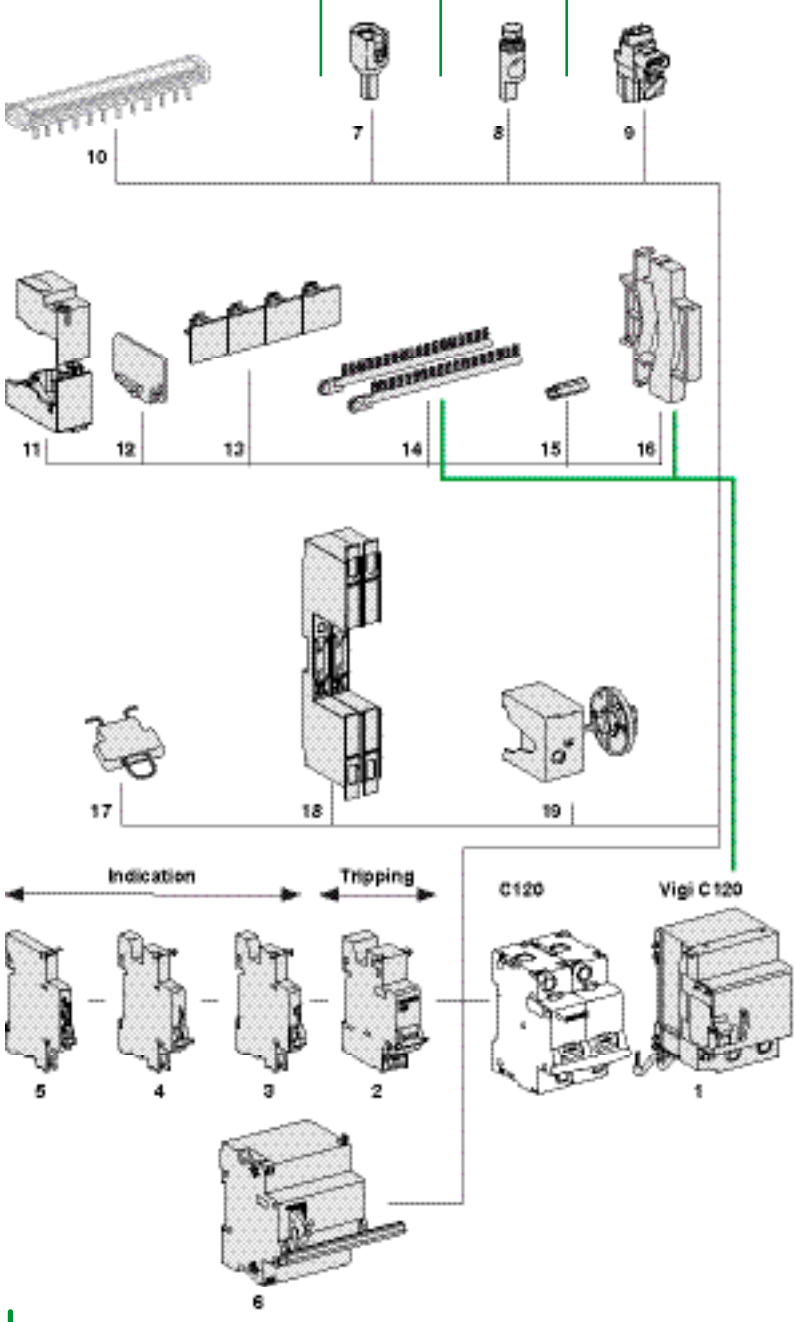
Indication		
3	SD fault indicating auxiliary contact	**26927**
4	OF open/closed auxiliary contact	**26924**
5	OF/SD+OF auxiliary contact (OF+SD or OF+OF combination)	**26929**
6	Tm C120 remote control	**18312**

Trip units			
2	MN, MNx, MNS undervoltage release or MSU voltage threshold release MX + OF shunt release	see module	**CM907002F**

Vigi C120

1	Vigi C120 add-on residual current device	see module	**CM902007F**

DB126530



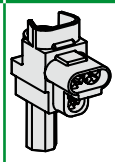
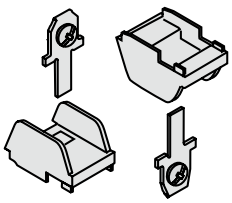
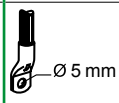
The trip units must be installed first.

Accessories for C120 devices

Installation

Accessories	Rotary handle			Plug-in base	Padlocking device
					
Function					
	Front or side control of 2, 3 and 4-pole circuit breakers ■ Degree of protection: IP 40, IK 10 ■ Installation: □ the circuit-breaker operating sub-assembly cat. no. **27046** is fixed to the circuit breaker □ the removable handle cat. no. **27047** is mounted on the removable front panel or on the enclosure door □ the fixed handle cat. no. **27048** is fixed to the front or side panel of the enclosure ■ A complete rotary handle consists of: □ a circuit-breaker operating sub-assembly, cat. no. **27046**, □ a handle cat. no. **27047** or a handle cat. no. **27048**			**Allows a circuit breaker or switch to be quickly removed or replaced, without touching the connections** ■ Degree of protection: IP20 ■ It consists of: □ a base to be fixed to a rail (or panel) □ 2 "blades" to be fixed in the device terminals ■ Connection: tunnel terminals for cables up to 50 mm² (rigid) or 35 mm² (flexible) ■ Installation: □ in a universal enclosure □ on a horizontal rail ■ Centreline between two rows: 200 mm ■ Only on the circuit breaker, without a Vigi device or auxiliary ■ Padlocking option (8 mm dia. padlock not supplied)	**Used to padlock a circuit breaker or a switch in the "open" or "closed" position** ■ Diameter of the padlock: 8 mm max. ■ Locking in the ON position does not prevent the circuit breaker or switch from tripping in the event of a fault ■ Isolation: in conformity with IEC/EN 60947-2.
Catalogue numbers	**27047** Removable extended handle	**27048** Fixed handle	**27046** Operating sub-assembly (1)	**26996** (1 per pole)	**27145**
Set of	**1**	**1**	**1**	**1**	**1**
Suitable for the following devices:					
C120	■ 2P, 3P, 4P			■	■
C120 + Vigi C120	■ 2P, 3P, 4P			-	■

Connection

Accessories	Multi-cable terminal		50 mm² Al terminal	Screw-on connection for ring terminal
	DB118780 		DB118782 	DB118784 
Function				
	For 3 copper cables: ■ Rigid up to 16 mm² ■ Flexible up to 10 mm²		**For 16 to 50 mm² aluminium cables**	**For cable end with ring terminal, front or rear mounting**
	DB118787 		DB122935  Al	DB118789  Ø 5 mm
Cat. numbers	**19091**	**19096**	**27060**	**27053**
Set of	**4**	**3**	**1**	**8**
C120	-	-	-	■
Vigi C120	-	-	-	-
Tightening torque	3.5 N.m		3.5 N.m	2 N.m
Stripping length	11 mm		13 mm	-
Tools to be used	Diameter 6 mm or PZ2		Hc 1/5" or 6.5 mm	Diameter 5 mm

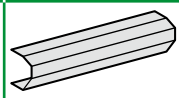
*(1) A complete rotary handle consists of a circuit-breaker operating sub-assembly, cat. no. **27046**, a handle cat. no. **27047** or a handle cat. no. **27048**.*

Accessories for C120 devices (cont.)

Safety

Accessories	Screw shield	Terminal shield	Interpole barrier	Spacer
				
Function				
	Prevents all contact with the fixing screws ■ The degree of protection becomes IP40. ■ Sealable. ■ Dividable.	**Prevents all contact with the terminals** ■ Degree of protection IP40 ■ Sealable, max. diameter 1.2 mm	**Improves the insulation between the connections: cables, terminals, lugs, etc.**	■ Used to: □ complete the rows □ separate the devices ■ Width: 1 x 9 mm module. ■ Allows cables to be routed from one row to another (above and below), up to 6 mm².
Catalogue numbers	**18527**	**15526**	**27001**	**27062**
Set of	**2 (4P dividable)**	**2 (for upstream and downstream terminal)**	**10**	**1**
Suitable for the following devices:				
C120	–	■	■	■
Vigi C120	–	–	–	■

Identification

Accessories	Clip-on terminal marker strip				Label holder
	 DB118786				
	For connection identification				
Catalogue numbers	0 : **AB1-R0** 1 : **AB1-R1** 2 : **AB1-R2** 3 : **AB1-R3** 4 : **AB1-R4** 5 : **AB1-R5** 6 : **AB1-R6** 7 : **AB1-R7** 8 : **AB1-R8** 9 : **AB1-R9**	A : **AB1-GA** B : **AB1-GB** C : **AB1-GC** D : **AB1-GD** E : **AB1-GE** F : **AB1-GF** G : **AB1-GG** H : **AB1-GH** I : **AB1-GI** J : **AB1-GJ**	K : **AB1-GK** L : **AB1-GL** M : **AB1-GM** N : **AB1-GN** O : **AB1-GO** P : **AB1-GP** Q : **AB1-GQ** R : **AB1-GR** S : **AB1-GS** T : **AB1-GT**	U : **AB1-GU** V : **AB1-GV** W : **AB1-GW** X : **AB1-GX** Y : **AB1-GY** Z : **AB1-GZ** + : **AB1-R12** - : **AB1-R13** Blank: **AB1-RV**	**27150**
Set of	**250**				**10**
C120	■ 4 markers max. per pole				
Vigi C120	■ 4 markers max. per device				

Electrical auxiliaries for C60, C120, DPN, DPN Vigi, RCCB/ID, I-NA devices

■ The electrical auxiliaries provide the remote tripping or position (open/closed/tripped) indication functions of these devices in the event of a fault.
■ They clip on (no tool required) to the left-hand side of the associated device.
■ The OF+SD/OF auxiliary is a two-in-one product: a mechanical selector switch is used to select one of two contacts: OF+SD or OF+OF.

⚠
■ The electrical auxiliaries are not compatible with ID residual current circuit breakers of type B.

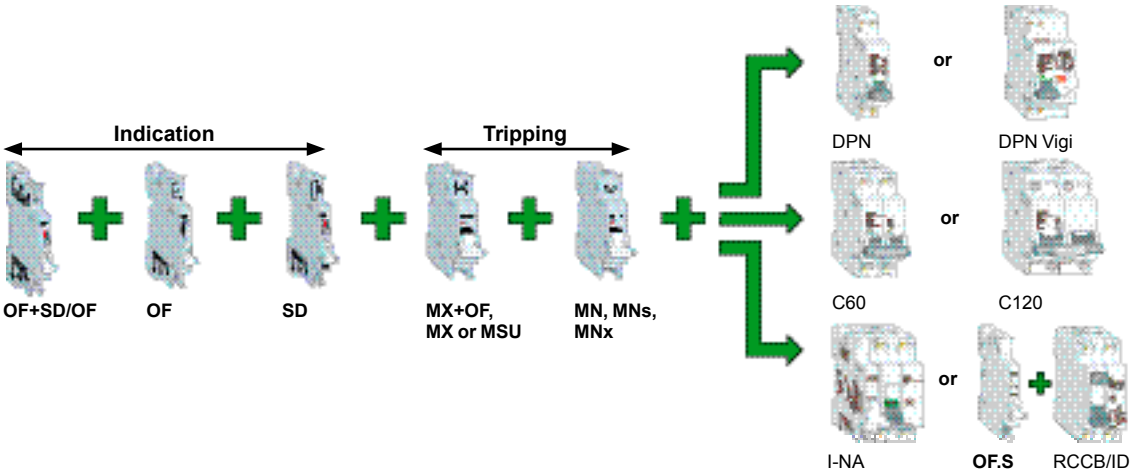
IEC/EN 60947-1

■ Tripping auxiliaries:
□ MN: undervoltage release
□ MNs: delayed undervoltage release
□ MNx: undervoltage release, independent of the supply voltage
□ MSU: voltage threshold release
□ MX: shunt release
□ MX+OF: shunt release with open/closed contact.

IEC/EN 60947-5-1

■ Indication auxiliaries:
□ OF: open/closed contact
□ OF.S: open/closed contact for RCCB/ID
□ SD: fault indicating contact
□ OF+SD/OF: choice of open/closed contact and OF or SD contact via the selector switch.

DB123814



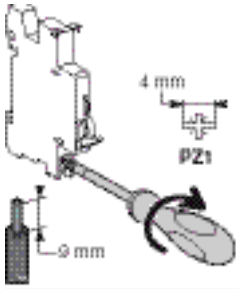
Combination table

Electrical auxiliaries			Devices
Indication		**Tripping**	
Maximum number of indication auxiliaries (from left to right)		**Maximum number of tripping auxiliaries**	
3 x OF or SD	+	2 x MX or MN	 DPN, DPN Vigi  C60, C120
Or 2 x OF+SD/OF or OF or SD		2 x MX or MN	
Or none		3 x MSU	
2 x OF		2 x MX or MN or MSU	 I-NA  **OF.S**+RCCB/ID
1 x OF+SD/OF		2 x MX or MN or MSU	

The trip units must be installed first.

Connection

DB1261475



Type	Tightening torque	Copper cables	
		Rigid	Flexible
		 DB122945	 DB122946
Indication and tripping auxiliaries	1 N.m	0.5 to 2.5 mm²	2 x 1.5 mm²

Electrical auxiliaries for C60, C120, DPN, DPN Vigi, RCCB/ID, I-NA devices (cont.)

Tripping

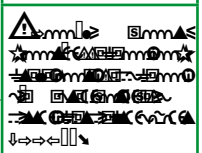
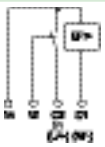
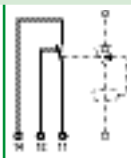
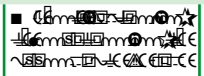
Auxiliaries	MN			MNs	MNx			MSU	
Type	**Undervoltage release**							**Voltage threshold release**	
	Instantaneous			Delayed	Independent of the supply voltage				
	PB100202_SE-30			PB100203_SE-30	PB100205_SE-30			PB100206_SE-30	
Function									
	■ Causes the device with which it is associated to trip when its input voltage decreases (between 70 % and 35 % of Un). Prevents the device from closing until its input voltage has been restored							■ Cuts off the power supply by opening the device with which it is associated when the phase/neutral voltage is exceeded (loss of neutral). For a four-phase network, use three MSU tripping auxiliaries	
				■ No tripping in the event of transient voltage dips (up to 0.2 s)	■ Separate input and power supply			■ Tripping volt.: 275 V AC	■ Tripping volt.: 255 V AC
Wiring diagrams									
	DB118804				DB118805			DB118806	
Utilization									
	■ Emergency stop via a normally-closed pushbutton ■ Ensures the safety of the power supply circuits of several machines by preventing accidental startups				■ Fail-safe emergency stop ■ Insensitive to the variation in the control circuit voltage to improve continuity of service			■ Protection of the devices against overvoltages on the electrical network (break in the neutral conductor) ■ Monitoring the voltage between the phase conductor and the neutral conductor	
Catalogue numbers	**26960**	**26961**	**26959**	**26963**	**26969**	**26977***	**26971**	**26991***	**26979**	**26479**

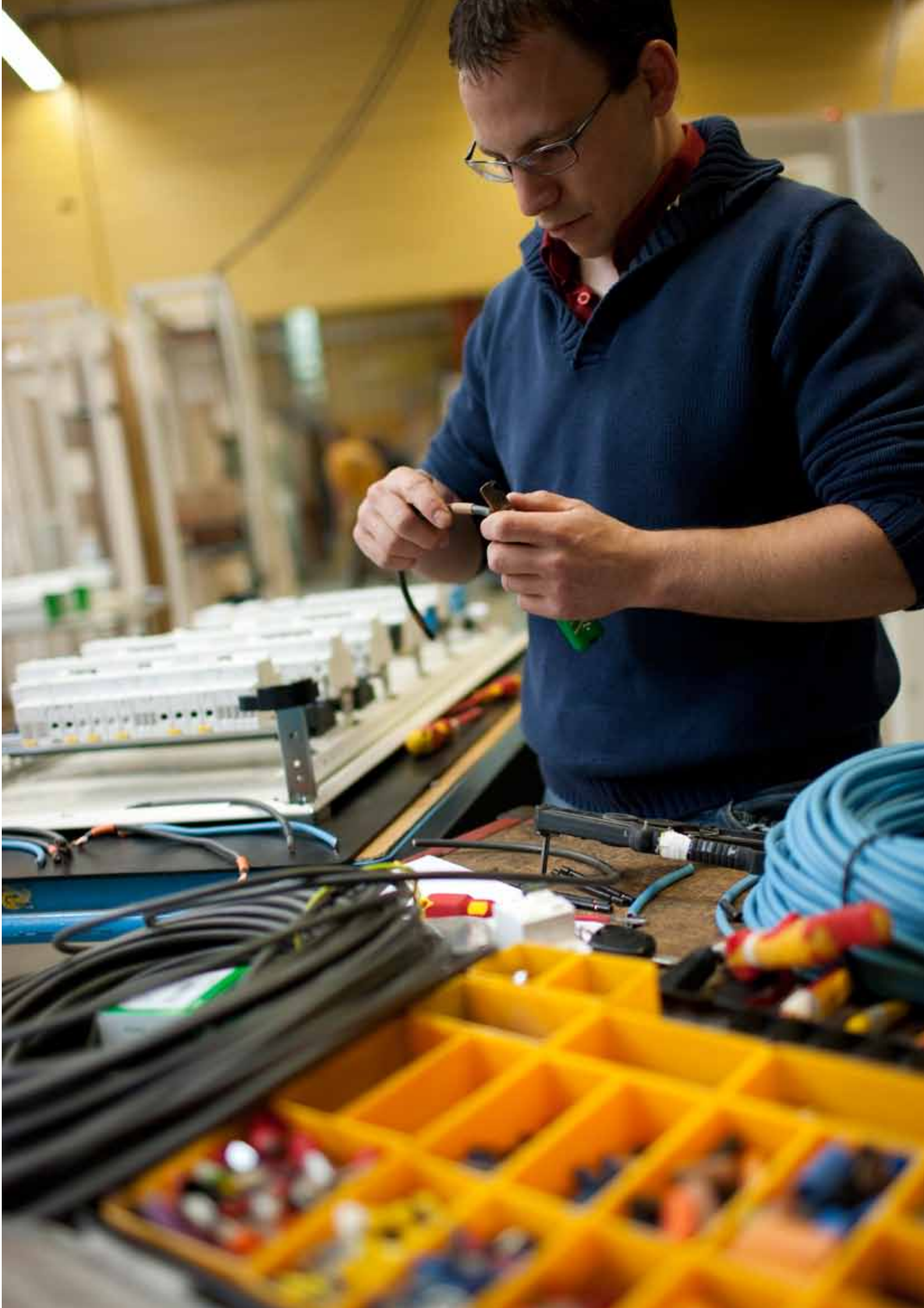
Technical specifications										
Rated voltage (Ue)	V AC	220…240	48	115	220…240	230	400	230	230
	V DC	–	48		–	–		–	
Operating frequency	Hz	50/60		400	50/60	50/60		50/60	
Mechanical state indicator light, red		On front face			On front face	On front face		On front face	
Test function		–			–	–		–	
Width in 9 mm modules		2			2	2		2	
Operating current		–			–	–		–	
Number of contacts		–			–	–		–	
Operating temperature	°C	-25…+50			-25…+50	-25…+50		-25…+50	
Storage temperature	°C	-40…+85			-40…+85	-40…+85		-40…+85	
Standards									
IEC/EN 60947-1		■			■	■		■	
IEC/EN 60947-5-1		–			–	–		–	
EN 60947-2		■			■	–		–	
EN 62019-2(1)		–			–	–		–	

(*) Tripping auxiliaries MNx ref. 26977 and 26991 are specific for C60 circuit breakers.
(1) For C60, C120, iDPN (DPN).

Electrical auxiliaries for C60, C120, DPN, DPN Vigi, RCCB/ID, I-NA devices (cont.)

Signalisation

	MX			MX+OF			OF.S	OF	SD	OF+SD/OF
	Shunt release						**Open/closed auxiliary contact**	**Open/closed auxiliary contact**	**Fault indicating contact**	**Double open/closed or fault indicating contact**
				With open/closed auxiliary contact						
	PB100199_SE-30 			PB100198_SE-30 			PB100628_SE-30 	PB100626_SE-30 	PB100627_SE-30 	PB100625_SE-30 
	■ Trips the associated device when it is powered on						■ Changeover contact indicating the "open" or "closed" position of the associated device 	■ Changeover contact indicating the "open" or "closed" position of the associated device	■ Changeover contact indicating the position of the associated device in the event of: □ electrical fault □ action on the tripping auxiliary	■ The OF+SD/OF auxiliary is a two-in-one product: choice of OF + SD or OF + OF contact via the selector switch
				■ Includes an open/closed contact (OF contact) to indicate the "open" or "closed" position of the associated device					⚠ **Not compatible with a RCCB/ID residual current circuit breaker, use an OF+SD/OF in the SD position**	
	DB123012 			DB118808 			DB118809 	DB118810 	DB118811 	DB118812  DB118813  OF position | SD position
	■ Emergency stop via a normally-open pushbutton.			■ Emergency stop via a normally-open pushbutton ■ Remote indication of the position of the associated device			■ 	■ Remote indication of the position of the associated device	■ Remote fault tripping indication of the associated device	■ Remote position and/or fault tripping indication of the associated device
	26476	**26477**	**26478**	**26946**	**26947**	**26948**	**26923**	**26924**	**26927**	**26929**
	100…415	48	12…24	100…415	48	12…24	240…415	240…415	240…415	240…415
	110…130	48	12…24	110…130	48	12…24	24…130	24…130	24…130	24…130
	50/60			50/60			50/60	50/60	50/60	50/60
	On front face			On front face			–	–	On front face	On front face
	–			–			–	On front face	On front face	On front face
	2			2			1	1	1	1
	–			3 A / 415 V AC 6 A / ≤ 240 V AC			3 A /415 V AC 6 A / ≤ 240 V AC			
	–			1 NO/NC			1 NO/NC	1 NO/NC	1 NO/NC	1 NO/NC + 1 NO/NC
	-25…+50			-25…+50			-25…+50	-25…+50	-25…+50	-25…+50
	-40…+85			-40…+85			-40…+85	-40…+85	-40…+85	-40…+85
	■			■			–	–	–	–
	–			–			■	■	■	■
	–			–			–	–	–	–
	–			–			■	■	■	■



iCT contactors

DB123399 DB116619 DB106604

EN 61095, IEC 1095

iCT contactors are available in two versions:
- Contactors without manually-operated
- Contactors with manually-operated.

The breadth of the iCT contactor range satisfies most application cases.
iCT contactors can be combined with auxiliary control, protection and indication functions.

Contactors

iCT 2P

PB106115-35

manual control

iCT 4P

PB106105-35

- iCT contactors can be used to remote control applications in alternative networks:
  - lighting, heating, ventilation, roller blinds, sanitary hot water
  - mechanical ventilation systems, etc
  - load-shedding of non-priority circuits

PB106120-34

Indication iACTs
- This auxiliary allows indication or control of the "open" or "closed" position of the contactor power contacts

PB106124-34

Interference filtering iACTp
- This auxiliary is an interference suppressor which limits overvoltages on the control circuit

PB106123-34

Dual control iACTc
- Used to control a contactor in impulse-type mode or to combine latched or impulse-type control orders

PB106125-34

Time delay iATEt
- This auxiliary is used to time delay for iCT and iTL.

According to cabling, there are 5 possible time delay types:
- 1 for iTL
- 4 for iCT

Function type A:
late closing
Delay energizing of contactor

Function type B:
time delay
- Energize the contactor by closing a push button
- The time delay starts as soon as the control contacts are closed

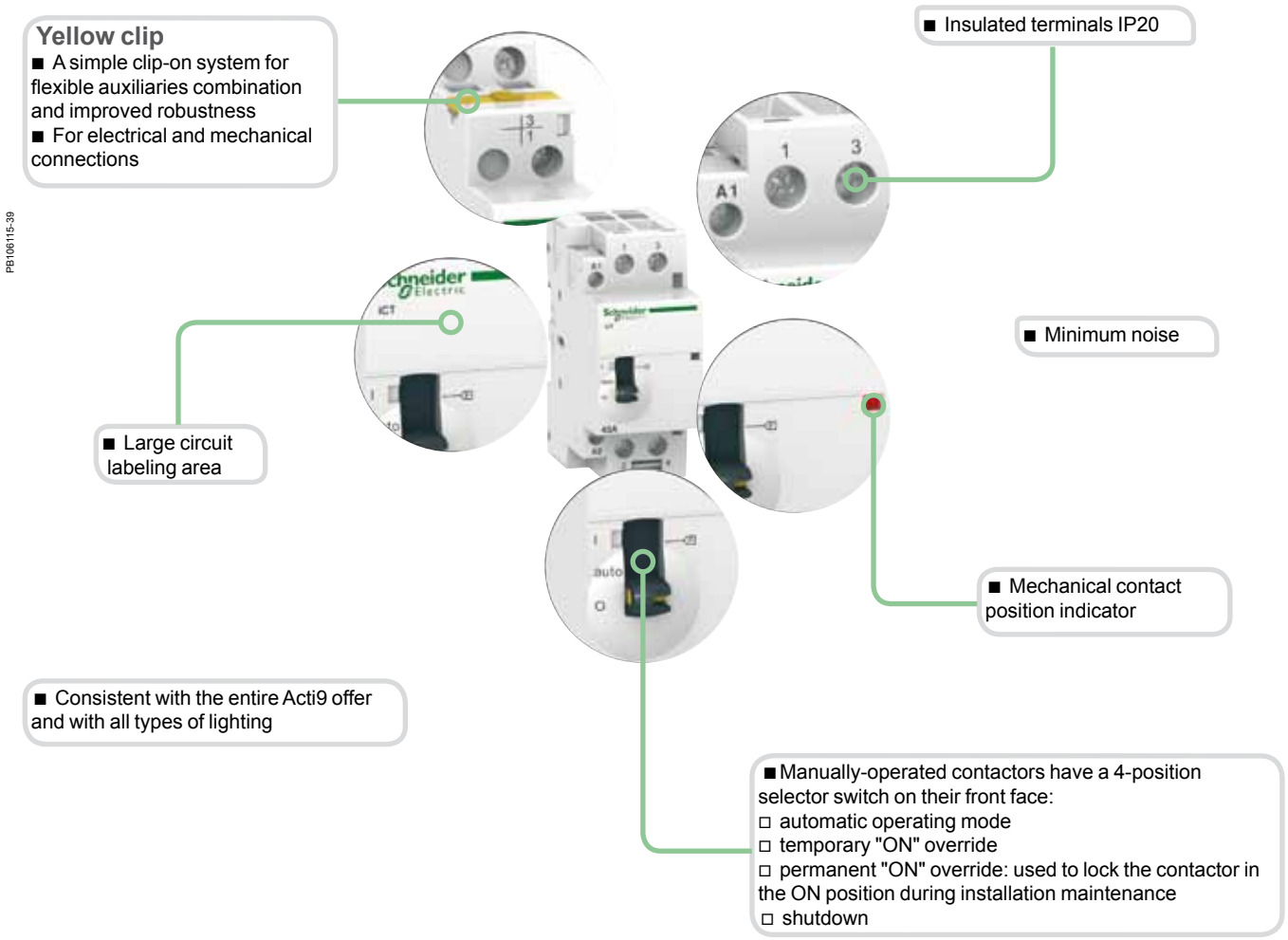
Function type C:
late opening
- Energize the contactor by closing a push button
- The time delay starts when the control contacts are opened

Function type H:
fixed time operation
- Operate the contactor for a pre-determined time from the moment of energizing

Contactors
Contactors auxiliaries

		Choice of 50 Hz contactors					
Type		**Contactor**					
Rating	A	16	20	25	40	63	100
Auxiliaries							
iACTs indication auxiliary		Yes	Yes	Yes			
iACTp protection auxiliary	By yellow clips	No	No	Yes			
iACTc, iATEt control auxiliary	By yellow clips	No	No	Yes			

iCT contactors (cont.)

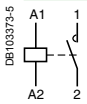
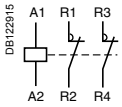
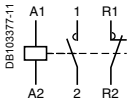
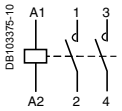
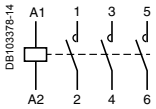
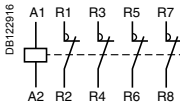
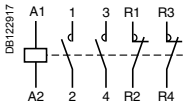
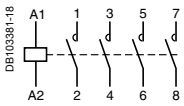
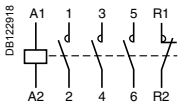


					Choice of 60 Hz contactors				
	Manually-operated contactors				Contactor				Manually-operated contactors
	16	25	40	63	16	25	40	63	40
	Contactors that can be equipped with auxiliaries				Contactors that can be equipped with auxiliaries				
	Yes				Yes				
	Yes	Yes			Yes	Yes			
	No	Yes			No	Yes			

iCT contactors (cont.)

Catalogue numbers

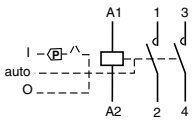
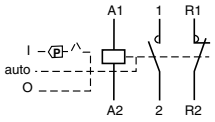
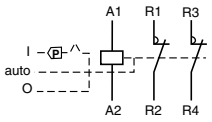
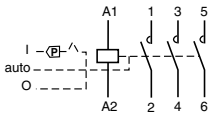
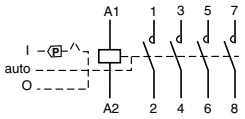
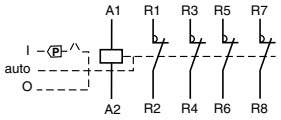
iCT contactors - 50 Hz

Type	Rating (In)		Control voltage (V AC) (50 Hz)	Contact		Width in 9 mm modules
1P	**AC7a**	**AC7b**				
	16 A	6 A	12	1NO	**A9C22011**	2
			24	1NO	**A9C22111**	2
			48	1NO	**A9C22211**	2
			220	1NO	**A9C22511**	2
			230…240	1NO	**A9C22711**	2
	25 A	8.5 A	220	1NO	**A9C20531**	2
			230…240	1NO	**A9C20731**	2
2P						
	16 A	6 A	12	2NO	**A9C22012**	2
			24	2NO	**A9C22112**	2
			48	2NO	**A9C22212**	2
			220	2NO	**A9C22512**	2
			230...240	2NO	**A9C22712**	2
			12	1NO+1NC	**A9C22015**	2
			24	1NO+1NC	**A9C22115**	2
			220	1NO+1NC	**A9C22515**	2
			230...240	1NO+1NC	**A9C22715**	2
	20 A	6 A	230...240	2NO	**A9C22722**	2
	25 A	8.5 A	24	2NO	**A9C20132**	2
			48	2NO	**A9C20232**	2
			220	2NO	**A9C20532**	2
			230...240	2NO	**A9C20732**	2
			220	2NC	**A9C20536**	2
			230...240	2NC	**A9C20736**	2
	40 A	15 A	220...240	2NO	**A9C20842**	4
	63 A	20 A	24	2NO	**A9C20162**	4
			220...240	2NO	**A9C20862**	4
	100 A	-	220...240	2NO	**A9C20882**	6
3P						
	16 A	6 A	220…240	3NO	**A9C22813**	4
	25 A	8.5 A	220…240	3NO	**A9C20833**	4
	40 A	15 A	220…240	3NO	**A9C20843**	6
	63 A	20 A	220…240	3NO	**A9C20863**	6
4P						
	16 A	6 A	24	4NO	**A9C22114**	4
			220...240	4NO	**A9C22814**	4
			220...240	2NO+2NC	**A9C22818**	4
	20 A	6 A	220 ...240	4NO	**A9C22824**	4
	25 A	8.5 A	24	4NO	**A9C20134**	4
			220...240	4NO	**A9C20834**	4
			24	4NC	**A9C20137**	4
			220...240	4NC	**A9C20837**	4
			220...240	2NO+2NC	**A9C20838**	4
	40 A	15 A	220...240	4NO	**A9C20844**	6
			220...240	4NC	**A9C20847**	6
	63 A	20 A	24	4NO	**A9C20164**	6
			220...240	4NO	**A9C20864**	6
			24	4NC	**A9C20167**	6
			220...240	4NC	**A9C20867**	6
			220...240	2NO+2NC	**A9C20868**	6
			220...240	3NO+1NC	**A9C20869**	6
	100 A	-	220...240	4NO	**A9C20884**	12

iCT contactors (cont.)

Catalogue numbers

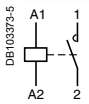
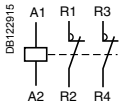
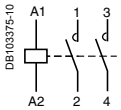
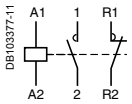
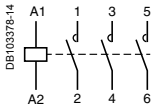
iCT manual control contactor 50 Hz

Type		Rating (In)		Control voltage (V AC) (50 Hz)	Contact		Width in 9 mm modules
		AC7a	AC7b				
2P							
DB106317-24 		16 A	6 A	220	2NO	**A9C23512**	2
				230...240	2NO	**A9C23712**	2
				220	1NO+1NC	**A9C23515**	2
				230...240	1NO+1NC	**A9C23715**	2
		25 A	8.5 A	24	2NO	**A9C21132**	2
DB106318-27 				24	2NC	**A9C21136**	2
				220	2NO	**A9C21532**	2
				230...240	2NO	**A9C21732**	2
		40 A	15 A	24	2NO	**A9C21142**	2
				220...240	2NO	**A9C21842**	4
DB106588-27 		63 A	20 A	24	2NO	**A9C21162**	4
				220...240	2NO	**A9C21862**	4
3P							
DB106319-27 		25 A	8.5 A	220...240	3NO	**A9C21833**	4
		40 A	15 A	220...240	3NO	**A9C21843**	6
4P							
DB106320-31 		25 A	8.5 A	24	4NO	**A9C21134**	4
				24	4NC	**A9C21137**	4
				220...240	4NO	**A9C21834**	4
		40 A	15 A	24	4NO	**A9C21144**	6
				24	4NC	**A9C21147**	6
				220...240	4NO	**A9C21844**	6
DB106587-36 		63 A	20 A	24	4NO	**A9C21164**	6
				220...240	4NO	**A9C21864**	6

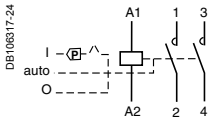
iCT contactors (cont.)

Catalogue numbers

iCT contactors - 60 Hz

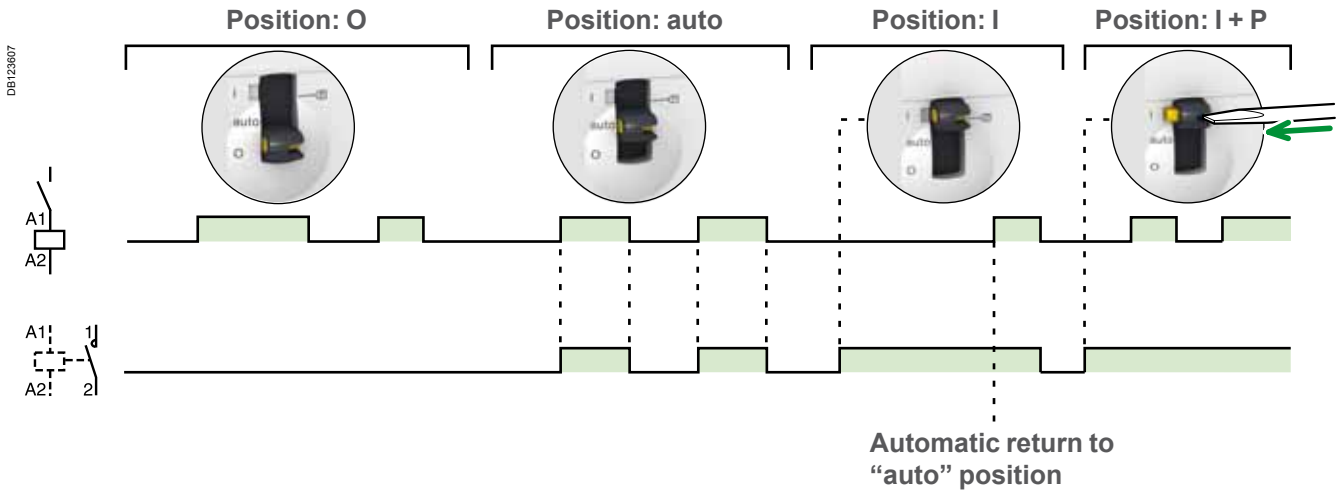
Type						Width in 9 mm modules
1P	Rating (In) AC7a	Rating (In) AC7b	Control voltage (V AC) (60 Hz)	Contact		
	25 A	8.5 A	127	1NO	**A9C20431**	2
			220 ...240	1NO	**A9C20631**	2
2P						
 	16 A	6 A	127	1NO+1NC	**A9C22415**	2
			220...240	1NO+1NC	**A9C22615**	2
	25 A	8.5 A	127	2NO	**A9C20432**	2
			220...240	2NO	**A9C20632**	2
			127	2NC	**A9C20436**	2
			220...240	2NC	**A9C20636**	2
	40 A	15 A	127	2NO	**A9C20442**	4
			220...240	2NO	**A9C20642**	4
3P						
	25 A	8.5 A	127	3NO	**A9C20433**	4
			220...240	3NO	**A9C20633**	4
	40 A	15 A	127	3NO	**A9C20443**	6
			220...240	3NO	**A9C20643**	6
	63 A	20 A	127	3NO	**A9C20463**	6
			220...240	3NO	**A9C20663**	6

iCT manual control contactor 60 Hz

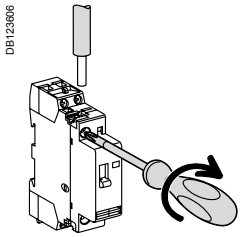
Type						Width in 9 mm modules
2P	Rating (In) AC7a	Rating (In) AC7b	Control voltage (V AC) (60 Hz)	Contact		
	40 A	15 A	127	2NO	**A9C21442**	4
			220...240	2NO	**A9C21642**	4

iCT contactors (cont.)

