GENERAL CATALOGUE

Solutions for Power, Control, Safety & Energy Efficiency

2021
2022

POWER SWITCHING

POWER MONITORING

When **energy** matters

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Innovative Power Solutions

Contents

Ensuring the energy performance of electrical installations, wherever it is critical

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SYDV 514

For almost 100 years, Socomec has continued to design and manufacture its core products in Europe. Notably solutions for its primary mission: the availability, control and safety of low voltage electrical networks.

As an independent manufacturer, the group is committed to constant innovation to improve the energy performance of electrical installations in infrastructures as well as industrial and commercial sites. Throughout its history, Socomec has constantly anticipated market changes by developing cutting-edge technologies, providing solutions that are adapted to customer requirements and fully in keeping with international standards. “Optimising the performance of your system throughout its life cycle” - this is the commitment carried out every day by the Socomec teams around the world, wherever your business is located.

1
independent manufacturer

3,500 m²
of test platforms

One of the leading independent power testing labs in Europe

10 %
of turnover invested in R&D

Always at the cutting-edge of technology for innovative, high quality products

110,000
on-site interventions per year

Nearly 400 experts in commissioning, technical audit, consultancy and maintenance

Your energy, our expertise

SITE 1105

Power switching

Managing power and protecting people, equipment and installations

Active in the industrial switching market since its foundation in 1922, Socomec is today an undisputed leader in the field of low voltage switchgear, providing expert solutions that ensure:

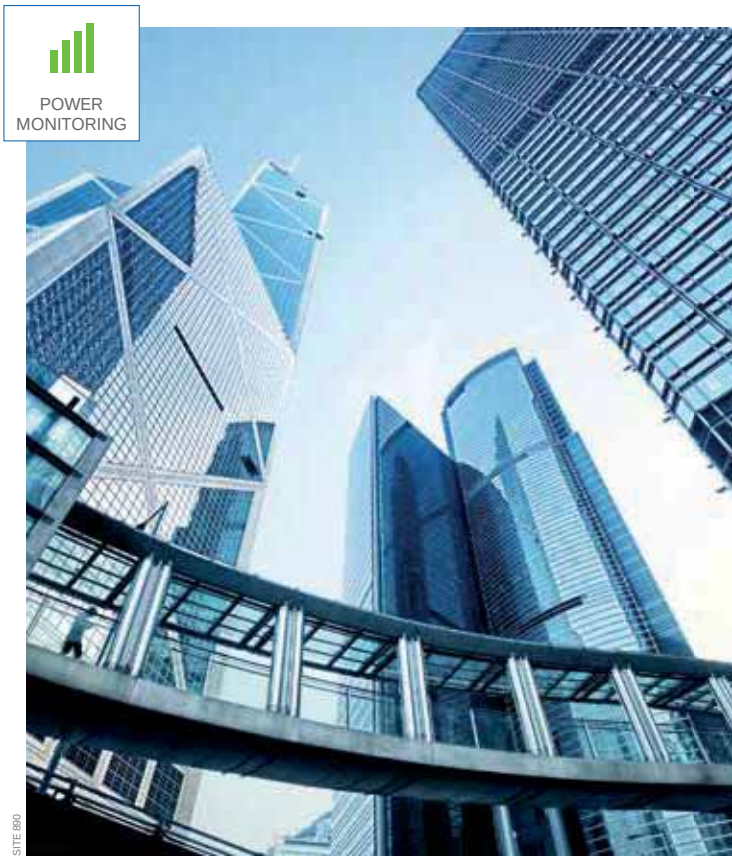
- isolation and on load breaking for the most demanding switching applications,
- continuity of the power supply to electrical facilities via manual remotely operated or automatic transfer switching equipment,
- protection of persons and assets via fusebased and other specialist solutions.

Power monitoring

Improving energy performance and monitoring installations

Socomec solutions - from current sensors to power meters and from IOT to energy management software - are driven by experts in energy performance. They meet the requirements of facility managers and operators of commercial, industrial and critical buildings to enable and facilitate:

- the measurement of energy consumption, the identification of sources of excess consumption and the generation of awareness amongst occupants as to their impact,
- the utilisation of the best available tariffs, utility bill checks and the accurate distribution of energy billing between consumer entities,
- the limitation of reactive energy and avoidance of associated tariff penalties,
- capacity management and the evolution of the electrical installation,
- improvements to power availability by monitoring and detecting insulation faults.



SITE 880

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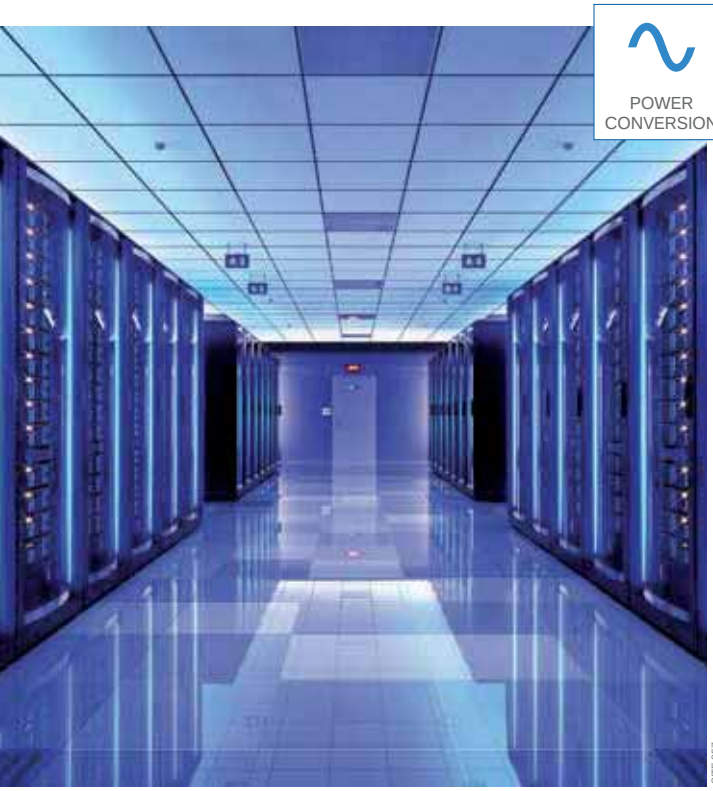


SITE 857

Power conversion

Ensuring the availability and storage of high quality power

With its wide range of continuously evolving products, solutions and services, Socomec are recognised experts in the cutting-edge technologies used for ensuring the highest availability of the electrical power supply to critical facilities and buildings, including:

- static uninterruptible power supplies (UPS) for high-quality power free of distortions and interruptions occurring on the primary power supply,
- changeover of static, high availability sources for transferring the supply to an operational back-up source,
- permanent monitoring of the electrical facilities to prevent failures and reduce operating losses,
- energy storage for ensuring the proper energy mix of buildings and for stabilisation of the power grid.

Expert services

Enabling available, safe and efficient energy

Socomec is committed to delivering a wide range of value-added services to ensure the reliability and optimisation of end-users' equipment:

- prevention and service operations to lower the risks and enhance the efficiency of operations, for high-quality power free of distortions and interruptions occurring on the primary power supply,
- measurement and analysis of a wide range of electrical parameters leading to recommendations for improving the site's power quality,
- optimisation of the total cost of ownership and support for a safe transition when migrating from an old to a new generation of equipment,
- consultancy, deployment and training from the project engineering stage through to final procurement,
- performance assessment of the electrical installation throughout the life cycle of the products via analysis of data transmitted by connected devices.

APPLI 759

Your partner in expert services

Socomec is committed to delivering a wide range of value-added services to ensure the reliability and optimisation of end-users' equipment during its life cycle

- Prevention and service operations to reduce risk and enhance equipment efficiency.
- Measurement and analysis of a wide range of electrical parameters leading to recommendations for power quality improvement.
- Consultancy, deployment and training from the project engineering stage to the final procurement stage.

Specialists - at your service

Our Services team comprises qualified engineers whose mission is to ensure the correct operation of your equipment. We offer a comprehensive support service package which gives you complete peace of mind: commissioning, on-site testing, preventive maintenance visits, 24-hour call out and rapid on-site repairs, original spare parts, power quality and energy efficiency audits, consultancy, design and implementation of installation modifications and updates.

Our Services team is the most reliable partner when it comes to advising you on the maintenance of Socomec equipment and providing resolution to any problems in accordance with current environmental standards and procedures.

Professional tools

Our Services team is provided with the latest essential equipment including:

- Personal Protective Equipment (protective goggles, helmet, insulated gloves, fireproof jacket, safety shoes, earplugs…),
- laptop embedded with all software required to optimise equipment performance,
- measuring equipment calibrated annually by our metrology department (multimeter, digital scope, current clamps, infra-red camera, power analyser).

Reports

An exhaustive report is generated for each intervention (including commissioning, preventive maintenance and troubleshooting) which is then automatically sent to the customer and synchronised with our systems.

Remote diagnostics

In case of any anomaly, an automatic notification is sent to a local call centre for proactive online troubleshooting.

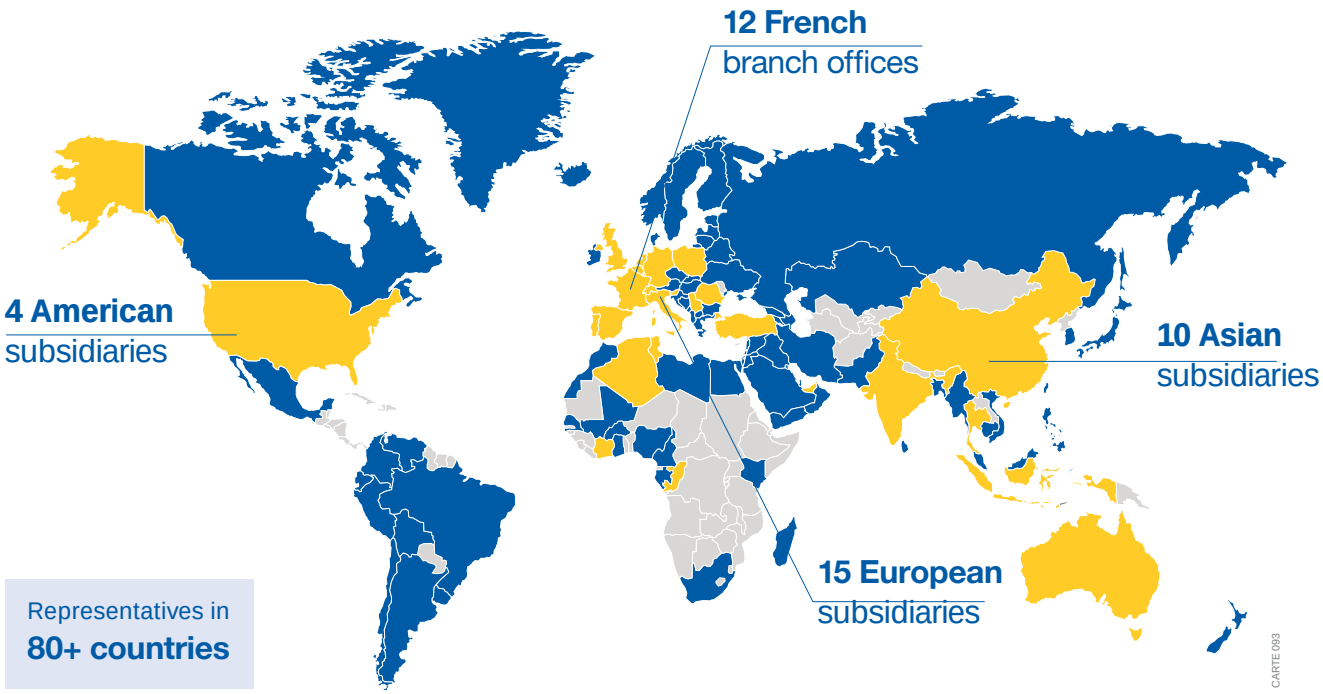
Availability of original spare parts

The various original parts and components that we stock guarantee that any faulty equipment can be rapidly brought back online, whilst maintaining its original performance and reliability.

Key figures

Nearly 400 Socomec experts - supported by 200 engineers and technicians from across our distributor network - can provide the solutions to your specific needs.

- Subsidiaries
- Distributors
- Contact us



On-site service management

110,000
service operations per year (mainly preventive visits)

98 %
Service Level Agreement compliance rate

Technical hotline network

25+
languages spoken

3
advanced technical support centres

110,000+
incoming calls handled per year

Certified expertise

8,000
hours of technical training undertaken every year (product, methodology and safety)

Expert in power conversion

maximising power quality and availability

Socomec at the forefront of innovation

European design and production
Socomec's products are designed and developed by our talented team of in-house engineers with their real depth and wide knowledge in power electronics and digital controls. Our expertise in manufacturing - combined with the use of only the highest quality components in the most efficient production and testing processes – means that when it comes to reliability our products are unrivaled.

Socomec factories join the digital world
Since 2014, Socomec has been investing to bring its manufacturing facilities in line with industry 4.0 standards. Beyond lean manufacturing, the digitalisation of production means that we can ensure the delivery of a competitive offering with continuously improving service levels whilst also supporting the creation of more personalised products.

Factory Acceptance Test (FAT)
The FAT service is available to all customers who want to audit their order before it leaves the factory. With the support of Socomec Platform Engineers and dedicated infrastructure, several live product tests are available, including:
- standard tests to verify product performance,
- custom tests according to your precise requirements.

3 levels of protection according to your criticality

PRIME
Trustworthy power
Reliable and cost effective protection to assure operational continuity

SUPERIOR
Unrivalled power performance
Best in class & certified performance to optimise usage and Total Cost of Ownership

ULTIMATE
Fault tolerant power without compromise
Fully redundant architecture for maximum availability, minimum MTTR and risk free maintenance

A cutting-edge laboratory

the backing of an expert

Created in 1965, SOCOMEC's laboratory brings its expertise to guarantee the reliability and the conformity of our products and solutions.
Since 2015, the laboratory renamed Tesla Lab – Power Testing and Certification in 2015, offers its testing and certification services to all its customers.

CORPO 441 A

Proven expertise

Tesla Lab is an independant laboratory specialised in testing of LV switchgear, components and switchgear assemblies.

4 M€ has been invested since 2011 in this 2000 m² laboratory, where 30 experts guarantee the quality of the performed tests, making the Tesla Lab one of the most modern laboratories in Europe.

Vast range of tests

The laboratory has a 100 MVA (I_{cc} 100 kA rms 1 s) short-circuit platform, three 10 kA overload platforms and many other test facilities covering 2000 m² for:

- functional tests,
- mechanical tests: endurance,
- dielectric tests,
- environmental tests: vibration,
- Ingress Protection (IP),
- temperature rise tests up to 60 °C ambient.

International partnership

The laboratory is recognised by the major certification bodies worldwide: member of ASEFA and LOVAG, it is accredited by COFRAC, UL (CTDP), CSA (shared certification) and DEKRA (WMT).

The partnership with many international certification bodies guarantees the quality and safety requirements in each country.

Implementation of standard IEC / EN 61439

Electrical switchgear manufacturers

IEC/EN 61439 standards define the requirements of "Low voltage switchgear assemblies" as well as the tests necessary to ensure the achievement of the specified levels of performance. The compliance with these standards gives a guarantee of safety and performance to the user of the equipment

IEC/EN 61439 READY

An original manufacturer according to IEC / EN 61439 standards

Socomec offers a wide range of original manufacturer solutions complying with IEC 61439 standards.

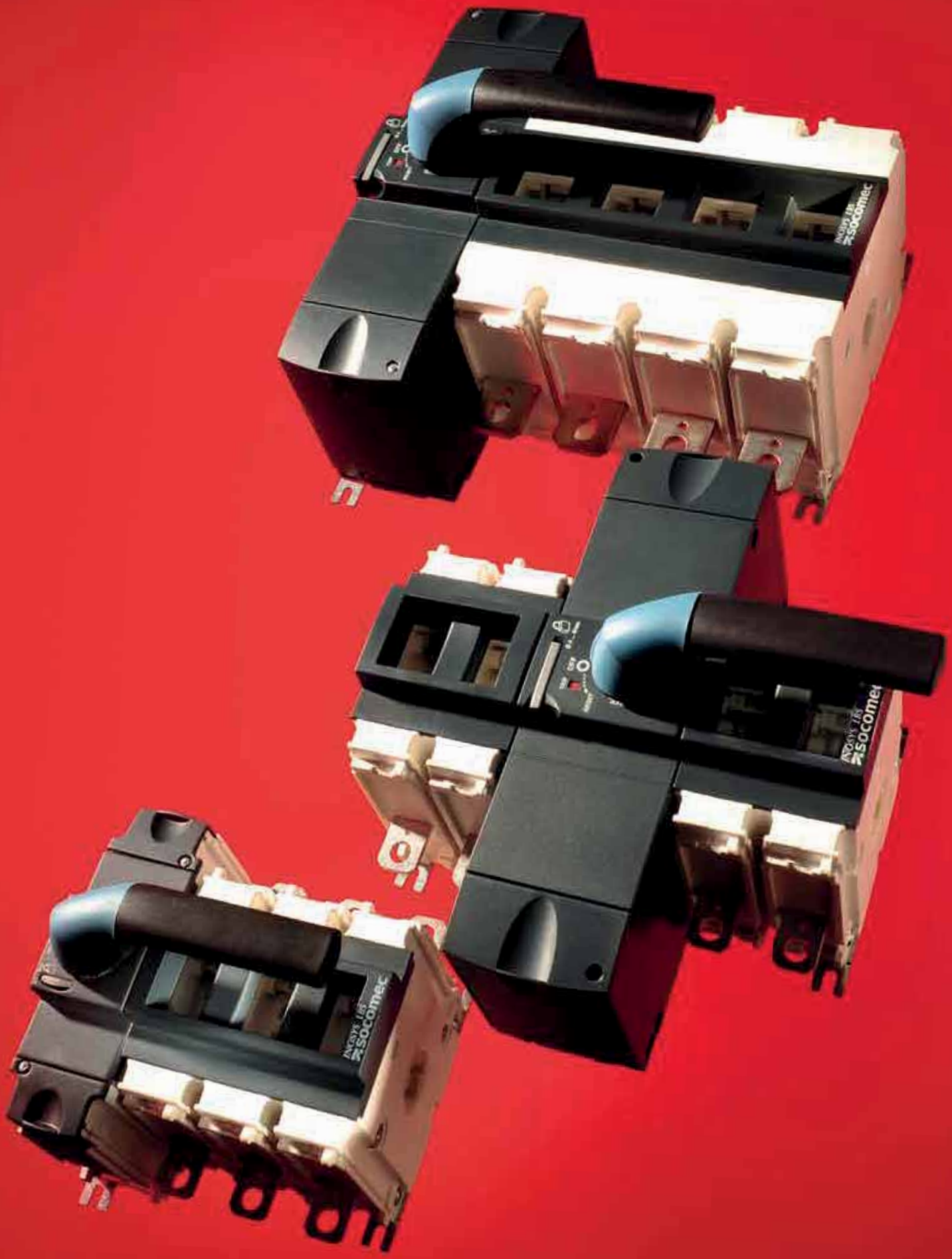
- FLEXYS and CADRYS cabinet systems designed for distribution panel applications.
- Local switching and equipment cabinets covering requirements in power availability and safety.
- Components for integration.

Tesla Lab accredited by COFRAC

With its world-class testing facilities, the Tesla Lab can perform all of the tests required by IEC/EN 61439 standards for switchgear assemblies

We can therefore help you to:

- define a verification program,
- perform conformity tests,
- issue test reports in order to get certification from third party certification bodies (ASEFA, LOVAG, DEKRA, UL, CSA, COFRAC, ASTA…).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Load break switches

Load break switches

SIRCO M/MV
16 to 160 A
p. 20

SIRCO
SIRCO AC
125 to 5000 A
p. 38

INOSYS LBS
160 to 800 A
p. 84

Load break switches for DC and PV applications

SIRCO PV
100 to 3200 A
p. 60

INOSYS LBS
160 to 630 A
p. 84

Specific applications

Load break switches:
- with overrated neutral,
- high short-circuit withstand,
- multipolar,
- for earthing,
- for 1000 V network,
- motorised models.

p. 96

Find out more

Enclosed devices
SOCOMEC offers a range of pre-assembled steel and polyester enclosures.

p. 407

Special requests
SOCOMEC makes specific products.
We will help you to find the best solution for your application.
Contact your local sales office.

Load break switches for all your applications

Machine control, power distribution and photovoltaic installations

Operating in the electrical breaking technology market since 1922, SOCOMEC is both a global leader and unrivalled benchmark reference.

The SOCOMEC load break switches range is one of the largest on the market.

INOSYS LBS is the latest range of load break switches especially designed and tested for most demanding applications.