Operation (Manual control contactor)

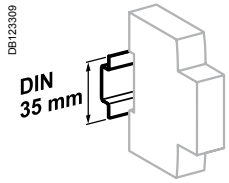


Connection

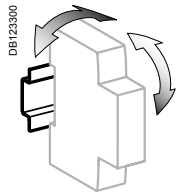


Type		Rating	Lenght tripping	Circuit	Tightening torque	Copper cables	
						Rigid	Flexible or ferrule
					DB122945	DB122946	
iCT	PZ1: 4 mm	16 - 100 A	9 mm	Control	0.8 N.m	1.5 to 2.5 mm: 2 x 1.5 mm²	1.5 to 2.5 mm: 2 x 2.5 mm²
		16 and 25 A		Power		1.5 to 6 mm²	1 to 4 mm²
	PZ2: 6 mm	40 A - 63 A	14 mm		3.5 N.m	6 to 25 mm²	6 to 16 mm²
		100 A				6 to 35 mm²	6 to 35 mm²
iACTs, iACTp, iACTc, iATEt	PZ1: 4 mm	-	9 mm	-	0.8 N.m	1.5 to 2.5 mm: 2 x 1.5 mm²	1.5 to 2.5 mm: 2 x 2.5 mm²

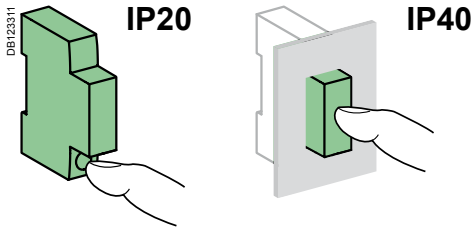
iCT contactors (cont.)

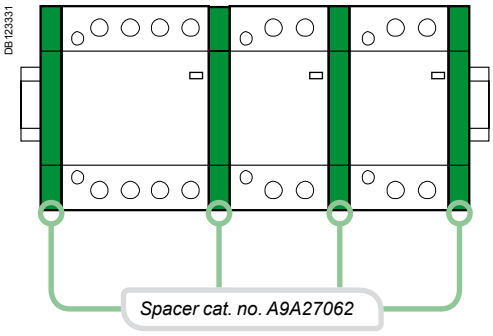


Clip on DIN rail 35 mm.



± 30° vertical.





Technical data

Power circuit		
Voltage rating (Ue)	1P, 2P	250 V AC
	3P, 4P	400 V AC
Frequency		50 Hz or 60 Hz
Type of load		See module CA908026
Endurance (O-C)		
Electrical		100,000 cycles
Maximum number of switching operation a day		100
Additional characteristics		
Insulation voltage (Ui)		500 V AC
Pollution degree		2
Rated impulse withstand voltage (Uimp)		2.5 kV (4 kV for 12/24/48 V AC)
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
Operating temperature		-5°C to +60°C (1)
Storage temperature		-40°C to +70°C
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95 % at 55°C)
ELSV compliance (Extra Low Safety Voltage) for 12/24/48 V AC versions		
The product control conforms to the SELV (safety extra low voltage) requirements		

(1) In the case of contactor mounting in a enclosure for which the interior temperature is in range between 50°C and 60°C, it is necessary to use a spacer, cat. no. A9A27062, between each contactor

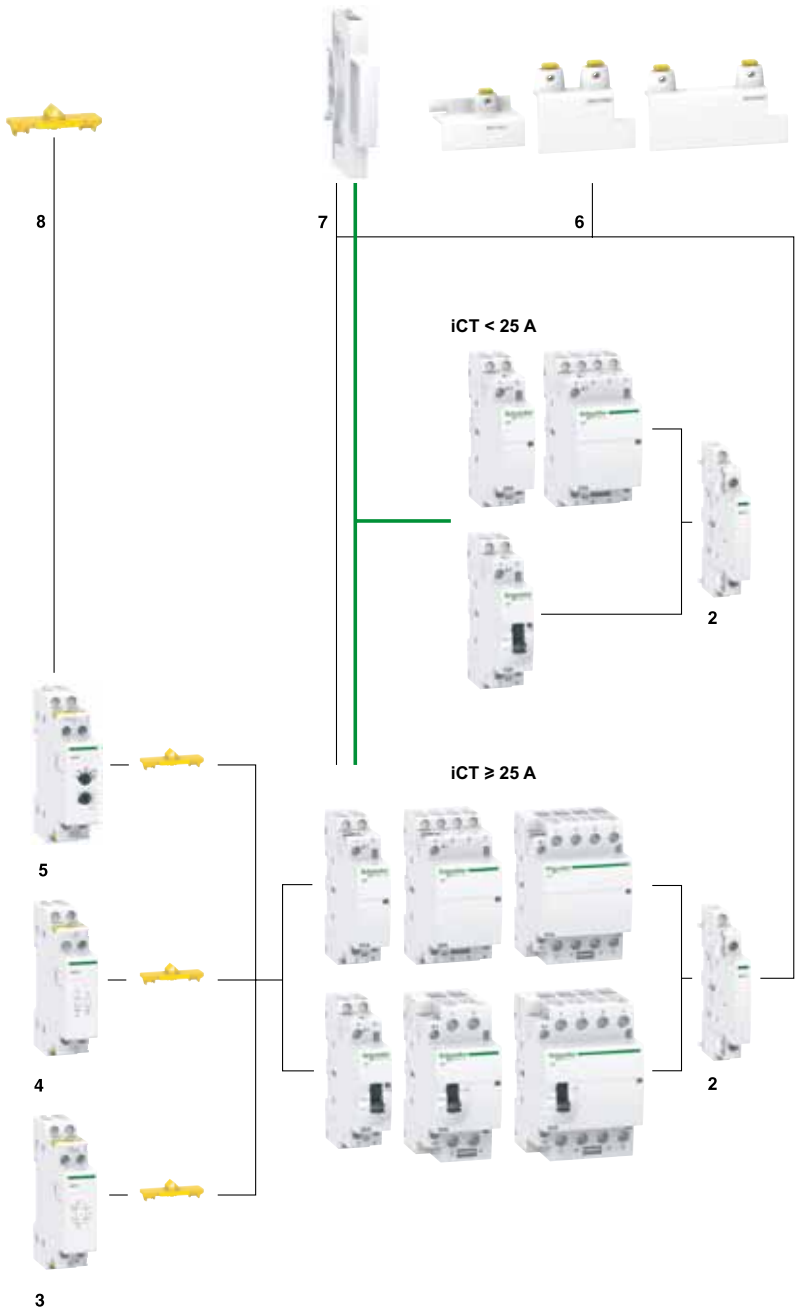
iCT contactors (cont.)

Mounting accessories

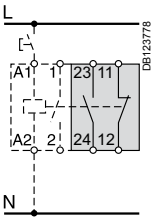
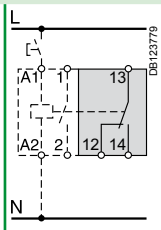
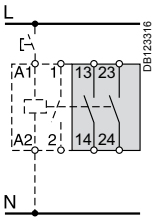
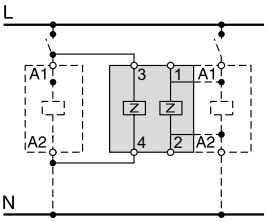
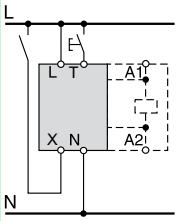
6	Sealable screw shields for top and bottom	3P, 4P 25 A	**A9A15921**
		2P 40/63 A	**A9A15922**
		3P, 4P 40/63 A	**A9A15923**
7	9 mm spacer		**A9A27062**
8	Yellow clips		**A9C15415**

Auxiliaries

Indication			
2	iACTs	1NO + 1NC	**A9C15914**
		1CO	**A9C15915**
		2NO	**A9C15916**
Double control inputs			
3	iACTc	230 V AC	**A9C18308**
		24 V AC	**A9C18309**
Coil suppression blocs			
4	iACTp	12...48 V AC	**A9C15919**
		48...127 V AC	**A9C15918**
		220...240 V AC	**A9C15920**
Time delay			
5	iATEt	24...240 V AC	**A9C15419**



iCT contactors
Electrical auxiliaries for iCT

	Indication			Protection			Control	
Auxiliaries	**iACTs**			**iACTp**			**iACTc**	
Type	**Indication**			**Interference filtering**			**Impulse/latched control**	
	With Open/Close auxiliary contact			2 protection circuits				
	PB106120-34 			PB106124-34 			PB106123-34 	
Function								
	■ This auxiliary allows indication of the "open" or "closed" position of the contactor power contacts			■ This auxiliary is an interference suppressor which limits overvoltages on the control circuit			■ This auxiliary, combined with contactors, enables them to be controlled by 2 order types: □ impulse order for local control (input T) □ latched order for centralised control (input X) □ the last order received takes priority	
Wiring diagrams								
	DB123777 	DB123778 	DB123779 	DB123316 			DB123315 	
Mounting								
	■ Mounted to the right of iCT			■ Mounted to the left of iCT by yellow clips (1) ■ By wires			■ Mounted to the left of iCT by yellow clips (1)	
Use								
	–			■ The iACTp has 2 separate and identical circuits, allowing it to be combined with 2 different one on the iCT the other by wires			■ Mains power outages: □ < 1 s: keeps its initial status □ ⩾ 5 s: reset □ put back into operation by manual operation on input X or T. ■ Minimum impulse duration: 250 ms	
Catalogue numbers	**A9C15914**	**A9C15915**	**A9C15916**	**A9C15918**	**A9C15919**	**A9C15920**	**A9C18308**	**A9C18309**

Technical specifications									
Control voltage (Ue)	V AC	24…240			48 …127	12 …48	220 …240	230…240	24…48
	V DC	24…130			–			–	
Operating frequency	Hz	50/60			50/60			50/60	
Width in 9 mm modules		1			2			2	
Auxiliary contact (breaking capacity)		■ Mininimum: 10 mA at 24 V DC/AC - cos φ = 1 ■ Maximum: □ 5 A at 240 V AC - cos φ = 1 □ 1 A at 130 V DC			–			–	
Number of contacts		1NO + 1NC	1CO	2NO	–			–	
Operating temperature	°C	-5°C to +50°C							
Storage temperature	°C	-40°C to +70°C							
Consumption		–			–			OFF load: 3 VA Inrush (2): 2 VA Holding (2): 0.2 VA	

(1) Electrical and mechanical link.
(2) Maximum consumption of all contactors controlled.

iCT contactors
Electrical auxiliaries for iCT (cont.)

Control (cont.)

iATEt

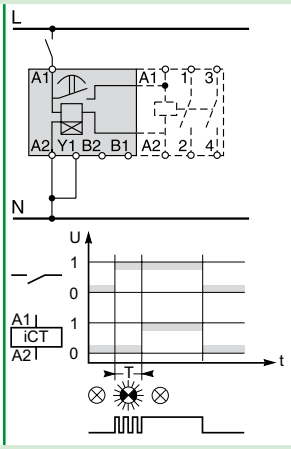
Time delay

PB106125-34

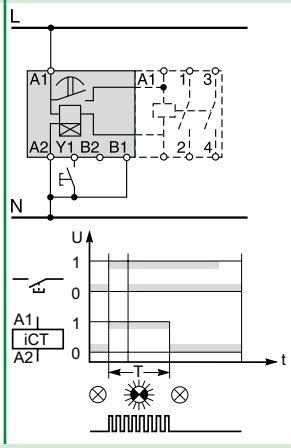
■ This auxiliary is used to time delay for iCT and iTL. According to cabling, there are 5 possible time delay types:
□ 1 for iTL
□ 4 for iCT.

Function type A: late closing	**Function type B: time delay**	**Function type C: late opening**	**Function type H: fixed time operation**
■ Delay energizing of contactor.	■ Energize the contactor by closing a push button. ■ The time delay starts as soon as the control contacts are closed.	■ Energize the contactor by closing a push button. ■ The time delay starts when the control contacts are opened.	■ Operate the contactor for a pre-determined time from the moment of energizing.

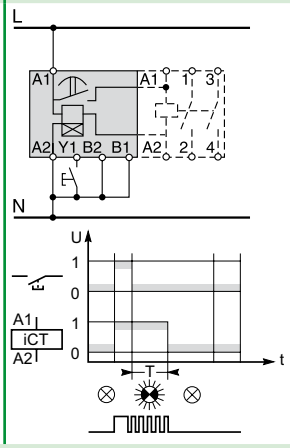
DB123321



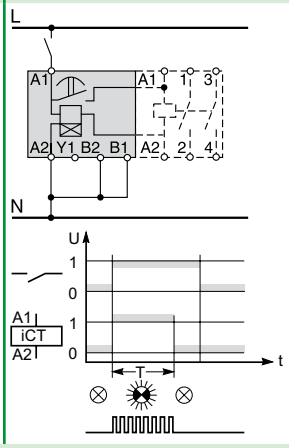
DB123322



DB123323



DB123324



■ Mounted to the left of iCT by yellow clips (1)

–

A9C15419

24…240

24…110

50/60

2

–

–

-20°C to +50°C

-40°C to +80°C

Off-load: 5 VA
Inrush (2): 3 A
Holding (2): 0.2 A

iCT contactors
Accessories for iCT

Security

Accessories	Sealable screw shields			Yellow clips	Spacer
	PB104485-15	PB104486-15	PB104487-15	PB106143-10	PB104483-40
					
Function					
	■ Designed to cover terminals to avoid contact with device screws. ■ Allow sealing			■ Ensure the mechanical and/or electrical link between contactors and their auxiliaries.	■ Required to reduce temperature rise of modular devices installed side by side. ■ Recommended to separate electronic devices (thermostat, programmable clock, etc.) from electromechanical devices (relays, contactors).
	■ For iCT: 3P, 4P - 25 A	■ For iCT: 2P - 40/63 A	■ For iCT: 3P, 4P - 40/63 A		
Use					
	■ Bag of 10 upstream/10 downstream			■ Bag of 10	■ Bag of 5
Catalogue numbers	**A9A15921**	**A9A15922**	**A9A15923**	**A9C15415**	**A9A27062**
Technical specifications					
Width in 9 mm modules	4	4	6	–	1
Number of poles	3P, 4P	2P	3P	–	–

iCT contactors
Technical advice for iCT

Consumption

iCT contactors - 50 Hz

Type	Rating (In)		Control voltage (V AC) (50 Hz)	Consumption		Max. power	
1P	AC7a	AC7b		Holding	Inrush		
	16 A	5 A	12	3.8 VA	15 VA	1.3 W	**A9C22011**
			24	3.8 VA	15 VA	1.3 W	**A9C22111**
			48	3.8 VA	15 VA	1.3 W	**A9C22211**
			220	3.8 VA	15 VA	1.3 W	**A9C22511**
			230…240	2.7 VA	9.2 VA	1.2 W	**A9C22711**
	25 A	8.5 A	220	3.8 VA	15 VA	1.3 W	**A9C20531**
			230…240	2.7 VA	9.2 VA	1.2 W	**A9C20731**
2P							
	16 A	5 A	12	3.8 VA	15 VA	1.3 W	**A9C22012**
			24	3.8 VA	15 VA	1.3 W	**A9C22112**
			48	3.8 VA	15 VA	1.3 W	**A9C22212**
			220	3.8 VA	15 VA	1.3 W	**A9C22512**
			230...240	2.7 VA	9.2 VA	1.2 W	**A9C22712**
			12	3.8 VA	15 VA	1.3 W	**A9C22015**
			24	3.8 VA	15 VA	1.3 W	**A9C22115**
			220	3.8 VA	15 VA	1.3 W	**A9C22515**
			230...240	2.7 VA	9.2 VA	1.2 W	**A9C22715**
	20 A	6.4 A	230...240	2.7 VA	9.2 VA	1.2 W	**A9C22722**
	25 A	8.5 A	24	3.8 VA	15 VA	1.3 W	**A9C20132**
			48	3.8 VA	15 VA	1.3 W	**A9C20232**
			220	3.8 VA	15 VA	1.3 W	**A9C20532**
			230...240	2.7 VA	9.2 VA	1.2 W	**A9C20732**
			220	3.8 VA	15 VA	1.3 W	**A9C20536**
			230...240	2.7 VA	9.2 VA	1.2 W	**A9C20736**
	40 A	15 A	220...240	4.6 VA	34 VA	1.6 W	**A9C20842**
	63 A	20 A	24	4.6 VA	34 VA	1.6 W	**A9C20162**
			220...240	4.6 VA	34 VA	1.6 W	**A9C20862**
	100 A	-	220...240	6.5 VA	53 VA	2.1 W	**A9C20882**
3P							
	16 A	5 A	220…240	4.6 VA	34 VA	1.6 W	**A9C22813**
	25 A	8.5 A	220…240	4.6 VA	34 VA	1.6 W	**A9C20833**
	40 A	15 A	220…240	6.5 VA	53 VA	2.1 W	**A9C20843**
	63 A	20 A	220…240	6.5 VA	53 VA	2.1 W	**A9C20863**
4P							
	16 A	5 A	24	4.6 VA	34 VA	1.6 W	**A9C22114**
			220...240	4.6 VA	34 VA	1.6 W	**A9C22814**
			220...240	4.6 VA	34 VA	1.6 W	**A9C22818**
	20 A	6.4 A	220 ...240	4.6 VA	34 VA	1.6 W	**A9C22824**
	25 A	8.5 A	24	4.6 VA	34 VA	1.6 W	**A9C20134**
			220...240	4.6 VA	34 VA	1.6 W	**A9C20834**
			24	4.6 VA	34 VA	1.6 W	**A9C20137**
			220...240	4.6 VA	34 VA	1.6 W	**A9C20837**
			220...240	4.6 VA	34 VA	1.6 W	**A9C20838**
	40 A	15 A	220...240	6.5 VA	53 VA	2.1 W	**A9C20844**
			220...240	6.5 VA	53 VA	2.1 W	**A9C20847**
	63 A	20 A	24	6.5 VA	53 VA	2.1 W	**A9C20164**
			220...240	6.5 VA	53 VA	2.1 W	**A9C20864**
			24	6.5 VA	53 VA	2.1 W	**A9C20167**
			220...240	6.5 VA	53 VA	2.1 W	**A9C20867**
			220...240	6.5 VA	53 VA	2.1 W	**A9C20868**
			220...240	6.5 VA	53 VA	2.1 W	**A9C20869**
	100 A	-	220...240	13 VA	106 VA	4.2 W	**A9C20884**

iCT contactors
Technical advice for iCT (cont.)

Consumption (cont.)

iCT manual control contactor 50 Hz

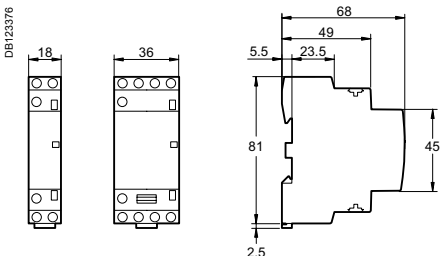
Type							
2P	Rating (In)		Control voltage (V AC) (50 Hz)	Consumption		Max. power	
	AC7a	AC7b		Holding	Inrush		
	16 A	5 A	220	2.7 VA	9.2 VA	1.2 W	A9C23512
			230...240	2.7 VA	9.2 VA	1.2 W	A9C23712
			220	3.8 VA	15 VA	1.3 W	A9C23515
			230...240	2.7 VA	9.2 VA	1.2 W	A9C23715
	25 A	8.5 A	24	3.8 VA	15 VA	1.3 W	A9C21132
			24	3.8 VA	15 VA	1.3 W	A9C21136
			220	2.7 VA	9.2 VA	1.2 W	A9C21532
			230...240	2.7 VA	9.2 VA	1.2 W	A9C21732
	40 A	15 A	24	4.6 VA	34 VA	1.6 W	A9C21142
			220...240	4.6 VA	34 VA	1.6 W	A9C21842
	63 A	20 A	24	4.6 VA	34 VA	1.6 W	A9C21162
			220...240	4.6 VA	34 VA	1.6 W	A9C21862
3P							
	25 A	8.5 A	220...240	4.6 VA	34 VA	1.6 W	A9C21833
	40 A	15 A	220...240	6.5 VA	53 VA	2.1 W	A9C21843
4P							
	25 A	8.5 A	24	4.6 VA	34 VA	1.6 W	A9C21134
			24	4.6 VA	34 VA	1.6 W	A9C21137
			220...240	4.6 VA	34 VA	1.6 W	A9C21834
	40 A	15 A	24	6.5 VA	53 VA	2.1 W	A9C21144
			24	6.5 VA	53 VA	2.1 W	A9C21147
			220...240	6.5 VA	53 VA	2.1 W	A9C21844
	63 A	20 A	24	6.5 VA	53 VA	2.1 W	A9C21164
			220...240	6.5 VA	53 VA	2.1 W	A9C21864

iCT contactors - 60 Hz

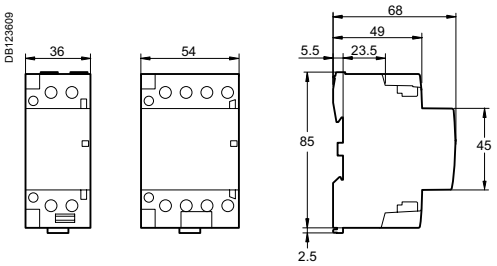
Type							
1P	Rating (In)		Control voltage (V AC) (60 Hz)	Consumption		Max. power	
	AC7a	AC7b		Holding	Inrush		
	25 A	8.5 A	127	3.8 VA	15 VA	1.3 W	A9C20431
			220 ...240	2.7 VA	9.2 VA	0.9 W	A9C20631
2P							
	16 A	5 A	127	3.8 VA	15 VA	1.3 W	A9C22415
			220...240	2.7 VA	9.2 VA	0.9 W	A9C22615
	25 A	8.5 A	127	3.8 VA	15 VA	1.3 W	A9C20432
			220...240	2.7 VA	9.2 VA	0.9 W	A9C20632
			127	3.8 VA	15 VA	1.3 W	A9C20436
			220...240	2.7 VA	9.2 VA	0.9 W	A9C20636
	40 A	15 A	127	4.6 VA	34 VA	1.6 W	A9C20442
			220...240	4.6 VA	34 VA	1.6 W	A9C20642
3P							
	25 A	8.5 A	127	4.6 VA	34 VA	1.6 W	A9C20433
			220...240	4.6 VA	34 VA	1.6 W	A9C20633
	40 A	15 A	127	6.5 VA	53 VA	2.1 W	A9C20443
			220...240	6.5 VA	53 VA	2.1 W	A9C20643
	63 A	20 A	127	6.5 VA	53 VA	2.1 W	A9C20463
			220...240	6.5 VA	53 VA	2.1 W	A9C20663

iCT contactors
Dimensions for iCT

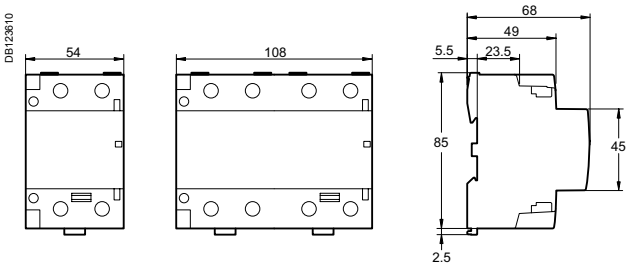
Dimensions (mm)



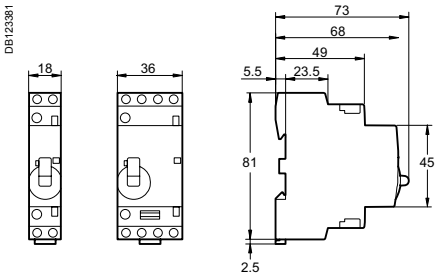
iCT 16/25 A



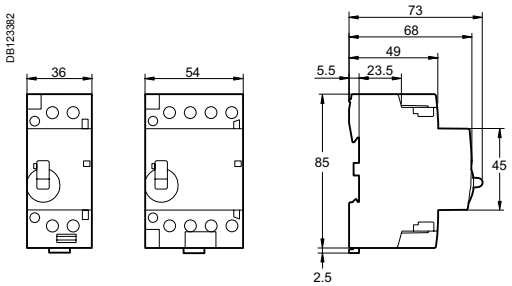
iCT 40/63 A



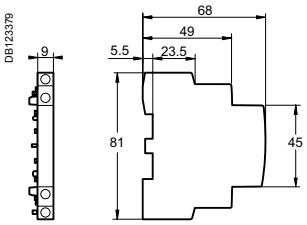
iCT 100 A



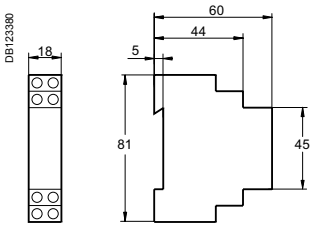
iCT manual control contactor 16/25 A



iCT manual control contactor 40/63 A



iACTs



iATEt
iACTp
iACTc

iTL impulse relays

DB123399 DB116619

IEC/EN 60669-2-2
iTLs: IEC/EN 60947-5-1

Impulse relays


PB106126-34


PB106128-34

iTL
■ The impulse relays are used to control, by means of pushbuttons, lighting circuits consisting of:
□ incandescent lamps, low-voltage halogen lamps, etc. (resistive loads)
□ fluorescent lamps, discharge lamps, etc. (inductive loads)

Remote indication


PB106133-34

iTLs
■ Allows remote indication of its operating state (open/closed)


PB106139-34

Indication iATLs
■ Allows remote indication of the associated impulse relay

Centralised control


PB106130-34

iTLc
■ Allows centralised control of a group of TLc impulse relays, whilst at the same time retaining local impulse-type control


PB106137-34

Centralised control iATLc
■ Used for centralised control, thanks to a "pilot line", of a group of impulse relays controlling separate circuit, while at the same time maintaining local individual control of each impulse relay

Latched control


PB106132-34

iTLm
■ Operated by latched orders from a changeover contact (switch, time switch, thermostat). Manual control does not work


PB106138-34

Latched control iATLm
■ Controls the associated impulse relay by latched orders from a changeover contact

iTL impulse relays (cont.)

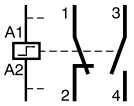
Impulse relays are used:

- Closing of the impulse relay pole(s) is triggered by an impulse on the coil.
- Having two stable mechanical positions, the pole(s) will be opened by the next impulse. Each impulse received by the coil reverses the position of the pole(s).
- Can be controlled by an unlimited number of pushbuttons.
- Zero energy consumption.

PB106131-34

Changeover contact iTLi

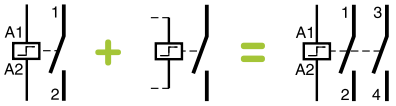
- This impulse relay has a changeover contact



PB106134-34

Extensions iETL

- Used to increase the number of impulse relay poles
- Can be installed on the iTL, iTLi, iTLc, iTLm and iTLs



PB106140-34

Centralised control + indication iATLc+s

- Used for centralised control, thanks to a "pilot line", of a group of impulse relays controlling separate circuit, while at the same time maintaining local individual control of each impulse relay
- Remote indication of the mechanical status of each relay

PB106136-34

Multi-level centralised control iATLc+c

- Allows centralised control of a group of iTLc or "iTL + ATLc" impulse relays

PB106125-34

Time delay iATEt

- Combined with an impulse relay, it automatically disconnects the circuit after a preset time

PB106141-34

Control iATLz

- Must be used when installing several illuminated PBs in parallel to control an impulse relay (prevents operating malfunctions)

PB106142-63

Step by step control iATL4

- Allows step-by-step control of two circuits via a single pushbutton

Impulse relays auxiliaries

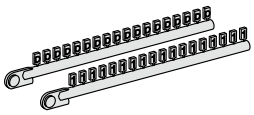
Specific auxiliaries

iTL impulse relays (cont.)

Mounting accessories

10	Yellow clips		**A9C15415**
11	9 mm spacer		**A9A27062**
12	Clip-on terminal markers	see module	**CA907001**

DB123631



12

11

10

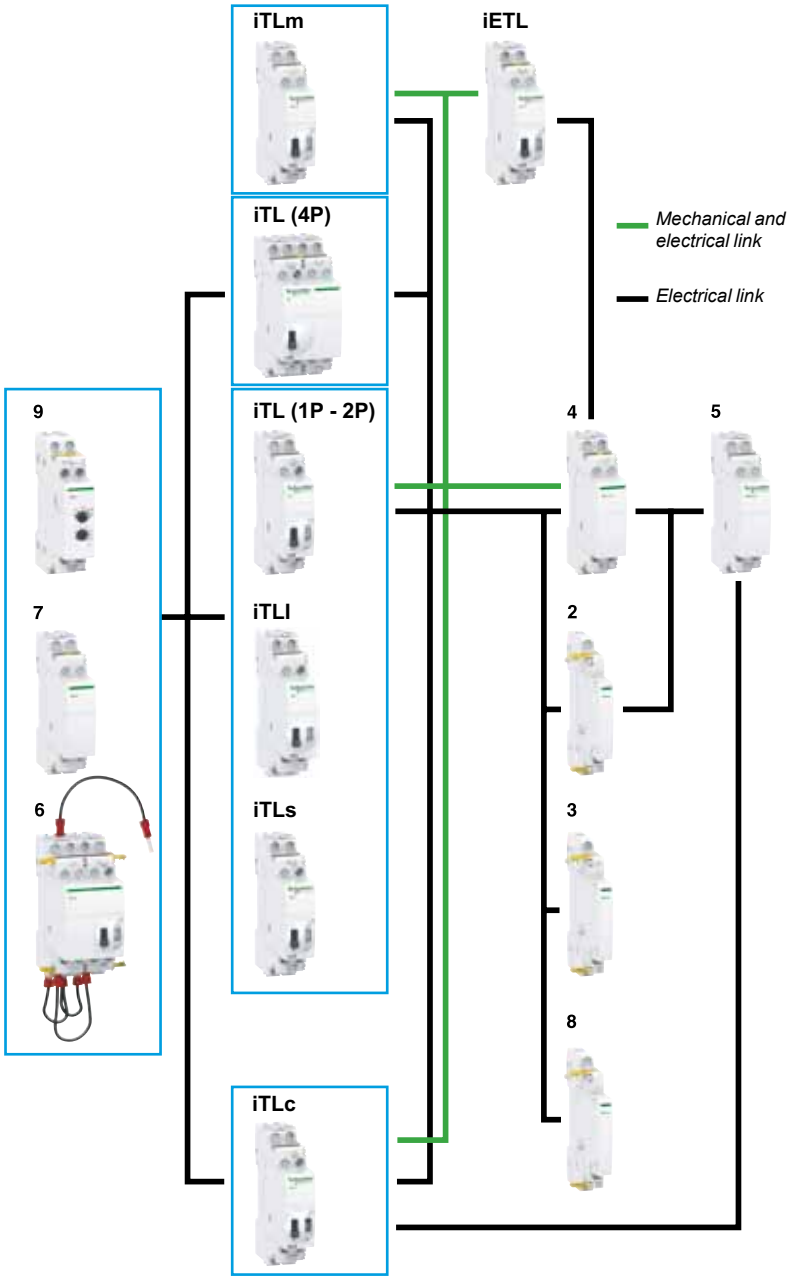
Auxiliaries

Centralised control			
2	iATLc [1], [3]	24...240 V AC	**A9C15404**
Indication			
3	iATLs [1]	24...240 V AC	**A9C15405**
Centralised control + indication			
4	iATLc+s [3]	24...240 V AC	**A9C15409**
Multi-level centralised control			
5	iATLc+c [2], [3]	24...240 V AC	**A9C15410**
Step by step control			
6	iATL4	230 V AC	**A9C15412**
Control by illuminated push-buttons			
7	iATLz	130...240 V AC	**A9C15413**
Latched control			
8	iATLm [1]	12...240 V AC	**A9C15414**
Time delay control			
9	iATEt [4]	24...240 V AC	**A9C15419**

(1) The iATLc, iATLs and iATLm 9 mm auxiliaries are used by themselves to the right of an impulse relay.
(2) Connection by traditional cabling.
The iATLc+c must be mounted to the right of an iATLc+s or an iATLc.

(3) The centralised control functions (iTLc, iATLc, iATLc+s, iATLc+c) only operate on AC voltage networks.

(4) iATEt: control voltage:
24...240 V AC, 24...110 V DC.



iTL impulse relays (cont.)

PB106126-41

Yellow clip
- A simple clip-on system for flexible auxiliaries combination and improved robustness
- For electrical and mechanical connections

- Insulated terminals IP20

- Large circuit labeling area

- Built-in or optional auxiliary function: state indication, centralised control, latched control, control for illuminated pushbutton, step-by-step control, time delay

- Disconnection of remote control by selector switch (except for 4P single-piece iTL) for maintenance operation

- Consistent with the entire Acti9 offer and with all types of lighting

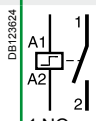
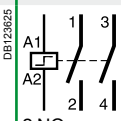
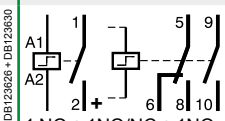
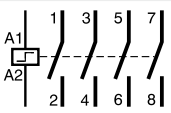
- Manual controls on front face: direct and priority manual control by O-I toggle
- Mechanical contact position indicator

		Choice impulse relays auxiliaries																	
Type		**Standard iTL**						**Changeover iTLI**					**iTLc centralised control**			**iTLm control on latched order**	**iTLs remote indication**		
Rating	A	16					32	16					16			16	16		
Control voltage	V AC	230/240	130	48	24	12	230/240	230/240	130	48	24	12	230/240	48	24	230/240	230/240	48	24
	V DC	110	48	24	12	6	110	110	48	24	12	6	-			110	110	24	12
Auxiliaries																			
Extension																			
iETL		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Centralised control + indication																			
iATLc+s		■	■	■	■	-	■	■	■	■	-	-	-	-	-	-	■	■	■
Centralised control																			
iATLc		■	■	■	■	-	■	■	■	■	-	-	-	-	-	-	■	■	■
Indication																			
iATLs		■	■	■	■	-	■	■	■	■	■	■	■	■	■	■	■	■	■
Multi-level centralised control																			
iATLc+c		■	■	■	■	-	■	■	■	■	-	-	■	■	■	-	■	■	■
Latched control																			
iATLm		■	■	■	■	■	■	■	■	■	■	■	-	-	-	-	■	■	■
Control for illuminated Pushbutton																			
iATLz		■	■	-	-	-	■	■	■	-	-	-	■	■	-	-	■	■	-
Step by step control																			
iATL4		■	-	-	-	-	■	■	-	-	-	-	■	-	-	-	■	-	-
Time delay control																			
iATEt		■	■	■	(*)	■	-	■	■	■	■	(*)	-	■	■	■	-	■	■ (*)

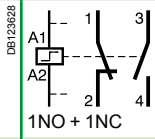
(*) iATEt : does not operate on 12 V DC.