It completes the two lead product ranges ranges in this category: SIRCO M and SIRCO.

If the three ranges INOSYS LBS, SIRCO and SIRCO M cover most needs, the complete range of SOCOMEC load break switches meets every application.

A specific need?

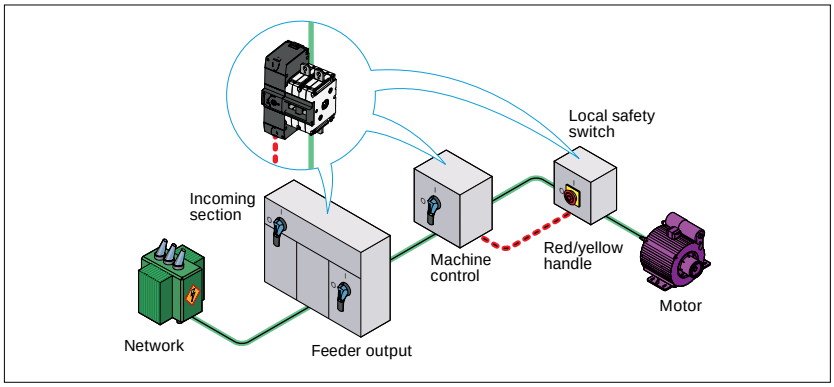
We have developed many customised solutions: switches with overrated neutral, high short circuit withstand, multipolar switches, earthing switches, switches for 1000 V networks, special motorised switches, etc.

Whatever your application, you will find the right solution in the following pages!

appli_312_a

Discover all our products in the selection guides in the following pages.

SOCOMEC load break switches in power distribution and machine control applications



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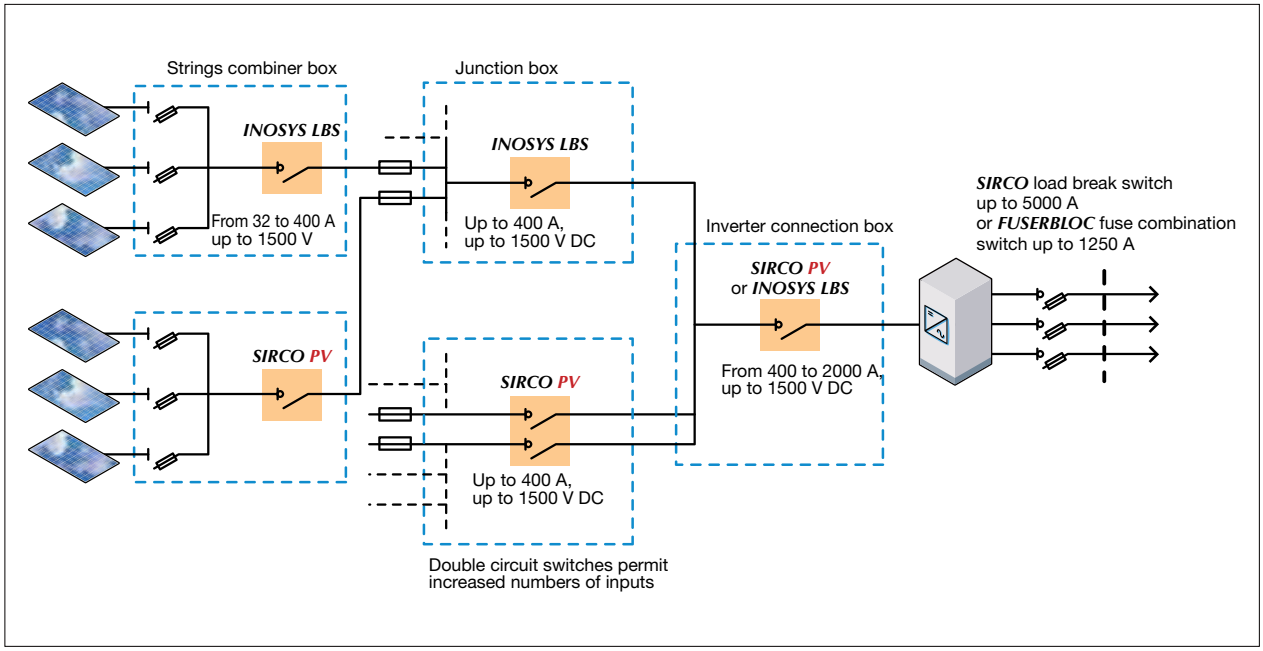
SOCOMEC load break switches in photovoltaic applications



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Why choose a load break switch designed for photovoltaic applications?

gamme_574

SIRCO MC PV, SIRCO PV and INOSYS LBS devices are available in IEC and UL versions.

Safe operations

To ensure electrical isolation during maintenance operations, or for emergency breaking to prevent a risk of fire or electrical shock, it is essential that dedicated photovoltaic switches are used.

These devices must be installed at each functional level of the installation based on its architecture.

In order to disconnect a direct current photovoltaic string, generator or UPS, only INOSYS LBS, SIRCO PV or SIRCO MC PV devices can:

- Isolate the associated high DC voltages ,
- Guarantee safe on-load disconnection several thousand times across the full range of DC currents linked to daily fluctuations in sunlight, up to 1500 VDC.

Devices designed for extreme conditions

Socomec load break switches have been designed for industrial use. They are extremely robust, with casings made from glass fibre-reinforced thermoset materials, bringing numerous benefits:

- Thermal stability, unlike some thermoplastics,
- Excellent resistance to high temperatures,
- Good electrical characteristics: Arc and insulation resistance,
- Good mechanical characteristics: Dimensional stability and rigidity over time.

These benefits are particularly important in photovoltaic installations, where the temperature may be below 0°C or above 50°C.

Back-to-back design, an innovative solution

The SOCOMEC range of photovoltaic load break switches enables simultaneous on-load disconnection of two circuits using a single handle.

Advantages

- **Space saving:** The overall width is the same as that of 3 or 4 pole devices. This enables significant savings, as compared to the use of two separate devices.
- **Simple connection** and integration.
- **Increasing the voltage:** Connecting the two devices in series allows on-load disconnection of voltages above 1000 VDC.
- **Doubling the rating:** By connecting the two devices in parallel.

What are the standards that apply to photovoltaic installations?

For installations

Photovoltaic installations are governed by international standards such as IEC and UL. These standards provide the guidelines for commissioning a photovoltaic installation.

- IEC 60364-7-712: Electrical installations of buildings — Requirements for special installations or locations — Solar photovoltaic (PV) power supply systems.
- IEC 62548: Installation and safety requirements for photovoltaic (PV) generators.

For breaking devices

To date there is no specific IEC standard. Manufacturers must therefore refer to standard IEC 60947-3. **In the USA, the reference standard is UL98B.** This standard, which is more stringent than IEC 60947-3, requires strict testing, in particular concerning temperatures and resistance to electrical arcing.

SIRCO PVs have been developed in compliance with both IEC 60947-3 and UL98B.

Selection guide

Load break switches

Which application? ▶ Which function?

	Machine control	
		
	SIRCO M **16 to 125 A** *p. 20*	***SIRCO MV*** **100 to 160 A** *p. 20*
Applications		
Main switchboard	•	•
Distribution panel	•	•
Emergency load break	•	•
Genset output	•	•
Network coupling	•	•
Local safety load break	•	•
Machine control	•	•
Enclosed switches	•	•
Functions		
3/4 pole load break switch	•	•
6/8 pole load break switch	•	
3/4 pole transfer switch (I-0-II)	•	
3/4 pole transfer switch (I-I+II-II)	•	
Characteristics		
Operation		
Manual (rotating)	•	•
Manual toggle	•	
Motorised		
Direct operation handle		
Front	•	•
External operation handle		
Front	•	•
Right side	•	•
Left side	•	•
Indication of breaking		
Positive break indication	•	•
Visible contacts		•
Switch body		
Modular	•	•

(1) Please consult us.

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Which operation handle? → Which type of breaking? → Which switch body?

	Power distribution	
		
	SIRCO **125 to 5000 A** *p. 38*	***SIRCO AC*** **200 to 4000 A** *p. 38*
	•	•
	•	•
	•	•
	•	•
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	•	•
	•	•
	See SIRCOVER	*See SIRCOVER*
	See SIRCOVER	*See SIRCOVER*
	•	•
	See SIRCO MOT AT	*See SIRCO MOT AT*
	•	•
	•	•
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Selection guide

Load break switches

PV applications

Which application? ▶ Which function?

	Photovoltaics	
		
	SIRCO PV IEC **100 to 2000 A** *p. 60*	
Applications		
Emergency load break	•	
Photovoltaic load break	•	
Fitted enclosures	•	
Fonctions		
3/4 pole load break switch	•	
6/8 pole load break switch	•	
Caractéristiques		
Operation		
Manual (rotating)	•	
Direct operation handle		
Front	•	
Side		
External operation handle		
Front	•	
Left side		
Indication of breaking		
Positive break indication	•	
Visible contacts		
Switch body		
Modular		

Which operation handle? → Which type of breaking? → Which switch body?

	DC and photovoltaics
	
	INOSYS LBS IEC **160 to 630 A** *p. 84*
	•
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SIRCO M and *MV*

Universal load break switches

from 16 to 160 A

*4 pole **SIRCO M***
direct operation

*4 pole **SIRCO MV***
direct operation

Function

SIRCO M and MV are manually operated modulable and modular multipolar load break switches.

They make and break under load conditions and provide safety isolation for any low voltage circuit, particularly for machine control circuits.

Through the use of accessories, SIRCO M can be transformed into multipolar load break or 3/4 pole changeover switches. SIRCO M changeover switches provide on load changeover switching between two sources or two low voltage power circuits, as well as their safety isolation.

Advantages

Total integration

The SIRCO M and MV fully integrate isolation, breaking and switching functions.

Within a single product, SIRCO M offers front, right side or left side operation. Their highly functional design enables the product to be easily transformed from a load break switch to a changeover switch, offering a highly innovative modular solution for numerous applications.

A wide range of accessories

A single standard module, which can be complemented with a choice of accessories, offers a range of advantages:

- Simplicity when choosing the device.
- Flexibility to adapt to the most varied applications.
- Reduction in the cost of management and storage.

Upgradeability

Its wide range of accessories means that the SIRCO M can be upgraded even after it has been commissioned, enabling future requirements to be met.

Compliance with major certifications and approvals

The SIRCO M and MV range of load break switches have been designed, qualified and tested according to the criteria defined by standards IEC 60947-3, UL508 and UL98.

This process guarantees a high quality level for the product which is fully adapted to arduous operating environments.

General characteristics

- Double break per pole.
- Mounting options: DIN rail, panel or modular panel with 45 mm front cut out.
- IP20 accessories and device.
- Severe utilisation categories (AC-22 and AC-23).

Specific characteristics

SIRCO M:

- Positive break indication.
- Contact point technology.
- Product can be mounted directly on the door or panel side; see "Door mounting kit" in the accessory section.

SIRCO MV:

- Visible double breaking based on a sliding contact system (SIRCO type, see page “SIRCO”).
- Positive break indication.

The solution for

- > Main incoming load break
- > Distribution load break
- > Machine control
- > Local safety load break

Strong points

- > Total integration
- > A wide range of accessories
- > Upgradeability
- > Compliance with major certifications and approvals
- > Specific characteristics

Conformity to standards

- > IEC 60947-3
- > Other standards available

**See pages SIRCO UL and CSA range*

Approvals and certifications(1)

(1) Product reference on request.

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What you need to know

SIRCO M

- SIRCO M can be operated in 3 different ways:


sircm_028.eps

Complete switch body for toggle operation


sircm_029.psd

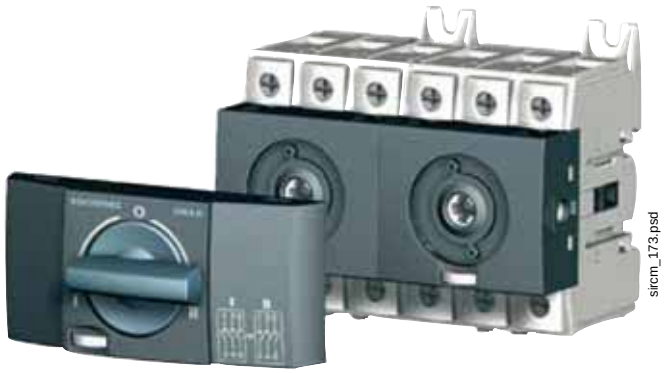
Direct front operation with handle


sircm_030.eps

External operation
front, left side or right side

- The SIRCO M is a 3 pole load break switch which is available from 16 to 125 A. It can be combined with a switched 4th pole, an unswitched neutral or PE pole and pre-break and signalling auxiliary contacts.

- From 16 to 125 A, through the wide range of available accessories, it is possible to convert a 3 pole load break switch into a 4, 6 or 8 pole load break switch or a 3/4 pole changeover switch. Through use of its door mounting kit, SIRCO M load break switches can be mounted on the panel door.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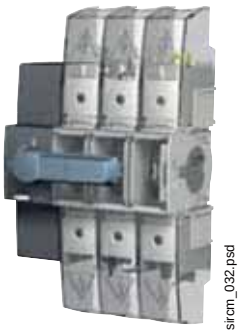
Changeover switches I - 0 - II

SIRCO MV

- 3 operations are available: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Direct front operation


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External right side operation


sircm_033.eps

External front and left side operation

- SIRCO MV can be ordered in 3 or 4 pole from 100 to 160 A.
- Two types of auxiliary contacts are available:
  - U-type pre-break,
  - M-type for signalisation.

References

SIRCO M

***SIRCO M* - from 16 to 125 A**									
Rating (A) / Frame size	**No. of poles**	**Complete switch body toggle operation**	**Switch body**	**Direct handle**	**Door interlocked external front and right side handle[6]**	**External left side handle[6]**	**Front external handle for changeover switches[6]**	**Shaft for external front and side handle[6]**	**4th pole**
16 A / M1	3 P	2205 **3000**	2200 **3000**[1][2][3]	M00 type Blue 2299 **5012** Red 2299 **5013**	S00 type I -0 Black IP55 1471 **1111**[4] Black IP65 1473 **1111**[4] Red/Yellow IP65 1474 **1111**[4]	S00 type I -0 Black IP65 147A **5111** Red/Yellow IP65 147B **5111**	S00 type I - 0 - II Black IP65 1473 **1113**[4] I - I+II - II Black IP65 1473 **1114**[4]	3/4 P ≤ 125 A 6/8 P & COS ≤ 80 A S0, S00 type 150 mm 1407 **0515** 200 mm 1407 **0520** 320 mm 1407 **0532** 6/8 P & COS 100 ... 125 A S00 type 150 mm 1409 **0615** 200 mm 1409 **0620** 320 mm 1409 **0632**	2200 **1000**
20 A / M1	3 P	2205 **3001**	2200 **3001**[1][2][3]						2200 **1001**
25 A / M1	3 P	2205 **3002**	2200 **3002**[1][2][3]						2200 **1002**
32 A / M1	3 P	2205 **3003**	2200 **3003**[1][2][3]						2200 **1003**
40 A / M1	3 P	2205 **3004**	2200 **3004**[1][2][3]						2200 **1004**
63 A / M2	3 P	2205 **3006**	2200 **3006**[1][2][3]						2200 **1006**
80 A / M2	3 P	2205 **3008**	2200 **3008**[1][2][3]						2200 **1008**
100 A / M3	3 P		2200 **3010**[1][2][3]	M01 type Blue 2299 **5032**	S0 type I -0 Black IP55 1481 **1111**[4] Black IP65 1483 **1111**[4] Red/Yellow IP65 1484 **1111**[4]	S0 type I -0 Black IP65 148A **5111** Red/Yellow IP65 148B **5111**	S00 type I - 0 - II Black IP65 1473 **0113** I - I+II - II Black IP65 1473 **0114**		2200 **1010**
125 A / M3	3 P		2200 **3011**[1][2][3]						2200 **1011**

(1) Front and side operation.
(2) For a 6-pole device in direct operation, order 2 x 3 pole device + conversion kit (for external operation, add the shaft + the handle).
(3) For an 8-pole device in direct operation, order 2 x 3 pole device + 2 x 4th poles + conversion kit (for external operation, add the shaft + the handle).
(4) Defeatable handle.
(5) Top and bottom.
(6) Other handles & shafts are available. Please see accessory pages.

SIRCO M

SIRCO M - **from 16 to 125 A**

Rating (A) / Frame size	No. of poles	Complete switch body toggle operation	Switch body	Unswitched neutral pole	Unswitched protective earth module	Auxiliary contact	Terminal shrouds	Door mounting kit
16 A / M1	3 P	2205 **3000**	2200 **3000**(1)(2)(3)	1 P 2200 **5005**	1 P 2200 **9005**	M type 1 module NO + NC 2299 **0001** 1 module 2 NO 2299 **0011**	1 P 2294 **1005**(4) 3 P 2294 **3005**(4)	3/4 P Complete protection IP2X 2299 **3309**(5) Compact design 2299 **3409**(5) 6/8 P Steel support 2299 **3609**(5)
20 A / M1	3 P	2205 **3001**	2200 **3001**(1)(2)(3)					
25 A / M1	3 P	2205 **3002**	2200 **3002**(1)(2)(3)					
32 A / M1	3 P	2205 **3003**	2200 **3003**(1)(2)(3)					
40 A / M1	3 P	2205 **3004**	2200 **3004**(1)(2)(3)					
63 A / M2	3 P	2205 **3006**	2200 **3006**(1)(2)(3)	1 P 2200 **5009**	1 P 2200 **9009**		1 P 2294 **1009**(4) 3 P 2294 **3009**(4)	
80 A / M2	3 P	2205 **3008**	2200 **3008**(1)(2)(3)					
100 A / M3	3 P		2200 **3010**(1)(2)(3)	1 P 2200 **5011**	1 P 2200 **9011**		1 P 2294 **1011**(4) 3 P 2294 **3016**(4)	3/4 P Steel support 2299 **3609**(5)
125 A / M3	3 P		2200 **3011**(1)(2)(3)					

(1) Front and side operation.
(2) For a 6-pole device in direct operation, order 2 x 3 pole device + conversion kit (for external operation, add the shaft + the handle).
(3) For an 8-pole device in direct operation, order 2 x 3 pole device + 2 x 4th poles + conversion kit (for external operation, add the shaft + the handle).
(4) Top and bottom.
(5) Delivered with a shaft.

SIRCO MV

SIRCO M - **from 100 to 160 A**

Rating (A)	No. of poles	Switch body	Direct handle	Door interlocked external front and right side handle(4)	External left side handle(4)	Shaft for external front and side handle(4)	Auxiliary signal contact	Pre-break auxiliary contact	Terminal shrouds
100 A	3 P	2200 **3110**	M0b type Blue 2299 **5042**(1) M0 type Blue 2299 **5022**	S0 type I -0 Black IP55 1491 **0111**(2) Black IP65 1493 **0111**(2) Red/Yellow IP65 1494 **0111**(2)	S0 type I -0 Black IP65 149A **9111** Red/Yellow IP65 149B **9111**	S0 type 150 mm 1409 **0615** 200 mm 1409 **0620** 320 mm 1409 **0632**	M type 1 module NO + NC 2299 **0001** 1 module 2 NO 2299 **0011**	U type 1 contact NO 3999 **0701** 1 contact NC 3999 **0702**	3 P 2294 **3016**(3) 4 P 2294 **4016**(3)
	4 P	2200 **4110**							
125 A	3 P	2200 **3012**							
	4 P	2200 **4012**							
160 A	3 P	2200 **3016**							
	4 P	2200 **4016**							

(1) Standard.
(2) Defeatable handle.
(3) Top and bottom.
(4) Other handles & shafts are available. Please see accessory pages.

Accessories

Direct operation handle

For SIRCO M

Rating (A) / Frame size	Handle colour	Handle	Reference
16 ... 80 / M1 ... M2	Blue	M00 type	2299 **5012**(1)
16 ... 80 / M1 ... M2	Red	M00 type	2299 **5013**
100 ... 125 / M3	Blue	M01 type	2299 **5032**(1)

(1) Standard.

For SIRCO MV

Rating (A)	Handle colour	Handle	Reference
100 ... 160	Blue	M0b type	2299 **5042**(1)
100 ... 160	Blue	M0 type	2299 **5022**

(1) Standard.