Catalogue numbers

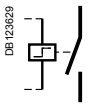
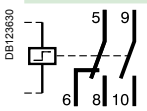
iTL impulse relays

Type			1P	2P	3P	4P
			 1 NO	 2 NO	 1 NO + 1NO/NC + 1NO	 4 NO
Rating (In)	**Control voltage (Uc)**					
	(V AC)	**(V DC)**				
16 A	12	6	**A9C30011**	**A9C30012**	**A9C30011 + A9C32016**	**A9C30012 + A9C32016**
	24	12	**A9C30111**	**A9C30112**	**A9C30111 + A9C32116**	**A9C30114**
	48	24	**A9C30211**	**A9C30212**	**A9C30211 + A9C32216**	**A9C30212 + A9C32216**
	130	48	**A9C30311**	**A9C30312**	**A9C30311 + A9C32316**	**A9C30312 + A9C32316**
	230...240	110	**A9C30811**	**A9C30812**	**A9C30811 + A9C32816**	**A9C30814**
32 A	230...240	110	**A9C30831**	**A9C30831 + A9C32836**	**A9C30831 + 2 x A9C32836**	**A9C30831 + 3 x A9C32836**
Width in 9 mm modules			2	2	4	4

iTLI impulse relays

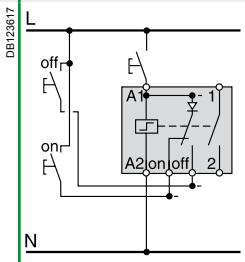
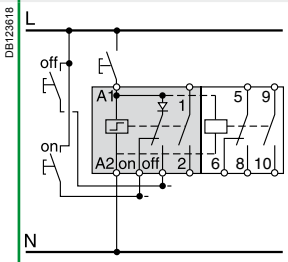
Type			1P
			 1NO + 1NC
Rating (In)	**Control voltage (Uc)**		
	(V AC)	**(V DC)**	
16 A	12	6	**A9C30015**
	24	12	**A9C30115**
	48	24	**A9C30215**
	130	48	**A9C30315**
	230...240	110	**A9C30815**
Width in 9 mm modules			2

iETL extensions for iTL and iTLI

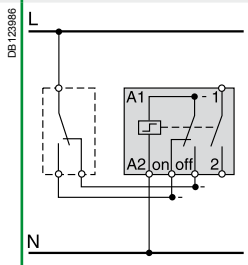
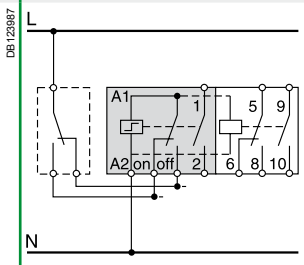
Type					Width in 9 mm modules
1P	**Rating (In)**	**Control voltage (Uc)**			
		(V AC)	**(V DC)**		
 1NO	32 A	230...240	110	**A9C32836**	2
2P					
 1NO/NC + 1NO	16 A	12	6	**A9C32016**	2
		24	12	**A9C32116**	2
		48	24	**A9C32216**	2
		130	48	**A9C32316**	2
		230...240	110	**A9C32816**	2

Catalogue numbers (cont.)

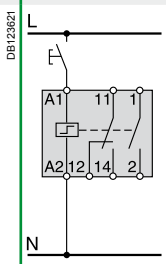
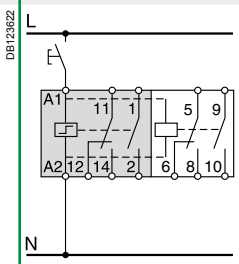
iTLc impulse relay with centralised control

Type		1P	3P
		 1NO	 3P
Rating (In)	**Control voltage (Uc) (V AC)**		
16 A	24	**A9C33111**	**A9C33111 + A9C32116**
	48	**A9C33211**	**A9C33211 + A9C32216**
	230...240	**A9C33811**	**A9C33811 + A9C32816**
Width in 9 mm modules		2	4

iTLm impulse relay with latched control

Type		1P	3P
		 1NO	 3P
Rating (In)	**Control voltage (Uc) (V AC)**		
16 A	230...240	**A9C34811**	**A9C34811 + A9C32116**
Width in 9 mm modules		2	4

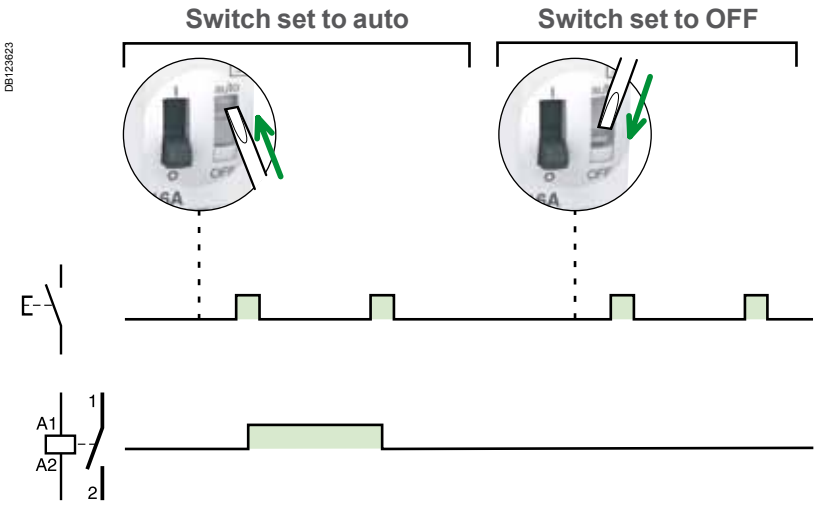
iTLs impulse relay with remote indication*

Type			1P	3P
			 1NO	 3P
Rating (In)	**Control voltage (Uc)**			
	(V AC)	**(V DC)**		
16 A	24	12	**A9C32111**	**A9C32111 + A9C32116**
	48	24	**A9C32211**	**A9C32211 + A9C32216**
	230...240	110	**A9C32811**	**A9C32811 + A9C32816**
Width in 9 mm modules			2	4

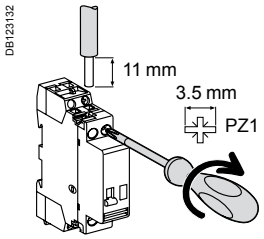
(*) Short circuit protection device for indication contacts : 6 A gG fuse.

iTL impulse relays

Operation



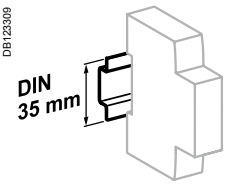
Connection



Type	Rating	Circuit	Tightening torque	Copper cables	
				Rigid or ferrule	Flexible or ferrule
			DB122945	DB123553	
iTL, iTLi, iTLc, iTLm, iTLs, iETL	16 A	Control	1 N.m	0.5 to 4 mm²	1 to 4 mm²
		Power		1.5 to 4 mm²	1.5 to 4 mm²
iTL, iETL	32 A	Control		0.5 to 4 mm²	1 to 4 mm²
		Power	1.2 N.m	1.5 to 10 mm²	1.5 to 10 mm²
Auxiliaries			1 N.m	0.5 to 4 mm²	1 to 4 mm²

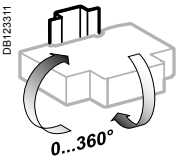
iTL impulse relays (cont.)

DB123309



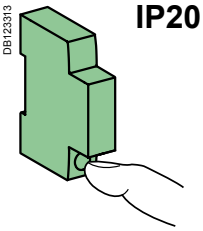
Clip on DIN rail 35 mm.

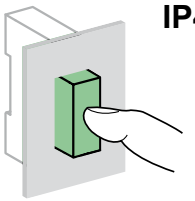
DB123311



Indifferent position of installation.

DB123313

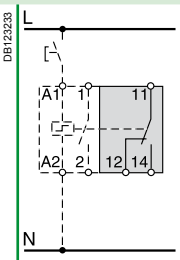
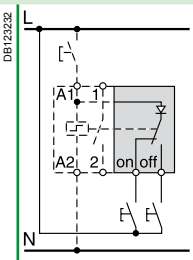
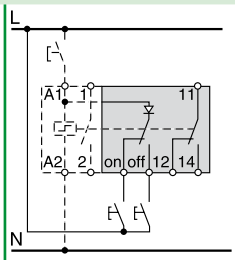
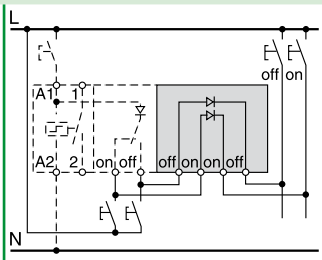




Technical data

Control circuit			
		iTL and iTLI 16 A iTLc, iTLm, iTLs, iETL 16 A	**iTL 32 A, iETL 32 A**
Dissipated power (during the impulse)		1, 2, 3P: 19 VA	19 VA
		4P: 38 VA	
Illuminated PB control		Max. current 3 mA (if > use an ATLz)	
Operating threshold		Min. 85 % of Un in conformance with IEC/EN60669-2-2	
Duration of the control order		50 ms to 1 s (200 ms recommended)	
Response time		50 ms	
Power circuit			
Voltage rating (Ue)	1P, 2P	24 ...250 V AC	
	3P, 4P	24....415 V AC	
Frequency		50 Hz or 60 Hz	
Maximum number of operations per minute		5	
Maximum number of switching operation a day		100	
Additional characteristics to IEC/EN 60947-3			
Insulation voltage (Ui)		440 V AC	
Pollution degree		3	
Rated impulse withstand voltage (Uimp)		6 kV	
Endurance (O-C)			
Electrical to IEC/EN 60947-3		200,000 cycles (AC21)	50,000 cycles (AC21)
		100,000 cycles (AC22)	20,000 cycles (AC22)
Overvoltage category		IV	
Other characteristics			
Degree of protection (IEC 60529)	Device only	IP20	
	Device in modular enclosure	IP40 Insulation class II	
Operating temperature		-20°C to +50°C	
Storage temperature		-40°C to +70°C	
Tropicalization (IEC 60068-1)		Treatment 2 (relative humidity 95 % at 55°C)	

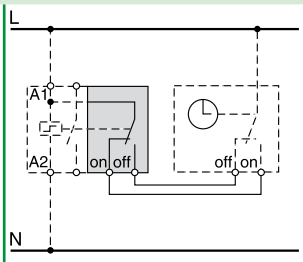
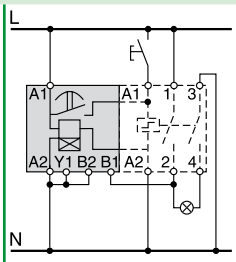
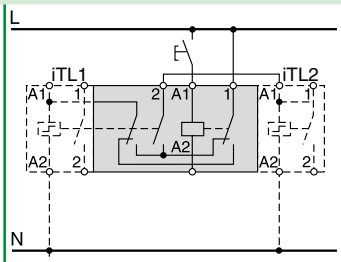
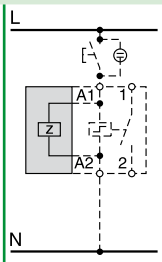
iTL impulse relays
Electrical auxiliaries
for iTL impulse relays

	Indication	Control		
Auxiliaries	**iATLs**	**iATLc**	**iATLc+s**	**iATLc+c**
Type	**Indication**	**Centralised control**	**Centralised control + indication**	**Multi-level centralised control**
	PB106139-34 	PB106137-34 	PB106140-34 	PB106136-34 
Function				
	■ Allows remote indication of the associated impulse relay	■ Used for centralised control, thanks to a "pilot line", of a group of impulse relays controlling separate networks, while at the same time maintaining local individual control of each impulse relay	■ And for remote indication of the mechanical status of each relay	■ Used to control the centralised controls of a number of impulse relay groups, while at the same time maintaining local individual control and centralised control by level
Wiring diagrams				
	DB123233 	DB123232 	DB123231 	DB123235 
	–	–	–	■ Each group, made up of iTLc or (iTL or iTLI or iTLs) + iATLc+s, must only contain a single iATLc+c ■ Maximum number of impulse relays that can be controlled: □ 230 V AC: 24 □ 130 V AC: 12 □ 48 V AC: 5
Mounting				
	■ Mounted to the right of iTL by yellow clips	■ Mounted to the right of iTL by yellow clips	■ Mounted to the right of iTL by yellow clips	■ Without mechanical link with impulse relays and auxiliaries
Catalogue numbers	**A9C15405**	**A9C15404**	**A9C15409**	**A9C15410**

Technical specifications					
Control voltage (Ue)	V AC	24…240	24…240	24…240	24 …240
	V DC	24…240	–	–	–
Width in 9 mm modules		1	1	2	2
Auxiliary contact (breaking capacity)		■ Mininimum: 10 mA at 24 V AC/DC ■ Maximum (IEC 60947-5-1): □ 12…240 V AC 6 A □ 12…24 V DC 6 A □ 15…240 V AC 2 A □ 13…24 V DC 2 A	–	■ Mininimum: 10 mA at 24 V AC/DC ■ Maximum (IEC 60947-5-1): □ 12…240 V AC 6 A □ 12…24 V DC 6 A □ 15…240 V AC 2 A □ 13…24 V DC 2 A	–
Number of contacts		–	–	–	–
Operating temperature	°C	-20°C to +50°C			
Storage temperature	°C	-40°C to +70°C			

iTL impulse relays
Electrical auxiliaries
for iTL impulse relays (cont.)

Control

	iATLm	iATEt	iATL4	iATLz
	Latched control	**Time delay**	**Step by step control**	**Control by illuminated push-buttons**
	PB106138-34 	PB106125-34 	PB106142-63 	PB106141-34 
	■ Combined with an impulse relay, it operates on latched orders	■ Combined with an impulse relay, it automatically disconnects the circuit after a preset time	■ Allows the step by step sequence over 2 circuits	■ Used to control impulse relays by illuminated push-buttons, without operating risks
	DB123234 	DB123237 	DB123562 	DB123230 
	–	■ 5 time setting ranges: □ 1 to 10 s □ 6 to 60 s □ 2 to 10 min □ 6 to 60 min □ 2 to 10 h	■ The cycle is as follows: □ 1st impulse - iTL 1 closed, iTL 2 open □ 2nd impulse - iTL 1 open, iTL 2 closed □ 3rd impulse - iTL 1 and 2 closed □ 4th impulse - iTL 1 and 2 open □ 5th impulse - iTL 1 closed, iTL 2 open, etc	■ Provide an iATLz when the current drawn up by the illuminated push-buttons is higher than 3 mA (this current is sufficient to keep the coils energised). Above this value, fit one extra iATLz per 3 mA. ■ For example: for 7 mA, fit 2 iATLz
	■ Mounted to the right of iTL by yellow clips	■ Mounted to the left of iTL by yellow clips	■ Assembled between 2 impulse relays: according to the auxiliarisation table by yellow clips	■ Mounted to the left of iTL by yellow clips
	A9C15414	**A9C15419**	**A9C15412**	**A9C15413**
	12…240	24…240	230	130…240
	6…110	24…110	–	–
	1	2	4	2
	–	–	–	–
	–	–	–	–
	-20°C to +50°C			
	-40°C to +70°C			

Security

Accessories — Yellow clips

PB106143-10

Function

■ Ensure the mechanical and/or electrical link between contactors and their auxiliaries (set of 10).

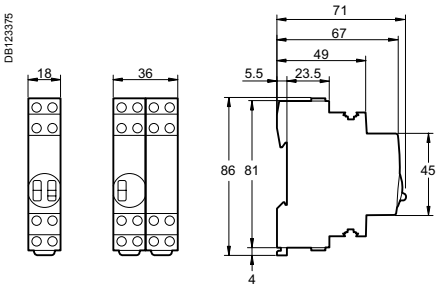
Catalogue numbers	**A9C15415**

Technical specifications

Width in 9 mm modules	–
Number of poles	–

Dimensions (mm)

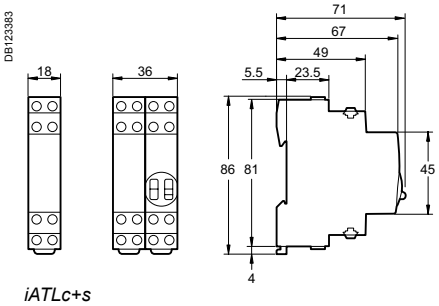
DB123375



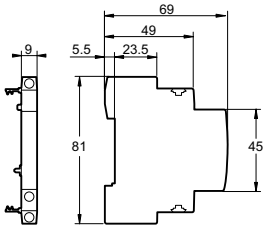
iTL 1P
iTLc
iTLm
iTLs
iTLi
iETL

iTL+iETL
iTL 4P

DB123383

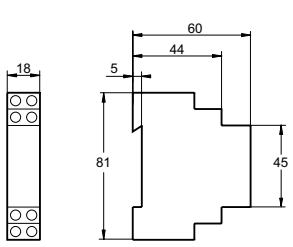


iATLc+s
iATLc+c
iATLz
iATL4



iATLc
iATLs
iATLm

DB123380



iATEt

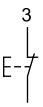
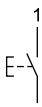
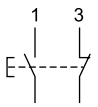
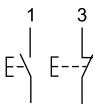
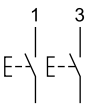
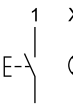
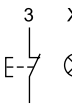
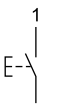
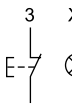
iPB pushbuttons

IEC 60669-1 and IEC 60947-5-1

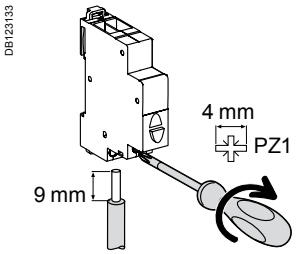
■ iPB pushbuttons are used to control electric circuits by means of pulses.

Catalogue numbers

iPB pushbuttons

Type		Single				Double		Single + indicator light			
											
Diagram		1 NC 		1 NO 	1 NO + 1 NC 	1 NO / 1 NC 	1 NO / 1 NO 	1 NO 	1 NC 	1 NO 	1 NC 
Pushbutton	Colour	Grey	Red	Grey	Grey	Green/red	Grey/grey	Grey	Grey	Grey	Grey
Indicator light	Power supply	-	-	-	-	-	-	110…230 V AC		12…48 V AC/DC	
	Colour	-	-	-	-	-	-	Green	Red	Green	Red
Cat. no.		**A9E18030**	**A9E18031**	**A9E18032**	**A9E18033**	**A9E18034**	**A9E18035**	**A9E18036**	**A9E18037**	**A9E18038**	**A9E18039**
Width in 9 mm modules		2				2		2			

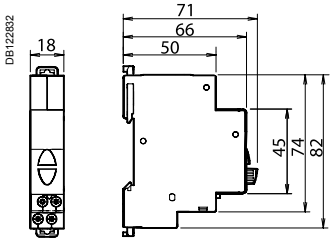
Connection



Tightening torque	Copper cables	
	Rigid	Flexible or ferrule
		
1 N.m	0.5 mm² min.	0.5 mm² min.
	2 x 2.5 mm² max.	2 x 2.5 mm² max.

■ Phase-separated wall that can be divided to allow the teeth of all types of comb busbar to pass through.
■ Staggered terminals to simplify connection.

Dimensions (mm)



Technical data

Main characteristics	
Pollution degree	3
Power circuit	
Voltage rating (Ue)	250 V AC
Current rating (Ie)	20 A
Additional characteristics	
Endurance (O-C)	30,000 operations AC22 (cos j = 0.8)
Operating temperature	-35°C... +70°C
Storage temperature	-40°C... +80°C
Tropicalization	Treatment 2 (relative humidity 95 % at 55°C)
LED indicator light	Consumption: 0.3 W
	Service life: 100,000 hours of constant lighting efficiency
	Maintenance-free indicator light (non-interchangeable LEDs)

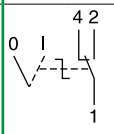
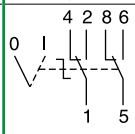
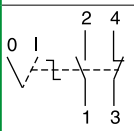
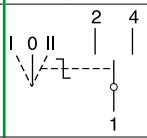
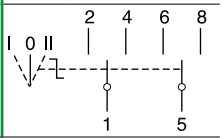
iSSW linear switches

IEC 60669-1 and IEC 60947-5-1

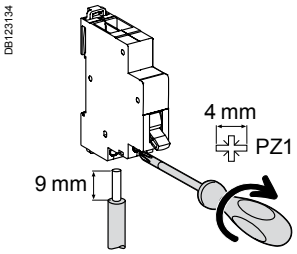
■ iSSW linear switches are used for the manual control of electric circuits.

Catalogue numbers

iSSW linear switches

Type	2 positions			3 positions	
					
Contact	1 changeover switch	2 changeover switches	1 NO + 1NC	1 changeover switch	2 changeover switches
Diagram					
Cat. no.	**A9E18070**	**A9E18071**	**A9E18072**	**A9E18073**	**A9E18074**
Width in 9 mm modules	2	4	2	2	4

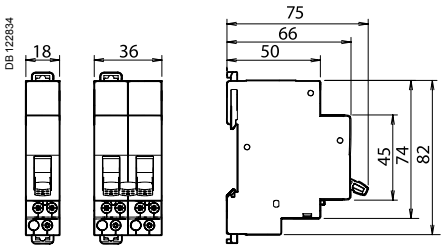
Connection



Tightening torque	Copper cables	
	Rigid	Flexible or ferrule
		
1 N.m	0.5 mm² min. 2 x 2.5 mm² max.	0.5 mm² min. 2 x 2.5 mm² max.

■ Phase-separated wall that can be divided to allow the teeth of all types of comb busbar to pass through.
■ Staggered terminals to simplify connection.

Dimensions (mm)



Technical data

Main characteristics	
Pollution degree	3
Power circuit	
Voltage rating (Ue)	250 V AC
Current rating (Ie)	20 A
Additional characteristics	
Endurance (O-C)	30,000 cycles AC22 (cos j = 0.8)
Operating temperature	-20°C... +50°C
Storage temperature	-40°C... +70°C
Tropicalization	Treatment 2 (relative humidity 95 % at 55°C)

iSW switches

Position contact indication

■ Suitable for industrial isolation according to IEC/EN 60947-3 standard.
■ The presence of the green strip guarantees physical opening of the contacts and allows operations to be performed on the downstream circuit in complete safety.

PB105266-40
DB122818

PB105264-40

PB105265-40

Control switches

iSW control switches (20, 32 A)

IEC/EN 60669-1, iSW switch with indicator light.
IEC/EN 60669-2-4, iSW switch without indicator light.

These switches are used for:
■ Control (opening and closing of circuits under load).
The 1P and 2P switches are available with or without indicator light.
■ Disconnection, for switches without indicator light IEC/EN 60669-2-4.

iSW switch-disconnectors (40 to 125 A)

IEC 60947-3

The switch-disconnectors combine the following functions:
■ Control (opening and closing of circuits under load).

OF iSW auxiliary

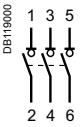
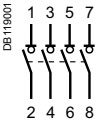
■ Mounted on the left, it indicates the "open" or "closed" position of the switch and has a normally open (NO) or normally closed (NC) contact.

Accessory

■ The padlocking facility locks the switch in the "open" or "closed" position.

Catalogue numbers

20, 32 A iSW control switches

Type				Width in 9 mm modules
1P	**Rating**	**Voltage (Ue)**		
DB118998 	20 A	250 V AC	**A9S60120**	2
	32 A	250 V AC	**A9S60132**	
2P				
DB118999 	20 A	250 V AC	**-**	2
		415 V AC	**A9S60220**	
	32 A	250 V AC	**-**	
		415 V AC	**A9S60232**	
3P				
DB119000 	20 A	415 V AC	**A9S60320**	4
	32 A	415 V AC	**A9S60332**	
4P				
DB119001 	20 A	415 V AC	**A9S60420**	4
	32 A	415 V AC	**A9S60432**	
Operating frequency			50/60 Hz	

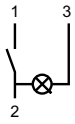
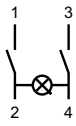
iSW switches (cont.)

PB105264-40

Control switches with indicator light

Catalogue numbers (cont.)

20, 32 A iSW control switches with indicator light

Type			Width in 9 mm modules
1P	**Rating**	**230 V indicator light**	
DB122819 	20 A	**A9S61120**	2
	32 A	**A9S61132**	
2P			
DB122820 	20 A	**A9S61220**	2
	32 A	**A9S61232**	
Operating frequency		50/60 Hz	

Spare indicator lights for 20, 32 A iSW switches

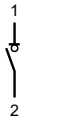
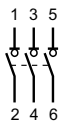
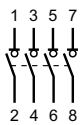
Type		
Neon	**Voltage (Ue)**	
Supplied with a red diffuser (Pack of 10)	230 V AC	**15111**
Incandescent bulb (P=1.2 W)		
Supplied with a red diffuser (Pack of 10)	12 V DC/AC	**15112**
	24 V DC/AC	**15113**
	48 V DC/AC	**15114**

PB105266-40

PB105267-40

Switch-disconnectors

40 to 125 A iSW switch-disconnectors

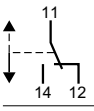
Type				Width in 9 mm modules
1P	**Rating**	**Voltage (Ue)**		
DB118998 	40 A	250 V AC	**A9S60140**	2
	63 A	250 V AC	**A9S60163**	
	100 A	250 V AC	**A9S60191**	
	125 A	250 V AC	**A9S60192**	
2P				
DB118999 	40 A	415 V AC	**A9S60240**	4
	63 A	415 V AC	**A9S60263**	
	100 A	415 V AC	**A9S60291**	
	125 A	415 V AC	**A9S60292**	
3P				
DB119000 	40 A	415 V AC	**A9S60340**	6
	63 A	415 V AC	**A9S60363**	
	100 A	415 V AC	**A9S60391**	
	125 A	415 V AC	**A9S60392**	
4P				
DB119001 	40 A	415 V AC	**A9S60440**	8
	63 A	415 V AC	**A9S60463**	
	100 A	415 V AC	**A9S60491**	
	125 A	415 V AC	**A9S60492**	
Operating frequency		50/60 Hz		

iSW switches (cont.)

PB105264-40

OF iSW

Catalogue numbers (cont.)

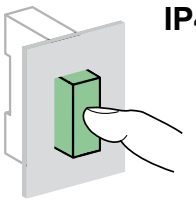
Auxiliary				
Type				**Width in 9 mm modules**
OF iSW	**Rating**	**Voltage (Ue)**		
DB122821 	3 A	415 V AC	**A9A15096**	2
	6 A	250 V AC		

Accessories	
Type	
Padlocking facility (for Ø 8 mm padlock)	
Pack of 2 parts	**26970**

Technical data

Main characteristics		20, 32 A iSW		40 to 125 A iSW	
Insulation voltage (Ui)		**Without indicator light** ■ 1P: 250 V AC ■ 2P, 3P, 4P: 500 V AC	**With indicator light** 250 V AC	1P: 250 V AC 2P, 3P, 4P: 500 V AC	
Pollution degree		2		3	
Power circuit					
Rated impulse withstand voltage (Uimp)		4 kV		6 kV	
Operating category		AC - 22 A		AC - 22 A	
Permissible rated short-time withstand current (Icw)		-		40 A, 63 A: 1260 A 100 A, 125 A: 2500 A	
Conditional rated short-circuit current (Inc)		3 kA to IEC/EN 60669-2-4		6 kA to IEC 60947-3	
Rated short-circuit closing current (Icm)		-		40 A, 63 A: 4.2 kA 100 A, 125 A: 5 kA	
Using direct current		48 V (110 V with 2 poles in series)			
Additional characteristics					
Degree of protection		IP40 on the front panel			
Endurance (O-C)	Mechanical	300,000 cycles		50,000 cycles	
	Electrical	30,000 cycles		40, 63 A iSW	20,000 cycles
				100 A iSW	10,000 cycles
				125 A iSW	2 500 cycles
Operating temperature		-20°C to +50°C			
Storage temperature		-40°C to +70°C			
Tropicalization		Treatment 2 (relative humidity 95% at 55°C)			

DB123597

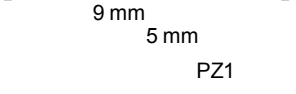


IP40

iSW switches (cont.)

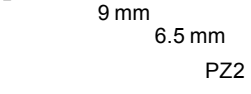
Connection

DB123135



20, 32 A iSW

DB123136

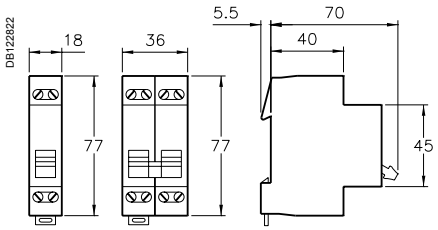


40 to 125 A iSW

Type	Rating	Tightening torque	Copper cables	
			Rigid	Flexible or ferrule
		DB122945	DB122946	
iSW	**20, 32 A**	1.2 N.m	10 mm²	10 mm²
	40 to 125 A	3.5 N.m	≤ 50 mm²	≤ 35 mm²
OF iSW	-	1.2 N.m	10 mm²	10 mm²

Dimensions (mm)

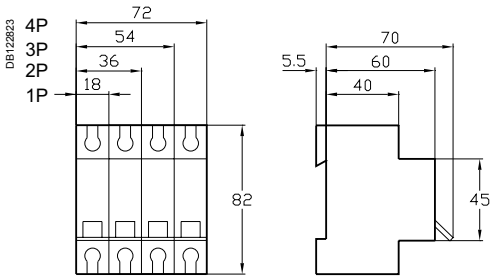
DB122822



1P, 2P *3P, 4P*

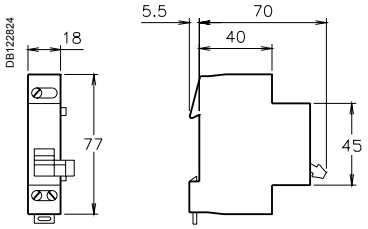
20, 32 A iSW

DB122823



40 to 125 A iSW

DB122824



OF iSW

RCA remote controls
For iC60 circuit breakers

PB106253-40

The RCA remote control system allows:
- Remote electrical control (opening and closing) of circuit breakers with or without Vigi add-on RCD, with or without auxiliary.
- Circuit-breaker resetting after tripping, in accordance with safety principles and the regulations in force.
- Local control by operating handle.
- Circuit placing in safety configuration by padlocking.

2 choices of operation after tripping:
- A: Enabling of remote circuit-breaker resetting;
- B: Inhibition of remote resetting.

The version with Ti24 interface allows:
- Direct interfacing of remote control with a programmable logic controller (PLC), a supervision system and any other communication device, having inputs/outputs in 24 V DC (control, OF and SD indications).
- Remote indication by "OF" potential-free contact.
- Provision of 2 operating modes, "1 and 3".

The iMDU auxiliary allows RCA control in 24/48 V AC/DC.

Catalogue numbers

RCA remote control			
Type			**Width in 9 mm modules**
For circuit breakers 1P, 1P+N, 2P	**Voltage**		
Without Ti24 interface	230 V AC, 50 Hz	**A9C70112**	7
With Ti24 interface	230 V AC, 50 Hz	**A9C70122**	7
For 3P, 4P circuit breakers			
Without Ti24 interface	230 V AC, 50 Hz	**A9C70114**	7
With Ti24 interface	230 V AC, 50 Hz	**A9C70124**	7

DB123813

DB123572

Without Ti24 interface

DB123673

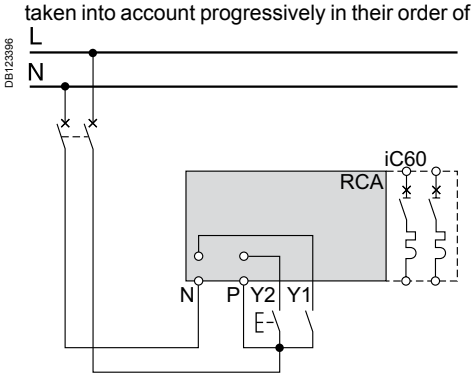
With Ti24 interface

Legend		
Type		**Application**
OFF		All remote control inhibited
auto	**A**	Circuit breaker remote reclosing after tripping allowed
	B	Circuit breaker remote reclosing after tripping inhibited
Green indicator lamp		Remote control possible
Orange indicator lamp		Remote control impossible
1 (Ti24)		Mode 1
3 (Ti24)		Mode 3
Y1		Latched order local control
Y2		Impulse-type or latched order local control (depending on mode)
Y3		Latched order centralized control

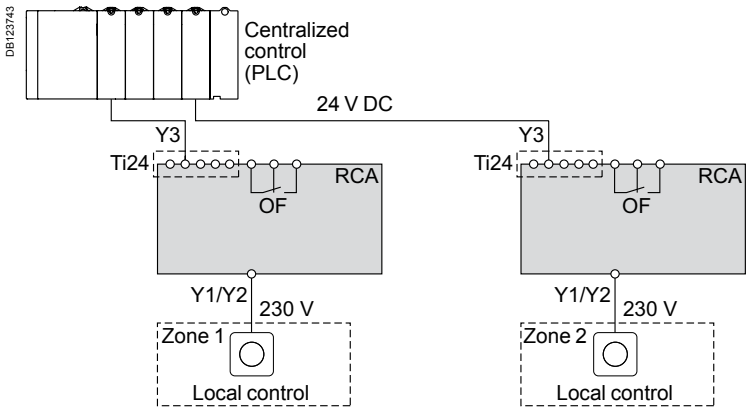
RCA remote controls (cont.)
For iC60 circuit breakers

Standard RCA

■ The orders received on terminals Y1 and Y2 are taken into account progressively in their order of arrival.



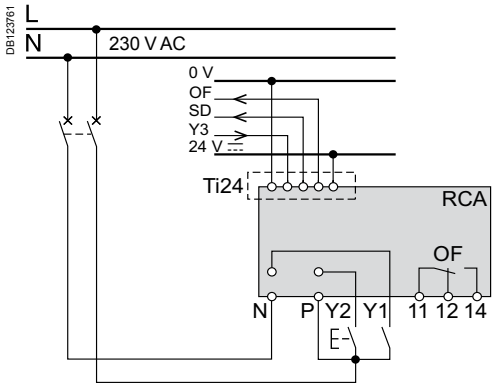
RCA Ti24



RCA Ti24 mode 1

Mode 1: Locally or centrally controlled circuit-breaker opening/closing

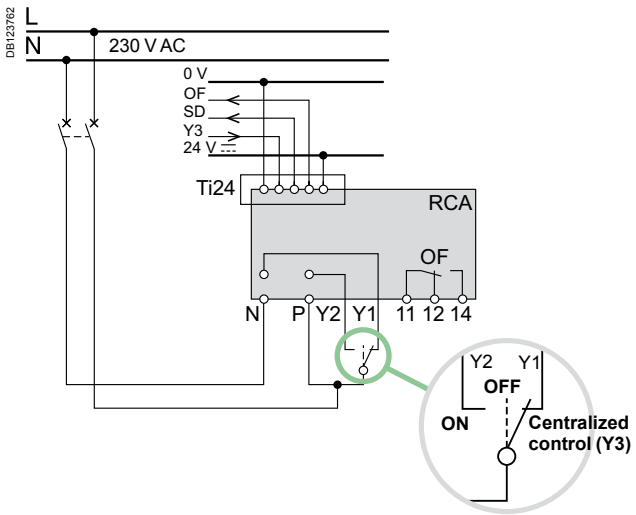
■ The orders come from various control points, and they are taken into account in their order of arrival
■ Y1: Latched order local control
■ Y2: Impulse-type local control
■ Y3: Latched order centralized control



RCA Ti24 mode 3

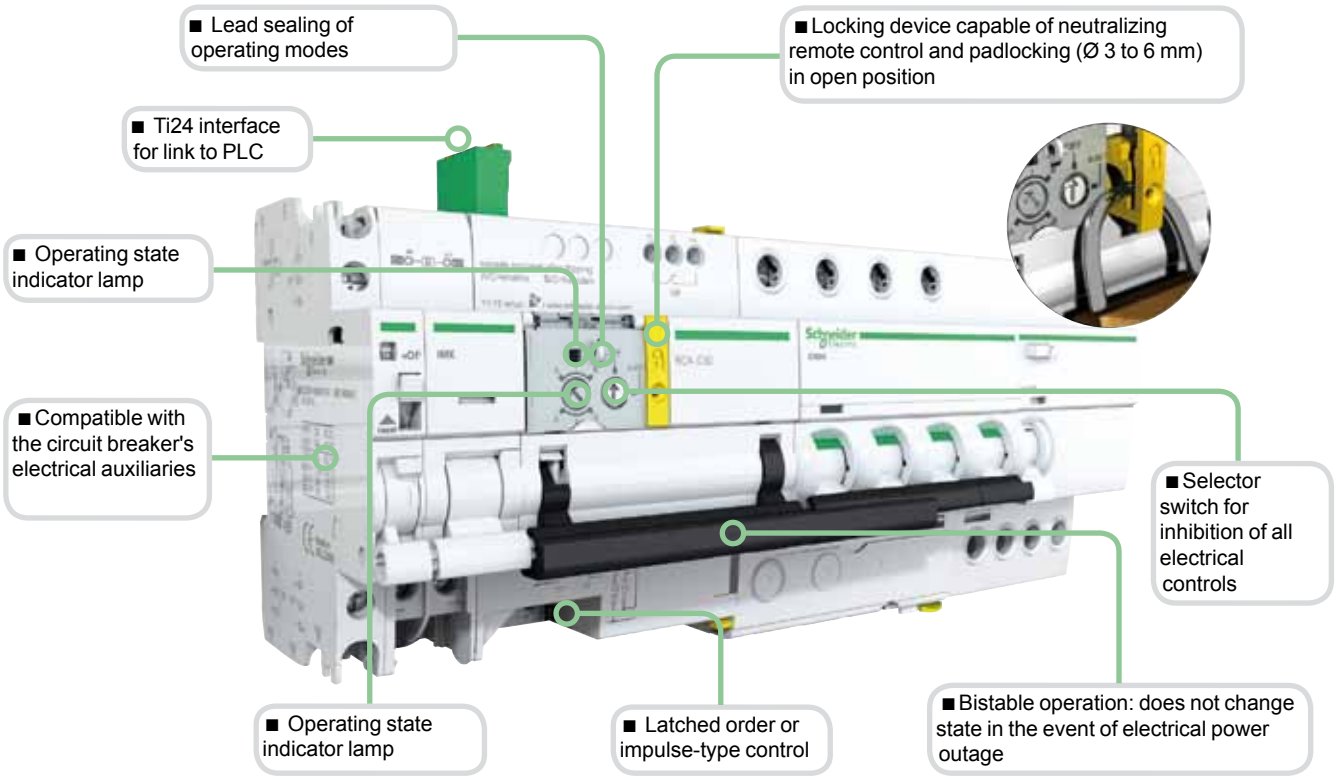
Mode 3: Centrally controlled opening/closing + local override

■ 3 positions allowing a choice between override and centralized control:
■ Y1: Latched order local control
■ Y2: Latched order local control
■ Y3: Latched order centralized control



RCA remote controls (cont.)
For iC60 circuit breakers

DB123576



DB123763

Legend	
Type	**Application**
+24VDC	V DC power supply
Y3	Latched order centralized control
SD	Circuit-breaker tripping information
OF	Control circuit state information (open/closed)
0 V	V DC power supply

DB123578

DB123579

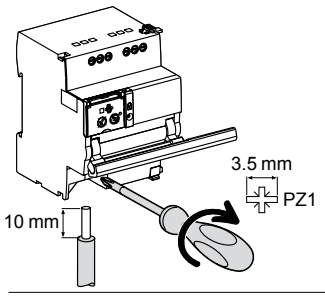
Y1	Latched order local control
Y2	Impulse-type or latched order local control (depending on mode)
N	230 V AC, 50 Hz power supply
P	
OF  11 12 14	Circuit-breaker state indication contact (open/closed)

Indication auxiliaries		Tripping auxiliaries	RCA remote control	iC60 circuit breaker	Vigi iC60 add-on RCD
PB104474-25 	PB104475-25 	PB104496-25 			
No	1 (iSD or iOF or iOF/SD+OF)	1 (iMX or iMN) max.	PB106253-25  *RCA*	PB104437-25  *iC60*	PB104437-25  *Vigi iC60*
1 iOF	1 (iSD or iOF or iOF/SD+OF)	No			

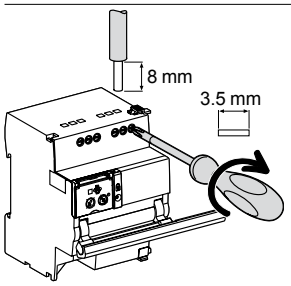
RCA remote controls (cont.)
For iC60 circuit breakers

Connection

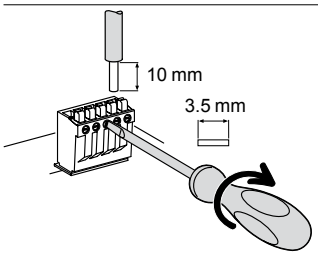
DB123565



DB123568

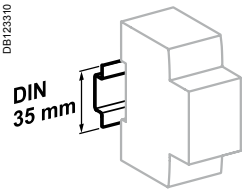


DB123764



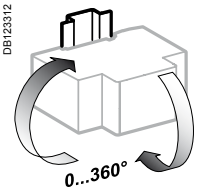
Terminal	Tightening torque	Without accessories — Copper cables		
		Rigid	Flexible	Flexible with ferrule
	DB122945	DB123553	DB123554	
Power supply (N/P) Inputs (Y1/Y2)	1 N.m	0.5 to 10 mm² 2 x 0.5 to 2 x 2.5 mm²	0.5 to 6 mm² 2 x 0.5 to 2 x 2.5 mm²	0.5 to 4 mm² 2 x 0.5 to 2 x 2.5 mm²
Outputs (OF)	0.7 N.m	0.5 to 2.5 mm² 2 x 0.5 to 2 x 1.5 mm²	0.5 to 2.5 mm² 2 x 0.5 to 2 x 1.5 mm²	0.5 to 1.5 mm² 2 x 0.5 to 2 x 1.5 mm²
Ti24 interface	Spring-loaded terminals	0.5 to 1.5 mm²	0.5 to 1.5 mm²	-

DB123310



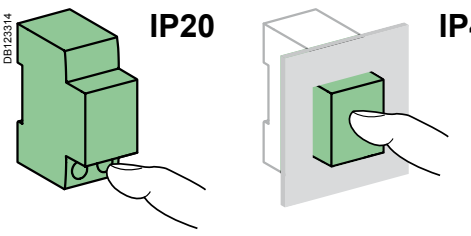
Clip on DIN rail 35 mm.

DB123312



Indifferent position of installation.

DB123314



Technical data

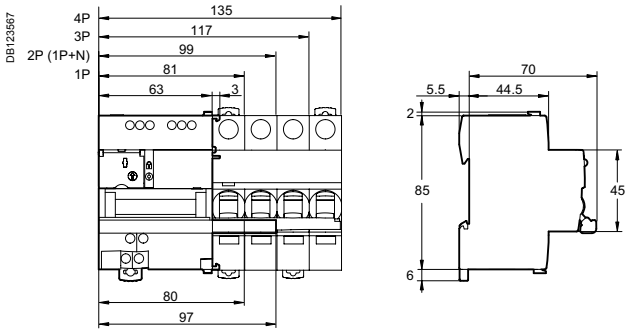
Control circuit		
Supply voltage (Ue) (N/P)		230 V AC, 50 Hz
Control voltage (Uc)	Type 1 inputs (Y1/Y2)	230 V AC (as per IEC 61131-2)
Min. duration of control order (Y2)		≥ 200 ms
Response time (Y2)		< 500 ms
Consumption		≤ 1 W
Thermal self-protection with automatic Reset against overheating of the control circuit due to an abnormal number of operations		
Endurance (O-C) (RCA combined with a circuit breaker)		
Electrical/Mechanical		10,000 cycles
Indication / Remote control		
Potential free changeover contact output (OF)	Min.	24 V AC/DC, 10 mA
	Max.	230 V AC ,1 A
Input (Y1/Y2)	230 V AC	5 mA
Ti24 interface (as per IEC 61131)		
Type 1 input (Y3)	24 V DC	5.5 mA
Output (OF and SD)	24 V DC	In max.: 100 mA
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in a modular enclosure	IP40 Insulation class II
Insulation voltage (Ui)		400 V
Degree of pollution (IEC 60947)		3
Rated impulse withstand voltage (Uimp)		6 kV
Operating temperature		-25°C to +60°C
Storage temperature		-40°C to +70°C
Tropicalization		Treatment 2 (relative humidity of 93 % at +40°C)

RCA remote controls (cont.)
For iC60 circuit breakers

Weight (g)

Remote controls	
Type	**RCA**
For 1P, 1P+N, 2P circuit breakers	400
For 3P, 3P+N, 4P circuit breakers	430

Dimensions (mm)



ARA automatic reclosers
For iC60 circuit breakers and iID residual current circuit breakers

PB106256-40

PB106257-40

The ARA reclosing auxiliary can:
- Perform automatic reclosing of the associated protection device, after tripping.
- Increase the availability of installations without supervision, isolated, hard of access and demanding very great availability (mobile telephony systems, motorways, pumping stations, airports, railways, meteorological stations, service stations, automatic teller machines, public lighting, tunnels, etc.), by restoring them to operation without intervention by personnel in the event of a transient fault (atmospheric disturbances, industrial overvoltages, etc.).
- The operator can choose predefined reclosing program which allows the safety and availability of facilities to be reconciled taking into account the facility's environment.
- The circuit is placed in safety configuration by the padlocking device.

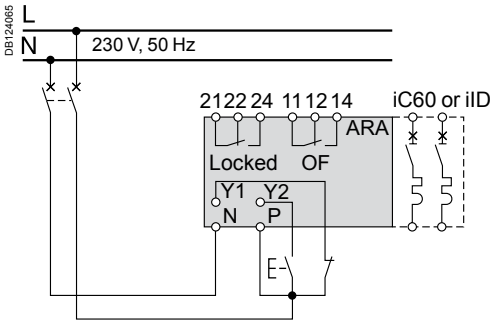
Catalogue numbers

ARA iC60				
For circuit breaker				**Width in 9 mm modules**
1P, 1P+N, 2P	**Number of programs**	**Voltage**		
	4	230 V AC, 50 Hz	**A9C70132**	7
3P, 4P				
	4	230 V AC, 50 Hz	**A9C70134**	7

ARA iID				
For residual current circuit breaker				**Width in 9 mm modules**
2P	**Number of programs**	**Voltage**		
	1	230 V AC, 50 Hz	**A9C70342**	7
	4	230 V AC, 50 Hz	**A9C70332**	
4P				
	4	230 V AC, 50 Hz	**A9C70334**	7

Diagram

DB124065



DB124060

DB123582

DB123583

DB123584

Legend		
Type		**Application**
DB124061 		Choice of program
Y1		"Remote" inhibition of automatic reclosing
Y2		Remote control of final reclosing
N		230 V power supply
P		
Locked	21 22 24	Automatic recloser inhibition indication contact
OF	11 12 14	Indicates the state of the circuit breaker or residual current circuit breaker (opened or closed)
Indicator lamp	Flashing green	Normal operation
	Flashing red	Reclosing cycle in progress
	Fixed red	Automatic recloser inhibited

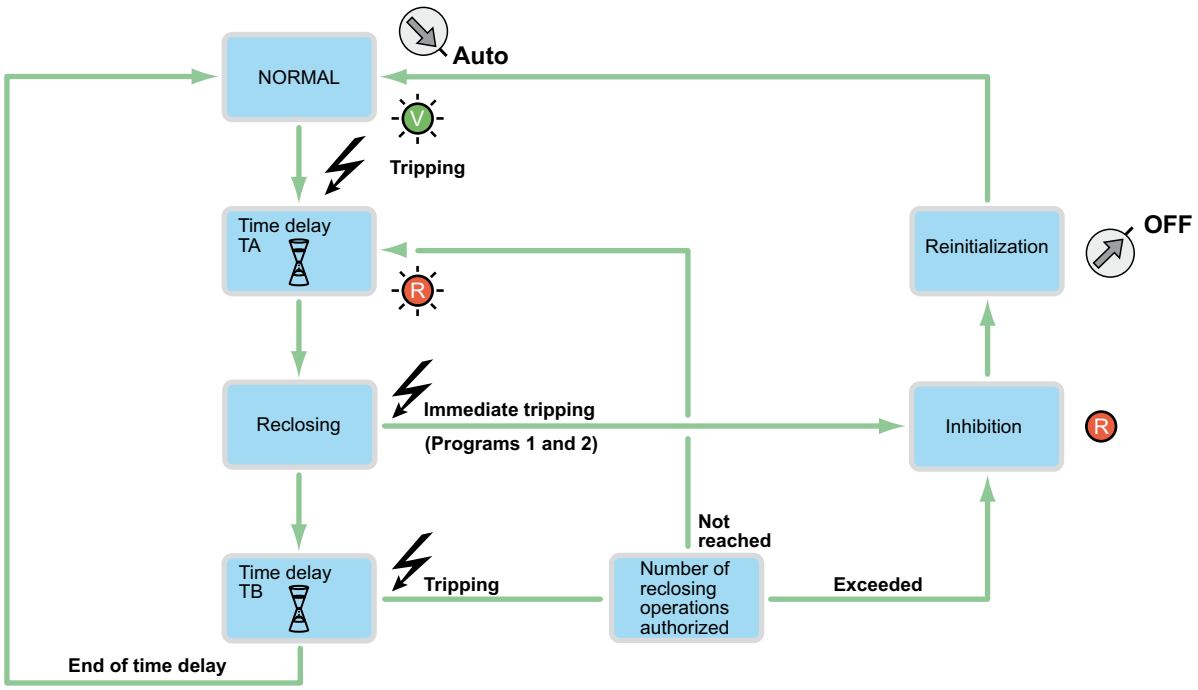
ARA automatic reclosers (cont.)
For iC60 circuit breakers and iID residual current circuit breakers

Operating principle

The ARA automatic recloser makes a number of attempts at reclosing depending on the program chosen by the user.
The program includes the following settings:
- A time delay before reclosing (TA).
- A reinitialization time delay (TB).
- A maximum number of reclosing attempts.

If, following these attempts, the fault is still present, the device places itself in waiting for manual reclosing, or final remote reclosing (Y2).

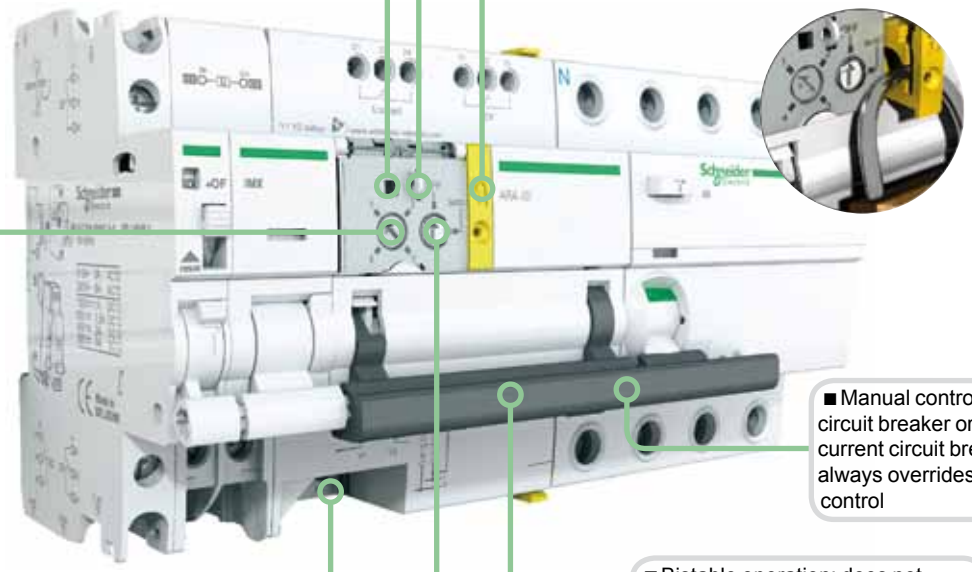
DB123632



				Number of reclosing attempts	Delay before reclosing	Check time	Final reclosing Y2
	iC60	iID			TA	TB	
	1P, 1P+N, 2P: A9C70132 3P, 4P: A9C70134	2P: A9C70342	2P: A9C70332 4P: A9C70334				
Program	–	1 program	4 programs				
DB124061 1 2 4 3	■	–	■	1	60 s	6 min.	Once after inhibition
DB124062 1 2 4 3	■	–	■	3	60 s 3 min. 3 min.	2 min. 6 min. 6 min.	
DB124063 1 2 4 3	■	–	–	5	60 s 3 min. 3 min. 3 min. 3 min.	2 min. 6 min. 6 min. 6 min. 6 min.	
DB124064 1 2 4 3	■	–	–	5	60 s 3 min. 4 min. 5 min. 6 min.	2 min. 6 min. 8 min. 10 min. 12 min.	
DB124063 1 2 4 3	–	–	■	5	60 s 4 min. 10 min. 1 h 6 h	2 min. 3 min. 6 min. 10 min. 10 min.	Once per cycle
DB124064 1 2 4 3	–	–	■	15	20 s 40 s 3 min. 3 min. ...	30 min. 30 min. ...	
Only 1 program available	–	■	–				

ARA automatic reclosers (cont.)
For iC60 circuit breakers and iID residual current circuit breakers

PB106050-78

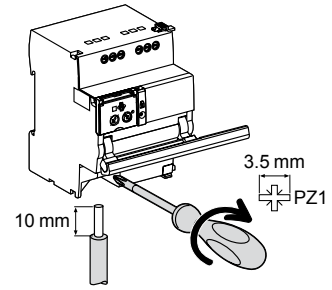


Indication auxiliaries		Tripping auxiliaries	ARA remote control	iC60 or iID device	Vigi iC60 add-on RCD
PB104474-25 	PB104475-25 	PB104496-25 			
No	1 (iSD or iOF or iOF/SD+OF)	1 (iMX or iMN) max.	PB106256-25  *ARA*	PB104437-25  *iC60*	PB104437-25  *Vigi iC60*
1 iOF	1 (iSD or iOF or iOF/SD+OF)	No		PB104472-25  *iID*	–

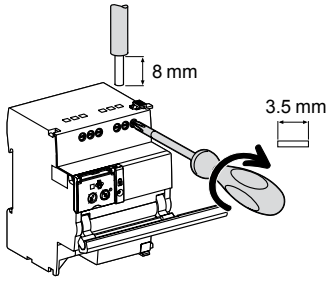
ARA automatic reclosers (cont.)
For iC60 circuit breakers and iID residual current circuit breakers

Connection

DB123565

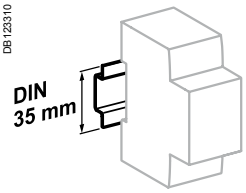


DB123566



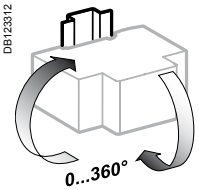
Terminal	Tightening torque	Without accessories — Copper cables		
		Rigid	Flexible	Flexible with ferrule
		DB122945  DB123553	 DB123554	
Power supply (N/P) Inputs (Y1/Y2)	1 N.m	0.5 to 10 mm² 2 x 0.5 to 2 x 2.5 mm²	0.5 to 6 mm² 2 x 0.5 to 2 x 2.5 mm²	0.5 to 4 mm² 2 x 0.5 to 2 x 2.5 mm²
Outputs (OF/Locked)	0.7 N.m	0.5 to 2.5 mm² 2 x 0.5 to 2 x 1.5 mm²	0.5 to 2.5 mm² 2 x 0.5 to 2 x 1.5 mm²	0.5 to 1.5 mm² 2 x 0.5 to 2 x 1.5 mm²

DB123310



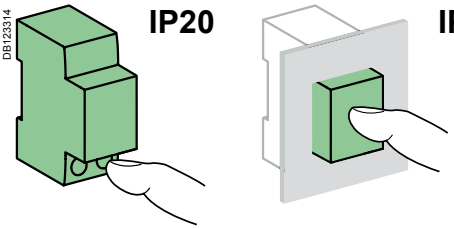
Clip on DIN rail 35 mm.

DB123312



Indifferent position of installation.

DB123314



Technical data

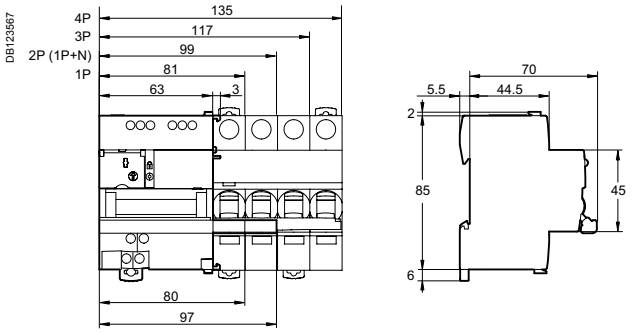
Control circuit		
Supply voltage (Ue) (N/P)		230 V AC, 50 Hz
Control voltage (Uc)	Type 1 inputs (Y1/Y2)	230 V AC (as per IEC 61131-2)
Min. duration of control order (Y2)		≥ 200 ms
Response time (Y2)		< 500ms
Consumption		≤ 1 W
Thermal self-protection with automatic Reset against overheating of the control circuit due to an abnormal number of operations		
Endurance (O-C) (ARA combined with a circuit breaker)		
Electrical		5000 cycles
Indication / Remote control		
Potential-free changeover contact output (OF/Locked)	Min.	24 V AC/DC, 10 mA
	Max.	230 V AC ,1 A
Input (Y1/Y2)	230 V AC	5 mA
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in a modular enclosure	IP40 Insulation class II
Insulation voltage (Ui)		400 V
Degree of pollution (IEC 60947)		3
Rated impulse withstand voltage (Uimp)		6 kV
Operating temperature		-25°C to +60°C
Storage temperature		-40°C to +70°C
Tropicalization		Treatment 2 (relative humidity of 93 % at +40°C)

ARA automatic reclosers (cont.)
For iC60 circuit breakers and iID residual current circuit breakers

Weight (g)

Automatic reclosers	
Type	**ARA**
For 1P, 1P+N, 2P circuit breakers or iID 2P residual current circuit breaker	440
For 3P, 4P circuit breakers or iID 4P residual current circuit breaker	470

Dimensions (mm)



Reflex iC60N, iC60H (curves B, C, D)

PB106239-40

PB106238-40

IEC/EN 60947-2

The Reflex iC60 devices are integrated control circuit breakers which combine the following main functions in a single device:
- ■ Remote control by latched and/or impulse-type order according to the 3 operating modes to be chosen by the user.
- ■ Circuit breaker, to provide:
- □ circuit protection against short-circuit currents,
- □ circuit protection against overload currents,
- □ disconnection in the industrial sector.

Resetting after a fault is performed manually, by the resetting handle.

The version with Ti24 allows direct interfacing of the Reflex iC60 with a PLC, to:
- ■ Execute remote control (Y3).
- ■ Indicate the state of the control circuit (OF) or circuit-breaker tripping (SD).

The iMDU auxiliary allows the Reflex iC60 to be controlled in 24/48 V AC/DC.

Alternating current (AC) 50 Hz				
Ultimate breaking capacity (Icu) as per IEC/EN 60947-2				Service breaking capacity (Ics)
		Voltage (Ue)		
Ph/Ph (2P, 3P, 4P)		220 to 240 V	380 to 415 V	
Reflex iC60N				
Rating (In)	10 to 40 A	20 kA	10 kA	75 % of Icu
Reflex iC60H				
Rating (In)	10 to 40 A	30 kA	15 kA	75 % of Icu

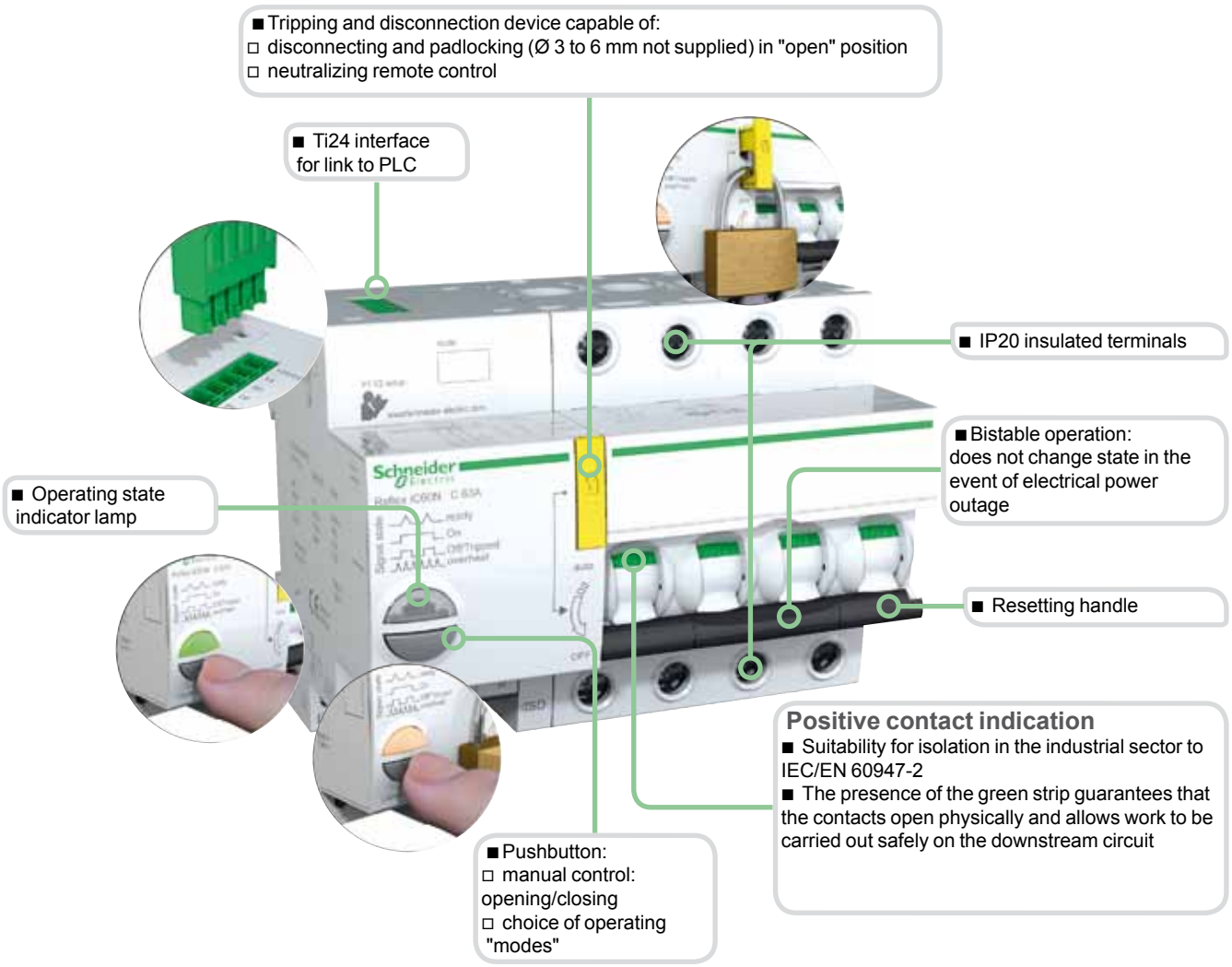
Catalogue numbers

Reflex iC60 circuit breaker									
Type	2P			3P			4P		
Rating (In)	Curve			Curve			Curve		
	B	C	D	B	C	D	B	C	D
Reflex iC60N									
With Ti24 interface									
10 A	A9C61210	A9C62210	A9C63210	A9C61310	A9C62310	A9C63310	A9C61410	A9C62410	A9C63410
16 A	A9C61216	A9C62216	A9C63216	A9C61316	A9C62316	A9C63316	A9C61416	A9C62416	A9C63416
25 A	A9C61225	A9C62225	A9C63225	A9C61325	A9C62325	A9C63325	A9C61425	A9C62425	A9C63425
40 A	A9C61240	A9C62240	-	A9C61340	A9C62340	-	A9C61440	A9C62440	-
Without Ti24 interface									
10 A	-	A9C52210	-	-	A9C52310	-	-	A9C52410	-
16 A	-	A9C52216	-	-	A9C52316	-	-	A9C52416	-
25 A	-	A9C52225	-	-	A9C52325	-	-	A9C52425	-
40 A	-	A9C52240	-	-	A9C52340	-	-	A9C52440	-
Reflex iC60H									
With Ti24 interface									
10 A	A9C64210	A9C65210	A9C66210	A9C64310	A9C65310	A9C66310	A9C64410	A9C65410	A9C66410
16 A	A9C64216	A9C65216	A9C66216	A9C64316	A9C65316	A9C66316	A9C64416	A9C65416	A9C66416
25 A	A9C64225	A9C65225	A9C66225	A9C64325	A9C65325	A9C66325	A9C64425	A9C65425	A9C66425
40 A	A9C64240	A9C65240	-	A9C64340	A9C65340	-	A9C64440	A9C65440	-
Width in 9 mm modules	9			11			13		
Vigi iC60	**Vigi iC60 add-on residual current device, module CA902005**			**Vigi iC60 add-on residual current device, module CA902005**			**Vigi iC60 add-on residual current device, module CA902005**		
iMDU auxiliaries	**A9C18195**			**A9C18195**			**A9C18195**		
Accessories	**Module CA907001**			**Module CA907001**			**Module CA907001**		

(1) Information to be supplied by the country concerned.

Reflex iC60N, iC60H (curves B, C, D) (cont.)

PB105980_W_70



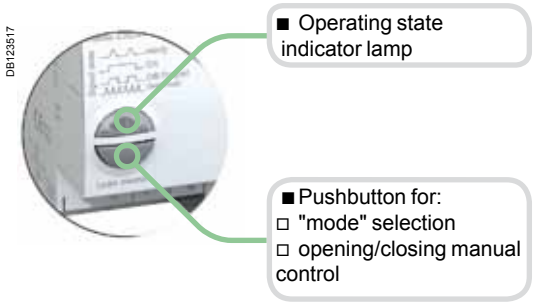
■ Longer product service life thanks to:
□ good overvoltage withstand capacity: products designed to provide a high industrial performance level (degree of pollution, rated impulse withstand voltage and insulation voltage),
□ high limitation performances (see limitation curves),
□ fast closure independent of the speed of resetting of the operating handle.

DB123765

DB123516

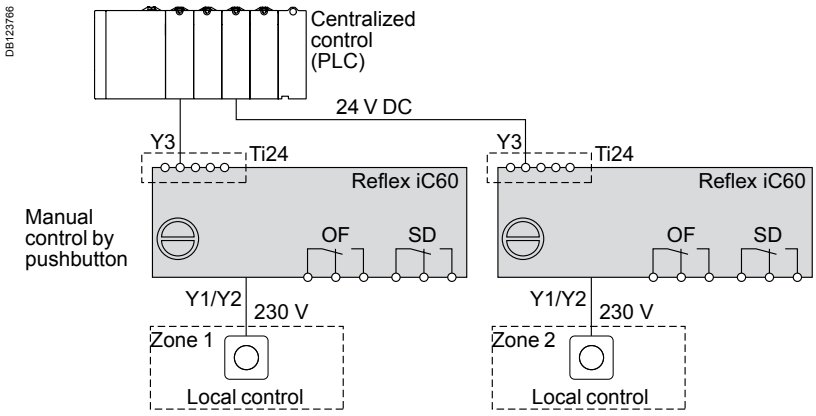
Legend	
Ti24 interface	
+24VDC	V DC power supply
Y3	Remote control by latched order
SD	Circuit-breaker tripping information
OF	Control circuit state information (open/closed)
0 V	V DC power supply
Y1	Latched order local control
Y2	Control by impulse-type or latched order (depending on mode)
N	230 V AC power supply
P	
OF 11 12 14	Control circuit state indication contact
SD 91 92 94	Circuit-breaker tripping indication contact

Reflex iC60N, iC60H (curves B, C, D) (cont.)



Remote control is possible by 3 operating modes to be set using the pushbutton on the front panel.

Operating mode



Mode 1: locally or centrally controlled circuit-breaker opening/closing

- The orders come from various control points, and they are taken into account in their order of arrival
- Y1: latched order local control
- Y2: impulse-type local control
- Y3: latched order centralized control

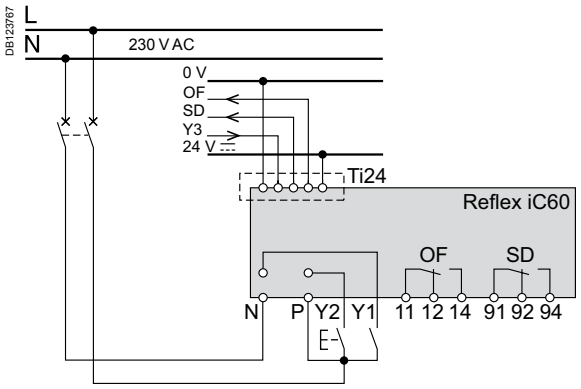
Mode 2: locally controlled opening/closing, centrally controlled opening

- The orders come from various control points.
- Only the stoppage orders are taken into account by the inputs Y1, Y3
- Y1: latched order local opening control
- Y2: impulse-type local opening/closing control
- Y3: latched order centralized opening control

Mode 3: centrally controlled opening/closing + local override

- 3 positions allowing a choice between override and centralized control:
- Y1: latched order local control
- Y2: latched order local control
- Y3: latched order centralized control

Reflex iC60 or Reflex iC60 Ti24 modes 1 and 2



Reflex iC60 Ti24 mode 3

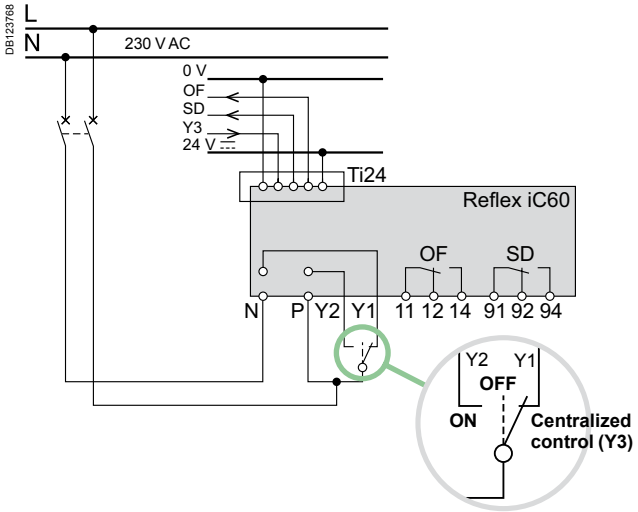


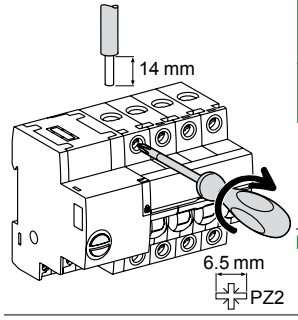
Table of modes

	Mode 1	Mode 2	Mode 3
Reflex iC60 without interface	■ Default mode	■ Possible mode	–
Reflex iC60 Ti24 with interface	■ Possible mode	■ Possible mode	■ Default mode

Reflex iC60N, iC60H (curves B, C, D) (cont.)

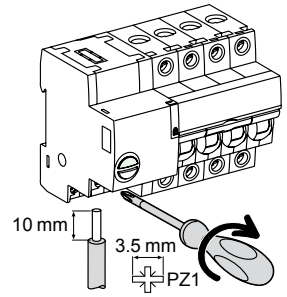
Connection

DB123561

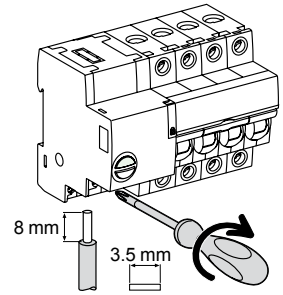


Terminal	Rating	Tightening torque	Without accessories: Copper cables: Rigid	Without accessories: Copper cables: Flexible or with ferrule	With accessories: Al terminal 50 mm²	With accessories: Screw-on connection for ring terminal	With accessories: Multi-cable terminal: Rigid cables	With accessories: Multi-cable terminal: Flexible cables
		DB122945	DB122946	DB122935	Al DB118789	DB118787		
Power	10 to 25 A	2 N.m	1 to 25 mm²	1 to 16 mm²	-	Ø 5 mm	-	-
	40 A	3.5 N.m	1 to 35 mm²	1 to 25 mm²	50 mm²		3 x 16 mm²	3 x 10 mm²

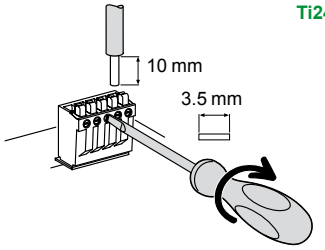
DB123562



DB123563

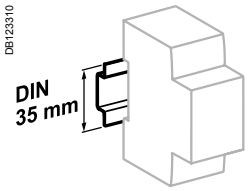


DB123764

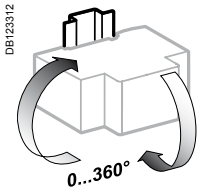


Terminal	Tightening torque	Without accessories: Copper cables: Rigid	Without accessories: Copper cables: Flexible	Without accessories: Copper cables: Flexible with ferrule
	DB122945	DB123553	DB123554	
Power supply (N/P) Inputs (Y1/Y2)	1 N.m	0.5 to 10 mm² 2 x 0.5 to 2 x 2.5 mm²	0.5 to 6 mm² 2 x 0.5 to 2 x 2.5 mm²	0.5 to 4 mm² 2 x 0.5 to 2 x 2.5 mm²
Outputs (OF/SD)	0.7 N.m	0.5 to 2.5 mm² 2 x 0.5 to 2 x 1.5 mm²	0.5 to 2.5 mm² 2 x 0.5 to 2 x 1.5 mm²	0.5 to 1.5 mm² 2 x 0.5 to 2 x 1.5 mm²
Ti24 interface	Spring-loaded terminals	0.5 to 1.5 mm²	0.5 to 1.5 mm²	0.5 to 1.5 mm²

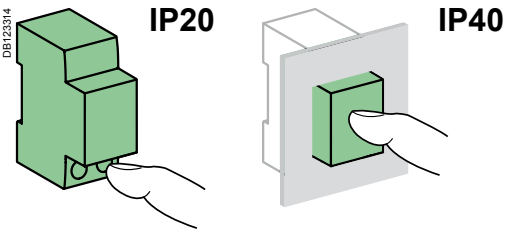
Reflex iC60N, iC60H (curves B, C, D) (cont.)