M00 handle

M01 handle

M0 handle

M0b handle

External handle operation - SIRCO M

S000 type handle

Rating (A) / Frame size	Type	No. of poles	Operation	Handle colour	External IP	Defeatable handle	Reference
16 ... 80 / M1... M2	Switch	3/4 P	Front and side operation	Black	IP65	no	1463 **5111**
	Switch	3/4 P	Front and side operation	Red/Yellow	IP65	no	1464 **5111**
16 ... 80 / M1... M2	Changeover switches I - 0 - II	3/4 P	Front	Black	IP65	no	1463 **5113**
	Changeover switches I - I+II - II	3/4 P	Front	Black	IP65	no	1463 **5114**

S000 handle

S00 type handle

Rating (A) / Frame size	Type	No. of poles	Operation	Handle colour	External IP	Defeatable handle	Reference
16 ... 80 / M1... M2	Switch	3/4 P(1)	Front and side operation	Black	IP55	yes	1471 **1111**
	Switch	3/4 P(1)	Front and side operation	Black	IP65	yes	1473 **1111**
	Switch	3/4 P(1)	Front and side operation	Red/Yellow	IP65	yes	1474 **1111**
	Switch	3/4 P	Left side	Black	IP65	no	147A **5111**
	Switch	3/4 P	Left side	Red/Yellow	IP65	no	147B **5111**
100 ... 125 / M3	Switch	6/8 P	Front	Black	IP55	yes	1471 **0111**
	Switch	6/8 P	Front	Black	IP65	yes	1473 **0111**
	Switch	6/8 P	Front	Red/Yellow	IP65	yes	1474 **0111**
16 ... 80 / M1... M2	Changeover switches I - 0 - II	3/4 P	Front	Black	IP65	yes	1473 **1113**
	Changeover switches I - I+II - II	3/4 P	Front	Black	IP65	yes	1473 **1114**
100 ... 125 / M3	Changeover switches I - 0 - II	3/4 P	Front	Black	IP65	yes	1473 **0113**
	Changeover switches I - I+II - II	3/4 P	Front	Black	IP65	yes	1473 **0114**

(1) Can also be used with 6 and 8 poles with front operation.

S00 handle

External operation handle - SIRCO M (continued)

S0 type handle

Rating (A) / Frame size	Type	No. of poles	Operation	Handle colour	External IP	Defeatable handle	Reference
100 ... 125 / M3	Switch	3/4 P	Front and side operation	Black	IP55	yes	1481 **1111**
	Switch	3/4 P	Front and side operation	Black	IP65	yes	1483 **1111**
	Switch	3/4 P	Front and side operation	Red/Yellow	IP65	yes	1484 **1111**
	Switch	3/4 P	Left side	Black	IP65	no	148A **5111**
	Switch	3/4 P	Left side	Red/Yellow	IP65	no	148B **5111**

S0 handle

S01 type handle

Rating (A) / Frame size	Type	No. of poles	Operation	Handle colour	External IP	Defeatable handle	Reference
16 ... 125 / M1 ... M3	Switch	3/4 P(2)	Front and side operation	Black	IP65	yes	1403 **2111**
	Switch	3/4 P(2)	Front and side operation	Red/Yellow	IP65	yes	1404 **2111**
16 ... 80 / M1 ... M2	Changeover switches I - 0 - II	3/4 P	Front	Black	IP65	yes	1403 **2113**
	Changeover switches I - 0 - II	3/4 P	Front	Black	IP65	yes	1403 **2813**(1)
	Changeover switches I - I+II - II	3/4 P	Front	Black	IP65	yes	1403 **2114**
	Changeover switches I - I+II - II	3/4 P	Front	Black	IP65	yes	1403 **2814**(1)

S01 handle

(1) Padlockable in 3 positions.
(2) Can also be used with 6 and 8 pole devices from 16 to 40 A.

External operation handle - SIRCO MV

S0 type handle

Rating (A)	Type	No. of poles	Operation	Handle colour	External IP	Defeatable handle	Reference
100 ... 160	Switch	3/4 P	Front and side operation	Black	IP55	yes	1491 **0111**
100 ... 160	Switch	3/4 P	Front and side operation	Black	IP65	yes	1493 **0111**
100 ... 160	Switch	3/4 P	Front and side operation	Red/Yellow	IP65	yes	1494 **0111**
100 ... 160	Switch	3/4 P	Left side	Black	IP65	no	149A **9111**
100 ... 160	Switch	3/4 P	Left side	Red/Yellow	IP65	no	149B **9111**

S0 handle

S1 type handle

Rating (A)	Type	No. of poles	Operation	Handle colour	External IP	Defeatable handle	Reference
100 ... 160	Switch	3/4 P	Front	Black	IP55	yes	1411 **2111**
100 ... 160	Switch	3/4 P	Front	Black	IP65	yes	1413 **2111**
100 ... 160	Switch	3/4 P	Front	Red/Yellow	IP65	yes	1414 **2111**
100 ... 160	Switch	3/4 P	Right side	Black	IP55	no	1415 **2111**
100 ... 160	Switch	3/4 P	Right side	Black	IP65	no	1417 **2111**
100 ... 160	Switch	3/4 P	Right side	Red/Yellow	IP65	no	1418 **2111**
100 ... 160	Switch	3/4 P	Left side	Black	IP65	no	141A **2111**
100 ... 160	Switch	3/4 P	Left side	Red/Yellow	IP65	no	141B **2111**

S1 Handle

Accessories (continued)

Shaft for external handle

SIRCO M 3/4 P

Rating (A) / Frame size	Handle type	Type	Length (mm)	Reference
16 ... 125 / M1... M3	S000 / S00 / S0	Switch	150 mm	1407 **0515**
	S000 / S00 / S0	Switch	200 mm	1407 **0520**
	S000 / S00 / S0	Switch	320 mm	1407 **0532**
	S01	Switch	200 mm	1404 **0520**
	S01	Switch	320 mm	1404 **0532**
	S01	Switch	400 mm	1404 **0540**


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SIRCO M 6/8 pole load break switch and 3/4 pole changeover switch

Rating (A)	Handle type	Type	Length (mm)	Reference
16 ... 80 / M1...M2	S000, S00	6/8 P and changeover switch	150 mm	1407 **0515**
	S000, S00	6/8 P and changeover switch	200 mm	1407 **0520**
	S000, S00	6/8 P and changeover switch	320 mm	1407 **0532**
100 ... 125 / M3	S00	6/8 P and changeover switch	150 mm	1409 **0615**
	S00	6/8 P and changeover switch	200 mm	1409 **0620**
	S00	6/8 P and changeover switch	320 mm	1409 **0632**
16 ... 40 / M1	S01	6/8 P	200 mm	1404 **0520**
	S01	6/8 P	320 mm	1404 **0532**
	S01	6/8 P	400 mm	1404 **0540**
16 ... 80 / M1 ... M2	S01	Changeover switch	200 mm	1404 **0520**
	S01	Changeover switch	320 mm	1404 **0532**
	S01	Changeover switch	400 mm	1404 **0540**

Use
Shaft lengths:
- 150 mm,
- 200 mm,
- 320 mm,
- 400 mm.

For 3/4 pole switches, shaft extensions are for external front and side operation.
For 6/8 pole switches and changeover switches, shaft extensions are for front operation only.

For SIRCO MV

Rating (A)	Handle type	Type	Length (mm)	Reference
100 ... 160	S0	Switch	150 mm	1409 **0615**
100 ... 160	S0	Switch	200 mm	1409 **0620**
100 ... 160	S0	Switch	320 mm	1409 **0632**
100 ... 160	S1	Switch	200 mm	1401 **0620**
100 ... 160	S1	Switch	320 mm	1401 **0632**
100 ... 160	S1	Switch	400 mm	1401 **0640**

Shaft guide for external operation

Use
To guide the shaft extension into the external handle.

This accessory enables the handle to engage the extension shaft with a misalignment of up to 15 mm.
Required for a shaft length over 320 mm.

Description	Handle type	To be ordered in multiples of	Reference
Shaft guide	S00 and S0 / S000	10 pieces	1419 **0000**
Shaft guide	S01 and S1	1 piece	1429 **0000**


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Additional pole for SIRCO M

Switched fourth pole module

Rating (A) / Frame size	No. of poles	Type	Reference
16 / M1	1 P	switched	2200 **1000**
20 / M1	1 P	switched	2200 **1001**
25 / M1	1 P	switched	2200 **1002**
32 / M1	1 P	switched	2200 **1003**
40 / M1	1 P	switched	2200 **1004**
63 / M2	1 P	switched	2200 **1006**
80 / M2	1 P	switched	2200 **1008**
100 / M3	1 P	switched	2200 **1010**
125 / M3	1 P	switched	2200 **1011**

Use

Adds one or two poles and transforms:

- a 3 pole SIRCO M into a 4 pole load break switch,
- a 6 pole SIRCO M into a 8 pole load break switch,
- a 3 pole SIRCO M into a 4 pole changeover switch.

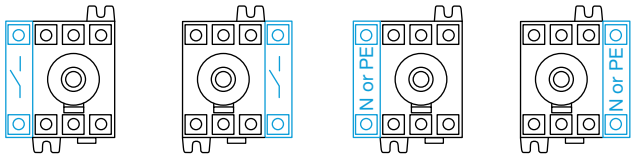
4th pole — Protective earth module — Neutral pole

Neutral pole

Rating (A) / Frame size	No. of poles	Type	Reference
16 ... 40 / M1	1 P	unswitched	2200 **5005**
63 ... 80 / M2	1 P	unswitched	2200 **5009**
100 ... 125 / M3	1 P	unswitched	2200 **5011**

Use

Transforms the 3-pole switch into a 3-pole + solid neutral.

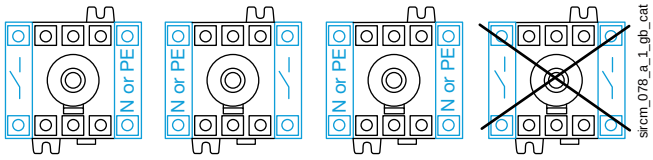


Protective earth module

Rating (A) / Frame size	No. of poles	Type	Reference
16 ... 40 / M1	1 P	unswitched	2200 **9005**
63 ... 80 / M2	1 P	unswitched	2200 **9009**
100 ... 125 / M3	1 P	unswitched	2200 **9011**

Use

Adds 1 protective earth module pole to the switch-disconnector.



Additional pole configuration

Terminal shrouds

Use

Top and bottom protection against direct contact with the terminals or connection parts.
Available in 1 or 3 pole versions for SIRCO M and in 3 or 4 pole versions for SIRCO MV.
An opening on each terminal cover makes it possible to insert a temperature measurement probe.

SIRCO M 3 P

SIRCO M 1 P

For SIRCO M

Rating (A) / Frame size	No. of poles	Position	Reference
16 ... 40 / M1	1 P	top and bottom	2294 **1005**
16 ... 40 / M1	3 P	top and bottom	2294 **3005**
63 ... 80 / M2	1 P	top and bottom	2294 **1009**
63 ... 80 / M1	3 P	top and bottom	2294 **3009**
100 ... 125 / M3	1 P	top and bottom	2294 **1011**
100 ... 125 / M3	3 P	top and bottom	2294 **3016**

For SIRCO MV

Rating (A)	No. of poles	Position	Reference
100 ... 160	3 P	top and bottom	2294 **3016**
100 ... 160	4 P	top and bottom	2294 **4016**

SIRCO MV 3P

SIRCO MV 4 P

Accessories (continued)

M type auxiliary contacts

Use

Pre-break and signalisation of positions 0 and I by NO+NC or 2 NO auxiliary contacts.

They allow to anticipate the switching of the main poles. They can be mounted on the left or on the right side of the device.

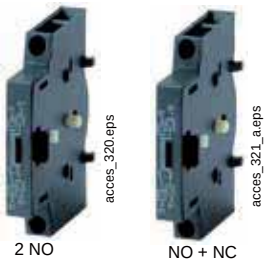
Max 4 auxiliary contacts (2 modules).

Pre-break is not guaranteed on the SIRCO MV.

Characteristics

NO+NC auxiliary contacts: IP2 with front operation.

M type



For SIRCO M

Rating (A) / Frame size	Number of AC	Type of AC	Reference
16 ... 125 / M1...M3	1 AC	NO + NC	2299 **0001**
	1 AC	2 NO	2299 **0011**

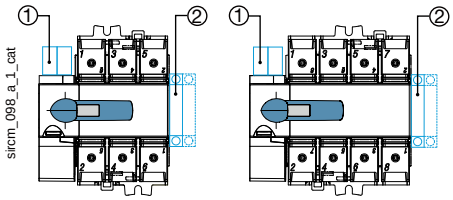
For SIRCO MV

Rating (A)	Number of AC	Type of AC	Reference
100 ... 160	1 AC	NO + NC	2299 **0001**
100 ... 160	1 AC	2 NO	2299 **0011**

Characteristics

Contact type	Nominal current (A)	Operating current I_e (A) 230 VAC AC-13	AC-15
NO + NC	10	10	6

Auxiliary contact configurations for SIRCO MV



1. Maximum 2 "U" type auxiliary contacts.
2. Maximum 2 "M" type auxiliary contact modules.

For SIRCO MV

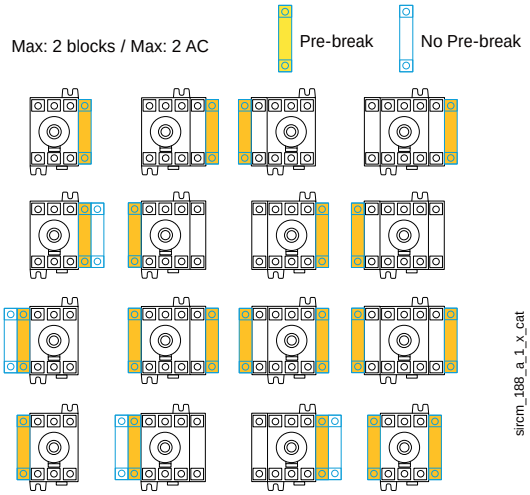
Rating (A)	Number of AC	Type of AC	Reference
100 ... 160	1 AC	NO	3999 **0701**
100 ... 160	1 AC	NC	3999 **0702**

Characteristics

Contact type	Nominal current (A)	Operating current I_e (A) 250 VAC AC-15	400 VAC AC-15	24 VDC DC-13	48 VDC DC-13
NC	10	3	1.8	2.8	1.4
NO	10	3	1.8	2.8	1.4

Auxiliary contacts configurations for SIRCO M

Max: 2 blocks / Max: 2 AC



U type

Use

Pre-break and signalisation by NO or NC auxiliary contact can be mounted on the device.

Maximum 2 auxiliary contacts. Only available for SIRCO MV switches.

Conversion kit

Use

It must be ordered together with the handle for external control.

This accessory enables the assembly of two 3 pole switches (+ additional pole) in order to create :

- a 6 or 8 pole SIRCO M load break switch,
- a 3 or 4 pole SIRCO M changeover switch.

SIRCO M changeover switches provide on load changeover switching between two sources or two low voltage power circuits, as well as their safety isolation (I - 0 - II); transfer without interruption of the supply is also possible (I - I+II - II).

Conversion kit for 6 or 8 pole load break switches

Conversion kit for changeover switches I - 0 - II

Conversion kit for changeover switches I - I+II - II

Load break switches 6/8 P

Rating (A) / Frame size	Type	Reference
16 ... 80 / M1 ... M2	6/8 P switch	2269 **6009**
100 ... 125 / M3	6/8 P switch	2269 **6011**

Changeover switches I - 0 - II

Rating (A) / Frame size	Type	Reference
16 ... 80 / M1 ... M2	Changeover switches I - 0 - II	2209 **6009**
100 ... 125 / M3	Changeover switches I - 0 - II	2209 **6011**

Changeover switches I - I+II - II

Rating (A) / Frame size	Type	Reference
16 ... 80 / M1 ... M2	Changeover switches I - I+II - II	2299 **6009**
100 ... 125 / M3	Changeover switches I - I+II - II	2299 **6011**

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Door mounting kit(1)

Use

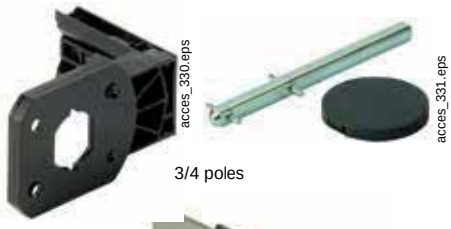
This kit enables a direct mounting of the switch on the door panel, on the right or left side of the panel.

The connection clamps of the switch are always accessible.

The external handle is quick and easy to install with the supplied internal locking nut mounted on the inside of the enclosure.

3 kits are available:

- one for complete protection IP2X
- one with compact design
- one in steel for 6/8 P and 100/125 A.



For SIRCO M

(1) Kit compatible with S00 type handle only.

Rating (A) / Frame size	No. of poles	Description	Reference
16 ... 80 / M1 ...M2	3/4 P	Complete protection IP2X	2299 **3309**
	3/4 P	Compact version	2299 **3409**
	6/8 P	Metallic support	2299 **3609**
100 ... 125	3/4 P	Metallic support	2299 **3609**

Cap for side operation mounting

Use

This accessory enables the front face of the SIRCO M to be capped when the switch is side operated. 20 pieces supplied per pack.

This piece snaps into place directly on the front face of the switch.

For SIRCO M

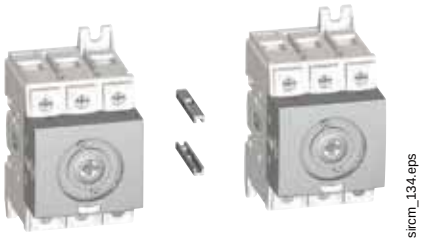
Rating (A) / Frame size	Pack	Reference
16 ... 125 / M1 ... M3	20 pieces	2299 **9409**

6/8 pole joining accessory

Use

This accessory enables two 3/4 pole switches to be coupled in order to provide a 6 or 8 pole switch for external side operation. 40 pieces supplied per pack.

For multi-pole switches, please consult us.



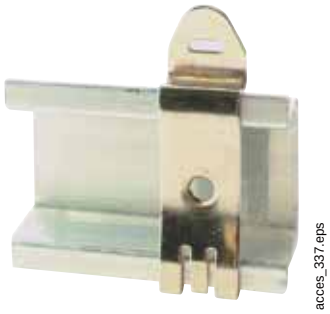
For SIRCO M

Rating (A) / Frame size	Pack	Reference
16 ... 80 / M1 ...M2	40 pieces	2299 **9909**

DIN rail locking clip

Use

This locking clip prevents the SIRCO MV from sliding when DIN rail mounted.



For SIRCO MV

Rating (A)	Type	Reference
100 ... 160	Locking clip M4	5000 **0041**
100 ... 160	Locking clip M5	5000 **0051**

Voltage sensing and power supply tap

Use

It allows connection of 2x ≤1.5 mm² voltage sensing or power cables.

This single-pole voltage sensing tap allows the connection of 2 x ≤1.5 mm² voltage sensing or power cables to any SIRCO MV power terminal without reducing its connection capacity.