Clip on DIN rail 35 mm.



Indifferent position of installation.



Technical data

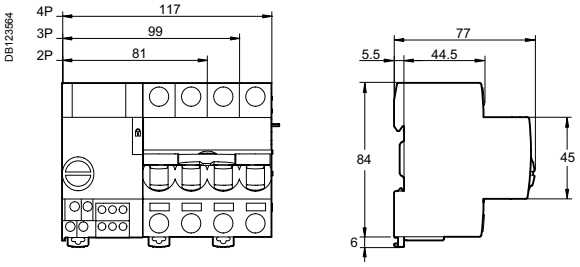
Control circuit		
Supply voltage (Ue) (N/P)		230 V AC, 50 Hz
Control voltage (Uc)	Inputs (Y1/Y2)	230 V AC
		24…48 V AC/DC, with iMDU auxiliary
Min. duration of control impulse (Y2)		≥ 250 ms
Response time (Y2)		≤ 200 ms
Consumption		≤ 1 W
Thermal self-protection with automatic Reset against overheating of the control circuit due to an abnormal number of operations		
Power circuit		
Max. working voltage (Ue)		400 V AC
Max. working voltage (Ue)		500 V
Rated impulse withstand voltage (Uimp)		6 kV in disconnected position
Thermal tripping	Reference temperature	50°C
Magnetic tripping	Curve B	4 In ± 20 %
	Curve C	8 In ± 20 %
	Curve D	12 In ± 20 %
Overvoltage category (IEC 60364)		IV
Endurance (O-C)		
Electrical	AC1	30,000 cycles
	AC5a	6000 cycles
	AC5b	6000 cycles
	AC21	50,000 cycles
Mechanical		> 50,000 cycles
Indication / Remote control		
Potential-free changeover contact outputs (OF/SD)	Min.	48 V DC, 1 A
	Max.	230 V AC ,1 A
Inputs (Y1/Y2)	230 V AC	5 mA
Ti24 interface (as per IEC 61131)		
Type 1 input (Y3)	24 V DC	5.5 mA
Outputs (OF/SD)	24 V DC	In max: 100 mA
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in a modular enclosure	IP40 Insulation class II
Degree of pollution		3
Operating temperature		-25°C to +60°C
Storage temperature		-40°C to +85°C
Tropicalization		Treatment 2 (relative humidity of 93 % at 40°C)

Reflex iC60N, iC60H (curves B, C, D) (cont.)

Weight (g)

Circuit breaker	
Type	**Reflex iC60**
2P	480
3P	620
4P	750

Dimensions (mm)



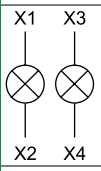
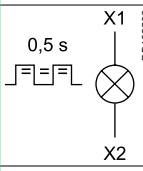
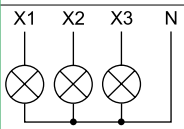
iIL indicator lights

IEC 60947-5-1

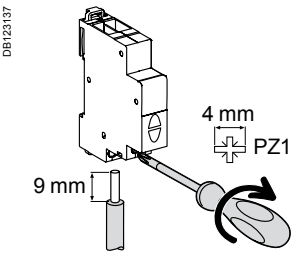
■ iIL indicator lights light up to indicate that a voltage is present.

Catalogue numbers

iIL indicator lights

Type	Single					Double		Flashing light	Three-phase voltage presence indicator light
									
Diagram									
Colour	Red	Green	White	Blue	Yellow	Green/red	White/ white	Red	Red/red/red
Cat. no.									
12...48 V AC/DC	**A9E18330**	**A9E18331**	**A9E18332**	**A9E18333**	**A9E18334**	**A9E18335**	-	-	-
110...230 V AC	**A9E18320**	**A9E18321**	**A9E18322**	**A9E18323**	**A9E18324**	**A9E18325**	**A9E18328**	**A9E18326**	-
230...400 V AC (3 phases)	-	-	-	-	-	-	-	-	**A9E18327**
Width in 9 mm modules	2					2		2	2

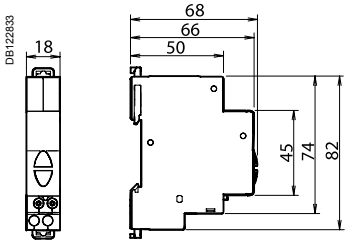
Connection



Tightening torque	Copper cables	
	Rigid	Flexible or ferrule
		
1 N.m	0.5 mm² min.	0.5 mm² min.
	2 x 2.5 mm² max.	2 x 2.5 mm² max.

■ Phase-separated wall that can be divided to allow the teeth of all types of comb busbar to pass through.
■ Staggered terminals to simplify connection.

Dimensions (mm)



Technical data

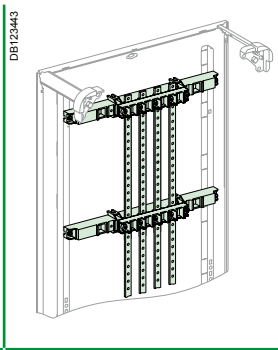
Main characteristics	
Pollution degree	3
Power circuit	
Operating frequency	50...60 Hz
Flashing frequency	2 Hz
Additional characteristics	
Operating temperature	-35°C... +70°C
Storage temperature	-40°C... +80°C
Tropicalization	Treatment 2 (relative humidity 95 % at 55°C)
LED indicator light	Consumption per indicator light: 0.3 W
	Service life: 100,000 hours of constant lighting efficiency
	Maintenance-free indicator light (non-interchangeable LEDs)

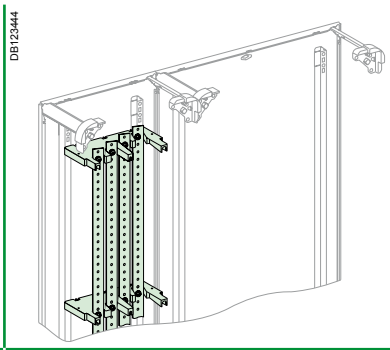
Power supply of rows from the incoming line

Busbar selection aid

Type of distribution		Busbars	
		Bare busbars to be formed	Insulated busbars
Selection criteria	Speed of installation	medium	high
	Personnel safety	medium	high
Specific features		-	For Prisma Plus switchboards

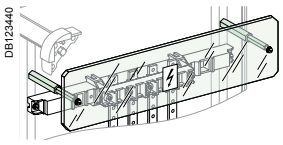
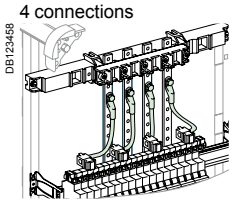
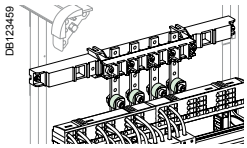
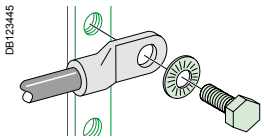
Bare busbars to be formed





Type			In enclosure			In duct			
Rating			**160 A**	**250 A**	**400 A**	**160 A**	**250 A**	**400 A**	**630 A**
Conductor cross section (mm)			15 x 5 mm	20 x 5 mm	32 x 5 mm	15 x 5 mm	20 x 5 mm	32 x 5 mm	32 x 8 mm
Spacing between supports according to Icw		10 kA rms/1 s	450 mm			450 mm			
		13 kA rms/1 s	-	450 mm		-	450 mm		
		15 kA rms/1 s	-		450 mm	-		450 mm	
		20 kA rms/1 s	-		300 mm	-		300 mm	
		25 kA rms/1 s	-		225 mm	-			300 mm
		25 kA rms/0.6 s	-			-		300 mm	-
Characteristics			Set of 4 cuttable bars M6 tapping to a pitch of 25 mm Direct installation on the frame of Prisma Plus enclosures and cabine			Set of 4 cuttable bars M6 tapping to a pitch of 25 mm Direct installation on the frame of Prisma Plus enclosures and cabinets			
Cat. no.	Support		**04191**			**04192**			
	Bars	1000 mm	**04161**	**04162**	**04163**	**04161**	**04162**	**04163**	**-**
		1400 mm	**04171**	**04172**	**04173**	**04171**	**04172**	**04173**	**04174**

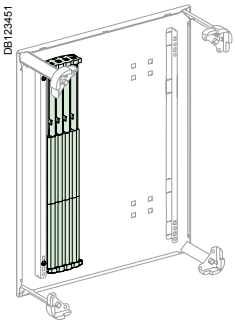
Accessories

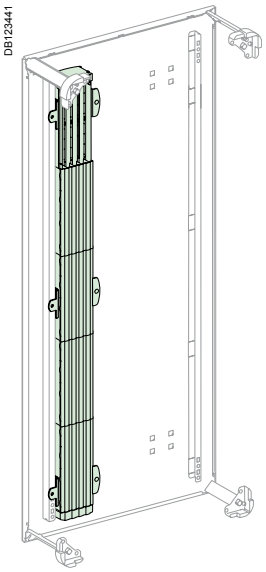
Type	Cat. no.	
Screen 	**04198** H = 100 mm	**04197** H = 1500 mm
4 connections 	**04145:** 125 A (230 mm) for NG125, NSA, INS provided with tunnel terminals or comb busbar	-
	04146: 160 A for NSA160	-
	**04029:** 200 A for Multiclip 200 A	**04024:** 200 A for Multiclip 200 A
Screws and nuts 	**04194:** 20 M6x20 bolts + 20 nuts + 40 washers	
	04195: 40 M6x16 screws + 40 contact washers	

Power supply of rows from the incoming line

Insulated busbars

In Prisma Plus enclosures and cabinets





Powerclip for Prisma Plus enclosures

Type		Cat. no.
Rating		**125 A**
Three-pole	450 mm	**04103**
	750 mm	**04107**
Four-pole	450 mm	**04104**
	750 mm	**04108**
Characteristics		Cuttable to 150 mm pitch Delivered with clip-on and cut-out covers which insulate the lugs of a power supply connection M6 tapping to a pitch of 25 mm Direct installation on the frame of Prisma Plus enclosures and cabinets

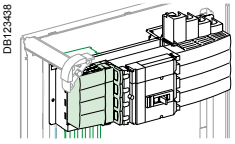
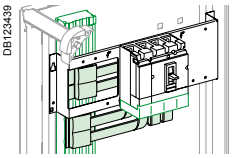
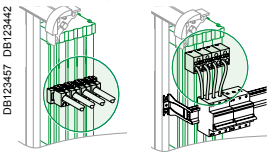
Accessories

Type	Cat. no.
4 connections	**04145:** 125 A (230 mm) for NG125, NSA, INS provided with tunnel terminals or comb busbar

Powerclip for Prisma Plus cabinets

Type		Cat. no.			
Rating		**160 A**	**250 A**	**400 A**	**630 A**
Three-pole	1000 mm	**04111**	**04112**	**04113**	**04114**
	1400 mm	**04116**	**04117**	**04118**	**04119**
Four-pole	1000 mm	**04121**	**04122**	**04123**	**04124**
	1400 mm	**04126**	**04127**	**04128**	**04129**
Characteristics		Cuttable to 200 mm pitch M6 tapping to a pitch of 25 mm Direct installation on the frame of Prisma Plus enclosures and cabinets			

Accessories

Type	Cat. no.
Busbar power supply from a Compact NSX   	For horizontal NSXs Power packs with connections **04060:** NSX250 **04070:** NSX400 **04071:** NSX630 For horizontal NSXs Universal power packs + connections **04062** + **04061:** NSX100/250 in enclosure **04064** + **04061:** NSX100/250 in duct **04073** + **04074:** NSX400/630 in duct
Tubular bare lugs drilling dia. 6.4 mm, 90° angled	**25222326:** for 10 mm² cables **25222331:** for 16 mm² cables **25222344:** for 25 mm² cables
Connections with Multiclip 200 A supplied with screws and nuts	**04021**
Power supply of rows  	Set of 12 branch terminals **04151:** for 1 cable of 6 mm² and 1 of 10 mm² **04152:** for 1 cable of 16 mm²
Protection of connection lugs Set of 8 clip-on and cut-out covers, to maintain IPxxB with 90° angled lugs and/or cable cross sections of 10 to 25 mm²	**04150**
Class 8.8 screws and nuts Set of 20 hex skt hd cap screws, M6 x 12	**04158**

Power supply of rows from the incoming line

Splitter block selection aid

Type of splitter block		Single-pole to be combined		Multipolar	
		Fast	Screw-on	Fast	Screw-on
Selection criteria	Flexibility	high		low	
	Compactness	medium		high	
	Maintenance	easy	complicated	easy	complicated

Single-pole splitter blocks to be combined

Fast connection

Rating		80 A (to be formed) Example of composition	125 A (to be formed) Example of composition	160 A Polybloc
		 DB123528	 DB123528	 E1012844
Detail dia. for flexible cables	6 mm²	28	28	6
	25 mm²	1 tunnel terminal	1 tunnel terminal	
	70 mm²			1 tunnel terminal
Size	in 9 mm modules	12.5		4.5
	in 18 mm modules	6.5		2.5
Characteristics		Clip-on to rail		Clip-on to rail
Cat. no.		**PRA90048:** splitter block kit + **PRA90050:** junction kit + **PRA90047:** 10 blocks of 4x6 mm² + **PRA90046:** 5 blocks of 25 mm²	**PRA90048:** splitter block kit + 2 x **PRA90050:** junction kit + **PRA90047:** 10 blocks of 4x6 mm² + **PRA90046:** 5 blocks of 25 mm²	**04031**

Screw connection

Rating		80 A		80 A (to be formed) Example of composition	125 A (to be formed) Example of composition
		 DB123464	 DB123464	 E101371	 E101372
Detail dia. for flexible cables	16 mm²	4			
	25 mm²	1	4	6	6
	35 mm²		1		
	50 mm²			1	1
Size	in 9 mm modules	?	?	12.5	
	in 18 mm modules	?	?	6.5	
Characteristics		Clip-on to rail		Clip-on to rail	
Cat. no.		**14936**	**14938**	**PRA90048:** splitter block kit + **PRA90050:** junction kit + **PRA90046:** 5 blocks of 25 mm² + **PRA90045:** 2 blocks of 50 mm²	**PRA90048:** splitter block kit + 2 x **PRA90050:** junction kit + **PRA90046:** 5 blocks of 25 mm² + **PRA90045:** 2 blocks of 50 mm²

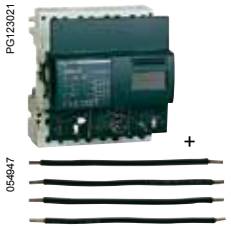
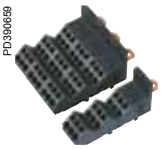
Note: *Correspondence: Flexible cable/rigid cable*

Cable type	Cross section in mm²						
Flexible	1.5	2.5	4	6	10	16	25
Rigid	1.5	2.5 / 4	6	10	16	25	35

Power supply of rows from the incoming line

Multipolar splitter blocks

Fast connection

Type		Distribloc				Polybloc	
		 PB104500	 PB104499	 PG123021 + 054947	 PD390657	 PD390659	 PD390659
Rating		63 A		125 A	160 A	250 A	250 A
Number of poles		4P		4P	4P	3P	4P
Total connection capacity (dia. for flexible cables)	4 mm²			7			
	6 mm²	12 per phase + 12 neutral		3			
	10 mm²			2		18	24
	16 mm²			1 tunnel terminal		9	12
	25 mm²	4 tunnel terminals per phase + 1 neutral					
	35 mm²			1 tunnel terminal			
	50 mm²						
Characteristics		Incoming through the top Clip-on to rail	Incoming through the bottom Clip-on to rail	Set of 4 35 mm² flexible connections, length 210 mm to be ordered separately (cat. no. 04047) Clip-on to rail	Set of 4 prefabricated flexible connections supplied, for connection with an INS100/160 or NSA160 switch, installed on the right or left Clip-on to rail	Direct installation on the terminals of Compact circuit breakers and Interpact switches	
Size	in 9 mm modules	8	8	12	12	12	16
	in 18 mm modules	4	4	6	6	6	8
Cat. no.		**04040**	**04041**	**04045 + 04047**	**04046**	**04033**	**04034**

Screw connection

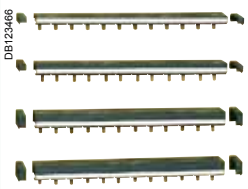
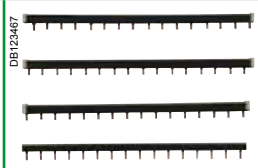
Number of poles		2P				4P						
		 DB123464		 058923		 058930d				 055034		
Rating		80 A		100 A	125 A	40 A	100 A	125 A		160 A	250 A	400 A
Total connection capacity (dia. for flexible cables)	6 mm²			3	5	11	3	5	7			
	10 mm²			3	5	2	3	5	7			
	16 mm²	4		1	2		1	2	2			
	25 mm²	1	4		1			1	1			
	35 mm²		1									
	50 mm²									4 + 13		
Characteristics		Clip-on to rail		Clip-on to rail		Clip-on to rail				To be screwed on back. 13 M6 tapped holes + 4 plain holes of dia. 12.2 mm		
Size	in 9 mm modules											
	in 18 mm modules											
Cat. no.		**14937**	**14939**	**13506**	**13507**	**13508**	**13510**	**13512**	**13514**	**04052**	**04053**	**04054**

Power supply of one row of switchgear

Distribution Selection aid

Type of distribution		Comb busbars	Splitter blocks	Wire-to-wire
Selection criteria	Management of monitoring/ control cabling	medium	easy	medium
	Maintenance and scalability	medium	high	complicated

Comb busbars

Type		For DPN			For iC60 and C60		For C120 and NG125	
Rating		**80 A**			**80 / 100 A**		**125 A**	
								
Length	in 9 mm modules	24	48	96	24	48	45	48
	in 18 mm modules	12	24	48	12	24	22.5	24
Quantity per cat. no.		1			1	2	1	
Accessories included	Side plates	4		-	2		2	
	Tooth covers	1 (6 modules of 9 mm)	2 (6 modules of 9 mm)	-	-		8 for 1P or 2P comb busbars, 4 for 3P or 4P comb busbars	
Powered device module type		9 mm			18 mm		27 mm	
Characteristics		-			80 A with 1 power supply point 100 A with 2 power supply points		63 A maximum per outgoing line	
Cat. no.	1P	-	-	-	**14881**	**14891**	-	**14811**
	2P	**21086**	**21088**	**21089**	**14882**	**14892**	-	**14812**
	3P	-	-	-	**14883**	**14893**	**14813**	-
	4P	**21090**	**21092**	**21093**	**14884**	**14894**	-	**14814**
Accessories								
Type		**Cat. no.**						
Side plates		Sets of 40 side plates: **21094:** 2P **21095:** 4P			Set of 20 side plates + 16 tooth covers: **14886:** 1P, 2P **14887:** 3P, 4P Set of 40 tooth covers: **14888**		**14818:** Set of 4 side plates + 20 tooth covers (2P, 3P, 4P)	
Tooth covers		**21096:** 12 tooth covers (6 modules of 9 mm)						
Connectors		**21098:** 4 connectors for 25 mm² cable			**21098:** 4 connectors for 25 mm² cable		-	

Power supply of one row of switchgear

Splitter blocks

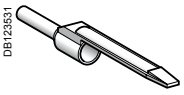
Type			Multiclip				
Rating			63 A	80 A	80 A	160 A	200 A
							
Length	in 9 mm modules		24	48	96	24	48
	in 18 mm modules		12	24	48	12	24
Upstream connection capacity			Tunnel terminals for cables up to 25 mm²		Tunnel terminals for cables up to 25 mm²	Direct on connecting pads by 50 mm² cables or by 20x3 flexible bar with a prefabricated connection from a busbar	
Downstream connection capacity	Max. 4 mm²	Phase	2	7	-	-	-
		Neutral	4	13			
	Max. 6 mm²	Phase	2	2	-	-	-
		Neutral	4	4			
	Max. 10 mm²	Phase	-	-	18	6	12
		Neutral			18	6	18
Accessories included	Pre-stripped copper connections		10 of 4 mm² + 6 of 6 mm² (L=100 mm)		12 blue + 12 black	20 of 4 mm² + 6 of 6 mm² (L=100 mm)	
	Protective cover					For pads (IPxxB)	
	Screws and nuts					For pads	
Cat. no.	2P		-	-	-	-	**04012**
	3P		-	-	-	-	**04013**
	4P		**04008**	**04004**	**04000**	**04018**	**04014**

Accessories

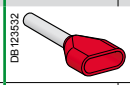
Type	Cat. no.				
Connections	-	-	**04030:** 160 A between Multiclip and switchgear	200 A, between Multiclip and: **04021:** Powerclip busbar **04029:** back busbar **04024:** busbar in duct	

Wire-to-wire

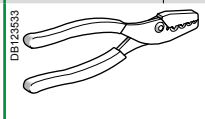
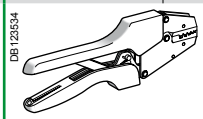
Single end-pieces

Conductor cross section (mm²)		0.25	0.5	0.75	1	1.5	2.5	4	6	10	16
											
Cat. no. and quantity	In bag	**DZ5CE002** 10x100	**DZ5CE005** 10x100	**DZ5CE007** 10x100	**DZ5CE010** 10x100	**DZ5CE015** 10x100	**DZ5CE025** 10x100	**DZ5CE042** 10x100	**DZ5CE062** 1x100	**DZ5CA102** 1x100	**DZ5CA162** 1x100
	In dispenser pack	-	**AZ5CE005** 5x200	**AZ5CE007** 5x200	**AZ5CE010** 5x200	**AZ5CE015** 5x200	**AZ5CE025** 5x100	-	-	-	-
	In strip of 50	-	**DZ5CEB005** 10x50	**DZ5CEB007** 10x50	**DZ5CEB010** 10x50	**DZ5CEB015** 10x50	**DZ5CEB025** 10x50	-	-	-	-
Colour		Yellow	White	Blue	Red	Black	Grey	Orange	Green	Brown	White

Double end-pieces

Conductor cross section (mm²)		2 x 0.5	2 x 0.75	2 x 1	2 x 1.5	2 x 2.5
						
Cat. no. and quantity	In bag	**AZ5DE005** 1x1000	**AZ5DE0071** 1x1000	**AZ5DE0101** 1x1000	**AZ5DE0151** 1x1000	**AZ5DE0255** 1x500
	In dispenser pack	-	**AZ5DE007** 5x100	**AZ5DE010** 5x100	**AZ5DE015** 5x100	**AZ5DE025** 5x50
Colour		White	Blue	Red	Black	Grey

Crimping pliers

On cable types	0.5 to 16 mm²	10 to 35 mm²	0.25 to 6 mm²	10 to 35 mm²
				
Cat. no.	**AT1PA2**	**AT1PA4**	**AT2PA5**	**AT2PA6**

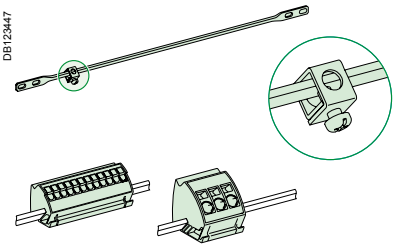
Connection to the outside of the switchboard

Connection Selection aid

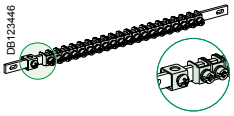
Type of connection: Fast | Screw-on

Terminal bars, terminal blocks and earth bars

Fast connection

Type		Phase-to-neutral terminal blocks or earth bar		Earth bar
		Example of composition	Example of composition	
				
Rating		90 A (to be formed)	160 A (to be formed)	To be formed
Connection capacity	4 mm²			36 (spring-loaded terminal)
	6 mm²	24 (spring-loaded terminal)	24 (spring-loaded terminal)	
	16 mm²			3 (spring-loaded terminal)
	25 mm²	1 (screw-on)	1 (screw-on)	
	35 mm²			1 (screw-on)
Mounting		In Pragma Evolution enclosures		The bare bar is fastened by supplied screws on the upright of the Prisma enclosures The earth blocks are clipped onto the bare bar
Cat. no.		**PRA90051:** support kit + **PRA90050:** junction kit + **PRA90047:** 10 blocks of 4x6 mm² + **PRA90046:** 5 blocks of 25 mm²	**PRA90051:** support kit + 2 x **PRA90050:** junction kit + **PRA90047:** 10 blocks of 4x6 mm² + **PRA90046:** 5 blocks of 25 mm²	**04201:** bare earth bar 13 x 2 mm + cage of 35 mm² + **04214:** 4 earth blocks 12 x 4 mm² + **04215:** 4 earth blocks 3 x 16 mm²

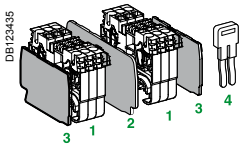
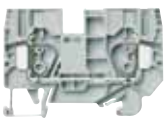
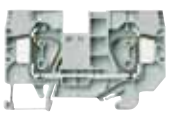
Screw connection

		Terminal bars				Phase-to-neutral terminal blocks or earth bar							Earth bar
											Example of composition		
													
Rating		80 A	125 A			80 A					90 A (to be formed)	160 A (to be formed)	-
Connection capacity	10 mm²	2	3	5	7	2	4	8	11	16			
	16 mm²	2	2	4	6	2	4	8	11	16			40
	25 mm²										6	6	
	35 mm²		1	1	1								1
	50 mm²										1	1	
Specific feature		Fastening by screws (1 M4 tapped hole)				Fastening: Clip-on to 12 x 2 mm flat bar Clip-on to rail (8 hole version only) By screws (8 hole version only) With dovetail (4 hole version only)					Mounting in Pragma Evolution enclosures		Fastening by supplied screws on the upright of the Prisma enclosures
Cat. no.		**14962**	**14963**	**14964**	**14965**	**13575**	**13576**	**13577**	**13578**	**13579**	**PRA90051:** support kit + **PRA90050:** junction kit + **PRA90045:** 2 blocks of 50 mm² + 2 x **PRA90046:** 5 blocks of 25 mm²	**PRA90051:** support kit + 2 x **PRA90050:** junction kit + **PRA90045:** 2 blocks of 50 mm² + 2 x **PRA90046:** 5 blocks of 25 mm²	**04200**

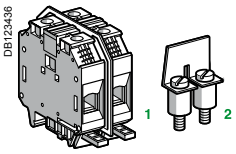
Connection to the outside of the switchboard

Terminal blocks

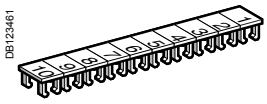
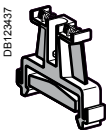
Fast connection

Conductor cross section			4 mm²		6 mm²	10 mm²	16 mm²
							
Number of points			1 input, 1 output	1 input, 2 outputs	1 input, 1 output	1 input, 1 output	1 input, 1 output
Width			6 mm	6 mm	8 mm	10 mm	12 mm
Cat. no. and quantity	1 Terminal block	Grey	**AB1 RRN435U2GR** 100	**AB1 RRN435U3GR** 100	**AB1 RRN635U2GR** 50	**AB1 RRN1035U2GR** 50	**AB1 RRN1635U2GR** 50
		Blue	**AB1 RRN435U2BL** 100	AB1 **RRN435U3BL** 100	**AB1 RRN635U2BL** 50	**AB1 RRN1035U2BL** 50	**AB1 RRN1635U2BL** 50
		Green/ yellow	**AB1 RRNTP435U2** 100	**AB1 RRNTP435U3** 100	**AB1 RRNTP635U2** 50	**AB1 RRNTP1035U2** 50	**AB1 RRNTP1635U2** 50
	2 Partition		**AB1 RRNTPAC442** 10	**AB1 RRNTPAC443** 10	**AB1 RRNTPAC642** 10	**AB1 RRNTPAC1042** 10	**AB1 RRNTPAC1642** 10
	3 End cover	Grey	**AB1 RRNAC442GR** 10	**AB1 RRNAC443GR** 10	**AB1 RRNAC643GR** 10	**AB1 RRNAC1042GR** 10	**AB1 RRNAC1642GR** 10
		Blue	**AB1 RRNAC442BL** 10	**AB1 RRNAC443BL** 10	**AB1 RRNAC643BL** 10	**AB1 RRNAC1042BL** 10	AB1 RRNAC1642BL 10
	4 Insulated terminal bar, 2-pole		**AB1 RRAL42** 10	**AB1 RRAL42** 10	**AB1 RRNAL62** 10	**AB1 RRAL102** 10	**AB1 RRAL162** 10

Screw connection

Conductor cross section			35 mm²	70 mm²	150 mm²
					
Number of points			1 input, 1 output	1 input, 1 output	1 input, 1 output
Width			16 mm	24 mm	28 mm
Cat. no. and quantity	1 Terminal block	Grey	**AB1 VVN3535U** 20	**AB1 VVN7035U** 20	**AB1 VVN15035U** 10
		Blue	**AB1 VVN3535UBL** 20	**AB1 VVN7035UBL** 20	**AB1 VVN15035UBL** 10
	2 Terminal bar, 2-point		**AB1 ALN352** 10 (insulated)	**AB1 ALN702** 10 (uninsulated)	**AB1 ALN1502** 10 (uninsulated)

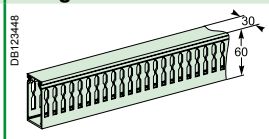
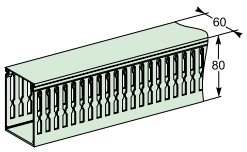
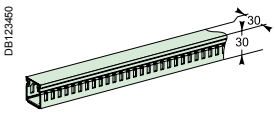
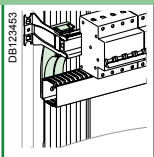
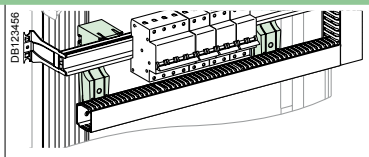
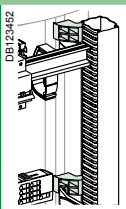
Accessories

Clip-on terminal markers								Label	Plastic stop
									
Marking		**Blank**	**1 to 10**	**11 to 20**	**21 to 30**	**31 to 40**	**41 to 50**	**AB1 S1**	**AB1 AB8P35**
Width and Cat. no.	6 mm	**AB1 BV6**	**AB1 B610**	**AB1 B620**	**AB1 B630**	**AB1 B640**	**AB1 B650**		
	8 mm	**AB1 BV8**	**AB1 B810**	**AB1 B820**	**AB1 B830**	**AB1 B840**	**AB1 B850**		
		51 to 60	**61 to 70**	**71 to 80**	**81 to 90**	**91 to 100**	**-**	Clip-on 4.5 x 8.3 mm	Screw-on
	6 mm	**AB1 B660**	**AB1 B6670**	**AB1 B680**	**AB1 B690**	**AB1 B6100**	**-**		
	8 mm	**AB1 B860**	**AB1 B870**	**AB1 B880**	**AB1 B890**	**AB1 B8100**	**-**		
		L1	**L2**	**L3**	**+ red**	**– blue**	**-**		
	6 mm	**AB1 B6L1**	**AB1 B6L2**	**AB1 B6L3**	**AB1 BV6RP**	**AB1 BV6BM**	**-**		
Quantity		Set of 25						500	100

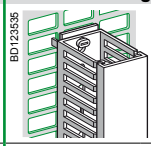
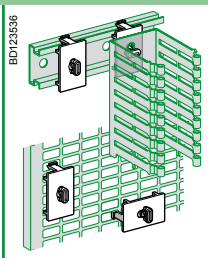
Management of cables in the switchboard

Cable troughs

RAL 9001 white

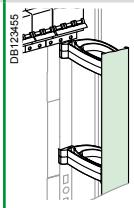
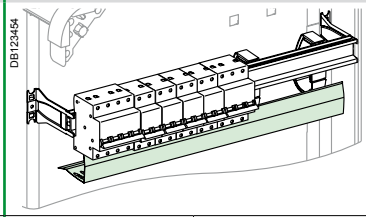
Use	For Prisma Plus System G enclosures and cabinets		
Mounting	**Horizontal 4 lengths of 450 mm**	**Vertical 18 lengths of 2 m**	**On door 30 lengths of 2 m**
			
Width	30 mm	60 mm	30 mm
Height	60 mm	80 mm	30 mm
Characteristics	Supplied with mounting brackets	-	Self-adhesive
Cat. no.	**04257**	**04267**	**04233**
Accessories			
Mounting bracket for Prisma Plus System G enclosure	 Set of 12 horizontal cable trough mounting brackets	 Set of 10 horizontal cable trough mounting brackets allowing alignment with a vertical cable trough	 Set of 12 vertical cable trough mounting brackets	-
Cat. no.	**04255**	**04256**	**04265**	

RAL 7030 grey

Use		Universal 8 lengths of 2 m							
									
Width		25 mm		37.5 mm		50 mm		75 mm	
Height		25 mm	50 mm	50 mm	75 mm	50 mm	75 mm	50 mm	75 mm
Cat. no.	Cable trough bottom	**NSYCD2M2525**	**NSYCD2M2550**	**NSYCD2M3750**	**NSYCD2M3775**	**NSYCD2M5050**	**NSYCD2M5075**	**NSYCD2M7550**	**NSYCD2M7575**
	Cover	**NSYCDC2M25**		**NSYCDC2M37**		**NSYCDC2M50**		**NSYCDC2M75**	
Accessories									
Set of 20 mounting brackets on pierced plate or on rail									
Cat. no.		**NSYSPC**							

Management of cables in the switchboard

Wiring bands

Use	For Prisma Plus System G enclosures and cabinets			
Mounting	**Vertical**		**Horizontal**	
				
Type	Wiring bands	Covers	Wiring bands	Covers
Quantity	Set of 12	2 x 1 m	Set of 12	4 x 430 mm
Cat. no.	**04264**	**04263**	**04239**	**04243**

Clamps

Identification clamps

Pad size	20 x 9 mm	25 x 8 mm	23 x 13 mm
			
Width	2.5 mm	2.5 mm	4,8 mm
Length	110	100	220
Max. clamping dia.	18 mm	18 mm	43 mm
Quantity	100	100	100
Cat. no.	**46220**	**46222**	**46225**

Cable clamps

Width		2.5 mm		3.6 mm			4.8 mm		7.6 mm
									
Length (mm)		100	200	140	200	295	200	270	368
Max. clamping dia.		18 mm	50 mm	33 mm	50 mm	76 mm	50 mm	73 mm	102 mm
Quantity		1000	1000	1000	1000	1000	1000	1000	1000
Cat. no.	Standard (colourless)	**NSYLZ25100**	**NSYLZ25200**	**NSYLZ35140**	**NSYLZ35200**	**NSYLZ35290**	**NSYLZ48200**	**NSYLZ48280**	**NSYLZ76380**
	UV resistant (black)	**NSYLN25100**	**NSYLN25200**	**NSYLN35140**	**NSYLN35200**	**NSYLN35290**	**NSYLN48200**	**NSYLN48280**	**NSYLN76380**

Accessories for clamps

Type	Bases	
		
Characteristics	Self-adhesive or screw-on (set of 100)	
	19 x 19 x 6 mm	26.5 x 26.5 x 8 mm
	For clamp of max. width 3.6 mm	For clamp of max. width 4.8 mm
Cat. no.	**NSYMB3A**	**NSYMB4A**

Connection comb busbars
for iC60, iID, iSW-NA, C120, NG125, STI, DPN

Comb busbars

Accessories | **1P+N and 3P+N comb busbar**

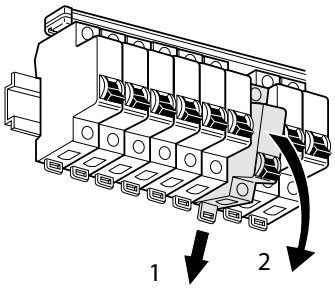
043532

Function

The comb busbars make it easier to install Schneider Electric products.
- Supplied with 2 side plates, IP 2
- Outgoing feeders can be marked
- Cutting markings on the copper bars and the insulating material
- Self-extinguishing insulating material, colour RAL 7016
- The teeth left on standby can be isolated by tooth cover end-pieces

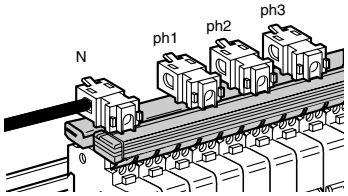
Wiring diagram

DB105974



Comb busbars allow dismountability (1-2)

DB105975



Use

- Power supply via semi-rigid cable directly in the cage of the device:
  - ☐ cross section 16 mm² for DPN
  - ☐ cross section 10 mm² for STI

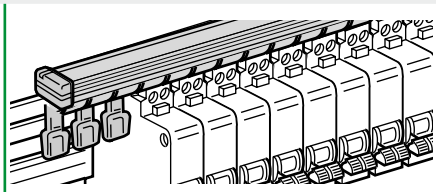
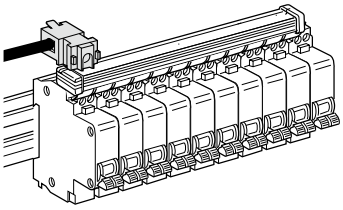
	1P+N	1P+N	3P+N
Catalogue numbers	**14880**	**14890**	**14899**
Number of 9 mm modules	26	48	48
Set of	**1**	**2**	**2**
Suitable for the following devices:			
STI	■	■	–
DPN	■	■	■

Technical specifications

Voltage rating (Ue)	250 V
Acceptable current at 40°C	80 A with 1 central power supply point 100 A with 2 power supply points
Max. current per feeder	63 A
Resistance to short-circuit currents	Compatible with the breaking capacity of Schneider Electric modular circuit breakers

Connection comb busbars
for iC60, iID, iSW-NA, C120, NG125, STI, DPN (cont.)