For SIRCO MV

Rating (A)	Pack	Reference
100 ... 160	2 pieces	1399 **4006**

Characteristics

Characteristics according to IEC 60947-3

		SIRCO M - **from 16 to 125 A**								
Thermal current I_{th} (40 °C)		**16 A**	**20 A**	**25 A**	**32 A**	**40 A**	**63 A**	**80 A**	**100 A**	**125 A**
Frame size		**M1**	**M1**	**M1**	**M1**	**M1**	**M2**	**M2**	**M3**	**M3**
Rated insulation voltage U_i (V)		800	800	800	800	800	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV)		8	8	8	8	8	8	8	8	8
Rated operational currents I_e (A)										
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-20 A / AC-20 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
415 VAC	AC-21 A / AC-21 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
415 VAC	AC-22 A / AC-22 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
415 VAC	AC-23 A / AC-23 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
500 VAC	AC-20 A / AC-20 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
500 VAC	AC-21 A / AC-21 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
500 VAC	AC-22 A / AC-22 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
500 VAC	AC-23 A / AC-23 B	16/16	20/20	25/25	25/25	25/25	63/63	63/63	80/80	100/100
690 VAC	AC-20 A / AC-20 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
690 VAC	AC-21 A / AC-21 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
690 VAC	AC-22 A / AC-22 B	16/16	20/20	25/25	32/32	32/40	40/63	63/80	80/100	100/125
690 VAC	AC-23 A / AC-23 B	16/16	20/20	25/25	25/25	25/25	40/40	40/40	63/63	63/63
110 VDC	DC-20 A / DC-20 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
110 VDC	DC-21 A / DC-21 B	16/16(2)	20/20(2)	25/25(2)	32/32(2)	40/40(2)	63/63(2)	80/80(2)	100/100(2)	125/125(2)
250 VDC	DC-20 A / DC-20 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
250 VDC	DC-21 A / DC-21 B	16/16(3)	20/20(3)	25/25(3)	32/32(3)	40/40(3)	63/63(3)	80/80(3)	100/100(3)	125/125(3)
400 VDC	DC-20 A / DC-20 B	16/16	20/20	25/25	32/32	40/40	63/63	80/80	100/100	125/125
400 VDC	DC-21 A / DC-21 B	16/16(4)	20/20(4)	25/25(4)	25/25(4)	25/25(4)	40/40(4)	40/40(4)	63/63(4)	63/63(4)
Operational power in AC-23 (kW)										
400 VAC without pre-break AC(kW)(5)		7.5	9	11	15	18.5	30	37	45	55
500 VAC without pre-break AC(kW)(5)		7.5	9	11	15	18.5	30	37	45	55
690 VAC without pre-break AC(kW)(5)		7.5	11	15	15	15	30	37	45	55
Fuse protected short-circuit withstand (kA rms prospective)(6)										
Prospective short-circuit current (kA rms)		50	50	50	50	50	50	50	25	25
Associated fuse rating (A)		16	20	25	32	40	63	80	100	125
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s										
Rated short-time withstand current 0.3s. I_{cw} (kA rms)		2.5	2.5	2.5	2.5	2.5	3	3	5	5
Short-circuit capacity (without protection)										
Rated short-time withstand current 1s. I_{cw} (kA rms)		1.26	1.26	1.26	1.26	1.26	1.5	1.5	2.75	2.75
Rated peak withstand current (kA peak)(6)		6	6	6	6	6	9	9	12	12
Connection										
Minimum Cu cable cross-section (mm^2)		1.5	1.5	1.5	1.5	1.5	2.5	2.5	10	10
Maximum Cu cable cross-section (mm^2)		16	16	16	16	16	35	35	70	70
Tightening torque min/max (Nm)		2 / 2.2	2 / 2.2	2 / 2.2	2 / 2.2	2 / 2.2	3.5 / 3.85	3.5 / 3.85	4/4.4	4/4.4
Mechanical characteristics										
Durability (number of operating cycles)		100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000
Operating effort - 3 pole device (Nm)		1	1	1	1	1	1.4	1.4	1.6	1.6
Operating effort - 4 pole device (Nm)		1.2	1.2	1.2	1.2	1.2	1.6	1.6	2	2
Weight of a 3 pole device (kg)		0.18	0.18	0.18	0.18	0.18	0.27	0.27	0.55	0.55
Weight of a 4 pole device (kg)		0.23	0.23	0.23	0.23	0.23	0.33	0.33	0.72	0.72
Weight of a 6 pole device (kg)		0.40	0.40	0.40	0.40	0.40	0.59	0.59	1.30	1.30
Weight of a 8 pole device (kg)		0.50	0.50	0.50	0.50	0.50	0.69	0.69	1.65	1.65
Weight of a 3 pole device (kg)		0.40	0.40	0.40	0.40	0.40	0.59	0.59	1.30	1.30
Weight of a 4 pole device (kg)		0.50	0.50	0.50	0.50	0.50	0.69	0.69	1.65	1.65

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) One pole per polarity.
(3) 3-pole device with 2 poles in series for the "+" and 1 pole for the "-".
(4) 4-pole device with 2 poles in series per polarity.
(5) The power value is given for information only, the current values vary from one manufacturer to another.
(6) For a rated operational voltage Ue = 415 VAC.

Characteristics

Characteristics according to IEC 60947-3

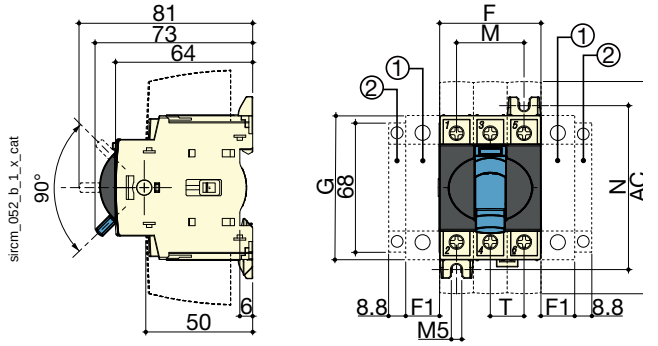
		SIRCO MV - from 100 to 160 A		
Thermal current I_{th} (40 °C)		**100 A**	**125 A**	**160 A**
Rated insulation voltage U_i (V)		800	800	800
Rated impulse withstand voltage U_{imp} (kV)		8	8	8
Rated operational currents I_e (A)				
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-20 A / AC-20 B	100/100	125/125	160/160
415 VAC	AC-21 A / AC-21 B	100/100	125/125	160/160
415 VAC	AC-22 A / AC-22 B	100/100	125/125	160/160
415 VAC	AC-23 A / AC-23 B	100/100	125/125	125/160
500 VAC	AC-20 A / AC-20 B	100/100	125/125	160/160
500 VAC	AC-21 A / AC-21 B	100/100	125/125	160/160
500 VAC	AC-22 A / AC-22 B	100/100	125/125	125/160
500 VAC	AC-23 A / AC-23 B	80/80	100/100	100/100
690 VAC	AC-20 A / AC-20 B	100/100	125/125	160/160
690 VAC	AC-21 A / AC-21 B	100/100	125/125	160/160
690 VAC	AC-22 A / AC-22 B	63/80	80/100	100/125
690 VAC	AC-23 A / AC-23 B	63/63	80/80	80/80
110 VDC	DC-20 A / DC-20 B	100/100	125/125	160/160
110 VDC	DC-21 A / DC-21 B	100/100(2)	125/125(2)	160/160(2)
250 VDC	DC-20 A / DC-20 B	100/100	125/125	160/160
250 VDC	DC-21 A / DC-21 B	100/100(3)	125/125(3)	160/160(3)
400 VDC	DC-20 A / DC-20 B	100/100	125/125	160/160
400 VDC	DC-21 A / DC-21 B	100/100(4)	125/125(4)	160/160(4)
Operational power in AC-23 (kW)				
400 VAC without pre-break AC(kW)(5)		45	55	75
500 VAC without pre-break AC(kW)(5)		45	55	75
690 VAC without pre-break AC(kW)(5)		45	75	75
Fuse protected short-circuit withstand (kA rms prospective)(6)				
Prospective short-circuit current (kA rms)		100	65	50
Associated fuse rating (A)		100	125	160
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s				
Rated short-time withstand current 0.3s. I_{cw} (kA rms)		7	7	7
Short-circuit capacity (without protection)				
Rated short-time withstand current 1s. I_{cw} (kA rms)		4	4	4
Rated peak withstand current (kA peak)(6)		12	12	12
Connection				
Minimum Cu cable cross-section (mm^2)		10	10	10
Maximum Cu cable cross-section (mm^2)		70	70	70
Tightening torque min/max (Nm)		4 / 4.4	4 / 4.4	4 / 4.4
Mechanical characteristics				
Durability (number of operating cycles)		50 000	50 000	50 000
Operating effort - 3 pole device (Nm)		4	4	4
Operating effort - 4 pole device (Nm)		4.2	4.2	4.2
Weight of a 3 pole device (kg)		0.68	0.68	0.68
Weight of a 4 pole device (kg)		0.85	0.85	0.85

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) One pole per polarity.
(3) 2 poles in series for the "+" and 1 pole for the "-".
(4) 2 poles in series per polarity.
(5) The power value is given for information only, the current values vary from one manufacturer to another.
(6) For a rated operational voltage Ue = 415 VAC.

Dimensions

SIRCO M1 and M2 16 to 80 A

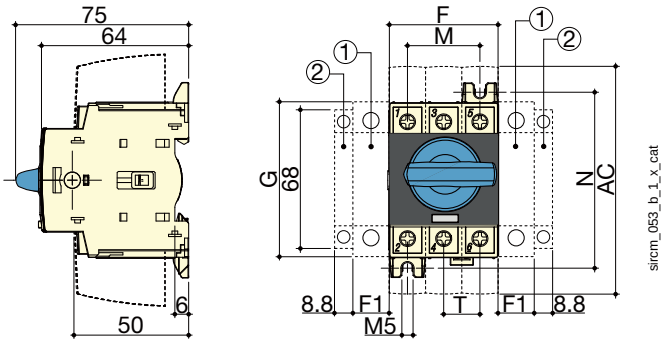
Toggle operation



1. Location for: 1 switched fourth pole module (1 per device max.) **or** 1 unswitched neutral pole **or** 1 protective earth module **or** 1 auxiliary contact.
2. Position for 1 auxiliary contact module only.

Note: max 2 additional blocks.

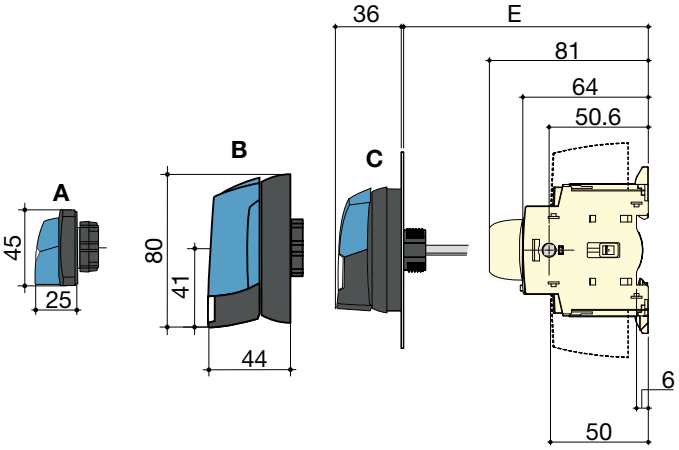
Direct operation with handle



1. Location for: 1 switched fourth pole module (1 per device max.) **or** 1 unswitched neutral pole **or** 1 protective earth module **or** 1 auxiliary contact.
2. Position for 1 auxiliary contact module only.

Note: max 2 additional blocks.

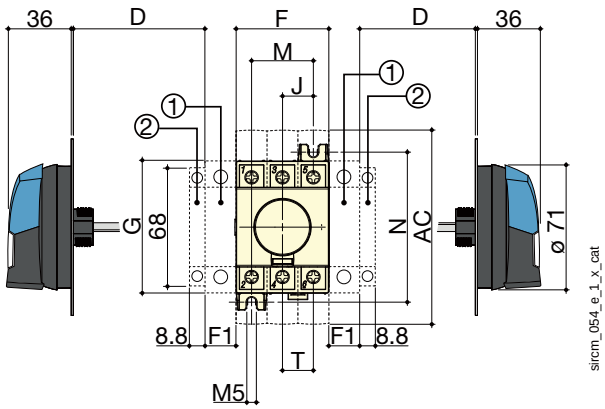
External front operation



1. Location for: 1 switched fourth pole module (1 per device max.) **or** 1 unswitched neutral pole **or** 1 protective earth module **or** 1 auxiliary contact.
2. Position for 1 auxiliary contact module only.

Note: max 2 additional blocks.

External side operation

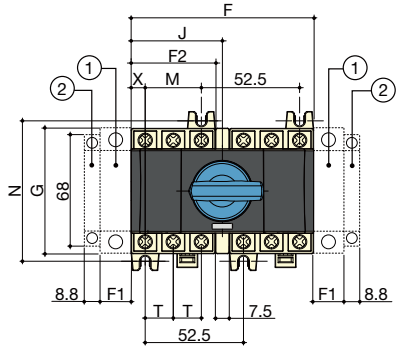


A. S000 Handle
B. S01 Handle
C. S00 Handle.

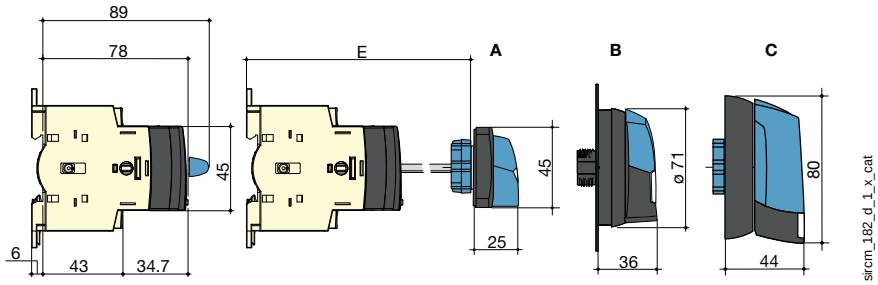
Rating (A) / Frame size	Overall dimensions				Terminal shrouds	Switch body				Switch mounting		Connection
	D min	D max	E min	E max	AC	F	F1	G	J	M	N	T
16 … 40 / M1	30	235	100	372	110	45	15	68	15	30	75	15
63 … 80 / M2	30	235	100	372	110	52.5	17.5	76	17.5	35	85	17.5

SIRCO M1 and M2 16 to 80 A (continued)

Direct front operation for
6/8-pole load break switches or 3/4-pole changeover switches



External front operation for 6/8-pole load break switches or
3/4-pole changeover switches



1. Location for: 1 switched fourth pole module (1 per device max.) **or** 1 unswitched neutral pole **or** 1 protective earth module **or** 1 auxiliary contact.
2. Position for 1 auxiliary contact module only.

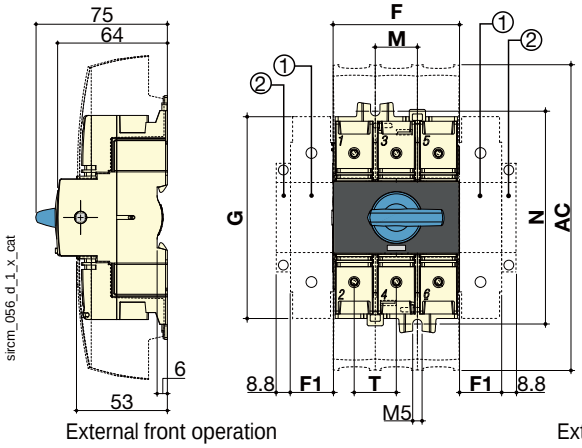
Note: max 2 additional blocks.

A. S000 handle
B. S00 handle
C. S01 handle

Rating (A) / Frame size	Overall dimensions		Switch body					Switch mounting		Connection	
	E min	E max	F	F1	F2	G	J	M	N	T	X
16 … 40 / M1	105	372	97.5	15	45	68	48.75	30	75	15	7.5
63 … 80 / M2	105	372	105	17.5	52.5	76	52.5	35	85	17.5	8.75

SIRCO M3 100 to 125 A

Direct operation with handle

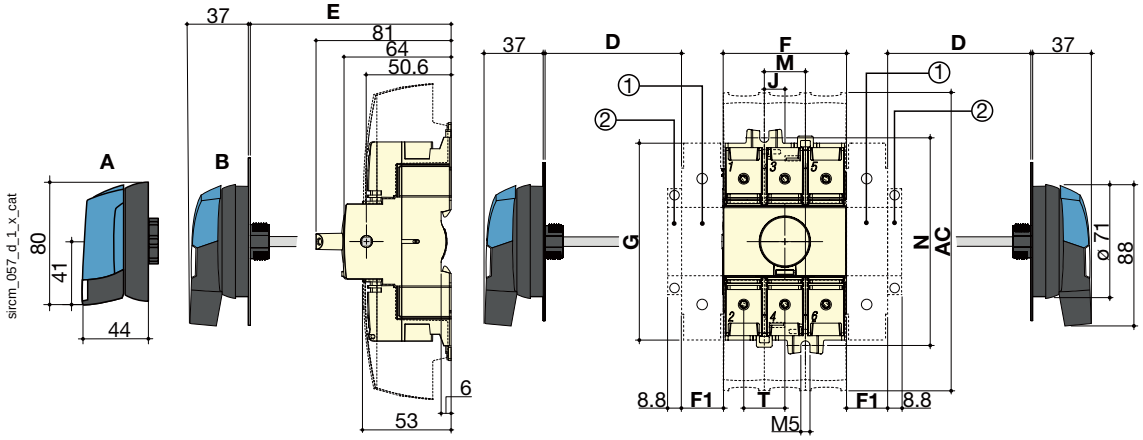


1. Location for: 1 switched fourth pole module (1 per device max.) **or** 1 unswitched neutral pole **or** 1 protective earth module **or** 1 auxiliary contact.
2. Position for 1 auxiliary contact module only.

Note: max 2 additional blocks.

External front operation

External side operation



1. Location for: 1 switched fourth pole module (1 per device max.) **or** 1 unswitched neutral pole **or** 1 protective earth module **or** 1 auxiliary contact.
2. Position for 1 auxiliary contact module only.

Note: max 2 additional blocks.

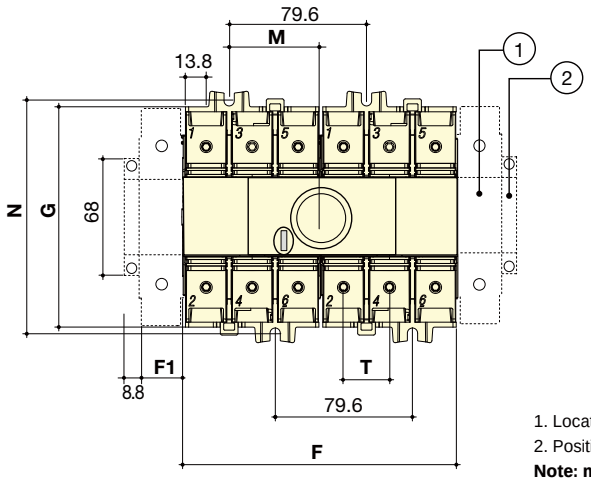
A. S01 handle
B. S00 handle

Rating (A) / Frame size	Overall dimensions				Terminal shrouds	Switch body				Switch mounting		Connection
	D min	D max	E min	E max	AC	F	F1	G	J	M	N	T
100 … 125 / M3	30	201	100	372	189	78	26	124.6	13	26	131.4	26

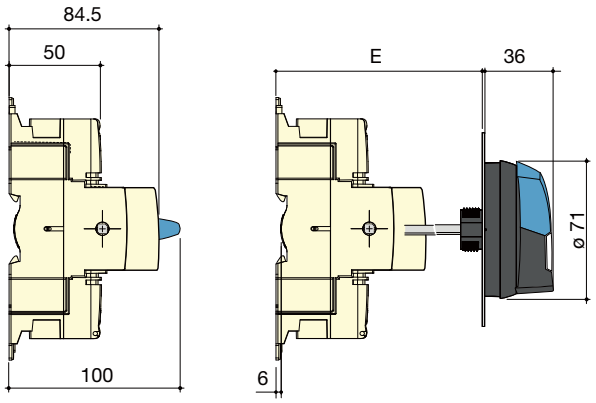
Dimensions (continued)

SIRCO M3 6/8 P and changeover switch M3 100 to 125 A

Direct front operation for 3/4 pole changeover switches



External front operation for 3/4 pole changeover switches



1. Location for: 1 main pole **or** 1 auxiliary contact (See accessory pages)
2. Position for 1 auxiliary contact module only.