Accessories

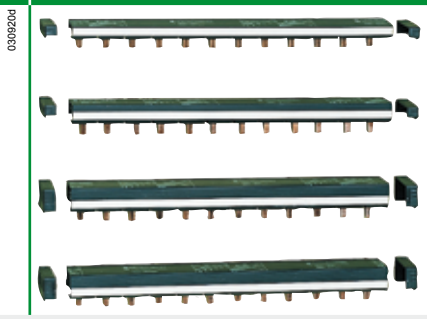
	Side plate		Tooth cover end-piece	Insulated connector
			030921d 	
				■ Compatible with all Schneider Electric comb busbars ■ Clip onto the comb busbar's insulating material, which gives them very great stability ■ Receive clip-on markers allowing circuit identification
	DB105977 		DB105977 	DB105976 
				■ For 25 mm² semi-rigid cable
	1P+N	3P+N	1P+N, 3P+N	
	14886	**14887**	**14898**	**14885**
	–	–	–	–
	40	**40**	**40**	**4**
	■	■	■	■
	■	■	■	■
	–			
	–			
	–			
	–			

Connection comb busbars
for iC60, iID, iSW-NA, C120, NG125, STI, DPN (cont.)

Comb busbars

Accessories

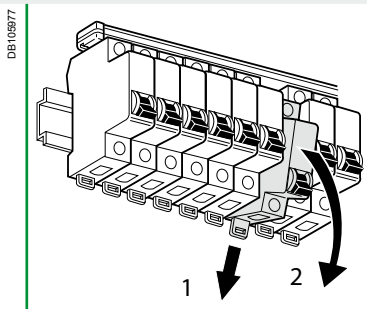
1P, 2P, 3P, 4P comb busbar



Function

The comb busbars make it easier to install Schneider Electric products.
- Supplied with 2 side plates, IP 2
- Outgoing feeders can be marked
- Cutting markings on the copper bars and the insulating material
- Self-extinguishing insulating material, colour RAL 7016
- The teeth left on standby can be isolated by tooth cover end-pieces

Wiring diagram



Comb busbars allow dismountability (1-2)

Use

■ Power supply via semi-rigid cable directly in the cage of the device:
□ cross section 25 mm² for iC60 and iID (all ratings)
□ cross section 10 mm² for STI

Direct power supply on the circuit-breaker terminal: maximum 50 mm² rigid

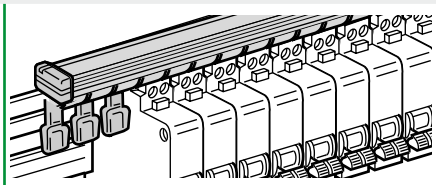
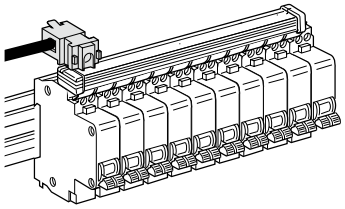
	1P		2P		3P		4P		1P	2P	3P	4P
Catalogue numbers	**14881**	**14891**	**14882**	**14892**	**14883**	**14893**	**14884**	**14894**	**14811**	**14812**	**14813**	**14814**
Number of 9 mm modules	24	48	24	48	24	48	24	48	L = 430 mm, 16 poles of 27 mm	L = 430 mm, 16 poles of 27 mm	L = 405 mm, 15 poles of 27 mm	L = 430 mm, 16 poles of 27 mm
Set of	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**			
Suitable for the following devices:												
STI	■	■	■	■	■	■	■	■	–	–	–	–
iC60	■	■	■	■	■	■	■	■	–	–	–	–
iID, iSW-NA	■	■	■	■	■	■	■	■	–	–	–	–
C120	–	–	–	–	–	–	–	–	■	■	■	■
NG125 ⩽ 63 A	–	–	–	–	–	–	–	–	■	■	■	■

Technical specifications

Voltage rating (Ue)	500 V	500 V
Acceptable current at 40°C	80 A with 1 central power supply point 100 A with 2 power supply points	125 A
Max. current per feeder	–	63 A
Resistance to short-circuit currents	Compatible with the breaking capacity of Schneider Electric modular circuit breakers	Compatible with the breaking capacity of modular circuit breakers

Connection comb busbars
for iC60, iID, iSW-NA, C120, NG125, STI, DPN (cont.)

Accessories

	Side plate		Tooth cover end-piece		Insulated connector	
					030921d 	
					■ Compatible with all Schneider Electric comb busbars ■ Clip onto the comb busbar's insulating material, which gives them very great stability ■ Receive clip-on markers allowing circuit identification	
	DB105977 		DB105977 		DB105976 	
					■ For 25 mm² semi-rigid cable	■ For 35 mm² semi-rigid cable
	1P, 2P	3P, 4P	1P, 2P, 3P, 4P			
	14886	**14887**	**14888**	**14818**	**14885**	**26998**
	40	**40**	**40**	**20**	**4**	**1**
	■	■	■	–	■	–
	■	■	■	–	■	■
	■	■	■	–	■	■
	–	–	–	■	–	–
	–	–	–	■	–	–
	–					
	–					
	–					
	–					

Distribloc 63 A splitter block

IEC/EN 60947-7-1.
IEC/EN 61439-2.

PB104469-40

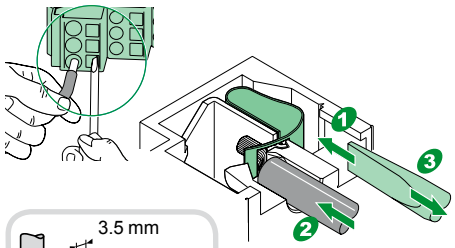
Description

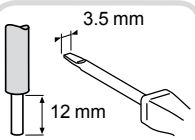
- Distribloc 63 A is a four pole splitter block installable on a standard DIN rail.
- Outgoing feeders are connected at the front, without screws, in spring terminals. The contact pressure of the cable is independent of the operator.
- The spring contact pressure adapts automatically to the cross section of the conductor. It is independent of the operator.

Advantages

- Very fast connection.
- Very simple phase rebalancing.
- In the event of an extension to or modification of the switchboard, connection is very easy.
- The appearance of its front panel (45 mm front tip) enables it to fit in on a row perfectly, alongside modular devices.

DB122626





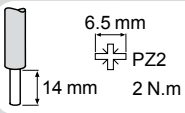
Technical data

Main characteristics		
Cat. no	Distribution through the top	04040
	Distribution through the bottom	04041
According to IEC/EN 60947-7-1		
Degree of protection		IP20
Rated insulation voltage (Ui)		500 V AC
Voltage rating (Ue)		440 V AC
Rated impulse withstand voltage (Uimp)		6 kV
Short-circuit current withstand		Up to breaking capacity of Schneider Electric outgoing circuit breakers, even when reinforced by cascading implementation
Reference temperature		40°C
Rated current at 40°C (In)		63 A
Operating frequency		50/60 Hz
Width in 9-mm modules		8

PB104500-60

Power supply

- Four-pole tunnel terminals with screw clamping.
- The tunnel terminals are located to facilitate the insertion of cables and clamping by screws.
- A single cable per connection point:
  - flexible from 4 to 16 mm²
  - rigid from 6 to 25 mm².



Installation

- Clip-on mounting on modular rail.
- Width occupied: 8x9-mm modules.

Distribution

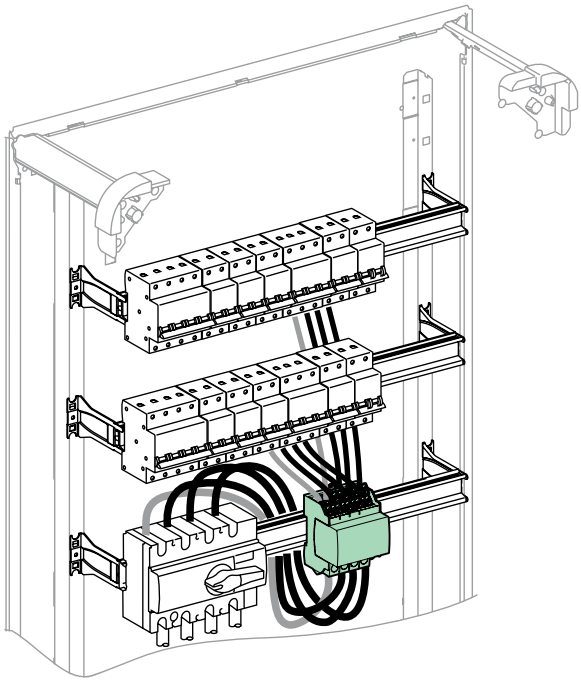
- 3 outgoing feeders connected by flexible or rigid cables of cross section 1 to 6 mm².
- 2 rows of terminals:
  - 12 connection points for phases (L1, L2, L3)
  - 12 connection points for neutral.
- A single cable per connection point: flexible (without ferrule) or rigid from 1 to 6 mm².
- Reliable, maintenance-free (tightness guaranteed over time).
- Insensitive to vibrations and thermal variations.

Distribloc 63 A splitter block (cont.)

Additional characteristics	
According to IEC/EN 60947-7-1	
Rated cross section	16 mm²
Rated connecting capacity	10-16-25 mm²
Pollution degree	3
Storage temperature	-40°C to +85°C
According to IEC/EN 61439-2	
Operating temperature	-25°C to +60°C
Colour	RAL 7016, RAL 9003

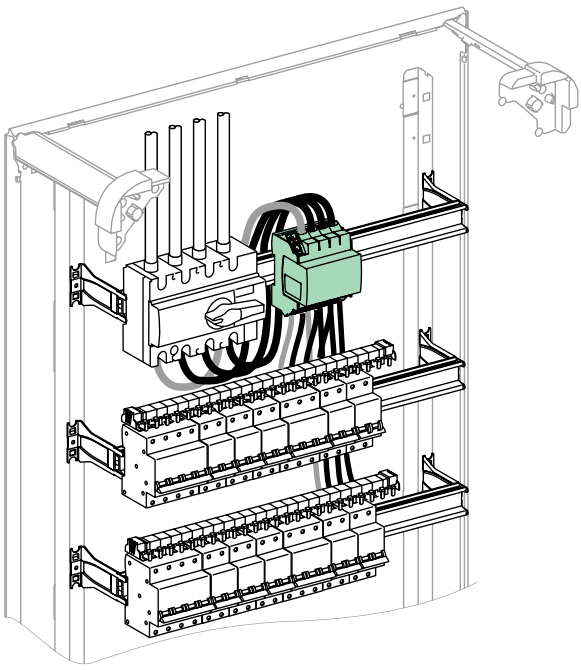
Installation

DB122671



Distribution through the bottom.

DB122625



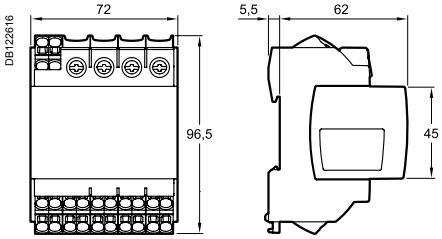
Distribution through the top.

Weight (g)

Splitter block	
Type	
Distribloc	290

Dimensions (mm)

DB122616



Multiclip 80 A splitter block

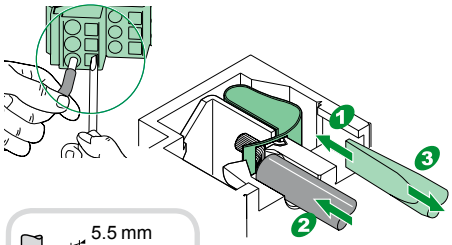
PB104507-35

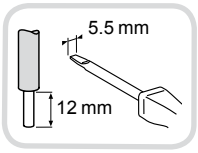
IEC/EN 60947-7-1.
IEC/EN 61439-2.

Description

■ Multiclip 80 A is a four-pole splitter block 24 modules wide installable on a standard DIN rail.
■ Outgoing feeders are connected at the front, without screws, in spring terminals.
■ The spring contact pressure adapts automatically to the cross section of the conductor. It is independent of the operator.
■ Supplied with 12 black and 12 blue pre-stripped 6 mm^2 cables.

DB122626





Advantages

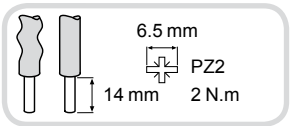
■ Very fast connection.
■ Very simple phase rebalancing.
■ In the event of an extension to or modification of the switchboard, connection is very easy.
■ Compatible with inter-rows of 150 mm.

Technical data

Main characteristics	
Cat. no	**04000**
According to IEC/EN 60947-7-1	
Rated current at 40°C (In)	80 A
Maximum operated voltage (Ue)	440 V AC
Operating frequency	50/60 Hz
Rated insulation voltage (Ui)	500 V AC
Pollution degree	3
Rated impulse withstand voltage (Uimp)	6 kV
Degree of protection	IP20
Short-circuit current withstand	Up to breaking capacity of Schneider Electric outgoing circuit breakers, even when reinforced by cascading implementation
Width in 9-mm modules	48

Power supply

■ Four-pole tunnel terminals with screw clamping.
■ The tunnel terminals are located to facilitate the insertion of cables and clamping by screws.
■ One cable per connection point:
□ flexible from 6 to 25 mm^2
□ rigid from 10 to 35 mm^2.



PB104501-45

Installation

■ Clip-on mounted Pragma and Prisma DIN rails.
■ Screwed on all other symetric rail.

Distribution

■ Connection to spring terminals through the front.
■ 2 rows of terminals:
□ 18 connection points for phases (L1, L2, L3)
□ 18 connection points for neutral.
■ A single cable per connection point: flexible (without ferrule) or rigid from 1 to 6 mm^2.
■ Maintenance-free (tightness guaranteed over time). Insensitive to vibrations and thermal variations.

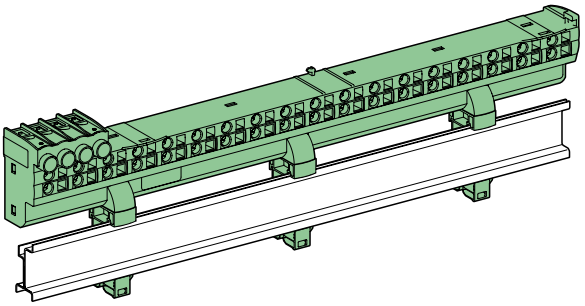
Multiclip 80 A splitter block (cont.)

PB104505-50

Additional characteristics	
According to IEC/EN 61439-2	
Operating temperature	-25°C to +60°C
Storage temperature	-40°C to +85°C
Colour	RAL 7016

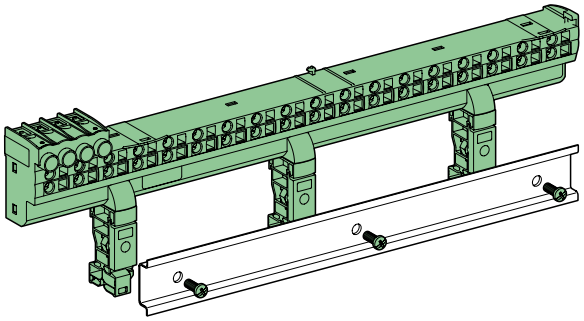
Installation

DB123198



On Pragma and Prisma rails

DB123199



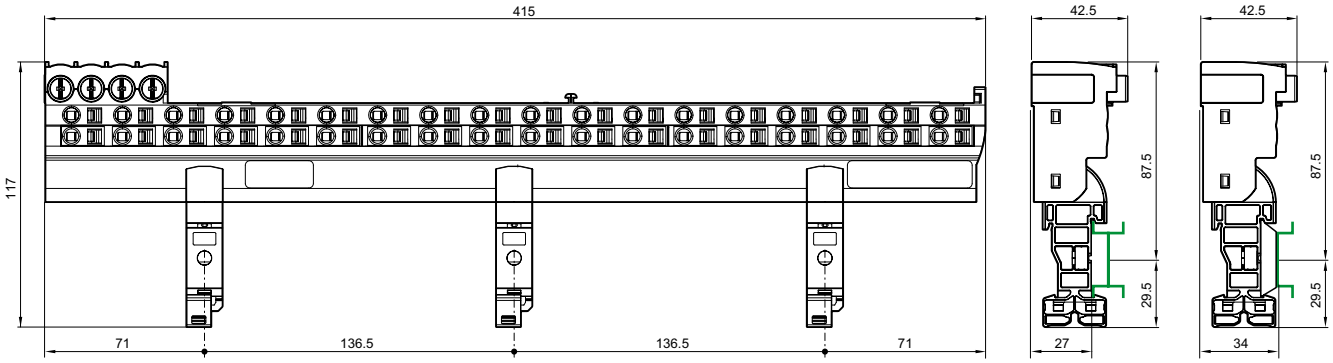
On other symetric rails

Weight (g)

Splitter block	
Type	
Multiclip	640

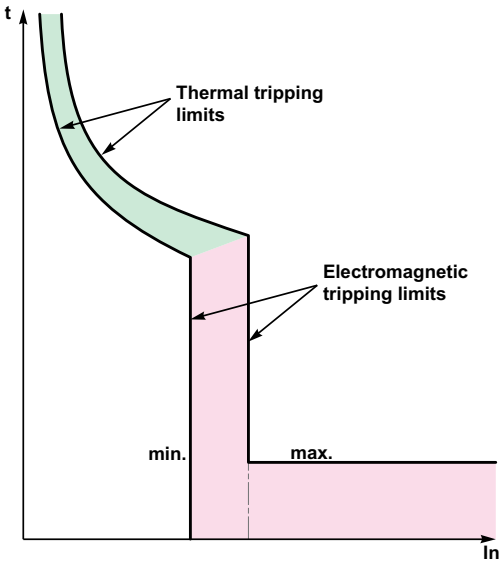
Dimensions (mm)

DB123200




BOARD
IOF
100A
300mA

Tripping curves



The following curves show the total fault current breaking time, depending on its amperage. For example: based on the curve on page 3, an iC60 circuit breaker of curve C, 20 A rating, will interrupt a current of 100 A (5 times the rated current In) in:
- 2 seconds at least
- 7 seconds at most.

The circuit breakers' tripping curves consist of two parts:
- tripping of overload protection (thermal tripping device): the higher the current, the shorter the tripping time
- tripping of short-circuit protection (magnetic tripping device): if the current exceeds the threshold of this protection device, the breaking time is less than 10 milliseconds. For short-circuit currents exceeding 20 times the rated current, the time-current curves do not give a sufficiently precise representation. The breaking of high short-circuit currents is characterized by the current limiting curves, in peak current and in energy. The total breaking time can be estimated at 5 times the value of the ratio $(I^2t)/(\hat{I})^2$.

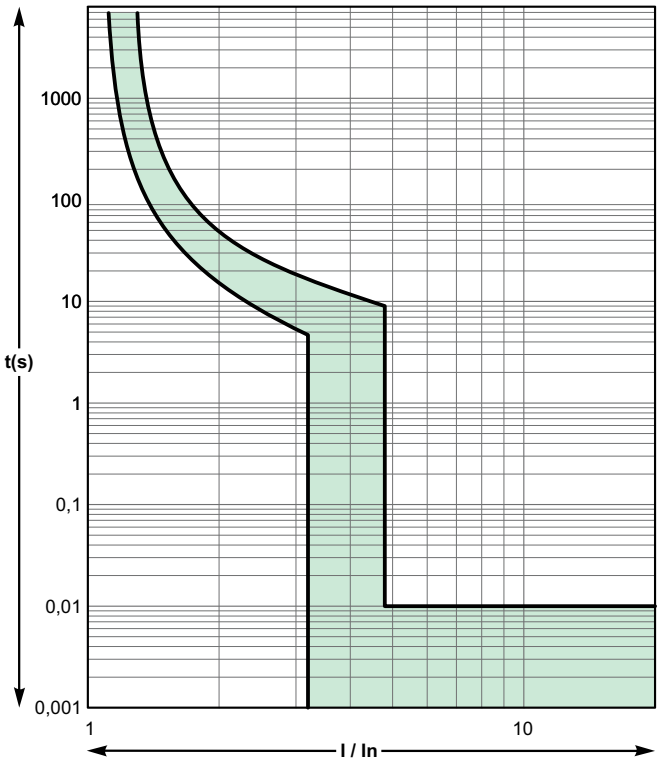
Verification of the discrimination between two circuit breakers

By superimposing the curve of a circuit breaker on that of the circuit breaker installed upstream, one can check whether this combination will be discriminating in cases of overload (discrimination for all current values, up to the magnetic threshold of the upstream circuit breaker). This verification is useful when one of the two circuit breakers has adjustable thresholds; for fixed-threshold devices, this information is provided directly by the discrimination tables.
To check discrimination on short circuit, the energy characteristics of the two devices must be compared.

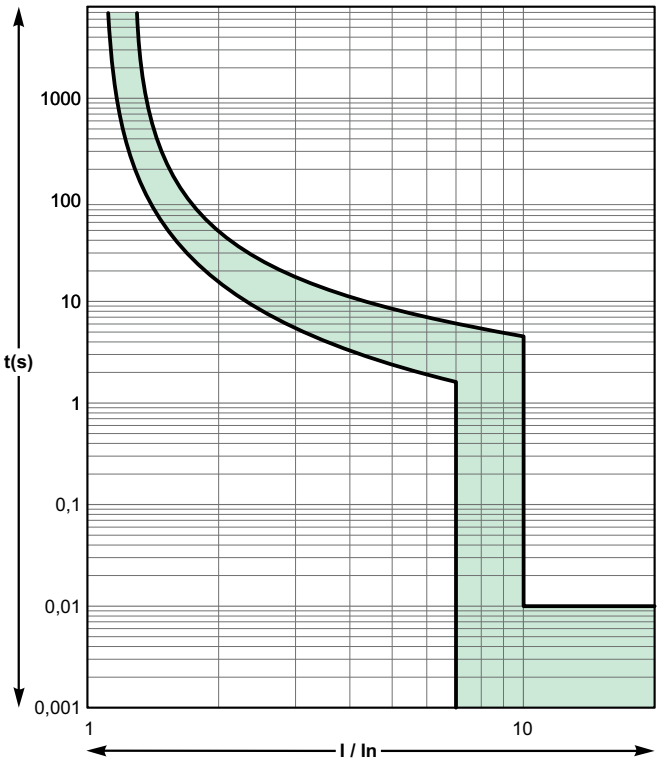
Tripping curves

iC60N/H/L ratings up to 4 A

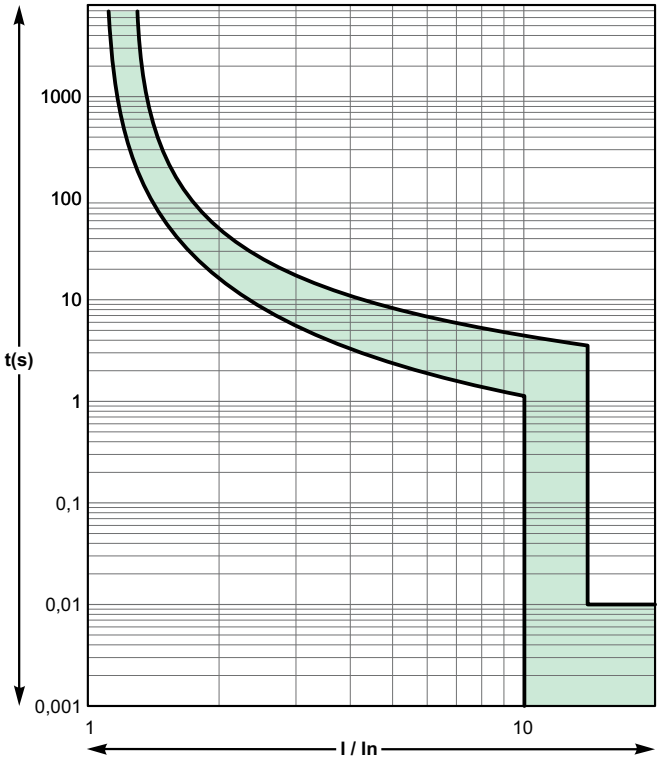
Curve B



Curve C



Curve D

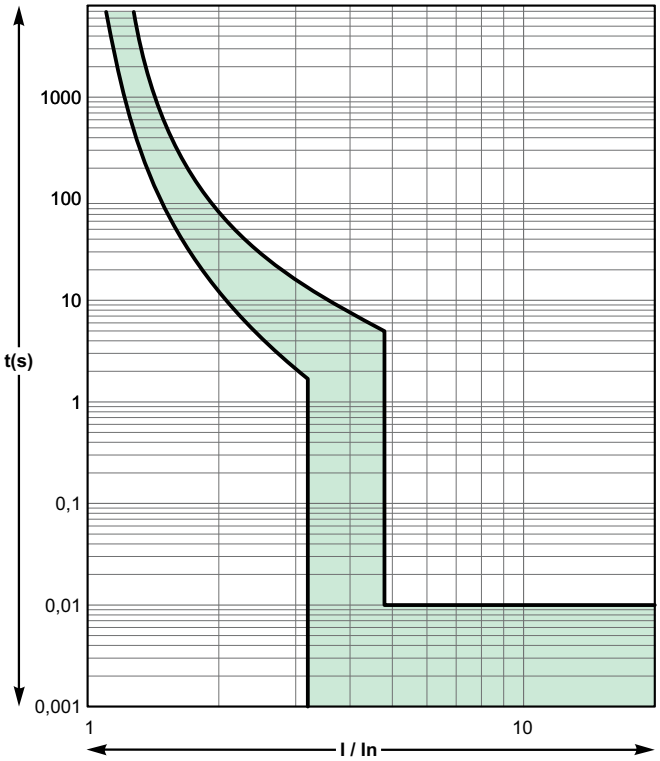


Tripping times (min, max) at an ambient temperature of 30 °C (standards IEC/ EN 60898).

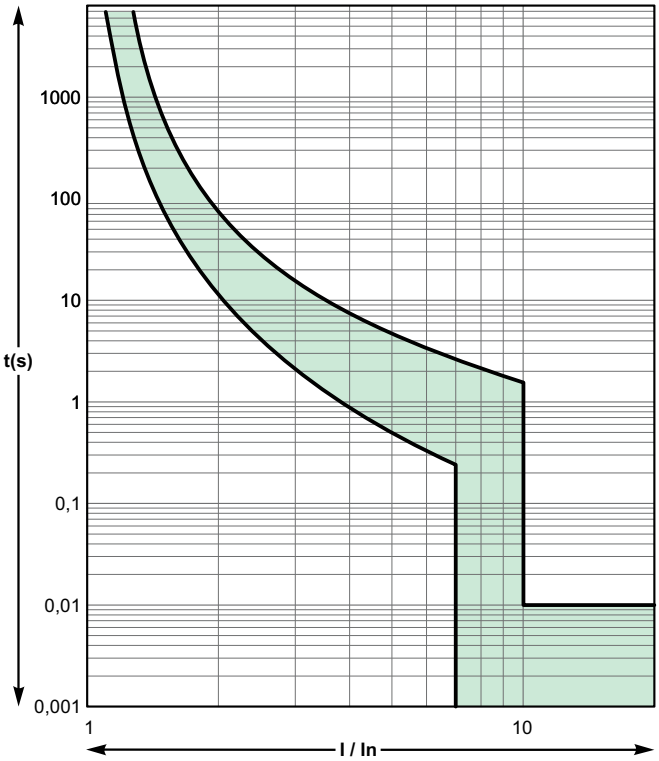
Tripping curves

iC60N/H/L ratings 6 to 63 A

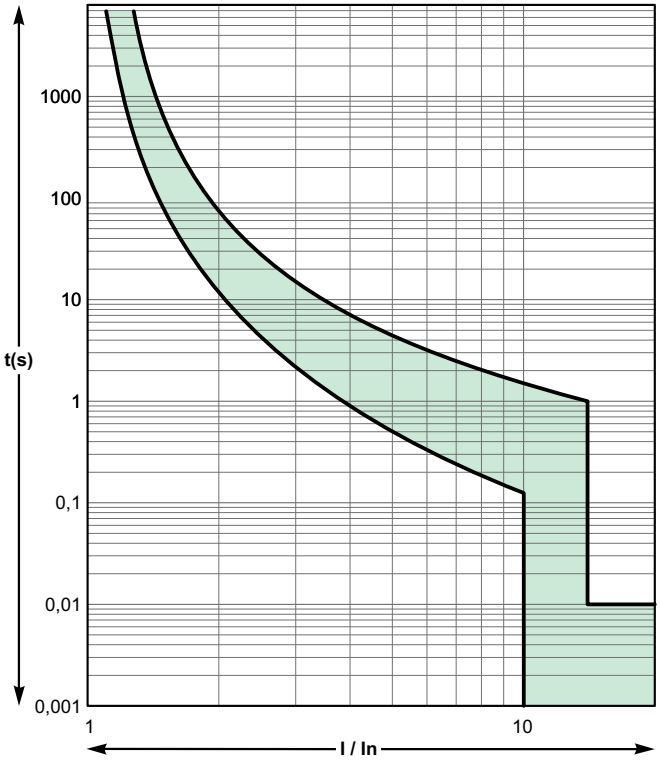
Curve B



Curve C

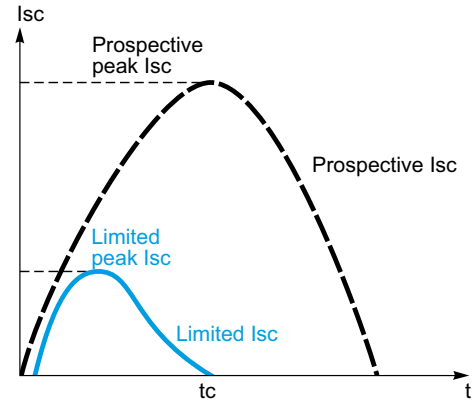


Curve D

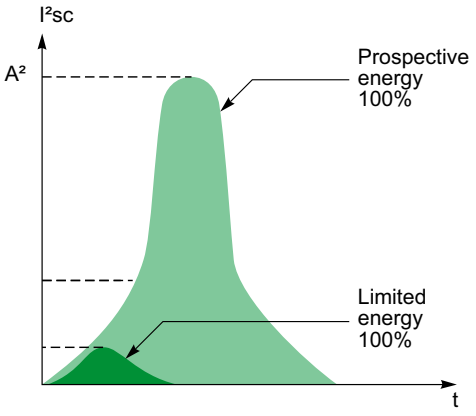


Tripping times (min, max) at an ambient temperature of 30 °C (standards IEC/ EN 60898).

Short-circuit current limiting



Prospective current and real limit current.



Definition

The limiting capacity of a circuit breaker is its ability to lessen the effects of a short circuit on an electrical installation by reducing the current amplitude and the dissipated power.

Benefits of limiting

Long installation service life

Thermal effects

Lower temperature rise at the conductor level, hence increased service life for cables and all components that are not self-protected (e.g. switches, contactors, etc.)

Mechanical effects

Lower electrodynamic repulsion forces, hence less risk of deformation or breakage of electrical contacts and busbars.

Electromagnetic effects

Less interference on sensitive equipment located in the vicinity of an electric circuit.

Savings through cascading

Cascading is a technique derived directly from current limiting: downstream of a current-limiting circuit breaker it is possible to use circuit breakers of breaking capacity lower than the prospective short-circuit current (in line with the cascading tables on page XXXX). The breaking capacity is heightened thanks to current limiting by the upstream device. Substantial savings can be achieved in this way on switchgear and enclosures.

Discrimination of protection devices

The circuit breakers' current limiting capacity improves discrimination with the protection devices located upstream: this is because the required energy passing through the upstream protection device is greatly reduced and can be not enough to cause it to trip. Discrimination can thus be natural without having to install a time-delayed protection device upstream.

Acti9 circuit breaker current limiting

Profiting from Schneider Electric's experience and expertise in the field of short-circuit current breaking, the circuit breakers of the Acti9 range have a top-level current limiting characteristic for modular devices.
This assures them of optimal protection of the entire power distribution system.

Compact NSX circuit breaker current limiting

Ics = 100 % Icu

The exceptional current limiting capacity of Compact NSX circuit breakers greatly attenuates the stresses caused by the fault current in the device.
The result is a significant increase in breaking performance.
In particular, the service breaking capacity Ics reaches 100% of Icu.
This performance, defined by the IEC 947-2 standard, is guaranteed following tests which involve:

- ■ cutting off a fault current equal to 100% of Icu three times in a row
- ■ then checking that the device operates normally:
  - □ it conducts its rated current without abnormal temperature rise;
  - □ the protection device operates within the limits authorized by the standard;
  - □ the suitability for isolation is ensured.

Short-circuit current limiting

Representation: Current limiting curves

The current limiting capacity of a circuit breaker is reflected by 2 curves which give, as a function of the prospective short-circuit current (current which would flow in the absence of a protection device):

- the real peak current (limited)
- the thermal stress (in A^2s), this value, multiplied by the resistance of any element through which the short-circuit current passes, gives the power dissipated by this element.

The straight line "10 ms" representing the energy A^2s of a prospective short-circuit current of a half-period (10 ms) indicates the energy that would be dissipated by the short-circuit current in the absence of limiting by the protection device (see example 2).

Example 1

What is the peak value of a prospective short-circuit current of 150 kA rms (i.e. 330 kÂ) limited by an NSX250L device upstream?

> The peak value of the prospective short-circuit current is: 150 kA x √2 : 210 kÂ.

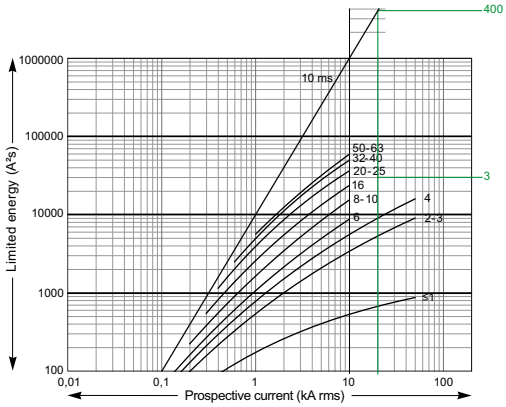
> As shown in the graph on page XXX, the Compact NSX250L circuit breaker reduces this value to: 30 kÂ.

Example 2

What is the energy limited by an iC60N 25 A circuit breaker for a prospective short-circuit current of 10 kA rms. What is the quality of current limiting?

> as shown in the graph opposite:

- this short-circuit current (10 kA rms) is likely to dissipate up to 1,000 kA^2s
- the iC60N circuit breaker reduces this thermal stress to: 45 kA^2s, which is 22 times less.



Example of use: Stresses acceptable by the cables

The following table shows the thermal stresses acceptable by the cables depending on their insulation, their composition (Cu or Al) and their cross section. Cross-section values are expressed in mm^2 and stresses in A^2s.

S (mm^2)		1.5	2.5	4	6	10
PVC	Cu	$2.97\ 10^4$	$8.26\ 10^4$	$2.12\ 10^5$	$4.76\ 10^5$	$1.32\ 10^6$
	Al					$5.41\ 10^5$
PRC	Cu	$4.10\ 10^4$	$1.39\ 10^5$	$2.92\ 10^5$	$6.56\ 10^5$	$1.82\ 10^6$
	Al					$7.52\ 10^5$
S (mm^2)		**16**	**25**	**35**	**50**	
PVC	Cu	$3.4\ 10^6$	$8.26\ 10^6$	$1.62\ 10^7$	$3.21\ 10^7$	
	Al	$1.39\ 10^6$	$3.38\ 10^6$	$6.64\ 10^6$	$1.35\ 10^7$	
PRC	Cu	$4.69\ 10^6$	$1.39\ 10^7$	$2.23\ 10^7$	$4.56\ 10^7$	
	Al	$1.93\ 10^6$	$4.70\ 10^6$	$9.23\ 10^6$	$1.88\ 10^7$	

Example

Is a Cu/PVC cable of cross section 10 mm^2 protected by a Compact NSX160F device?