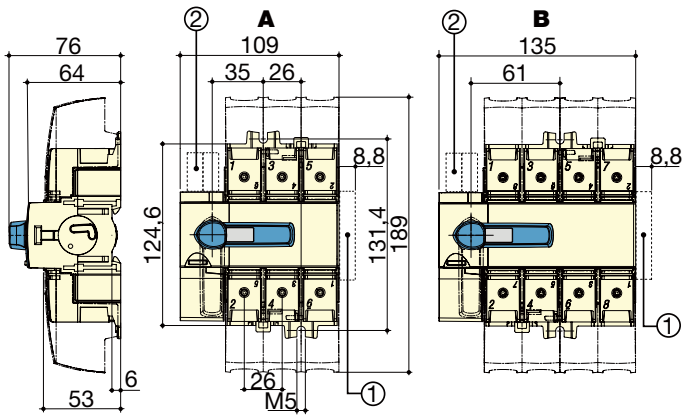
Note: max 2 additional blocks.

sircm_183_e_1_x_cat

Rating (A) / Frame size	Overall dimensions		Switch body			Switch mounting		Connection
	E min	E max	F	F1	G	M	N	T
100 ... 125 / M3	105	372	159	26	124.5	52.8	131.5	26

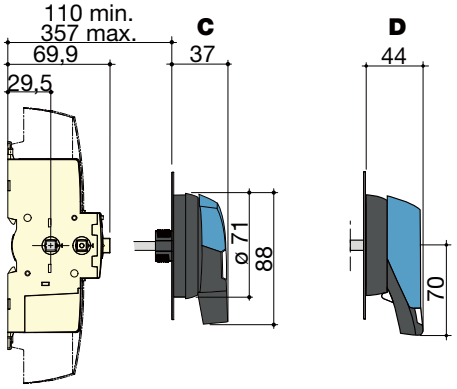
SIRCO MV 100 to 160 A

Direct front operation



A. 3 poles
B. 4 poles

External front operation

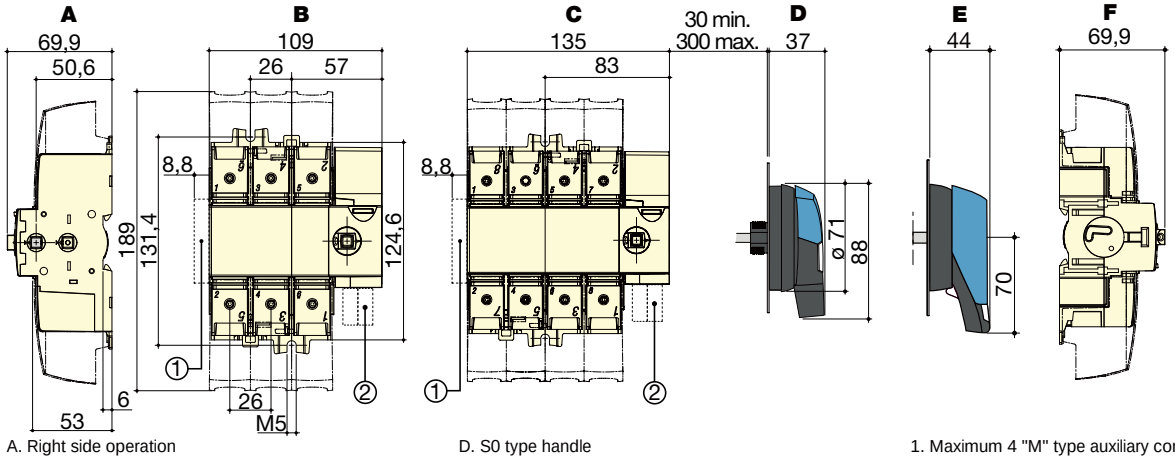


C. S0 type handle
D. S1 type handle

1. Maximum 4 "M" type auxiliary contacts
2. Maximum 2 "U" type auxiliary contacts

sircm_058_c_1_x_cat

External side operation



A. Right side operation
B. 3 poles
C. 4 poles

D. S0 type handle
E. S1 type handle
F. Left side operation

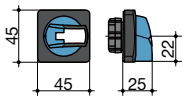
1. Maximum 4 "M" type auxiliary contacts
2. Maximum 2 "U" type auxiliary contacts

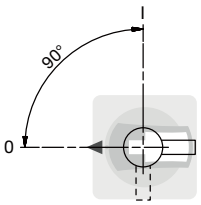
sircm_059_d_1_x_cat

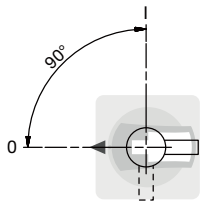
Dimensions for external handles

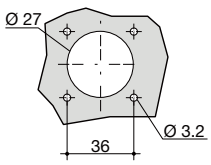
SIRCO M1 and M2

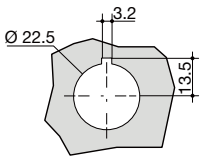
Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
S000 type Load break switches		**Right side operation**	With 4 fixing screws / With fixing nut





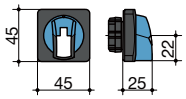


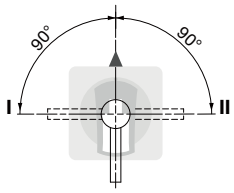


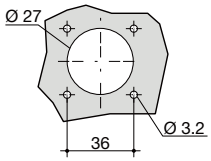


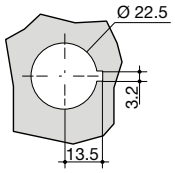
poign_016_a_1_gb_cat

Handle type	Front operation Direction of operation	Door drilling
S000 type Transfer switches I-0-II and I - I+II - II	**0** or **I+II**	With 4 fixing screws / With fixing nut



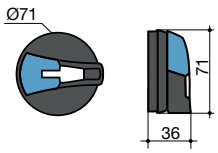


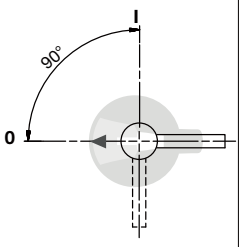


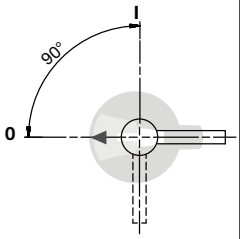


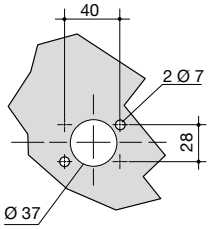
poign_017_b_1_gb_cat

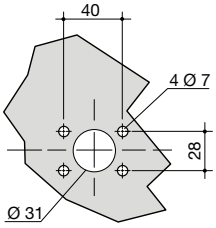
Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
S00 type Load break switches		**Right side operation**	IP55 with 2 fixing clips / IP65 with 4 fixing screws



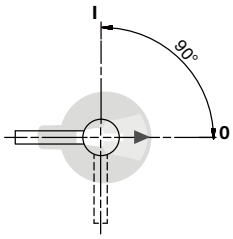




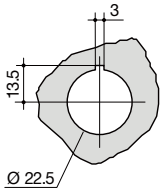




Left side operation

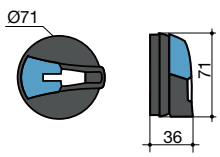


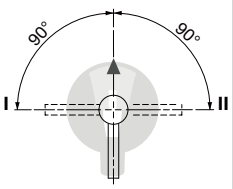
With fixing nut

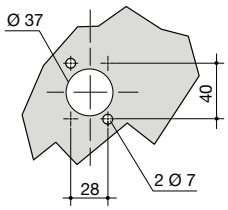


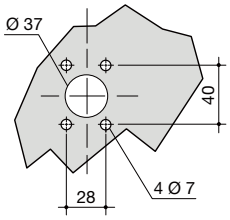
poign_024_a_1_gb_cat

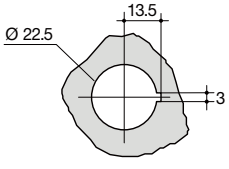
Handle type	Front operation Direction of operation	Door drilling
S00 type Transfer switches I-0-II and I - I+II - II	**0** or **I+II**	IP55 with 2 fixing clips / IP65 with 4 fixing screws / With fixing nut







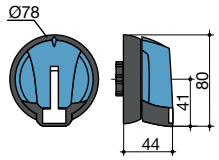
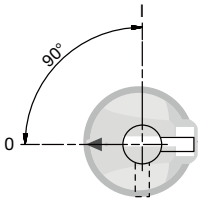
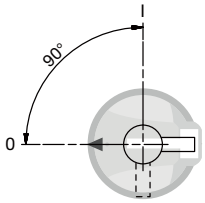
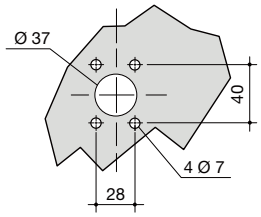


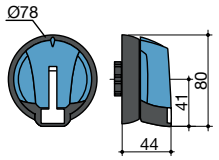
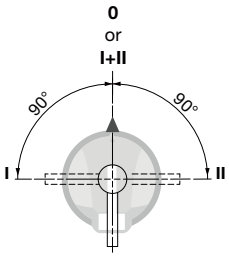
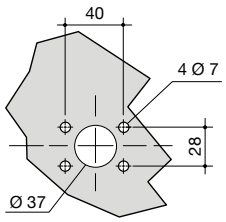


poign_025_b_1_gb_cat

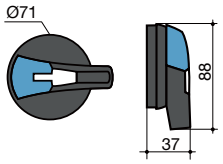
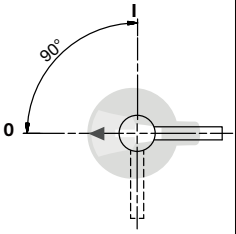
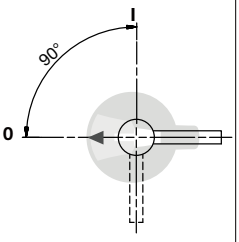
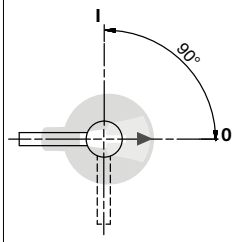
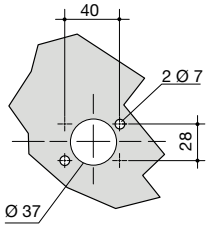
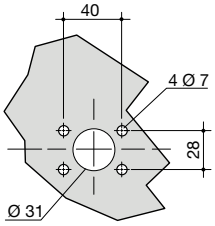
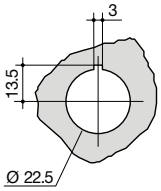
Dimensions for external handles

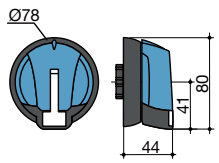
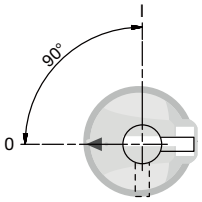
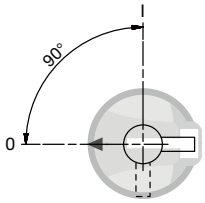
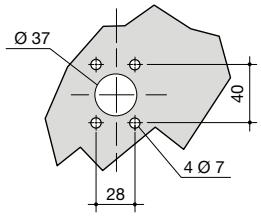
SIRCO M1 and M2 - 3/4 P and 6/8 P

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
S01 type Load break switches 		**Right side operation** 	IP65 with 4 fixing screws 

Handle type	Front operation Direction of operation	Door drilling
S01 type Transfer switches I-0-II and I - I+II - II 		IP65 with 4 fixing screws 

SIRCO M3

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
S0 type Load break switches 		**Right side operation**  **Left side operation** 	IP55 with 2 fixing clips  IP65 with 4 fixing screws  With fixing nut 

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
S01 type Load break switches 		**Right side operation** 	IP65 with 4 fixing screws 

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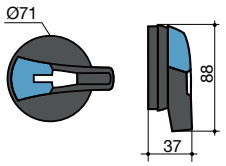
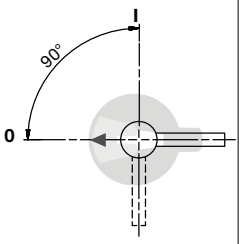
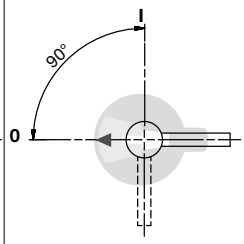
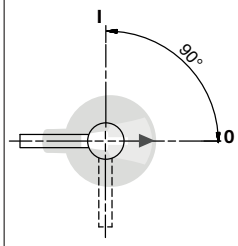
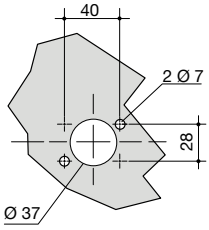
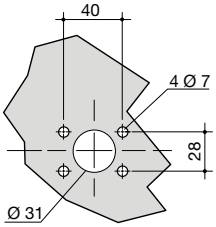
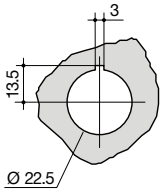
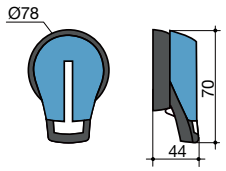
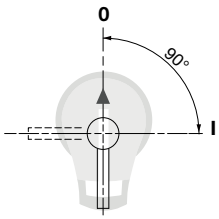
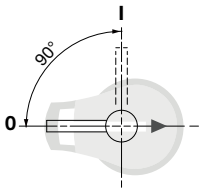
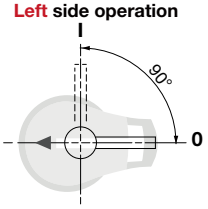
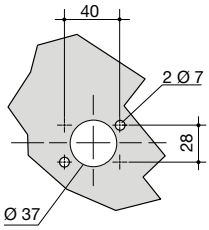
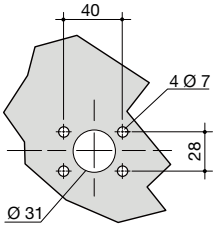
poign_019_b_1_gb_cat
poign_026_a_1_gb_cat
poign_018_a_1_gb_cat

SIRCO MV

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
S0 type Load break switches 		**Right side operation**  **Left side operation** 	IP55 with 2 fixing clips  IP65 with 4 fixing screws  With fixing nut 

poign_026_a_1_gb_cat

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
S1 type Load break switches 		**Right side operation**  **Left side operation** 	IP55 with 2 fixing clips  IP65 with 4 fixing screws 

poign_027_a_1_gb_cat

SIRCO

Load break switches for power distribution
from 125 to 5000 A

***SIRCO** 3 x 250 A*
direct operation

Function

SIRCO and **SIRCO AC** are manually or remotely operated multipolar load break switches.
They make and break under load conditions and provide safe isolation.
SIRCO are designed for 415 VAC and DC low voltage electrical circuits.
SIRCO AC are designed for heavy duty applications up to 1000 VAC - AC 23.

General characteristics

- Double positive break indication given through a position indication window, located directly on the product, and by the operating handle.
- Severe load duty categories (AC-22 and AC-23).
- High resistance to damp heat (supplied "tropicalised").

Advantages

Reliability and performance
The double breaking per pole, achieved through its sliding bar contact system, is a proven design that offers very high durability and short-circuit withstand. Improved breaking performance with quick opening and rapid closure.

Safety of property and personnel
The position indicator is located directly on the sliding bar contact mechanism, ensuring it can be seen in all circumstances.
The use of glass fibre reinforced polyester gives the SIRCO and SIRCO AC both high mechanical and thermal resistance.

Simplicity
The standardisation of the SIRCO and SIRCO AC range and its wide choice of common accessories enable:
- Simple mounting.
- Reduced stock management and storage costs.

Easy to install
The outdoors ranges are easy to install thanks to:
- A good centre-to-centre distance (up to 120 mm).
- Connection up to 6 x 185 mm².
- Connection accessories which facilitate both flat and edgewise connections.

The solution for
> Main switchboard
> Distribution panel
> Emergency breaking
> Network coupling
> Local safety breaking

Strong points
> Reliability and performance
> Safety of property and personnel
> Simplicity
> Easy to install

Compliance with standards
> IEC 60947-3

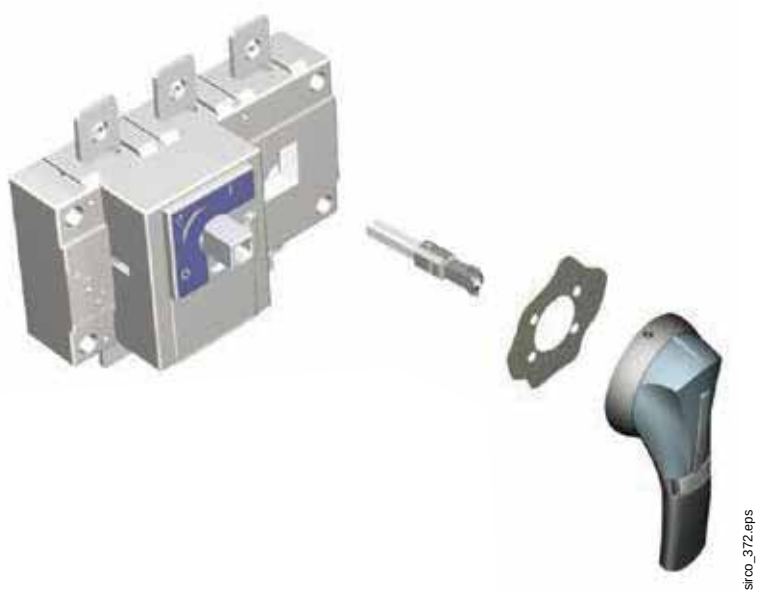
Approvals and certifications(1)
BUREAU VERITAS

(1) Product reference on request.

Enclosures
> The SIRCO and SIRCO AC range can be easily fitted in our enclosures and cabinets designed for electrical distribution.

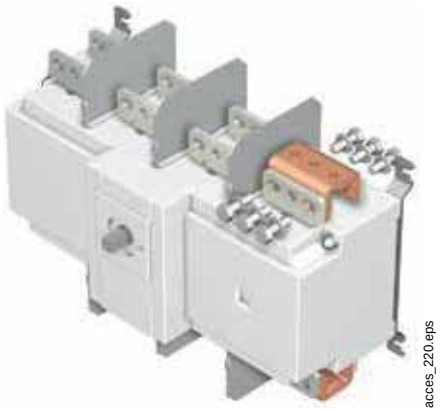
What you need to know

- In front **direct** or **external** operation, SIRCO is available in 3 and 4-pole versions from 125 to 5000 A.
- It can be ordered in 6 or 8-pole versions from 125 to 1600 A.
- SIRCO is available in a polyester or sheet metal enclosure from 125 to 1250 A.

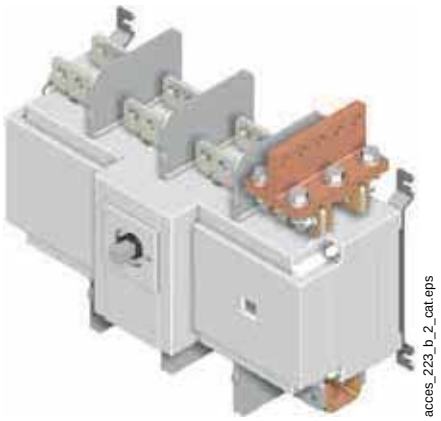


For ratings 2000, 2500 and 3200A, a copper **bar connection kit** enables the connection between the two power terminals of one pole.

Flat connection
top or bottom



Edgewise connection
top or bottom



SIRCO - References

Standard applications - Front operation - 3 & 4-pole

Rating (A) / Frame size	No. of poles	Switch body[1]	Direct handle	External handle	Shaft for external handle	Auxiliary contact	Terminal shrouds	Terminal screens
125 A / B3	3 P	2600 **3014**	J0 type Black 1102 **1111**[2] Red 1103 **1111**	S2 type Black IP55 1421 **2111**[2] Black IP65 1423 **2111** Red IP65 1424 **2111**	200 mm 1400 **1020** 320 mm 1400 **1032**[2] 500 mm 1400 **1050**	1st NO/NC contact 2699 **0031** 2nd NO/NC contact 2699 **0032**	3 P 2694 **3014**[3] 4 P 2694 **4014**[3]	3 P 2698 **3012**[3] 4 P 2698 **4012**[3]
	4 P	2600 **4014**						
160 A / B3	3 P	2600 **3017**						
	4 P	2600 **4017**						
200 A / B4	3 P	2600 **3021**	J1 type Black 1112 **1111** Red 1113 **1111**				3 P 2694 **3021**[3] 4 P 2694 **4021**[3]	3 P 2698 **3020**[3] 4 P 2698 **4020**[3]
	4 P	2600 **4021**						
250 A / B4	3 P	2600 **3026**						
	4 P	2600 **4026**						
315 A / B5	3 P	2600 **3032**					3 P 2694 **3051**[3] 4 P 2694 **4051**[3]	3 P 2698 **3050**[3] 4 P 2698 **4050**[3]
	4 P	2600 **4032**						
400 A / B5	3 P	2600 **3041**						
	4 P	2600 **4041**						
500 A / B5	3 P	2600 **3051**						
	4 P	2600 **4051**						
630 A / B5	3 P	2600 **3064**						
	4 P	2600 **4064**						
800 A / B6	3 P	2600 **3081**	J4 type Blue 1142 **1111**[2] Red 1143 **1111**	Type S4 Black IP65 1443 **3111**[2] Red IP65 1444 **3111**	200 mm 1401 **1520** 320 mm 1401 **1532**[2] 400 mm 1401 **1540**		-	3 P 2698 **3080**[3] 4 P 2698 **4080**[3]
	4 P	2600 **4081**						
1000 A / B6	3 P	2600 **3099**						
	4 P	2600 **4099**						
CD 1250 A / B6	3 P	2600 **3119**						
	4 P	2600 **4119**						
1250 A / B7	3 P	2600 **3121**						3 P 2698 **3120**[3] 4 P 2698 **4120**[3]
	4 P	2600 **4121**						
1600 A / B7	3 P	2600 **3161**						
	4 P	2600 **4161**						
1800 A / B7	3 P	2600 **3181**						
	4 P	2600 **4181**						
2000 A / B8	3 P	2600 **3200**		V2 type Black IP65 2799 **7136**[2] Red IP65 2799 **7134**	200 mm 2799 **3015** 320 mm 2799 **3018**[2] 450 mm 2799 **3019**			3 P 2698 **3200**[3] 4 P 2698 **4200**[3]
	4 P	2600 **4200**						
2500 A / B8	3 P	2600 **3250**						
	4 P	2600 **4250**						
3200 A / B8	3 P	2600 **3320**						
	4 P	2600 **4320**						
4000 A / B9	3 P	2600 **3401**	V0 type Black 2799 **7072**[2]	V0 type Black IP65 2799 **7155**[2]		1st/2nd NO/NC contact included		-
	4 P	2600 **4401**						
5000 A / B9	3 P	2600 **3500**						
	4 P	2600 **4500**						

(1) Device available enclosed see "Enclosed load break switches" pages.
(2) Standard.
(3) Top or bottom.

SIRCO AC - References

Heavy duty applications - Front operation 3 & 4 pole

Rating (A) / Frame size	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Auxiliary contact	Terminal shrouds	Terminal screens
200 A / B4	3 P	26AC **3020**	J1 type Black 1112 **1111**(1) J1 type Red 1113 **1111**	S2 type Black IP55 1421 **2111**(1) Black IP65 1423 **2111** Red IP65 1424 **2111**	200 mm 1400 **1020** 320 mm 1400 **1032**(1) 500 mm 1400 **1050**	1st contact NO/NC 2699 **0031** 2nd contact NO/NC 2699 **0032**	3P 2694 **3021**(2)(3) 4 P 2694 **4021**(2)(3)	3P 2698 **3020**(3) 4 P 2698 **4020**(3)
	4 P	26AC **4020**						
250 A / B4	3 P	26AC **3025**						
	4 P	26AC **4025**						
315 A / B4	3 P	26AC **3031**						
	4 P	26AC **4031**						
400 A / B5	3 P	26AC **3040**					3P 2694 **3051**(2)(3) 4 P 2694 **4051**(2)(3)	3P 2698 **3050**(3) 4 P 2698 **4050**(3)
	4 P	26AC **4040**						
500 A / B5	3 P	26AC **3050**						
	4 P	26AC **4050**						
CD 630 A / B5	3 P	26AC **3063**						
	4 P	26AC **4063**						
630 A / B6	3 P	26AC **3064**	J4 type Blue 1142 **1111**(1) Red 1143 **1111**	S4 type Black IP65 1443 **3111**(1) Red IP65 1444 **3111**	200 mm 1401 **1520** 320 mm 1401 **1532**(1) 400 mm 1401 **1540**			3 P 2698 **3080**(2)(3) 4 P 2698 **4080**(2)(3)
	4 P	26AC **4064**						
800 A / B6	3 P	26AC **3080**						
	4 P	26AC **4080**						
1000 A / B6	3 P	26AC **3100**						
	4 P	26AC **4100**						
CD 1250 A / B6	3 P	26AC **3120**						
	4 P	26AC **4120**						
1250 A / B7	3 P	26AC **3121**						3 P 2698 **3120**(2)(3) 4 P 2698 **4120**(2)(3)
	4 P	26AC **4121**						
1600 A / B7	3 P	26AC **3160**						
	4 P	26AC **4160**						
2000 A / B8	3 P	26AC **3200**	S5 type Black 2799 **7042**(1) Red 2799 **7043**	S5 type Black IP65 1453 **8111**(1) Red IP65 1454 **8111**	200 mm 2799 **3015** 320 mm 2799 **3018**(1) 450 mm 2799 **3019**			3 P 2698 **3200**(2)(3) 4 P 2698 **4200**(2)(3)
	4 P	26AC **4200**						
4000 A / B9	3 P	consult us	V0 type Black 2799 **7072**(1)	V0 type Black 2799 **7155**(1)		1st / 2nd included		3/4P 1509 **4200**(4)
	4 P							

(1) Standard.
(2) Mandatory for voltage greater than 415 VAC.
(3) Top or bottom.
(4) Top and bottom.

SIRCO - References

Standard applications - Front operation - 6 & 8-pole

Rating (A) / Frame size	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Auxiliary contact	Terminal shrouds	Terminal screens
125 A / $B3_{DS}$	6 P	2601 **6013**	J2 type Black 1122 **1111**(1) Red 1123 **1111**	S2 type Black IP55 1421 **2111**(1) Red IP65 1424 **2111**	200 mm 1400 **1020** 320 mm 1400 **1032**(1)	1st NO/NC contact 2699 **0061** 2nd NO/NC contact 2699 **0062**	6 P 2694 **3014**(2)(3) 8 P 2694 **4014**(2)(3)	6 P 1509 **3012**(4) 8 P 1509 **4012**(4)
	8 P	2601 **8013**						
160 A / $B3_{DS}$	6 P	2601 **6016**						
	8 P	2601 **8016**						
250 A / $B4_{DS}$	6 P	2601 **6025**	J3 type Black 1132 **1111**(1) Red 1133 **1111**	Type S4 Black IP65 1443 **3111**(1) Red IP65 1444 **3111**	200 mm 1401 **1520** 320 mm 1401 **1532**(1)		6 P 2694 **3021**(2)(3) 8 P 2694 **4021**(2)(3)	6 P 1509 **3025**(4) 8 P 1509 **4025**(4)
	8 P	2601 **8025**						
400 A / $B5_{DS}$	6 P	2601 **6040**					6 P 2694 **3051**(2)(3) 8 P 2694 **4051**(2)(3)	6 P 1509 **3063**(4) 8 P 1509 **4063**(4)
	8 P	2601 **8040**						
630 A / $B5_{DS}$	6 P	2601 **6063**						
	8 P	2601 **8063**						
800 A / $B6_{DS}$	6 P	2601 **6080**	J4 type Blue 1142 **1111**(2) Red 1143 **1111**	Type V1 Black IP65 2799 **7145**(1)	320 mm 2799 **3018**(1)		-	6 P 1509 **3080**(4) 8 P 1509 **4080**(4)
	8 P	2601 **8080**						
1000 A / $B6_{DS}$	6 P	2601 **6100**						
	8 P	2601 **8100**						
1250 A / $B7_{DS}$	6 P	2601 **6120**						
	8 P	2601 **8120**						
1600 A / $B7_{DS}$	6 P	2601 **6160**						6 P 1509 **3160**(4) 8 P 1509 **4160**(4)
	8 P	2601 **8160**						

(1) Standard.
(2) Top or bottom on the front or rear of the device.
(3) Select 2 sets for front or rear.
(4) Top or bottom at the front of the device.

Accessories

Direct operation handle

SIRCO direct operation handle

Rating (A) / Frame size	No. of poles	Handle type	Handle colour	Reference
125 ... 160 / B3	3/4 P	J0	Black	1102 **1111**(1)
125 ... 160 / B3	3/4 P	J0	Red	1103 **1111**
125 ... 160 / $B3_{DS}$	6/8 P	J2	Black	1122 **1111**(1)
125 ... 160 / $B3_{DS}$	6/8 P	J2	Red	1123 **1111**
200 ... 630 / B4-B5	3/4 P	J1	Black	1112 **1111**(1)
200 ... 630 / B4-B5	3/4 P	J1	Red	1113 **1111**
250 ... 630 / $B4_{DS}$-$B5_{DS}$	6/8 P	J3	Black	1132 **1111**(1)
250 ... 630 / $B4_{DS}$-$B5_{DS}$	6/8 P	J3	Red	1133 **1111**
800 ... 3200 / B6...B8	3/4 P	J4	Blue	1142 **1111**(1)
800 ... 3200 / B6...B8	3/4 P	J4	Red	1143 **1111**
800 ... 1600 / $B6_{DS}$-$B7_{DS}$	6/8 P	J4	Blue	1142 **1111**(1)
800 ... 1600 / $B6_{DS}$-$B7_{DS}$	6/8 P	J4	Red	1143 **1111**
4000 ... 5000 / B9	3/4 P	V0	Black	2799 **7072**(1)

(1) Standard.

SIRCO AC direct operation handle

Rating (A) / Frame size	No. of poles	Handle type	Handle colour	Reference
200 ... CD 630 / B4 ... B5	3/4 P	J1	Black	1112 **1111**(1)
200 ... CD 630 / B4 ... B5	3/4 P	J1	Red	1113 **1111**
630 ... 1600 / B6 ... B7	3/4 P	J4	Blue	1142 **1111**(1)
630 ... 1600 / B6 ... B7	3/4 P	J4	Red	1143 **1111**
2000 / B8	3/4 P	S5	Black	2799 **7042**(1)
2000 / B8	3/4 P	S5	Red	2799 **7043**
4000 / B9	3/4 P	V0	Black	2799 **7072**(1)

(1) Standard.

J1 type handle

J4 type handle

S5 type handle

Door interlocked external operation handle

SIRCO and SIRCO AC external front operation handle

Rating (A) / Frame size		No. of poles	Handle type	Handle colour	External IP(1)	Reference
SIRCO	SIRCO AC					
125 ... 630 / B3 ... B5	200 ... CD 630 / B4 ... B5	3/4 P	S2	Black	IP55	1421 **2111**(2)
				Black	IP65	1423 **2111**
				Red	IP65	1424 **2111**
125 ... 160 / $B3_{DS}$	-	6/8 P		Black	IP55	1421 **2111**(2)
				Black	IP65	1423 **2111**
				Red	IP65	1424 **2111**
250 ... 630 / $B4_{DS}$-$B5_{DS}$		6/8 P	S4	Black	IP65	1443 **3111**
				Red	IP65	1444 **3111**
800 ... 1600 / $B6_{DS}$-$B7_{DS}$		6/8 P	V1	Black	IP65	2799 **7145**(2)
800 ... 1800 / B6-B7	630 ... 1600 / B6 ... B7	3/4 P	S4	Black	IP65	1443 **3111**(2)
				Red	IP65	1444 **3111**
2000 ... 3200 / B8	2000 / B8	3/4 P	V2	Black	IP65	2799 **7136**(2)
				Red	IP65	2799 **7134**
			S5	Black	IP65	1453 **8111**
				Red	IP65	1454 **8111**
4000 ... 5000 / B9	4000 / B9	3/4 P	V0	Black	IP65	2799 **7155**(2)

(1) IP: protection degree according to IEC 60529 standard.
(2) Standard.

Use

Door interlocked external operation handles include an escutcheon, are padlockable and must be utilised with an extension shaft.

S2 type handle

S3 type handle

S4 type handle

S5 type handle

Accessories (continued)

Shaft for external operation

For 3/4 pole SIRCO and SIRCO AC

Rating (A) / Frame size				
SIRCO	**SIRCO AC**	**Dimension X (mm)**	**Length (mm)**	**Reference**
125 ... 160 / B3		125 ... 250	200	1400 **1020**
		125 ... 300	250	1400 **1025**
		125 ... 370	320	1400 **1032**
		125 ... 550	500	1400 **1050**
		125 ... 850	750	1400 **1075**
200 ... 250 / B4	200 ... 315 / B4	135 ... 265	200	1400 **1020**
		135 ... 315	250	1400 **1025**
		135 ... 385	320	1400 **1032**
		135 ... 565	500	1400 **1050**
		135 ... 880	750	1400 **1075**
315 ... 630 / B5	400 ... CD 630 / B5	165 ... 295	200	1400 **1020**
		165 ... 345	250	1400 **1025**
		165 ... 415	320	1400 **1032**
		165 ... 595	500	1400 **1050**
		165 ... 940	750	1400 **1075**
800 ... 1800 / B6...B7	630 ... 1600 / B6 ... B7	221 ... 343	200	1401 **1520**
		221 ... 463	320	1401 **1532**
		221 ... 543	400	1401 **1540**
2000 ... 3200 / B8	2000 / B8	415 ... 570	200	2799 **3015**
		415 ... 690	320	2799 **3018**
		415 ... 820	450	2799 **3019**
4000 ... 5000 / B9	4000 / B9	550 ... 680	200	2799 **3015**
		651 ... 921	320	2799 **3018**

For 6/8-pole SIRCO

Rating (A) / Frame size	Dimension X (mm)	Length (mm)	Reference
125 ... 160 / $B3_{DS}$	270 ... 436	200	1400 **1020**
125 ... 160 / $B3_{DS}$	270 ... 556	320	1400 **1032**
250 ... 630 / $B4_{DS}$-$B5_{DS}$	221 ... 308	200	1401 **1520**
250 ... 630 / $B4_{DS}$-$B5_{DS}$	221 ... 428	320	1401 **1532**
250 ... 630 / $B4_{DS}$-$B5_{DS}$	221 ... 508	400	1401 **1540**

Use

Standard lengths:
- 200 mm
- 250 mm
- 300 mm
- 400 mm
- 500 mm
- 750 mm

Other lengths available:
- please consult us.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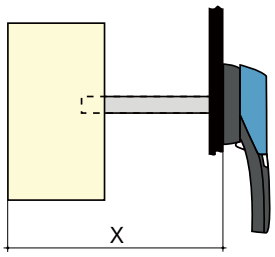

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Alternative handle cover colours

Use

For S type handles.

Handle colour	To be ordered in multiples of	Handle type	Reference
Light grey	50	S2, S3	1401 **0001**
Dark grey	50	S2, S3	1401 **0011**
Light grey	50	S4	1401 **0031**
Dark grey	50	S4	1401 **0041**


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S type cover

S type handle adapter

Use

Adds 12 mm to the depth of the handle.

Handle colour	To be ordered in multiples of	External IP[1]	Reference
Black	1	IP65	1493 **0000**

(1) IP: protection degree according to IEC 60529 standard.


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Shaft guide for external operation

Use

For use with S-type handles, to guide the shaft extension into the external handle. This accessory enables the handle to engage the extension shaft with a misalignment of up to 15 mm.
Recommended for shaft lengths over 320 mm.


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Description	Reference
Shaft guide	1429 **0000**

Auxiliary contact

Use

Pre-break and signalling of positions 0 and I:
- 1 to 2 NO/NC auxiliary contacts.
- 1 to 4 NO+NC auxiliary contacts.
- 1 to 2 low level NO/NC auxiliary contacts.

Characteristics

NO/NC A/C: IP2 with front operation.

Connection to the control circuit

6.35 mm fast-on terminal.

Electrical characteristics

30 000 operations.


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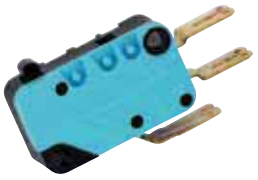
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NO/NC contact for 3/4 pole SIRCO and SIRCO AC		
Rating (A) / Frame size	**Position A/C**	**Reference**
125 ... 3200 / B3 ... B8	1st	2699 **0031**
125 ... 3200 / B3 ... B8	2nd	2699 **0032**
4000 ... 5000 /B9	1st/2nd	included

NO/NC contact for 6/8 pole SIRCO		
Rating (A) / Frame size	**Position A/C**	**Reference**
125 ... 1600 / $B3_{DS}$ ... $B7_{DS}$	1st	2699 **0061**
125 ... 1600 / $B3_{DS}$ ... $B7_{DS}$	2nd	2699 **0062**

NO+NC contact for 3/4 pole SIRCO and SIRCO AC		
Rating (A) / Frame size	**Position A/C**	**Reference**
125 ... 3200 / B3 ... B8	1st	2699 **0141**
125 ... 3200 / B3 ... B8	2nd/3rd/4th	2699 **0142**

NO/NC low level contact for 3/4 pole SIRCO and SIRCO AC		
Rating (A) / Frame size	**Position A/C**	**Reference**
125 ... 3200 / B3 ... B8	1st	2699 **0301**
125 ... 3200 / B3 ... B8	2nd	2699 **0302**

Characteristics

			Operating current I_e (A)									
			230 VAC		400 VAC		24 VDC			48 VDC		
Rating (A) / Frame size	**Contact type**	**Current nominal (A)**	**AC-12**	**AC-13/15**	**AC-12**	**AC-13/15**	**DC-12**	**DC-13**	**DC-14**	**DC-12**	**DC-13**	**DC-14**
125 ... 3200 / B3 ... B8	NO/NC	16	16	4	12	3	2.5	2.5	1	2.5	1.2	0.2
125 ... 3200 / B3 ... B8	NO + NC	16	16	4	16	3	16	5	1	2.5	1.2	0.2

Inter-phase barrier

Use

Safe isolation between the terminals, essential for use at 690 VAC or in a polluted or dusty atmosphere.


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For 3/4 poles SIRCO and SIRCO AC

Rating (A) / Frame size			
SIRCO	**SIRCO AC**	**No. of poles**	**Reference**
125 ... 160 / B3		3 P	2998 **0033**
125 ... 160 / B3		4 P	2998 **0034**
200 ... 250 / B4	200 ... 315 / B4	3 P	2998 **0023**
200 ... 250 / B4	200 ... 315 / B4	4 P	2998 **0024**
315 ... 630 / B5	315 ... CD 630 / B5	3 P	2998 **0013**
315 ... 630 / B5	315 ... CD 630 / B5	4 P	2998 **0014**
800 ... 5000 / B6 ... B9	630 ... 4000 / B6 ... B9	3 P	included
800 ... 5000 / B6 ... B9	630 ... 4000 / B6 ... B9	4 P	included

Accessories (continued)

Terminal shrouds

Use

Top or bottom protection against direct contact with terminals or connection parts.

Advantage

Perforations allow remote thermographic inspection without the need to remove the shrouds. The terminal shrouds also provide phase separation for SIRCO and SIRCO AC from 125 to 630 A.

For 3/4 poles SIRCO and SIRCO AC

Rating (A) / Frame size				
SIRCO	SIRCO AC	No. of poles	Position	Reference
125 ... 160 / B3		3 P	top or bottom	2694 **3014**(1)
125 ... 160 / B3		4 P	top or bottom	2694 **4014**(2)
200 ... 250 / B4	200 ... 315 / B4	3 P	top or bottom	2694 **3021**(1)
200 ... 250 / B4	200 ... 315 / B4	4 P	top or bottom	2694 **4021**(2)
315 ... 630 / B5	400 ... CD 630 / B5	3 P	top or bottom	2694 **3051**(1)
315 ... 630 / B5	400 ... CD 630 / B5	4 P	top or bottom	2694 **4051**(2)

(1) Reference includes 3 parts for top or bottom protection.
(2) Reference includes 4 parts for top or bottom protection.

For 6/8-pole SIRCO

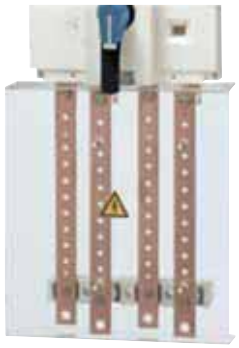
Rating (A) / Frame size	No. of poles	Position	Reference
125 ... 160 / $B3_{DS}$	6 P	Top or bottom	2694 **3014**(1)(3)
125 ... 160 / $B3_{DS}$	8 P	Top or bottom	2694 **4014**(2)(3)
250 / $B4_{DS}$	6 P	Top or bottom	2694 **3021**(1)(3)
250 / $B4_{DS}$	8 P	Top or bottom	2694 **4021**(2)(3)
400 ... 630 / $B5_{DS}$	6 P	Top or bottom	2694 **3051**(1)(3)
400 ... 630 / $B5_{DS}$	8 P	Top or bottom	2694 **4051**(2)(3)

(1) Reference includes 3 parts for top or bottom protection on the front or rear of the device.
(2) Reference includes 4 parts for top or bottom protection on the front or rear of the device.
(3) Select 2 sets for front or rear.

Distribution block

Use

Easy connection of multiple cables, bottom of the SIRCO.

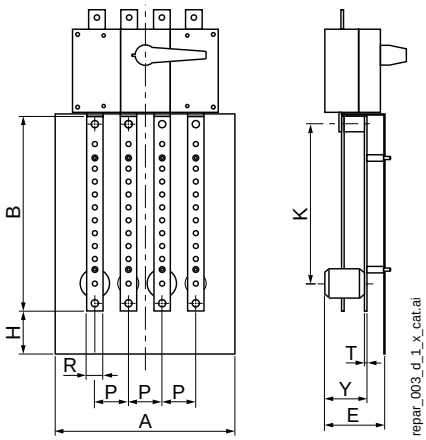


For 3/4-pole SIRCO

Rating (A) / Frame size	No. of poles	No. of feeders per section (mm²)	I_{cc} (kA rms)(1)	Reference
160 / B3	3 P	1x95 + 8x25	10	5411 **3016**
160 / B3	4 P	1x95 + 8x25	10	5411 **4016**
250 / B4	3 P	1x150 + 8x50	15	5411 **3025**
250 / B4	4 P	1x150 + 8x50	15	5411 **4025**
400 / B5	3 P	1x240 + 8x95	21	5411 **3040**
400 / B5	4 P	1x240 + 8x95	21	5411 **4040**
630 / B5	3 P	1x300 + 8x150	21	5411 **3063**
630 / B5	4 P	1x300 + 8x150	21	5411 **4063**

Dimensions

Rating (A) / Frame size	No. of poles	A	B	T	H	K	P	R	T	Y
160 / B3	3 P	154	286	73	46.5	261.5	36	20	4	54
160 / B3	4 P	190	286	73	46.5	261.5	36	20	4	54
250 / B4	3 P	210	307	83	57.5	279	50	25	4	56
250 / B4	4 P	260	307	83	57.5	279	50	25	4	56
400 / B5	3 P	281	375	116	82.5	340	65	32	5	82
400 / B5	4 P	346	375	116	82.5	340	65	32	5	82
630 / B5	3 P	271	438	117	90.5	410.5	65	40	6	83
630 / B5	4 P	346	438	117	90.5	410.5	65	40	6	83



Terminal screens

Use

Top or bottom protection from direct contact with terminals or connection parts.