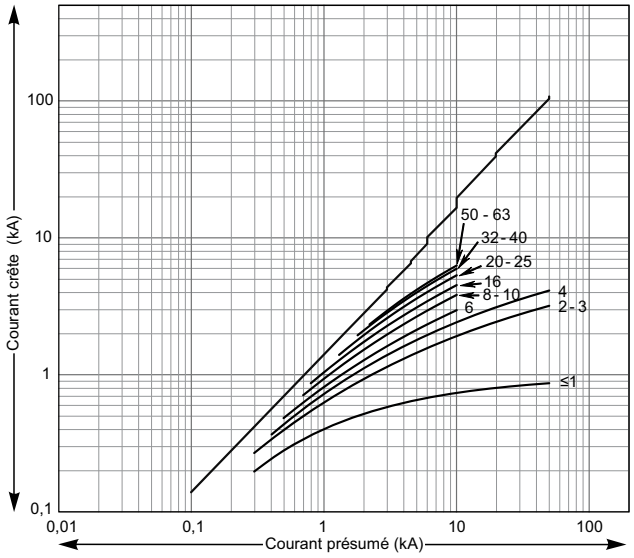
The above table shows that the acceptable stress is $1.32 \times 10^6\ A^2s$. Any short-circuit current at the point where a Compact NSX160F device (Icu = 36 kA) is installed will be limited, with a thermal stress of less than $6 \times 10^5\ A^2s$. (Curve on page XX).
The cable is therefore always protected up to the breaking capacity of the circuit breaker.

Short-circuit current limiting

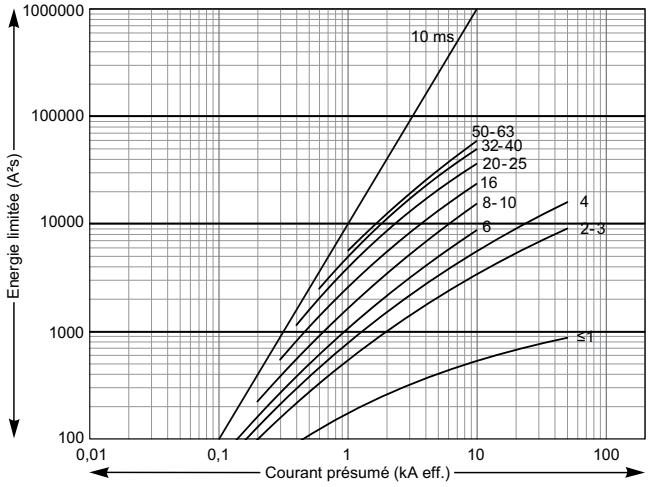
Limitation curves for 230 V single-phase or 400 V three-phase network (TN or TT earthing system)

iC60N

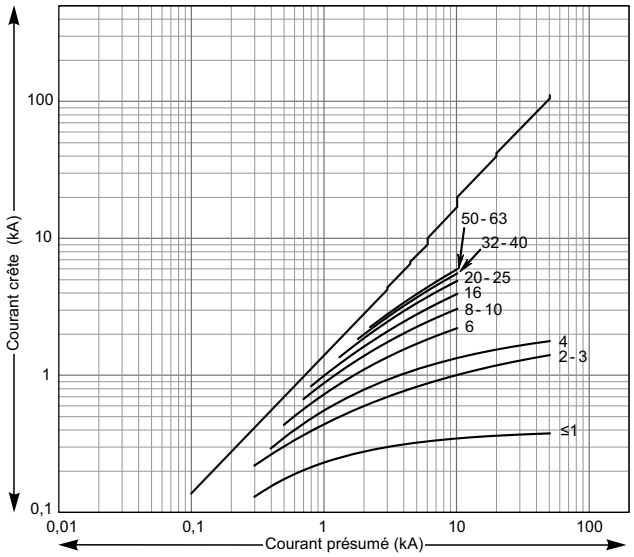
1P / 3P / 4P circuit breakers
Peak current



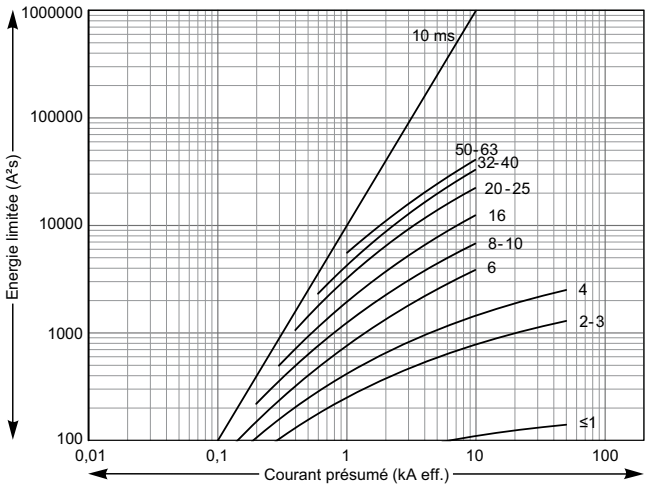
Thermal stress



1P+N / 2P circuit breakers
Peak current



Thermal stress

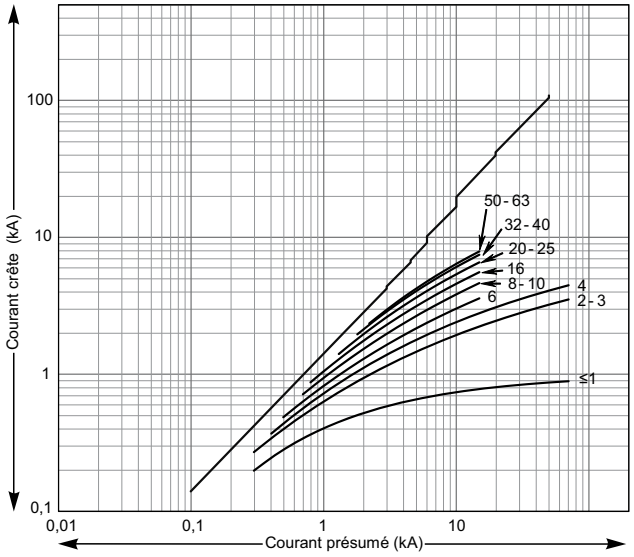


Note: *these values are also the limitation values obtained with an iC60N three- or four-pole circuit breaker operating on a 230 V phase-to-phase network.*

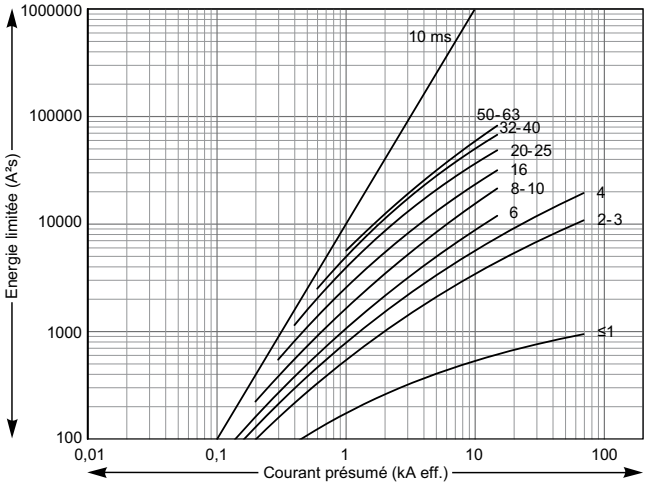
Short-circuit current limiting

iC60H

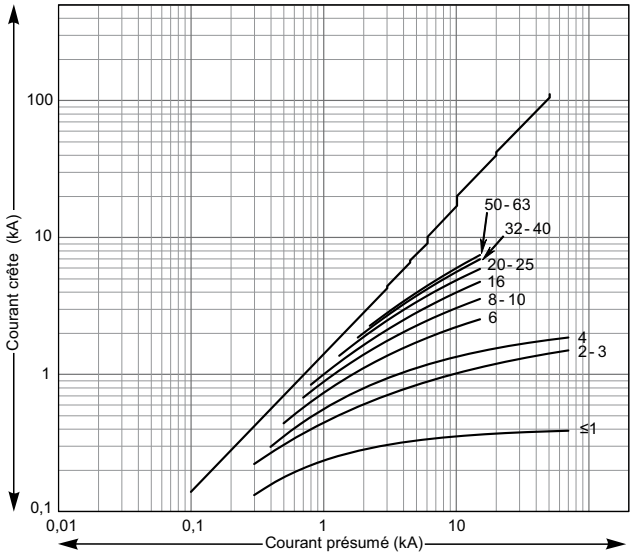
1P / 3P / 4P circuit breakers
Peak current



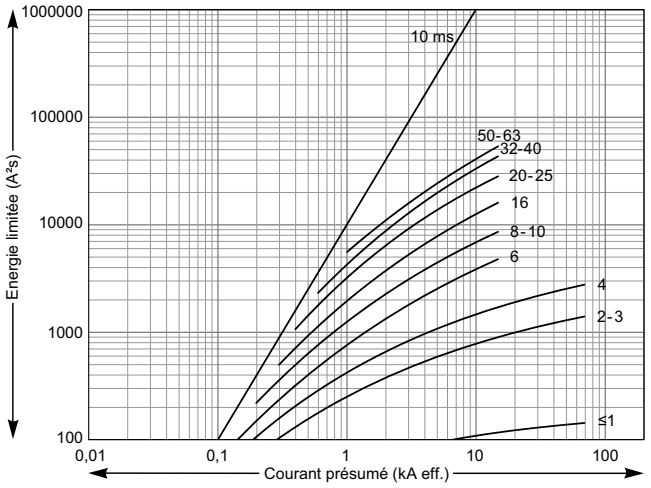
Thermal stress



1P+N / 2P circuit breakers
Peak current



Thermal stress



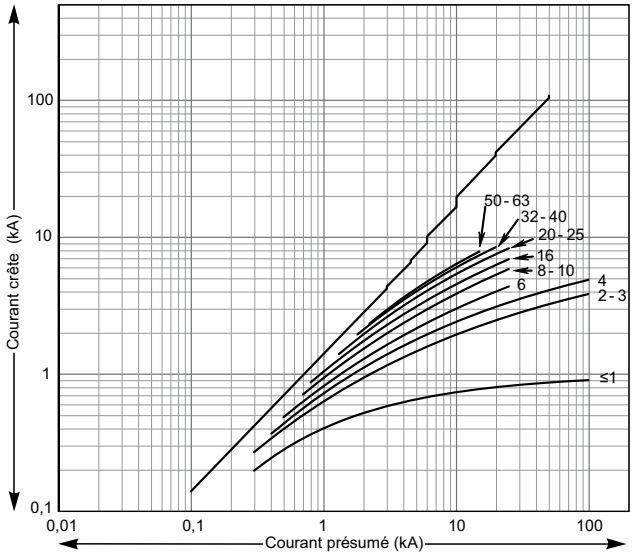
Note: *these values are also the limitation values obtained with an iC60H three- or four-pole circuit breaker operating on a 230 V phase-to-phase network.*

Short-circuit current limiting

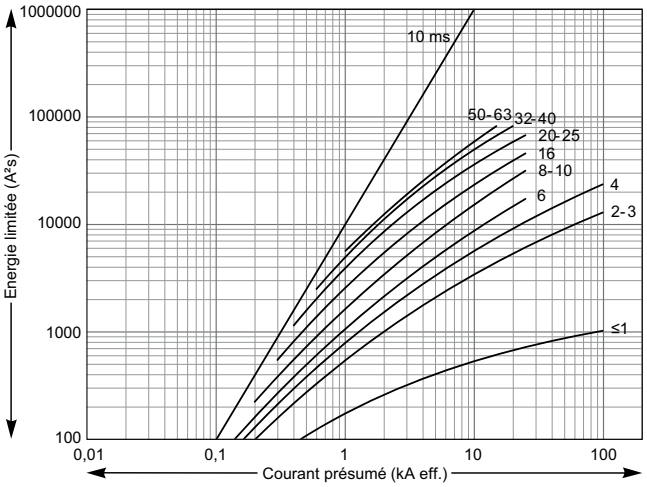
iC60L

1P / 3P / 4P circuit breakers

Peak current

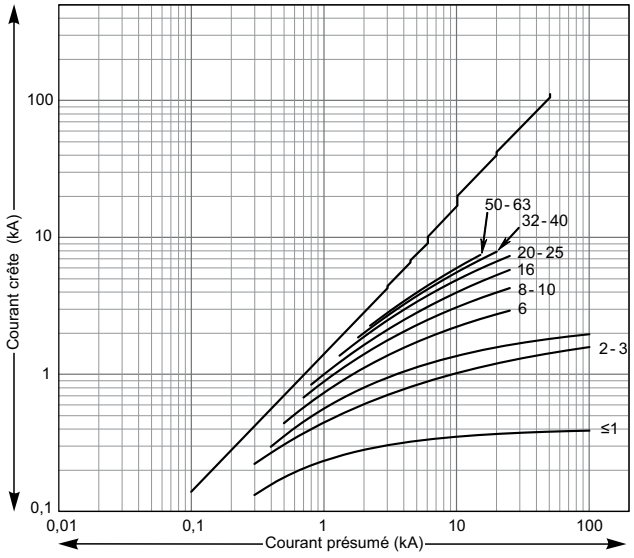


Thermal stress

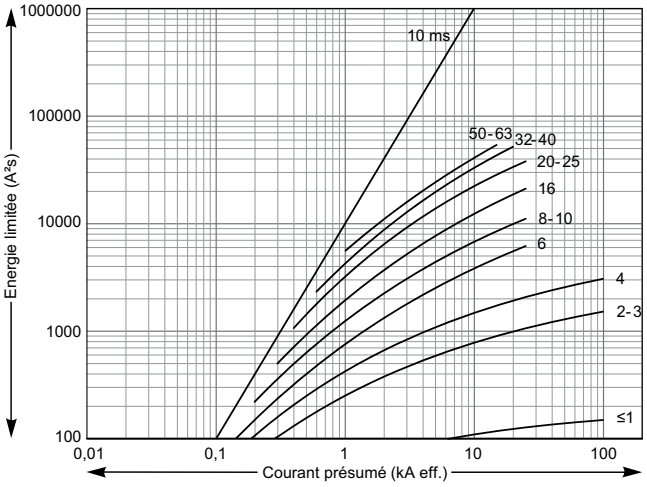


1P+N / 2P circuit breakers

Peak current



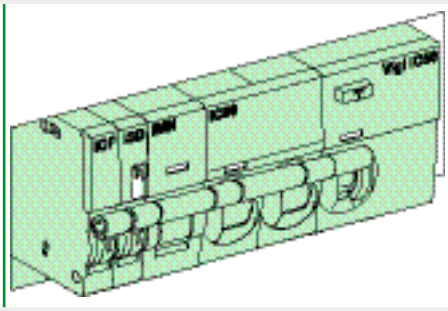
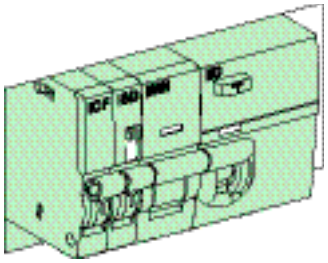
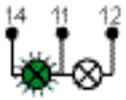
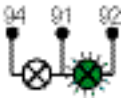
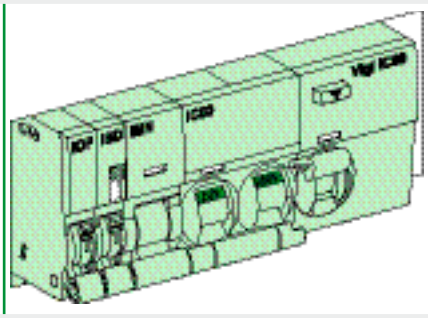
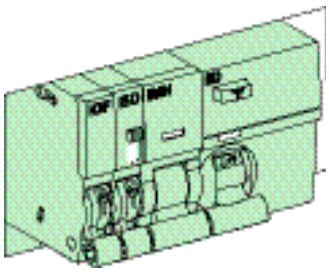
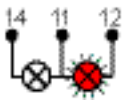
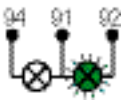
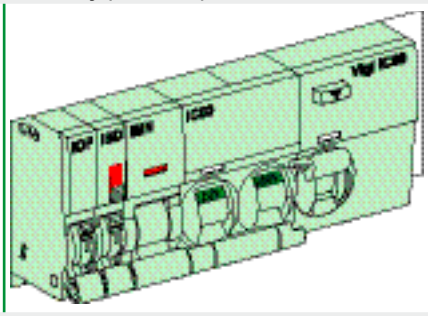
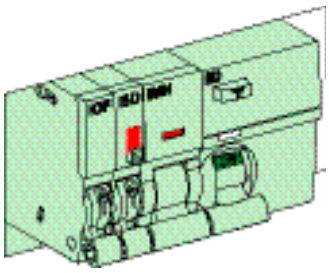
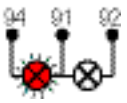
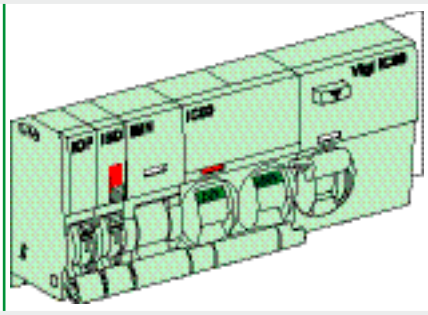
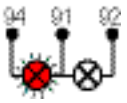
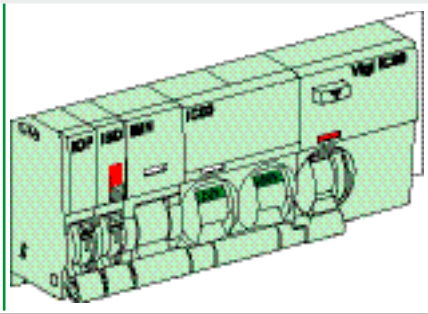
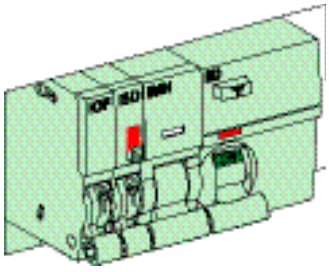
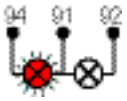
Thermal stress



Note: *these values are also the limitation values obtained with an iC60L three- or four-pole circuit breaker operating on a 230 V phase-to-phase network.*

Auxiliary indicating contacts for Acti9 protective devices

Table showing state of auxiliary contacts according to the main device and the type of fault.

	Main device		Auxiliary contacts	
Functions and use	**Circuit breaker**	**Residual current circuit breaker**	**OF**	**SD**
Closed	DB123288 	DB123289 	DB123292 	
Manually opened	DB123277 	DB123278 	DB123290 	
Tripped by release auxiliary (iMN, iMX)	DB123279 	DB123280 	DB123291 	
Tripped upon overload or short circuit	DB123285 	–	DB123291 	
Tripped upon earth fault	DB123286 	DB123287 	DB123291 	

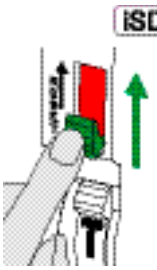
Auxiliary indicating contacts for Acti9 protective devices (cont.)

Function

RESET (SD contact)

When the main device is tripped and the fault has been eliminated, it is possible to switch the SD contact manually, via the "RESET" button on the front panel.
The unit is then in "device opened manually" configuration.

DB123294



	iOF	iSD	iOF/SD+OF
	-	■	■ iSD only

TEST (SD or OF contact)

When the main device is opened or tripped, the TEST button can be used to check the satisfactory operation of the indicating circuit by simulating operation of the main device. This operation also modifies the position of the indicator on the front panel of the iSD auxiliary.
On the double contact (iOF/SD+OF), this function can be implemented only for the SD indicating circuit.

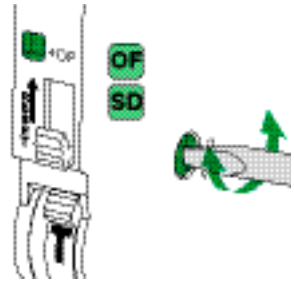
DB123294

	iOF	iSD	iOF/SD+OF
	■	■	■

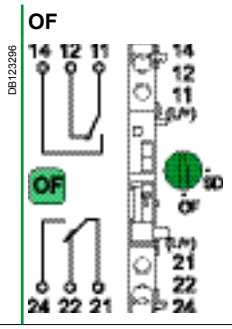
iOF/SD+OF double contact

Change of function of the second contact from OF to SD.

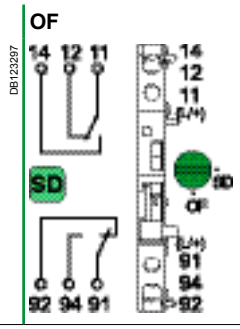
DB123295



DB123296

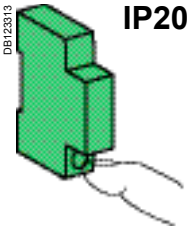


DB123297

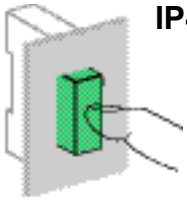


Auxiliary indicating contacts for Acti9 protective devices (cont.)

DB123313



IP20



IP40

Technical data

Main characteristics			
According to IEC 60947-5-1			
Insulation voltage (Ui)		400 V AC	
Degree of pollution		3	
Rated impulse withstand voltage (Uimp)		4 kV (6 kV relative to the associated protective device)	
Current rating (A)	Min.	24 V, 10 mA	
	Max.	AC12 415 V AC	3 A
		AC12 ⩽ 240 V AC	6 A
		DC12 130 V DC	1 A
		DC12 60 V DC	1.5 A
		DC12 48 V DC	2 A
		DC12 24 V DC	6 A

Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in a modular enclosure	IP40 Insulation class II
Endurance (O-C)	Electrical	20,000 cycles
Overvoltage category (IEC 60364)		III
Short-circuit resistance		1 kA
Rating of device for auxiliary contact protection against short circuits	Circuit breaker	iC60 - C curve - 6 A
	Fuse	6 A, 500 V Gg type 10.3 x 38 mm
Storage temperature		-40°C to +85°C
Operating temperature		-35°C to +70°C

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"Low-level" indication

For the control of low-level circuits (inputs of PLCs, sensors/effectors, etc.), the RBN relay can transmit the signals delivered by the circuit breakers' auxiliary contacts.

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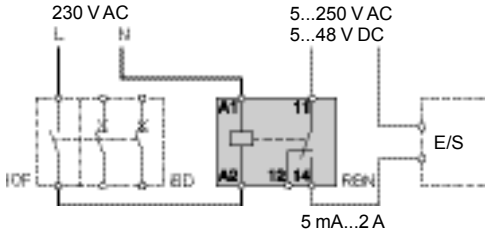
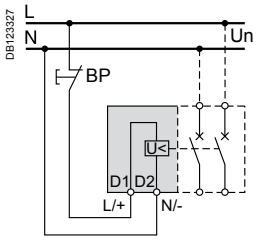
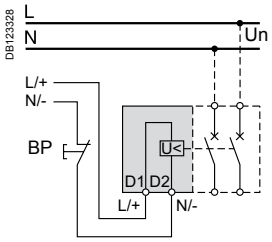


RBN relay		
Type	**Voltage (Ue)**	**Current rating (Ie)**
Inputs (A1, A2)	230 V AC, 50…60 Hz	-
Outputs (11 and 12, 11 and 14)	5…250 V AC	5 mA…2 A
	5…48 V DC	

Auxiliary trip units for Acti9 protective devices



iMN/iMNs powered by main network

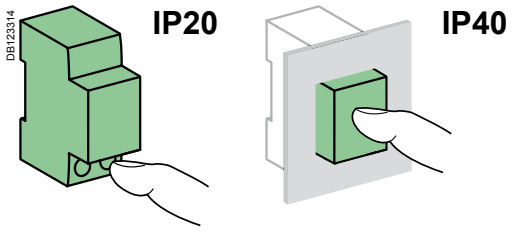


iMN/iMNs with separate power supply

iMN, iMNs: undervoltage release units

Function

■ Tripping of the associated protective device, when the voltage across its terminals falls:
□ either by opening the control circuit (e.g. push-button),
□ or by lowering the supply voltage.
■ Resetting of the protective device is possible only after the voltage across the terminals of the auxiliary has returned to its nominal value.
■ The MNs undervoltage release does not perform tripping in the event of a voltage drop lasting less than 200 ms.
■ A locking push-button control allows the circuit protected by the circuit breaker (e.g. machine control) to be placed in safety configuration.

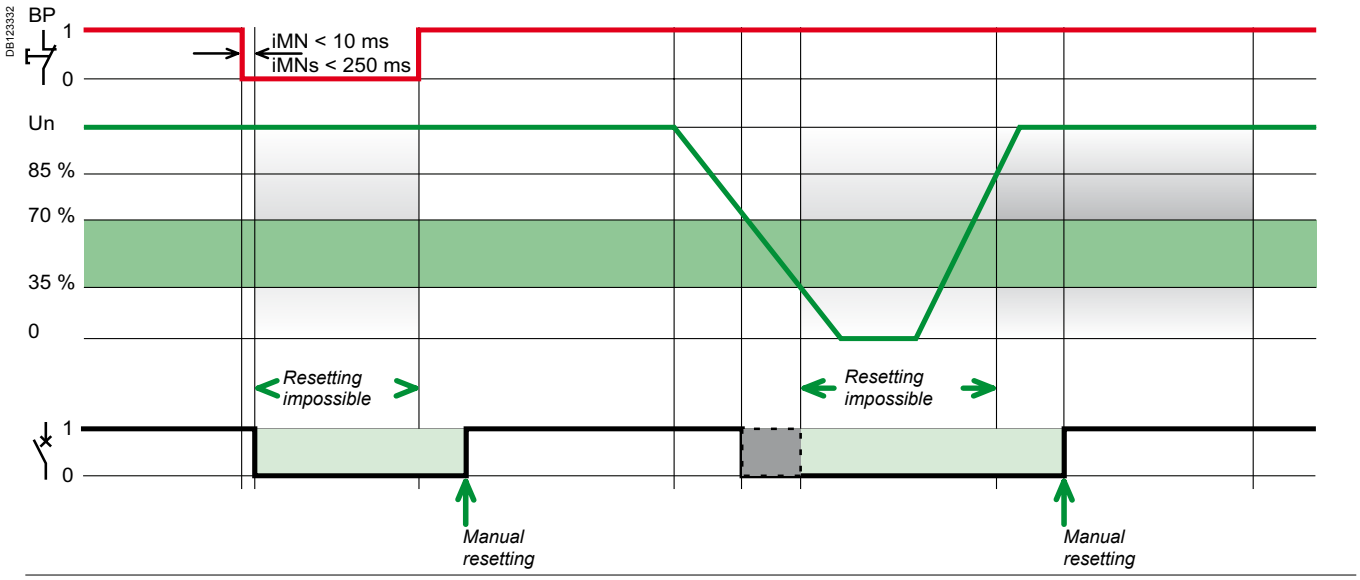


Technical data

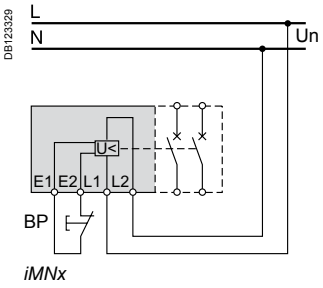
Auxiliary trip units		iMN				iMNs
Catalogue numbers		**A9A26960**	**A9A26961**		**A9A26959**	**A9A26963**
Main characteristics						
Rated voltage [1] (Un)		220…240 V, 50/60Hz	48 V, 50/60Hz	48 V DC	115 V, 400 Hz	220…240 V, 50/60Hz
Holding current [2]	A	0.014	0.022	0.034	0.017	0.014
Power consumption	VA	3.3	1.6	1.1	2	3.4
Tripping						
Threshold (V)		Between 0.35 and 0.75 of Un				
Duration of voltage dip (ms)	Min.	30	8	8	30	200
Restoration						
Threshold (V)	Min.	187	40.8	40.8	98	187
Additional characteristics						
Endurance		20,000 operations				
Insulation voltage (Ui)		400 V				
Degree of pollution		3				
Rated impulse withstand voltage (Uimp)		4 kV (6 kV relative to the associated protective device)				

(1) For a lower power supply (e.g., control by a PLC output), an RTBT interface must be implemented (see page 7).
(2) This characteristic must be taken into account to define the number of multiple controls by switches provided with an indicator lamp.

Operation timing chart



Auxiliary trip units for Acti9 protective devices (cont.)

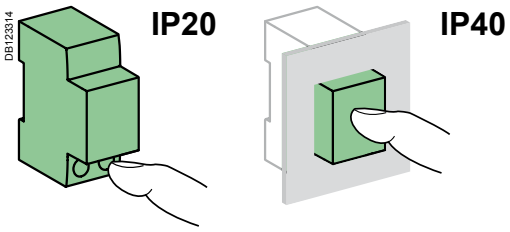


iMNx

iMNx: trip units with push-button control

Function

- Tripping of the associated protective device by opening of the control circuit (e.g. push-button, dry contact).
- A drop in the supply voltage does not trip the associated protective device.
- A locking push-button control allows the circuit protected by the circuit breaker (e.g. machine control) to be placed in safety configuration.

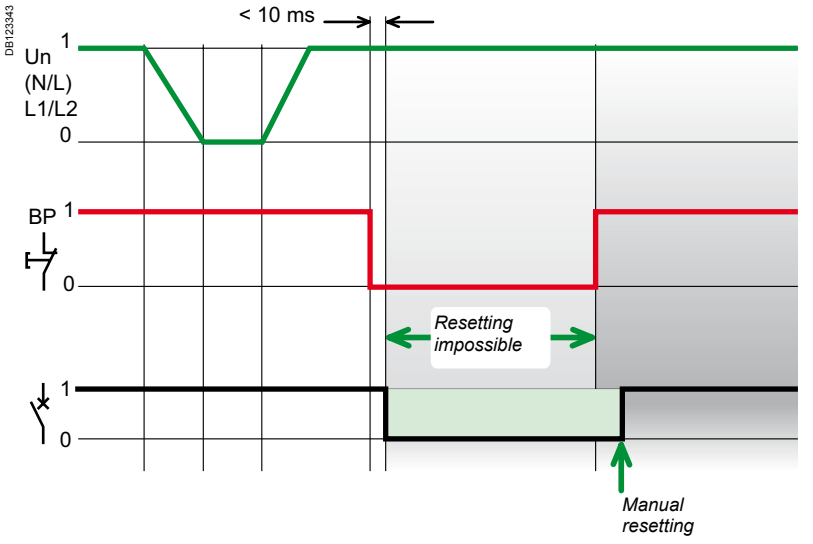


Technical data

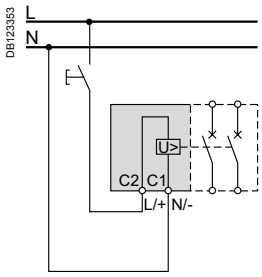
Auxiliary trip units	iMNx	
Catalogue numbers	**A9A26969**	**A9A26971**
Main characteristics		
Rated voltage [1] (Un)	220…240 V, 50/60 Hz	380...415 V, 50/60 Hz
Power consumption (at Un) A	0.014	
Tripping		
Threshold (V)	70 % of Ue	
Control-circuit opening duration Min. (ms)	30	
Additional characteristics		
Endurance	20,000 operations	
Insulation voltage (Ui)	400 V	
Degree of pollution	3	
Rated impulse withstand voltage (Uimp)	4 kV (6 kV relative to the associated protective device)	

(1) For a lower supply voltage (e.g., control by a PLC output), an RTBT interface must be implemented (see page 7).

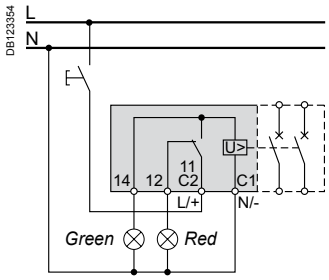
Operation timing chart



Auxiliary trip units for Acti9 protective devices (cont.)



iMX powered by main network



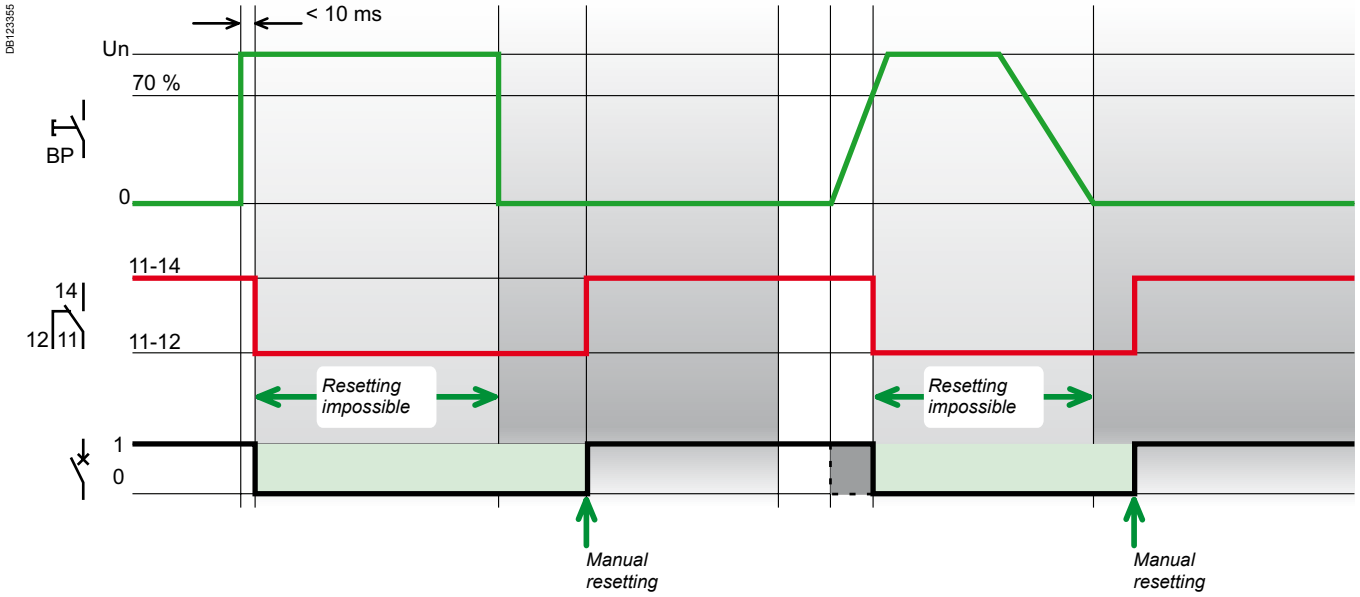
Control by N/O push-button with verification of voltage presence (iMX+OF)

iMX, iMX+OF: shunt release units

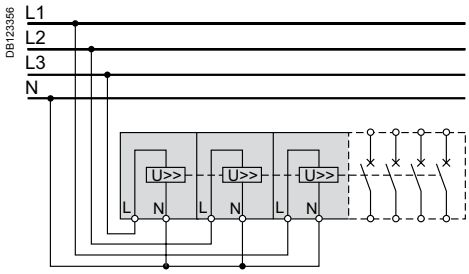
Function

- Tripping of the associated protective device when a voltage appears across the terminals of the auxiliary (control by: N/O push-button, dry contact, etc.).
- Resetting of the protective device is possible only when the voltage across the terminals of the auxiliary has disappeared.
- A locking push-button control allows the circuit protected by the circuit breaker (e.g. machine control) to be placed in safety configuration.

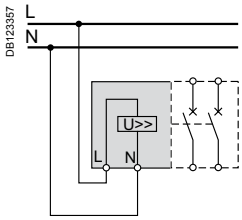
Operation timing chart



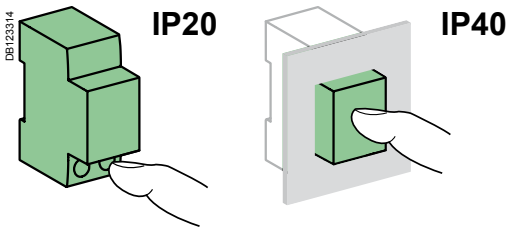
Auxiliary trip units for Acti9 protective devices (cont.)