For 3/4 poles SIRCO and SIRCO AC

Rating (A) / Frame size				
SIRCO	**SIRCO AC**	**No. of poles**	**Position**	**Reference**
125 ... 160 / B3		3 P	top or bottom	2698 **3012**
125 ... 160 / B3		4 P	top or bottom	2698 **4012**
200 ... 250 / B4	200 ... 315 / B4	3 P	top or bottom	2698 **3020**
200 ... 250 / B4	200 ... 315 / B4	4 P	top or bottom	2698 **4020**
315 ... 630 / B5	400 ... CD 630 / B5	3 P	top or bottom	2698 **3050**
315 ... 630 / B5	400 ... CD 630 / B5	4 P	top or bottom	2698 **4050**
800 ... CD 1250 / B6	630 ... CD 1250 / B6	3 P	top or bottom	2698 **3080**
800 ... CD 1250 / B6	630 ... CD 1250 / B6	4 P	top or bottom	2698 **4080**
1250 ... 1800 / B7	1250 ... 1600 / B7	3 P	top or bottom	2698 **3120**
1250 ... 1800 / B7	1250 ... 1600 / B7	4 P	top or bottom	2698 **4120**
2000 ... 3200 / B8	2000 / B8	3 P	top or bottom	2698 **3200**
2000 ... 3200 / B8	2000 / B8	4 P	top or bottom	2698 **4200**
4000 ... 5000 / B9	4000 / B9	3/4 P	top or bottom	1509 **4200**

For 6/8-pole SIRCO

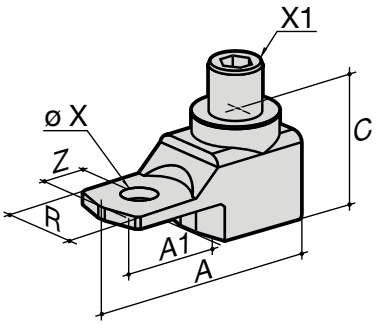
Rating (A) / Frame size	No. of poles	Position	Reference
125 ... 160 / $B3_{DS}$	6 P	Top or bottom	1509 **3012**
125 ... 160 / $B3_{DS}$	8 P	Top or bottom	1509 **4012**
250 / $B4_{DS}$	6 P	Top or bottom	1509 **3025**
250 / $B4_{DS}$	8 P	Top or bottom	1509 **4025**
400 ... 630 / $B5_{DS}$	6 P	Top or bottom	1509 **3063**
400 ... 630 / $B5_{DS}$	8 P	Top or bottom	1509 **4063**
800 ... 1250 / $B6_{DS}$-$B7_{DS}$	6 P	Top or bottom	1509 **3080**
800 ... 1250 / $B6_{DS}$-$B7_{DS}$	8 P	Top or bottom	1509 **4080**
1600 / $B7_{DS}$	6 P	Top or bottom	1509 **3160**
1600 / $B7_{DS}$	8 P	Top or bottom	1509 **4160**

Cage terminals

Use

They enable a direct terminal-free connection to rigid copper and aluminium conductors with integration under the IP2X protective cover.

Material: tin-plated aluminium



Dimensions

Rating (A) / Frame size	A	A1	C	R	ØX	X1	Z
125 ... 160 / B3	47.5	22.5	25	20	8.5	M12	10
200 ... 250 / B4	62	31.5	31.5	25	10.5	M16	14
315 ... 400 / B5	71.5	32	38	32	10.5	M20	15
500 ... 630 / B5	76.5	37	38	40	12.5	M20	15

References

Rating (A) / Frame size	Tightening capacity (mm²)	No. of poles	Tightening torque (Nm)	Flexible bar width (mm)	Reference
125 ... 160 / B3	16 ... 95	3 P	14	13	5400 **3016**
125 ... 160 / B3	16 ... 95	4 P	14	13	5400 **4016**
200 ... 250 / B4	16 ... 185	3 P	25	18	5400 **3025**
200 ... 250 / B4	16 ... 185	4 P	25	18	5400 **4025**
315 ... 400 / B5	50 ... 240	3 P	45	20	5400 **3040**
315 ... 400 / B5	50 ... 240	4 P	45	20	5400 **4040**
500 ... 630 / B5	70 ... 300	3 P	45	24	5400 **3063**
500 ... 630 / B5	70 ... 300	4 P	45	24	5400 **4063**

Accessories (continued)

Copper bar connection kits

Use

To allow connection between the two power terminals of the same pole for 2000 to 3200 A ratings (Fig. 1 and Fig 2).

For 3200 A rating, the connection pieces (part A) are delivered bridged as standard.

Bolt sets must be ordered separately.

Further details for these specific accessories are available in the user guide downloadable from www.socomec.com.

Top or bottom flat connection - Fig. 1

Rating (A) / Frame size	Part	Quantity to order per pole(1)	Reference
2000 ... 2500 / B8	Connection - part A	1	2619 **1200**
2000 ... 2500 / B8	Bolt set - part B	1	2699 **1200**
3200 / B8	Connection - part A		included
3200 / B8	Bolt set - part B	1	2699 **1200**
4000 ... 5000 / B9	Standard connection		

(1) Example for 3-pole device equipped top only: order 3 times the indicated quantity.

Fig. 1

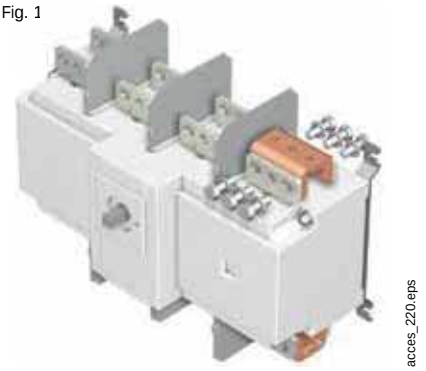
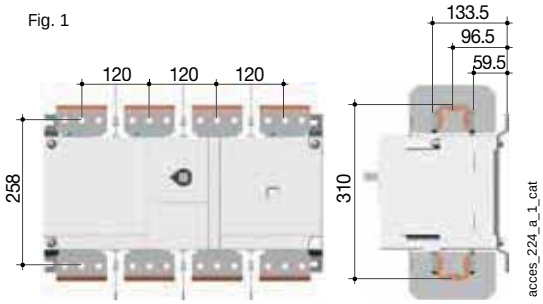


Fig. 1



Top or bottom edgewise connection - Fig. 2

Rating (A) / Frame size	Part	Quantity to order per pole(1)	Reference
2000 ... 2500 / B8	Connection - part A	1	2619 **1200**
2000 ... 2500 / B8	T piece - part C	1	2629 **1200**(2)
2000 ... 2500 / B8	Bracket - part D	1	2639 **1200**(2)
3200 / B8	Connection - part A		included
3200 / B8	T piece - part C	1	2629 **1200**
3200 / B8	Bracket - part D	1	2639 **1200**
4000 ... 5000 / B9	Standard connection		

(1) Example for 3-pole device equipped top only: order 3 times the indicated quantity.
(2) Bolt set is provided with the accessories.

Fig. 2

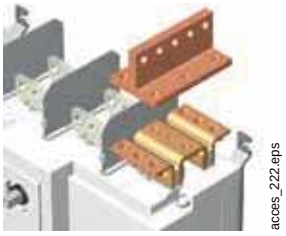
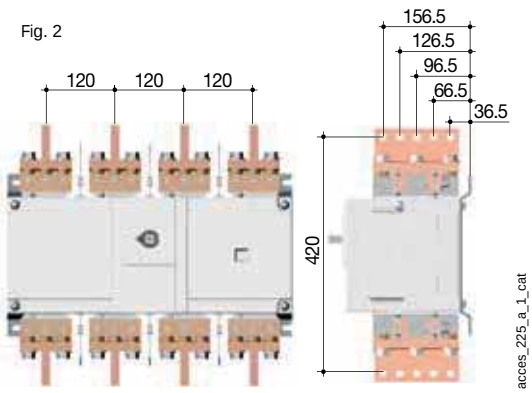


Fig. 2



Key handle interlocking system

Use

Locking in position 0 of the front or side operation handle:

- using a padlock (not supplied) and standard padlocking function of the handle. From 125 to 1800 A, padlocking the external front operation handle provides door interlocking,
- using a lock (not supplied): see diagrams opposite,
- using an undervoltage coil: the SIRCO can only be closed if the coil is energised.

For 6 / 8-pole, please consult us.

Fig. 1

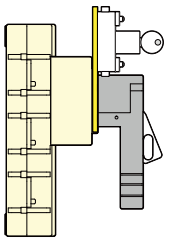
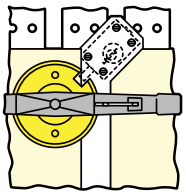


Fig. 2



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For SIRCO

Locking using RONIS EL11AP lock (not supplied)

Rating (A) / Frame size	No. of poles	Operation	Figure	Reference
125 ... 630 / B3 ... B5	3/4 P	Front direct	1	2699 **6008**(1)
125 ... 1800 / B3 ...B7	3/4 P	External front	3	1499 **7701**
800 ... 3200 / B6 ...B8	3/4 P	Front direct	2	2699 **6027**
1250 ... 5000 / B7 ...B9	3/4 P	External front	4	2799 **7002**

(1) Front operation handle included.

Fig. 3

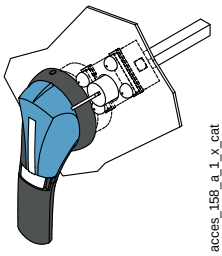
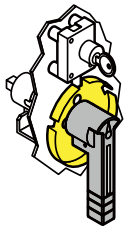


Fig. 4



acces_158_a_1_x_cat

acces_004_c_1_x_cat

For SIRCO AC

Locking using RONIS EL11AP lock (not supplied)

Rating (A) / Frame size	No. of poles	Operation	Figure	Reference
200 ... CD 630 / B4 ... B5	3/4 P	Front direct	1	2699 **6008**(1)
630 ... 1600 / B6 ... B7	3/4 P	Front direct	2	2699 **6027**

(1) The locking system is directly mounted on the device.

For SIRCO

Locking using 230 VAC undervoltage coil

(For other voltages, please contact us)

Rating (A) / Frame size	No. of poles	Operation	Reference
125 ... 630 / B3 ... B5	3/4 P	External front	2699 **9063**(1)
800 ... 3200 / B6 ... B8	3/4 P	Front direct	2699 **9315**(1)

(1) The locking system is directly mounted on the device.

Locking using CASTELL lock (not supplied)

Rating (A) / Frame size	No. of poles	Handle type	Lock type	Operation	Figure	Reference
125 ... 160 / B3	6/8 P	S2	K	External front	2	4109 **8507**
125 ... 1 800 / B3 ... B8	3/4 P	S2, S4	FS	External front	3	1499 **7703**
125 ... 1 800 / B3 ... B8	3/4 P	S2, S4	K	External front	3	1499 **7702**
250 ... 630 / B4 ... B5	6/8 P	S4	K	External front	2	2999 **8707**
800 ... 1 600 / B6 ... B7	6/8 P	S5	K	External front	2	2799 **7003**
1 250 ... 4 000 / B7 ... B9	3/4 P	S5, S0	K	External front	2	2799 **7003**

Other specific accessories

bd_03_01_01

- Mechanical coupling device for making switches with “n” poles of the same or different ratings
- Mechanical interlocking device

SIRCO characteristics according to IEC 60947-3

125 to 800 A

Thermal current I_{th} at 40°C		**125 A**	**160 A**	**200 A**	**250 A**	**315 A**	**400 A**	**500 A**	**630 A**	**800 A**
Frame size		**B3**	**B3**	**B4**	**B4**	**B5**	**B5**	**B5**	**B5**	**B6**
Rated insulation voltage U_i (V)		800	800	800	800	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)		8	8	8	8	12	12	12	12	12
Rated operational currents I_e (A)										
Rated voltage	**Utilisation category**	**A / B(1)**	**A / B(1)**	**A / B(1)**	**A / B(1)**	**A / B(1)**	**A / B(1)**	**A / B(1)**	**A / B(1)**	**A / B(1)**
415 VAC	AC-20 A / AC-20 B	125 / 125	160 / 160	200 / 200	250 / 250	315 / 315	400 / 400	500 / 500	630 / 630	800 / 800
415 VAC	AC-21 A / AC-21 B	125 / 125	160 / 160	200 / 200	250 / 250	315 / 315	400 / 400	500 / 500	630 / 630	800 / 800
415 VAC	AC-22 A / AC-22 B	125 / 125	160 / 160	200 / 200	250 / 250	315 / 315	400 / 400	500 / 500	630 / 630	800 / 800
415 VAC	AC-23 A / AC-23 B	125 / 125	160 / 160	200 / 200	250 / 250	315 / 315	400 / 400	500 / 500	500 / 500	800 / 800
220 VDC	DC-20 A / DC-20 B	125 / 125	160 / 160	200 / 200	250 / 250	315 / 315	400 / 400	500 / 500	630 / 630	800 / 800
220 VDC	DC-21 A / DC-21 B	125 / 125	160 / 160	160 / 200	250 / 250	315 / 315	400 / 400	500 / 500	630 / 630	800 / 800
220 VDC	DC-22 A / DC-22 B	125 / 125	160 / 160	160 / 200	250 / 250	315 / 315	400 / 400	400 / 500	500 / 500	800 / 800
220 VDC	DC-23 A / DC-23 B	125 / 125	125 / 125	160 / 160	200 / 200	315 / 315	400 / 400	400 / 400	500 / 500	800 / 800
440 VDC	DC-20 A / DC-20 B	125 / 125	160 / 160	200 / 200	250 / 250	315 / 315	400 / 400	500 / 500	630 / 630	800 / 800
440 VDC	DC-21 A / DC-21 B	125(2) / 125(2)	160(2) / 160(2)	160(2) / 200(2)	200(2) / 200(2)	315(2) / 315(2)	400(2) / 400(2)	400(2) / 400(2)	500(2) / 500(2)	800(3) / 800(3)
440 VDC	DC-22 A / DC-22 B	125(2) / 125(2)	125(2) / 125(2)	160(2) / 160(2)	200(2) / 200(2)	315(2) / 315(2)	400(2) / 400(2)	400(2) / 400(2)	500(2) / 500(2)	800(3) / 800(3)
440 VDC	DC-23 A / DC-23 B	125(3) / 125(3)	125(3) / 125(3)	160(3) / 160(3)	200(3) / 200(3)	315(3) / 315(3)	400(3) / 400(3)	400(3) / 400(3)	500 / 500	800(3) / 800(3)
500 VDC	DC-20 A / DC-20 B	125 / 125	160 / 160	200 / 200	250 / 250	315 / 315	400 / 400	500 / 500	630 / 630	800 / 800
500 VDC	DC-21 A / DC-21 B	125(2) / 125(2)	125(2) / 125(2)	160(2) / 200(2)	200(2) / 200(2)	315(2) / 315(2)	400(2) / 400(2)	400(2) / 400(2)	500(2) / 500(2)	800(3) / 800(3)
500 VDC	DC-22 A / DC-22 B	125(3) / 125(3)	125(3) / 125(3)	160(3) / 160(3)	200(3) / 200(3)	315(3) / 315(3)	315(3) / 400(3)	315(3) / 400(3)	500(3) / 500(3)	800(3) / 800(3)
500 VDC	DC-23 A / DC-23 B	125(3) / 125(3)	125(3) / 125(3)	160(3) / 160(3)	200(3) / 200(3)	315(3) / 315(3)	315(3) / 400(3)	315(3) / 400(3)	500(3) / 500(3)	800(3) / 800(3)
Operational power in AC-23 (kW)(1)(4)										
At 415 VAC without AC pre-break(1)		63 / 63	80 / 80	100 / 100	132 / 132	160 / 160	220 / 220	280 / 280	280 / 280	450 / 450
Reactive power (kvar)										
At 400 VAC (kvar)(4)		55	75	90	115	145	185	230	290	365
gG DIN fuse protected short-circuit withstand (kA rms prospective)(5)										
Prospective short-circuit current (kA rms)		100	100	80	50	100	100	100	70	50
Associated fuse rating (A)		125	160	200	250	315	400	500	630	800
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s										
Rated short-time withstand current 0.3s. I_{cw} (kA rms)		15	15	17	17	25	25	25	25	50
Short-circuit operation (switch only)										
Rated short-time withstand current I_{cw} 1s (kA rms)		7	7	9	9	13	13	13	13	26
Rated peak withstand current in I_{cc} (kA peak)(5)(6)		20	20	30	30	45	45	45	45	55
Connection										
Minimum Cu cable cross-section (mm²)		35	50	70	95	150	185	240	2 x 150	2 x 185
Minimum Cu busbar cross-section (mm²)									2 x 30 x 5	2 x 40 x 5
Maximum Cu cable cross-section (mm²)		50	95	95	150	240	240	240	2 x 300	2 x 300
Maximum Cu busbar width (mm)		25	25	32	32	40	40	40	50	63
Tightening torque min/max (Nm)		9 / -	9 / -	20 / -	20 / -	20 / -	20 / -	20 / -	40 / 45	40 / 45
Mechanical characteristics										
Durability (number of operating cycles)		10000	10000	10000	10000	10000	10000	10000	10000	3000
Operating effort (Nm)		6.5	6.5	10	10	14.5	14.5	14.5	14.5	37
Weight of a 3-pole device (kg)		1	1.5	2	2	3.5	3.5	3.5	3.5	8
Weight of a 4-pole device (kg)		1.5	1.5	2	2	4	4	4.5	4.5	10

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) 3-pole device with 2 poles in series for the '+' and 1 pole for the '-'.
(3) 4-pole device with 2 poles in series per polarity.
(4) The power value is given for information only, the current values vary from one manufacturer to another.
(5) For a rated operational voltage U_e = 415 VAC.
(6) Coordination tables with circuit breaker: please consult us.