Three-phase power supply monitoring



Single-phase power supply monitoring



iMSU: overvoltage release units

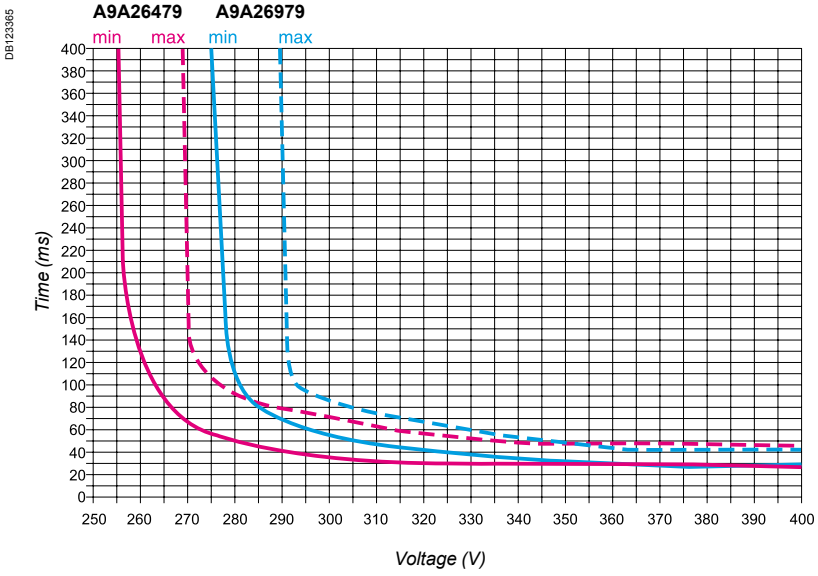
Function

- Tripping of the associated protective device when the voltage across its terminals exceeds its nominal value.
- This auxiliary can protect sensitive loads from mains voltage fluctuations, in particular those due to breakage of the neutral conductor.
- Resetting of the protective device is possible only when the voltage across the terminals of the auxiliary has returned to its nominal value.

Technical data

Auxiliary trip units			iMSU	
Catalogue numbers			**A9A26479**	**A9A26979**
Main characteristics				
Rated voltage (Un)			230 V, 50/60 Hz	
Power consumption (at Un)		A	0.002	
Power consumption	Holding	VA	0.046	
	Inrush	VÂ	128	
Insulation voltage (Ui)			400 V	
Degree of pollution			3	
Rated impulse withstand voltage (Uimp)			4 kV (6 kV relative to the associated protective device)	
Additional characteristics				
Endurance			20,000 operations	

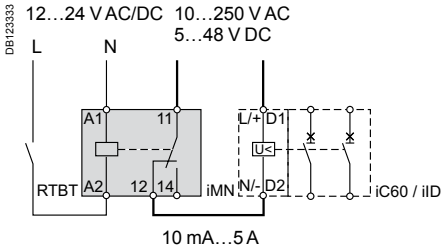
Tripping threshold and time



Low-level control

"Low-level" control

The RTBT relay cat. no. 15416 allows the auxiliary trip units to be controlled by a low-level signal (e.g. iMN).



RTBT relay

Type	Voltage (Ue)	Current rating (Ie)
Inputs (A1, A2)	12…24 V AC/DC, 0…60 Hz	-
Outputs (11 and 12, 11 and 14)	10…250 V AC	10 mA…5 A
	5…48 V DC	

Electrical auxiliaries for iC60, iID, iSW-NA, ARA and RCA

The mounting order for the various auxiliaries must be complied with.
The tripping auxiliaries (iMN, iMX) should be mounted first, as close as possible to the circuit breaker or the residual current circuit breaker. Then, the indicating auxiliaries (iOF, iSD) should be mounted, complying with their position shown in the following table.

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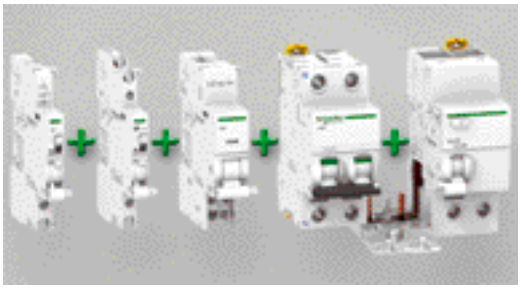


Indicating auxiliaries

PB104474-25

PB104475-25

1 iOF/SD+OF	1 iOF/SD+OF
1 iOF	1 (iSD or iOF or iOF/SD+OF)
No	No
1 iSD	**1 iOF/SD+OF**
1 iSD	1 iSD
1 iOF/SD+OF	1 iOF/SD+OF
1 iOF/SD+OF	1 iOF/SD+OF
1 iOF	1 (iSD or iOF or iOF/SD+OF)
No	No
No	1 (iSD or iOF or iOF/SD+OF)
1 iOF	1 (iSD or iOF or iOF/SD+OF)
No	1 (iSD or iOF or iOF/SD+OF)
1 iOF	1 (iSD or iOF or iOF/SD+OF)

The tripping auxiliaries should be installed first.
Comply with the position of the SD function.

Electrical auxiliaries for iC60, iID, iSW-NA, ARA and RCA (cont.)

	Tripping auxiliaries	Remote control	Device	Vigi iC60
		**ARA automatic recloser or RCA remote control**	**iC60 circuit breaker or iID residual current circuit breaker or iSW-NA switch-disconnector**	**Vigi iC60 add-on residual current device**
	1 (iMX or iMN or iMSU) max.	–	 *iC60*	 *Vigi iC60*
	2 (iMX or iMN or iMSU) max.			
	3 iMSU max.			
	1 (iMX or iMN or iMSU) max.			
	1 (iMX or iMN or iMSU) max.			
	2 (iMX or iMN or iMSU) max.			
	1 (iMX or iMN or iMSU) max.	–	 *iID/iSW-NA*	–
	2 (iMX or iMN or iMSU) max.			
	3 iMSU max.			
	1 (iMX or iMN or iMSU) max.	 *ARA*	 *iC60*	 *Vigi iC60*
	No			
			 *iID/iSW-NA*	–
	1 (iMX or iMN or iMSU) max.	 *RCA*	 *iC60*	 *Vigi iC60*
	No			

Influence of ambient temperature

Influence of temperature on the operation of Acti9 devices

Devices		Characteristics influenced by temperature	Temperature	
			Min.	Max.
iK60 circuit breakers		Tripping on overload	-25°C	+60°C
iID K residual current circuit breakers			-5°C	+40°C
iC60a/N/H/L circuit breakers	Without Vigi	Tripping on overload	-35°C	+70°C
	With Vigi (AC)		-5°C	+60°C
	With Vigi (A, Asi)		-25°C	+60°C
iID residual current circuit breakers	AC	Maximum operating current	-5°C	+60°C
	A, Asi		-25°C	+60°C
Protection auxiliaries		None	-35°C	+70°C
iCT contactors		Installation conditions	-5°C	+60°C
iTL impulse relays		None	-20°C	+50°C
iCT, iTL auxiliaries		None	- 20°C	+50°C
Distribloc		Maximum operating current	-25°C	+60°C
Multiclip		Maximum operating current	-25°C	+60°C

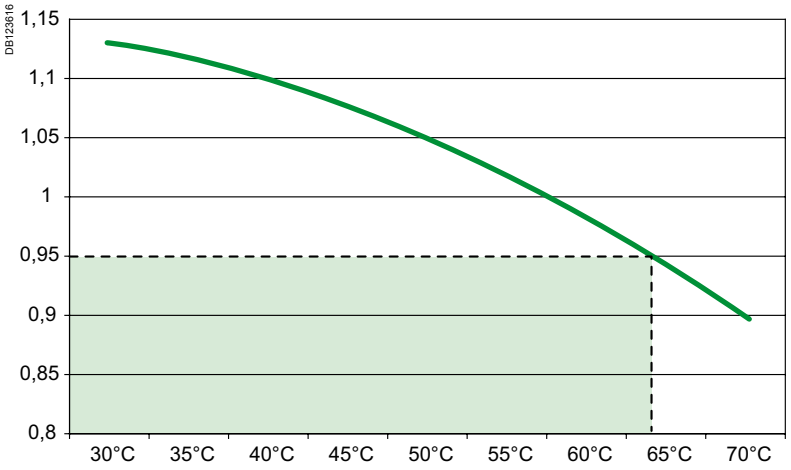
Note: the temperature considered is the temperature viewed through the device.

iK60, iC60 circuit breakers

Températures élevées

■ A rise in temperature causes lowering of the thermal threshold (tripping on overload).
■ Protection is still ensured: the tripping threshold remains lower than the current acceptable by the cable (I_z)
■ To prevent nuisance tripping, it should be checked that this threshold remains higher than the maximum operating current (I_B) of the circuit, defined by:
□ the rated load currents,
□ the coefficients of expansion and simultaneity of use.
■ The curve below indicates the minimum value of the threshold, relative to the rated current In, as a function of the temperature in the vicinity of the circuit breaker.

Example for a three-phase circuit having the following characteristics:
■ Cable (acceptable current I_Z 68 A), protected by an iC60 circuit breaker of rating 63 A
■ Maximum current that can be demanded by the loads (I_B): 60 A.
This current represents 0.95 times the rating of the circuit breaker: based on the curve opposite, there is no risk of nuisance tripping so long as the temperature does not exceed +65°C.



If the temperature is sufficiently high for the tripping threshold to become lower than the operating current I_B, switchboard ventilation should be provided for.

Influence of ambient temperature (cont.)

Low temperatures

■ A fall in temperature increases the thermal tripping threshold of the circuit breaker.
■ There is no risk of nuisance tripping: the threshold remains higher than the maximum operating current of the circuit (I_B) demanded by the loads.
■ It should be checked that the cable remains suitably protected, i.e. that its acceptable current (I_Z) is higher than the values shown in the following table (in amperes):

Circuit breaker rating (A)	Ambient temperature						
	-35°C	-25°C	-15°C	-5°C	+5°C	+15°C	+25°C
0.5 A	0.62	0.60	0.58	0.57	0.55	0.53	0.51
1 A	1.3	1.2	1.2	1.1	1.1	1.1	1.0
2 A	2.6	2.5	2.4	2.3	2.2	2.1	2.0
3 A	3.9	3.8	3.6	3.5	3.4	3.2	3.1
4 A	5.1	5.0	4.9	4.7	4.5	4.3	4.1
6 A	7.8	7.5	7.2	7.0	6.7	6.4	6.1
10 A	13	12	12	11	11	11	10
16 A	19	19	18	18	17	17	16
20 A	25	24	23	22	22	21	20
25 A	30	29	28	28	27	26	25
32 A	39	38	37	36	35	34	33
40 A	49	48	47	46	44	42	41
50 A	61	60	58	57	55	53	51
63 A	78	76	74	72	70	67	64

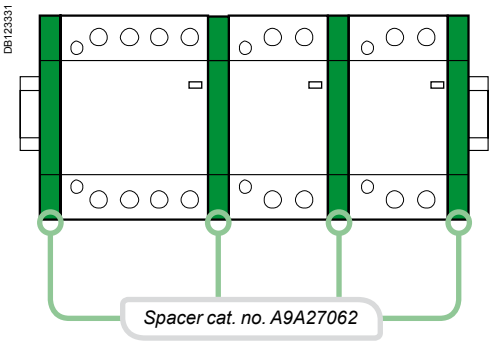
■ When the ambient temperature could vary within a broad range, both these aspects must be taken into account:
□ the difference between the maximum operating current of the circuit (I_B) and the tripping threshold of the circuit breaker for the minimum ambient temperature,
□ the difference between the strength of the cable (I_Z) and the maximum tripping threshold of the circuit breaker for the maximum ambient temperature.

iID residual current circuit breakers

■ For iID residual current circuit breakers, an ambient temperature higher than 40°C slightly reduces the acceptable main current.
■ Up to 60°C, in all cases, the iID residual current circuit breakers are satisfactorily protected against overloads by an iC60 circuit breaker of the same rating, operating under the same ambient temperature.

iCT contactors

In the case of contactor mounting in an enclosure for which the interior temperature is in a range between 50°C and 60°C, it is necessary to use a spacer, cat. no. A9A27062, between each contactor.



Splitter blocks

In the event of a temperature higher than 40°C, the maximum acceptable current is limited to the values in the table below:

Type	Temperature				
	40°C	45°C	50°C	55°C	60°C
Multiclip 80 A	80	76	73	69	66
Distribloc 63 A	63	60	58	55	53

Resistance to environmental conditions

Acti9 devices have successfully passed the environmental resistance tests specified in the building standards (IEC / EN 60898 and 60947-2 for circuit breakers, IEC / EN 61008 for residual current circuit breakers, etc.).
Most of these tests were performed under the control of official bodies in different countries: the devices therefore carry the quality mark issued by each of these bodies.

Schneider Electric has also subjected these devices to additional tests with higher requirements, to give users reliability and sturdiness that are unparalleled on the market.
These tests checked that the Constraints described below did not have any significant effect on the main functions of the devices:
- Tripping (for protection devices).
- Isolation and dielectric withstand.
- Degree of protection (IP) of the casing.
- Grip on the mounting bracket (rail).
- Manual opening / closing.

Additional checks were performed for certain tests, mentioned in the tables below.

Constraints	Atmospheric				
Type	**Humidity**	**Salt mist**	**Corrosive atmospheres**		**Dust**
Standard defining the test protocol	**IEC 60068-2-78**	**IEC 60068.2.52**	**IEC 60721-3-3**		
Constraint level applied					
	Temperature 40°C, relative humidity 93%.	Severity 2 (maritime environment).	Classification 3C2: urban regions with industrial activities, heavy traffic.	Covered swimming pools atmospheres	Plaster deposits + bumps.
Additional checks after constraint					
		Conductivity, overheating. No corrosion.			Conductivity and overheating.
Circuit breakers					
iK60N	■	■	-	-	■
iC60a/N/H/L	■	■	■	■	■
Residual current circuit breakers					
iID K	■	■	-	-	■
iID	■	■	■	Asi only	■
Residual current devices					
iC60a/N/H/L + Vigi iC60	■	■	■	Asi only	■
Protection device auxiliaries					
iOF	■	■	■	-	■
iSD	■	■	■	-	■
iOF/SD+OF	■	■	■	-	■
iMN, iMNs	■	■	■	-	■
iMX, iMX+OF	■	■	■	-	■
iMNx	■	■	■	-	■
iMSU	■	■	■	-	
Surge arresters					
iPF	-	-	-	-	-
iPRD	-	■		-	-
Mounting accessories					
Rotary handle	■	■	■	-	■
Plug-in base	■	■	■	-	■
Padlocking device	■	■	■	-	■
Safety accessories					
Screw shield	■	■	■	-	■
Interpole barrier	■	■	■	-	■
Spacer	■	■	■		
Splitter blocks					
Multiclip	■	■	■	-	■
Distribloc	■	■	■	-	■
Comb busbars for iC60	■	■	■	-	■

Resistance to environmental conditions (cont.)

	Mechanical						Storage
	Vibrations, impacts and bumps	**Vibrations**	**Bumps (repeated impacts)**	**Impacts**	**Impacts on the device**	**Falls**	**Damp heat**
	IEC 60721-3-3	**IEC 60068.2-6**	**IEC 60068-2-27**	**IEC 60068-2-27**	**IEC 62262**	**IEC 60068-2-32**	**IEC 60068-2-30**
	Class 3M4: industrial environment with considerable vibrations and impacts (e.g. proximity of machines, circulation of vehicles).	Amplitude: 3.5 mm. Acceleration: 1 g. Directions: 3 axes. Frequency: 5 to 300 Hz.	Acceleration: 15 g. Pulse duration: 6 ms.	Force: 15 g. Pulse duration: 11 ms.	IK 07: 5 impacts of 0.7 J.	Height: 0.8 m, concrete floor.	Db: - Temperature: 55°C. - Relative humidity: 95%.
	No power supply fault, no tripping.				Casing, degree of protection (IP).	Casing, degree of protection (IP).	
	-	■	■	-	■	■	
	■	■	■	■	■	■	
	-	■	■	-	■	■	
	■	■	■	■	■	■	
	■	■	■	■	■	■	
	■	■	■	■	■	■	■
	■	■	■	■	■	■	■
	■	■	■	■	■	■	■
	■	■	■	■	■	■	■
	■	■	■	■	■	■	■
	■	■	■	■	■	■	■
	■	■	■	■	■	■	■
	-	-	-	-	-		
	-	■ Frequency: 8.5 to 100 Hz.	-	-	-	■ Height: 0.6 m.	
	■	■	■	■	■	■	
	■	■	■	■	■	■	
	■	■	■	■	■	■	
	■	■	■	■	■	■	
	■	■	■	■	■	■	
	■	■	■	■	■	■	
	■	■	■	■	■	■	■
	■	■	■	■	■	■	■
	■	■	■	■	■	■	■

Temperature derating Dissipated power and voltage drop for C120

Temperature derating IEC 60947-5 / GB 14048-2

The current used for the circuit breakers varies according to the ambient temperature where the circuit breaker is located.
If the circuit breaker is installed in an enclosure or in a hot place (boiler room, etc.), the current required to trip the circuit breaker in the event of an overload will be reduced. If the ambient temperature exceeds the reference temperature of the circuit breaker, the circuit breaker will then be "derated". That is why circuit breaker manufacturers provide tables indicating the derated current (A) to be applied for given temperatures.
From examples taken from these tables, it should be noted that if the ambient temperature is less than the rated temperature, the circuit breaker is "overrated".
When several circuit breakers operating simultaneously are mounted side by side in a small enclosure, a temperature rise in the enclosure results in a reduction in the operating current.
In principle, this mutual temperature rise requires the application of an additional derating coefficient of 0.8.

The reference temperature is in a halftone colour.

Rating	Type	-25 °C -13 °F	-20 °C -4 °F	-15 °C 5 °F	-10 °C 14 °F	-5°C 23 °F	0 °C 32 °F	5 °C 41 °F	10 °C 50 °F	15 °C 59 °F	20 °C 68 °F	25 °C 77 °F	30 °C 86 °F	35 °C 95 °F	40 °C 104 °F	45 °C 113°F	50 °C 122 °F	55 °C 131 °F	60 °C 140 °F
20 A	**1P**	24.60	24.18	23.75	23.32	22.87	22.42	21.96	21.48	21.00	20.51	20	19.48	18.95	18.40	17.83	17.24	16.64	16.01
	2P	24.83	24.39	23.94	23.48	23.02	22.54	22.06	21.56	21.05	20.53	20	19.45	18.89	18.30	17.70	17.08	16.44	15.76
	3P	24.45	24.04	23.63	23.21	22.77	22.34	21.89	21.43	20.97	20.49	20	19.50	18.99	18.46	17.91	17.35	16.77	16.17
30 A	**1P**	36.57	35.97	35.35	34.73	34.09	33.45	32.79	32.11	31.42	30.72	30	29.26	28.51	27.73	26.93	26.10	25.25	24.37
	2P	36.85	36.23	35.59	34.94	34.28	33.60	32.91	32.21	31.49	30.75	30	29.23	28.43	27.61	26.77	25.90	25.00	24.07
	3P	36.36	35.78	35.18	34.58	33.96	33.33	32.69	32.04	31.38	30.70	30	29.29	28.56	27.81	27.04	26.25	25.43	24.59
40 A	**1P**	48.77	47.96	47.14	46.31	45.46	44.60	43.72	42.82	41.90	40.96	40	39.02	38.00	36.97	35.90	34.80	33.66	32.48
	2P	50.50	49.55	48.58	47.59	46.58	45.55	44.50	43.42	42.31	41.17	40	38.79	37.55	36.26	34.93	33.54	32.09	30.58
	3P	50.05	49.14	48.21	47.26	46.29	45.30	44.29	43.26	42.20	41.12	40	38.85	37.67	36.45	35.19	33.87	32.51	31.09
50 A	**1P**	61.87	60.79	59.69	58.57	57.42	56.25	55.06	53.84	52.59	51.31	50	48.65	47.27	45.84	44.37	42.85	41.27	39.62
	2P	63.92	62.67	61.39	60.09	58.75	57.39	55.99	54.55	53.08	51.56	50	48.39	46.72	44.99	43.19	41.31	39.35	37.28
	3P	62.05	60.95	59.83	58.69	57.53	56.35	55.14	53.90	52.63	51.33	50	48.63	47.22	45.77	44.27	42.72	41.11	39.43
60 A	**1P**	75.66	74.25	72.80	71.33	69.82	68.28	66.71	65.10	63.44	61.75	60	58.20	56.35	54.43	52.44	50.37	48.22	45.96
	2P	75.47	74.07	72.64	71.18	69.69	68.17	66.62	65.03	63.40	61.72	60	58.23	56.40	54.51	52.55	50.52	48.40	46.19
	3P	74.41	73.10	71.76	70.40	69.01	67.59	66.14	64.66	63.15	61.59	60	58.36	56.68	54.94	53.15	51.30	49.37	47.37
80 A	**1P**	95.66	94.21	92.74	91.25	89.73	88.18	86.61	85.00	83.37	81.70	80	78.26	76.48	74.66	72.80	70.88	68.91	66.89
	2P	95.76	94.31	92.82	91.32	89.79	88.23	86.65	85.04	83.39	81.71	80	78.25	76.46	74.62	72.74	70.81	68.83	66.79
	3P	95.02	93.63	92.21	90.78	89.32	87.83	86.32	84.79	83.22	81.63	80	78.34	76.64	74.91	73.13	71.31	69.44	67.52

Dissipated power and voltage drop IEC 60947-5 / GB 14048-2

What is the dissipated power per pole?

The following table shows the dissipated power of the device in Watts for each rating, per pole, at In:

Rating (A)	20	30	40	50	60	80
C120 (W/pole)	2.8	3.4	3.5	3.6	4	4.5

What is the voltage drop per pole?

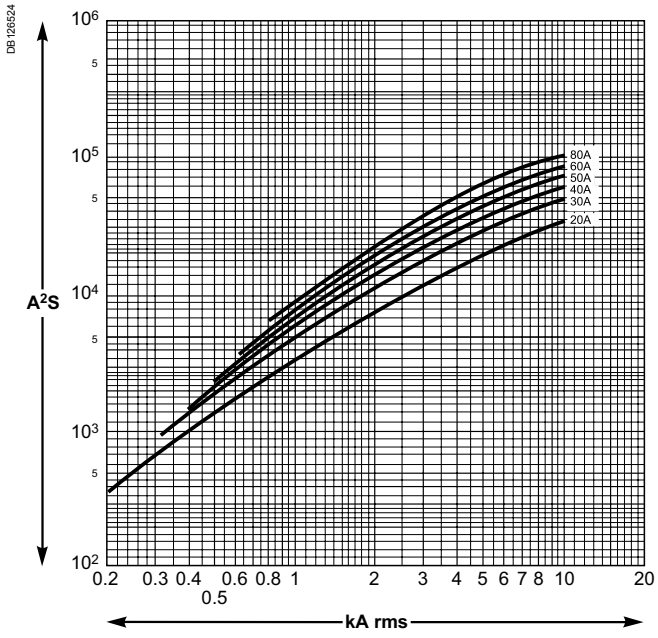
The following table shows the voltage drop of the device in mV for each rating, per pole, at In:

Rating (A)	20	30	40	50	60	80
C120 (mV/pole)	140	107	88	72	65	57

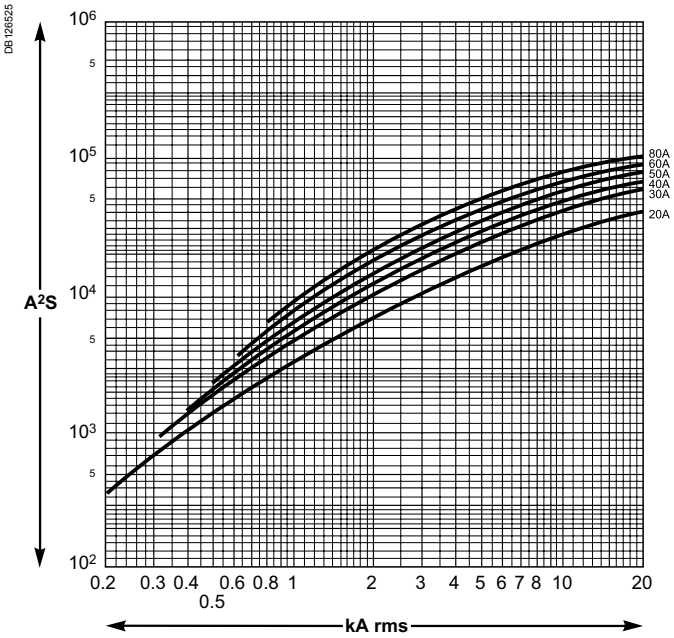
Short-circuit current limitation for C120

Thermal stress curve C

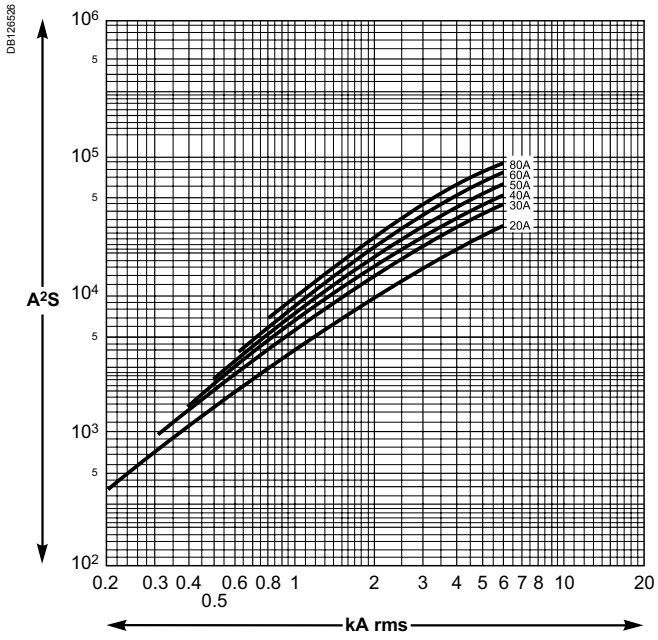
Ue: 240 V ~ 1P
Ue: 415 V ~ 2, 3P



Ue: 240 V ~ 2, 3P



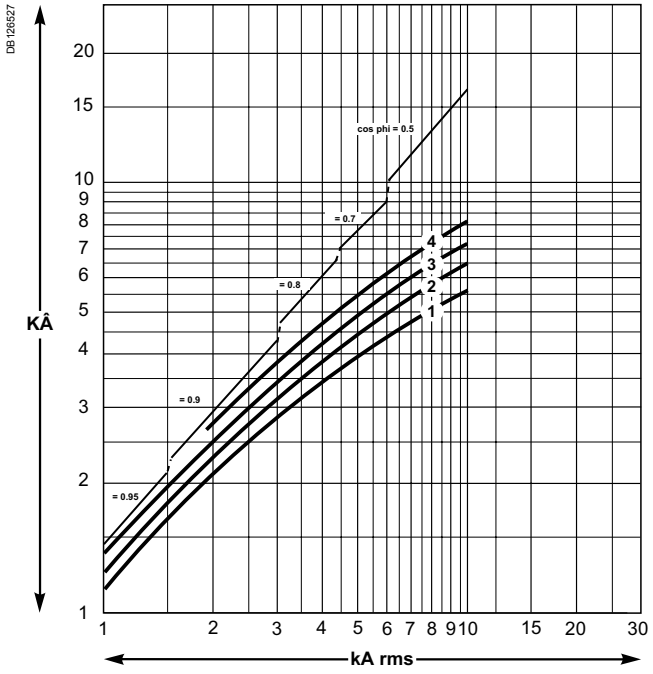
Ue: 440 V ~ 2, 3P



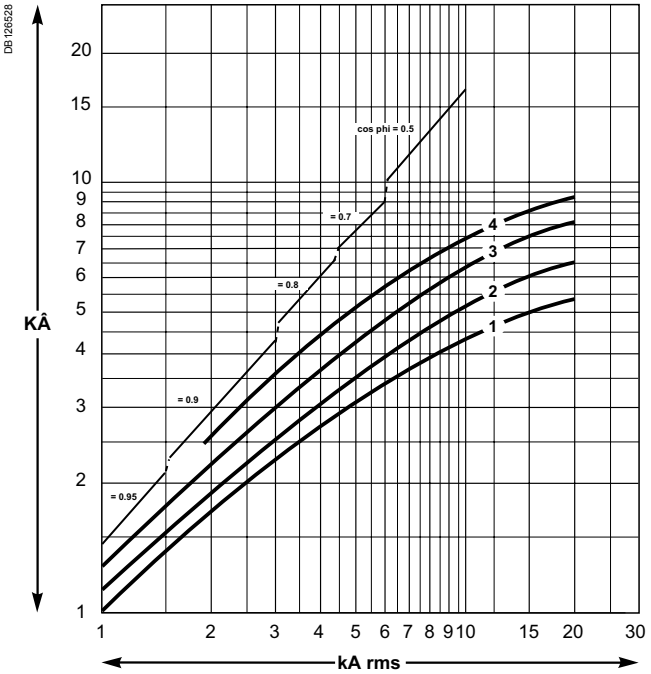
Short-circuit current limitation for C120

Peak current - 1P: 20 A - 2P: 30-40 A - 3 P: 50-60 A - 4P: 80 A

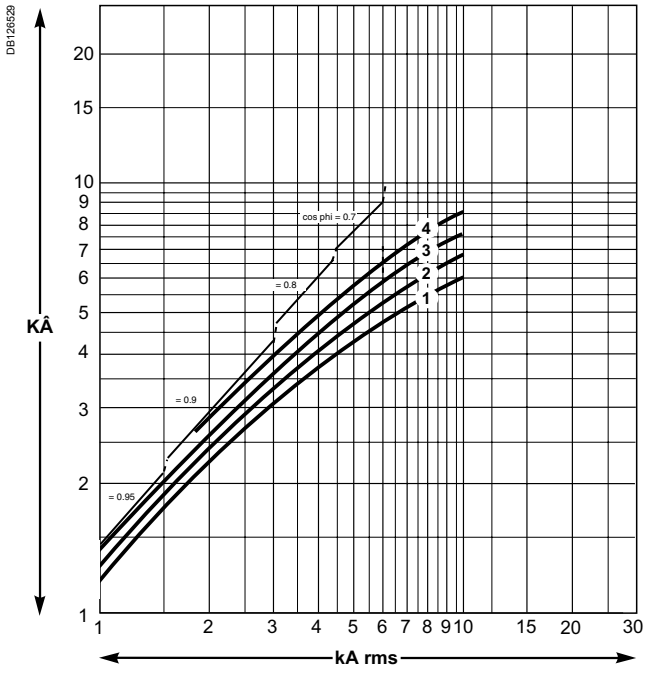
Ue: 240 V ∼ 1P
Ue: 415 V ∼ 2, 3P



Ue: 240 V ∼ 2, 3P



Ue: 440 V ∼ 2, 3P



Tripping curves for C120

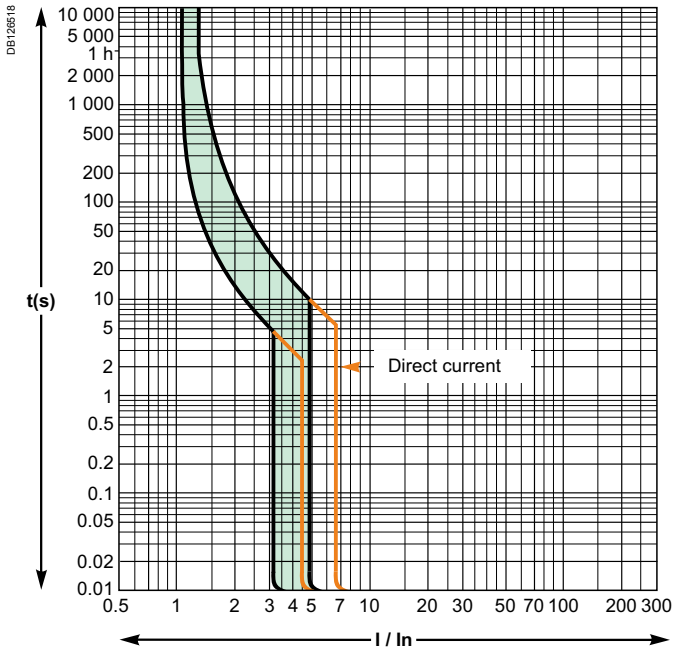
Tripping curves IEC 60947-5 / GB 14048-2

The operating range of the magnetic trip unit is included for:
- curve B: between 3.2 In and 4.8 In
- curve C: between 7 In and 10 In
- curve D: between 10 In and 14 In.

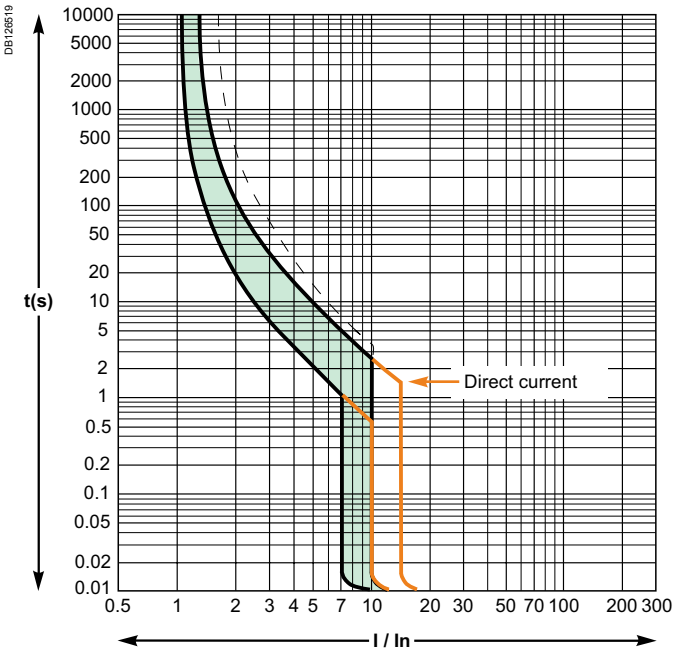
The curves show:
- the cold thermal tripping limits (25 °C), charged poles
- the electromagnetic tripping limits, 2 charged poles

C120

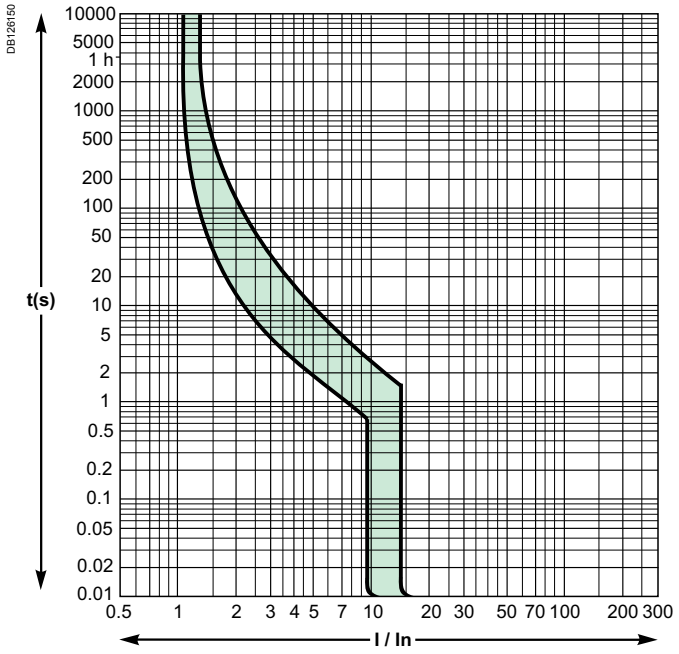
Curve B



Curve C



Curve D



iCT contactors

Use of contactors from 16 to 100 A

For automation needs in the housing, tertiary and industrial sectors, the range of modular CT contactors is used for:

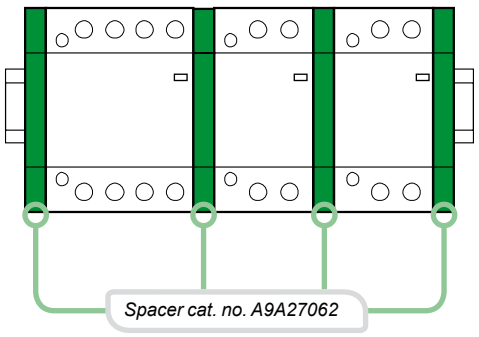
- ■ Power control of final circuits for housing and the tertiary sector:
  - □ lighting (luminous signs, shop windows, safety lighting, etc.)
  - □ heating, heat pumps, ovens
  - □ hot water for domestic use
  - □ small utility motors (pumps, fans, barriers, garage doors, etc.)
  - □ emergency stops and safety systems
  - □ air conditioning
- ■ Energy distribution control:
  - □ load shedding and restoration
  - □ source changeover, etc.

Characterisation on load types

■ Standard IEC 61095 applies to electromechanical contactors for domestic and similar purposes. It differs from standard IEC 60947.4 (designed for industrial applications) by specific requirements relating to safety of persons and equipment in premises and corridors accessible to the general public.

Applications	Industrial: IEC 60947.4	Domestic: IEC 61095
Motor	AC3	AC7b
Heating	AC1	AC7a
Lighting	AC5a and b	AC5a and b

DB123331



Use for temperatures between 50°C and 60°C

When contactors are mounted in enclosures with an internal temperature of between 50°C and 60°C, a spacer, catalogue number A9A27062, must be placed between each contactor.