SIRCO characteristics according to IEC 60947-3

1000 to 5000 A

Thermal current I_{th} at 40°C		**1000 A**	**CD 1250 A**	**1250 A**	**1600 A**	**1800 A**	**2000 A**	**2500 A**	**3200 A**	**4000 A**	**5000 A**
Frame size		**B6**	**B6**	**B7**	**B7**	**B7**	**B8**	**B8**	**B8**	**B9**	**B9**
Rated insulation voltage U_i (V)		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)		12	12	12	12	12	12	12	12	12	12
Rated operational currents I_e (A)											
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-20 A / AC-20 B	1000 / 1000	1250 / 1250	1250 / 1250	1600 / 1600	1800 / 1800	2000 / 2000	2500 / 2500	3200 / 3200	4000 / 4000	5000 / 5000
415 VAC	AC-21 A / AC-21 B	1000 / 1000	1250 / 1250	1250 / 1250	1600 / 1600	1800 / 1800	2000 / 2000	2500 / 2500	3200 / 3200	4000 / 4000	5000 / 5000
415 VAC	AC-22 A / AC-22 B	1000 / 1000	1250 / 1250	1250 / 1250	1600 / 1600	1800 / 1800	2000 / 2000	2500 / 2500	2500 / 3200	2500 / 3200	2500 / 3200
415 VAC	AC-23 A / AC-23 B	1000 / 1000	1250 / 1250	1250 / 1250	1250 / 1250	1250 / 1250	1600 / 1600	1600 / 1600	1600 / 1600	1800 / 2000	1800 / 2000
220 VDC	DC-20 A / DC-20 B	1000 / 1000	1250 / 1250	1250 / 1250	1600 / 1600	1800 / 1800	2000 / 2000	2500 / 2500	3200 / 3200	4000 / 4000	5000 / 5000
220 VDC	DC-21 A / DC-21 B	1000 / 1000	1250 / 1250	1250 / 1250	1250 / 1600	1250 / 1600	2000 / 2000	2000 / 2500	2000 / 2500	2500 / 3200	2500 / 3200
220 VDC	DC-22 A / DC-22 B	1000 / 1000	1250 / 1250	1250 / 1250	1250 / 1250	1250 / 1250	1250 / 1600	1250 / 1600	1250 / 1600	1800 / 2000	1800 / 2000
220 VDC	DC-23 A / DC-23 B	1000 / 1000	1250 / 1250	1250 / 1250	1250 / 1250	1250 / 1250	1250 / 1250	1250 / 1250	1250 / 1250	1250 / 1600	1250 / 1600
440 VDC	DC-20 A / DC-20 B	1000 / 1000	1250 / 1250	1250 / 1250	1600 / 1600	1800 / 1800	2000 / 2000	2500 / 2500	3200 / 3200	4000 / 4000	5000 / 5000
440 VDC	DC-21 A / DC-21 B	1000(2) / 1000(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1600(2)	1250(2) / 1600(2)	2000(2) / 2000(2)	2000(2) / 2500(2)	2500(2) / 3200(2)	3200(2) / 4000(2)	3200(2) / 5000(2)
440 VDC	DC-22 A / DC-22 B	1000(2) / 1000(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1600(2) / 1800(2)	1600(2) / 1800(2)
440 VDC	DC-23 A / DC-23 B	1000(2) / 1000(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)
500 VDC	DC-20 A / DC-20 B	1000 / 1000	1250 / 1250	1250 / 1250	1600 / 1600	1800 / 1800	2000 / 2000	2500 / 2500	3250 / 3250	4000 / 4000	5000 / 5000
500 VDC	DC-21 A / DC-21 B	1000(2) / 1000(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1600(2)	1250(2) / 1600(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1600(2) / 1800(2)	1600(2) / 1800(2)
500 VDC	DC-22 A / DC-22 B	1000(2) / 1000(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1600(2)	1250(2) / 1600(2)
500 VDC	DC-23 A / DC-23 B	1000(2) / 1000(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1250(2) / 1250(2)	1000(2) / 1000(2)	1000(2) / 1000(2)	1000(2) / 1000(2)	1000(2) / 1000(2)	1000(2) / 1000(2)
Operational power in AC-23 (kW)(1)(3)											
At 415 VAC without AC pre-break(1)		560 / 560	710 / 710	710 / 710	710 / 710	710 / 710	710 / 710	710 / 710	710 / 710	710 / 710	710 / 710
Reactive power (kvar)											
At 400 VAC (kvar)(3)		460									
gG DIN fuse protected short-circuit withstand (kA rms prospective)(4)											
Prospective short-circuit current (kA rms)		100	100	100	100	100	100	100			
Associated fuse rating (A)		1000	1250	1250	2 x 800	2 x 800	2 x 1000	2 x 1250			
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s											
Rated short-time withstand current 0.3s. I_{cw} (kA rms)		65	65	100	100	100	100	100	100		
Short-circuit operation (switch only)											
Rated short-time withstand current I_{cw} 1s (kA rms)		35	35	50	50	50	50	50	50	75	75
Rated peak withstand current in I_{cc} (kA peak)(4)(5)		80	80	110	110	110	110	110	120	165	165
Connection											
Minimum Cu cable cross-section (mm²)		2 x 240									
Minimum Cu busbar cross-section (mm²)		2 x 50 x 5	2 x 60 x 5	2 x 60 x 5	2 x 80 x 5	3 x 100 x 5	3 x 100 x 5	4 x 100 x 5	4 x 100 x 5	2 x 200 x 10	2 x 200 x 10
Maximum Cu cable cross-section (mm²)		4 x 185	4 x 185	4 x 185	6 x 185	6 x 185					
Maximum Cu busbar width (mm)		63	63	100	100	100	100	100	100		
Tightening torque min/max (Nm)		40/45	40/45	40/45	40/45	40/45	40/45	40/-	40/-	40/-	40/-
Mechanical characteristics											
Durability (number of operating cycles)		3000	3000	4000	4000	4000	3000	3000	3000	2000	2000
Operating effort (Nm)		37	37	56	56	56	75	75	75	105	105
Weight of a 3-pole device (kg)		8	8	12	12	12	22	22	22	45	45
Weight of a 4-pole device (kg)		10	10	15	15	15	25	25	25	50	50

(1) Category with index A = frequent operation - Category with index B = infrequent operation..
(2) 4-pole device with 2 poles in series per polarity.
(3) The power value is given for information only, the current values vary from one manufacturer to another.
(4) For a rated operational voltage U_e = 415 VAC.
(5) Coordination tables with circuit breaker: please consult us.

SIRCO AC characteristics according to IEC 60947-3

200 to 630 A

Thermal current I_{th} at 40°C		**200 A**	**250 A**	**315 A**	**400 A**	**500 A**	**CD 630 A**	**630 A**
Rated insulation voltage U_i (V)		1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)		12	12	12	12	12	12	12
Rated operational currents I_e (A)								
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
500 VAC	AC-20 A / AC-20 B	200/200	250/250	315/315	400/400	500/500	630/630	630/630
500 VAC	AC-21 A / AC-21 B	200/200	250/250	315/315	400/400	500/500	630/630	630/630
500 VAC	AC-22 A / AC-22 B	200/200	250/250	315/315	400/400	500/500	630/630	630/630
500 VAC	AC-23 A / AC-23 B	200/200	250/250	315/315	400/400	500/500	630/630	630/630
690 VAC	AC-20 A / AC-20 B	200/200	250/250	315/315	400/400	500/500	630/630	630/630
690 VAC	AC-21 A / AC-21 B	200/200	250/250	315/315	400(2)/400(2)	500(2)/500(2)	630(2)/630(2)	630(2)/630(2)
690 VAC	AC-22 A / AC-22 B	200/200	250/250	315/315	400(2)/400(2)	500(2)/500(2)	500(2)/630(2)	630(2)/630(2)
690 VAC	AC-23 A / AC-23 B	200/200	250/250	315/315	400(2)/400(2)	500(2)/500(2)	500(2)/500(2)	630(2)/630(2)
Operational power in AC-23 A (kW) (3)								
At 690 VAC without pre-break AC		160	220	250	400	500	500	630
Reactive power (kvar)								
At 690 VAC (kvar)		160	190	250	325	400	400	450
Fuse protected short-circuit withstand (kA rms prospective) at 690 VAC (4)								
Prospective short-circuit current (kA rms)		50	50	50	50	50	50	50
Associated fuse rating (A)		200	250	315	400	500	630	630
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s at 690 VAC								
Rated short-time withstand current 0.3s. I_{cw} (kA rms)		15	15	15	15	15	15	28
Short-circuit capacity (without protection)								
Rated short-time withstand current 1s. I_{cw} (kA rms)		8	8	8	11	11	11	20
Rated short-circuit making capacity without fuses I_{cm} (prospective kA peak)		22	22	22	22	22	22	40
Connection								
Minimum Cu cable cross-section (mm²)		70	70	70	185	240	2 x 150	2 x 185
Minimum Cu busbar cross-section (mm²)							2 x 30 x 5	2 x 40 x 5
Maximum Cu cable cross-section (mm²)		95	95	95	240	240	2 x 300	2 x 300
Maximum Cu busbar width (mm)		32	32	32	40	40	63	63
Tightening torque min/max (Nm)		20/-	20/-	20/-	20/-	20/-	20/-	40/45
Mechanical characteristics								
Durability (number of operating cycles)		10000	10000	10000	5000	5000	5000	4000
Operating effort (Nm)		10	10	10	14.5	14.5	14.5	48
Weight of a 3 pole device (kg)		2	2	2	3.5	3.5	3.5	8
Weight of a 4 pole device (kg)		2	2	2	4	4	4	10

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) With terminal shrouds or phase barrier.
(3) The power value is given for information only, the current values vary from one manufacturer to another.
(4) For a rated operational voltage U_e = 690 VAC.

SIRCO AC characteristics according to IEC 60947-3

800 to 4000 A

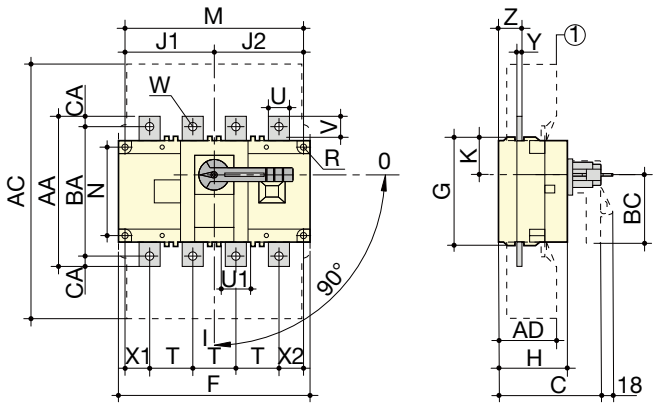
Thermal current I_{th} at 40°C		800 A	1000A	CD 1250 A	1250 A	1600 A	2000 A	4000 A
Rated insulation voltage U_i (V)		1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)		12	12	12	12	12	12	12
Rated operational currents I_e (A)								
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
500 VAC	AC-20 A / AC-20 B	800/800	1000/1000	1250/1250	1250/1250	1600/1600	2000/2000	4000/4000
500 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1250/1250	1600/1600	2000/2000	-/3200
500 VAC	AC-22 A / AC-22 B	800/800	1000/1000	1250/1250	1250/1250	1600/1600	2000/2000	-
500 VAC	AC-23 A / AC-23 B	800/800	1000/1000	1250/1250	1250/1250	1250/1250	1600/1600	-
690 VAC	AC-20 A / AC-20 B	800/800	1000/1000	1250/1250	1250/1250	1600/1600	2000/2000	4000/4000
690 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1250/1250	1600/1600	2000/2000	-/3200
690 VAC	AC-22 A / AC-22 B	800/800	1000/1000	1250/1250	1250/1250	1600/1600	2000/2000	-/-
690 VAC	AC-23 A / AC-23 B	800/800	1000/1000	1250/1250	1250/1250	1250/1250	1600/1600	-/-
Operational power in AC-23 A (kW) (3)								
At 690 VAC without pre-break AC		900	900	-	-	-	-	-
Reactive power (kvar)								
At 690 VAC (kvar)		550	750	950	950	-	-	-
Fuse protected short-circuit withstand (kA rms prospective) at 690 VAC(4)								
Prospective short-circuit current (kA rms)		50	50	50	50	50	-	-
Associated fuse rating (A)		800	800	2 x 500	1250	2 x 800	-	-
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s at 690 VAC								
Rated short-time withstand current 0.3s. I_{cw} (kA rms)		28	55	55	53	53	53	53
Short-circuit capacity (without protection) at 690 VDC								
Rated short-time withstand current 1s. I_{cw} (kA rms)		20	30	30	35	35	35	35
Rated short-circuit making capacity without fuses I_{cm} (prospective kA peak)		40	80	80	75	75	75	75
Connection								
Minimum Cu cable cross-section (mm^2)		2 x 185	2 x 240					
Minimum Cu busbar cross-section (mm^2)		2 x 40 x 5	2 x 50 x 5	2 x 60 x 5	2 x 60 x 5	2 x 80 x 5	3 x 100 x 5	1 x 100 x 5
Maximum Cu cable cross-section (mm^2)		2 x 300	4 x 185	4 x 185	4 x 185	6 x 185		
Maximum Cu busbar width (mm)		63	63	63	100	100	100	
Tightening torque min/max (Nm)		40/45	40/45	40/45	40	40	40	40
Mechanical characteristics								
Durability (number of operating cycles)		4000	4000	3000	4000	4000	3000	2000
Operating effort (Nm)		48	48	48	55	55	75	100
Weight of a 3 pole device (kg)		8	8	8	12	12	22	45
Weight of a 4 pole device (kg)		10	10	10	15	15	25	50

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) With terminal shrouds or phase barrier.
(3) The power value is given for information only, the current values vary from one manufacturer to another.
(4) For a rated operational voltage Ue = 690 VAC.

Dimensions - Front operation

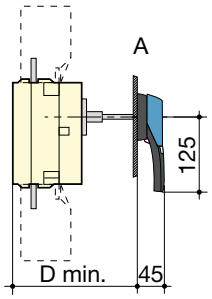
SIRCO 125 to 630 A and SIRCO AC 200 to CD 630 A - B3 to B5

Direct front operation



1. Terminal shrouds

External front operation



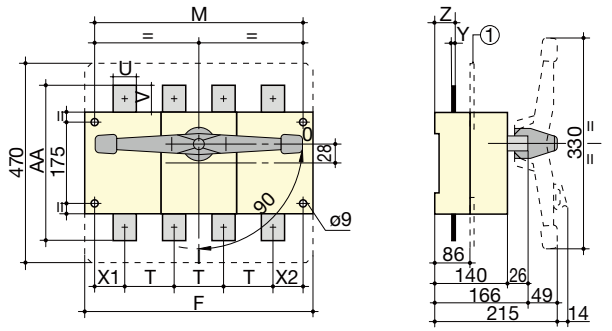
A. S2 type handle

sirco_198_i_1_x_cat

Rating (A) / Frame size		Overall dimensions		Terminal shrouds		Switch body									Switch mounting				Connection											
SIRCO	SIRCO AC	C	D min	AC	AD	F 3p.	F 4p.	G	H	J1 3p.	J1 4p.	J2	K	BC	M 3p.	M 4p.	N	R	T	U	U1	V	W	X1 3p.	X1 4p.	X2	Y	Z	AA	BA	CA
125…160/ B3		115	125	235	50	140	170	93	65	45	75	75	31.5	80	120	150	65	5.5	36	20	20.5	25	9	28	22	20	3.5	20.5	135	115	10
200…250 / B4	200…250 / B4			280	60	180	230	108	75	55	105	105	34	115	160	210	80	5.5	50	25	25.5	21.5	11	33	33	27	3.5	22.5	170	130	15
	315 / B4																			35											
315…400/ B5	400…500 / B5	160	165	401	89	230	290	170	110	75	135	135	55	115	210	270	140	7	65	32	45.5	29	11	42.5	37.5	37.5	5	36	235	205	15
500 / B5	-																														
630/ B5	CD 630 / B5																			45		41.5	13						260	220	20

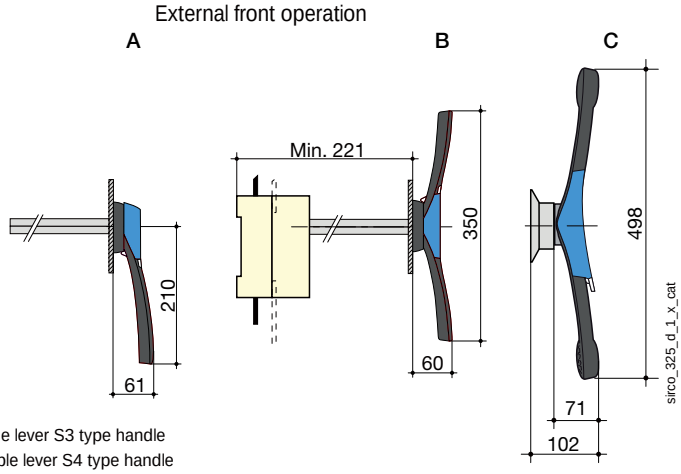
SIRCO 800 to 1800 A and SIRCO AC 630 to 1600 A - B6 to B7

Direct front operation



1. Terminal screens

External front operation



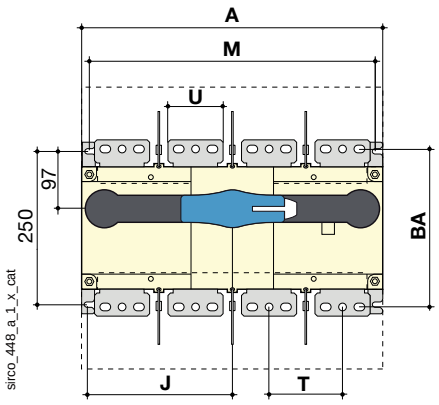
A. Single lever S3 type handle
B. Double lever S4 type handle
C. Double lever S5 type handle

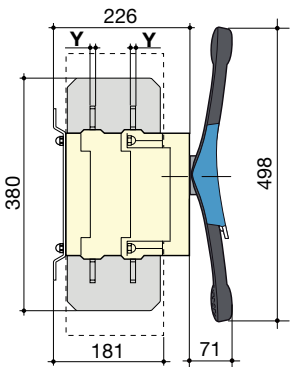
sirco_325_d_1_x_cat

Rating (A) / Frame size		Switch body		Switch mounting		Connection							
SIRCO	SIRCO AC	F 3p.	F 4p.	M 3p.	M 4p.	T	U	V	Y	X1	X2	Z	AA
800 … 1000 / B6	630 … 1000 / B6	280	360	255	335	80	50	60.5	7	47.5	47.5	46.5	321
CD 1250 / B6	CD 1250 /B6						60	65					330
1250 … 1800 / B7	1250 … 1600 / B7	372	492	347	467	120	90	44	8	53.5	53.5	47.5	288

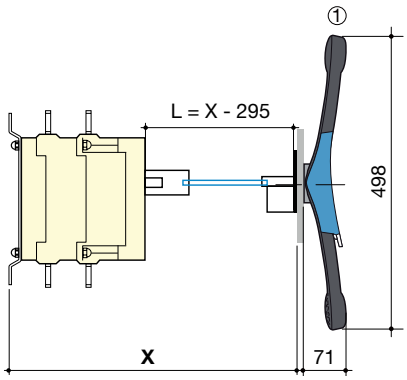
SIRCO 2000 to 3200 A and SIRCO AC 2000 A - B8

Direct front operation





External front operation

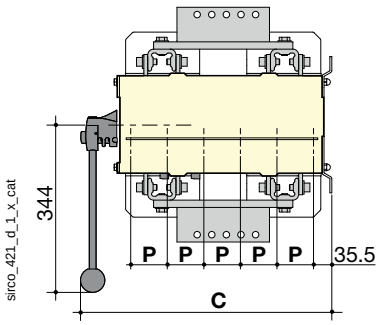


1. Double lever S5 type handle

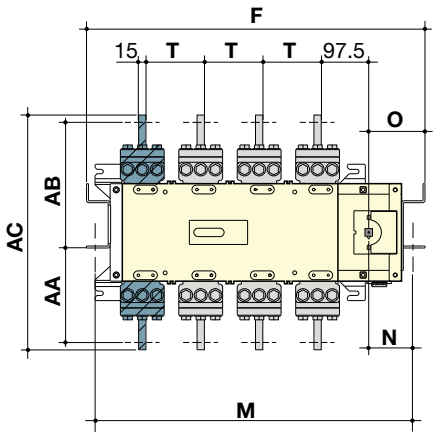
Rating (A) / Frame size		Overall dimensions		Switch body		Switch mounting		Connection			
SIRCO	SIRCO AC	A 3p.	A 4p.	J 3p.	J 4p.	M 3p.	M 4p.	T	U	Y	BA
2000 … 3200 / B8	2000 / B8	372	492	173.5	233.5	347	367	120	90	8	258

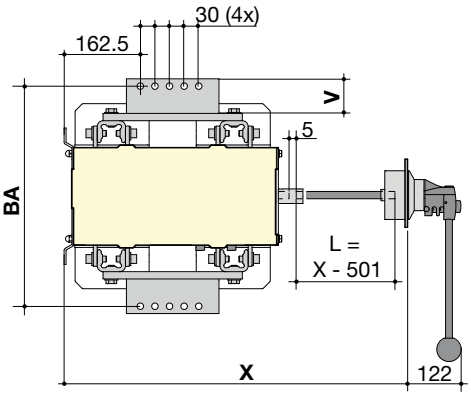
SIRCO 4000 to 5000 A and SIRCO AC 4000 A - B9

Direct front operation



External front operation



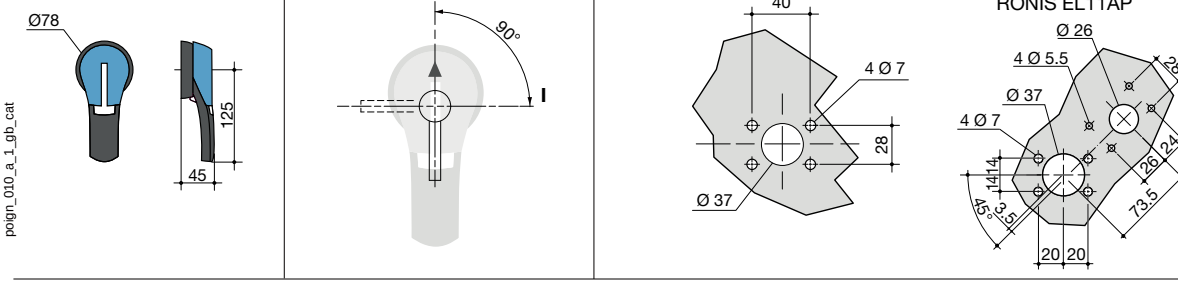


Rating (A) / Frame size		Overall dimensions	Switch body		Switch mounting					Connection					
SIRCO	SIRCO AC	C	F 3p.	F 4p.	M 3p.	M 4p.	N	O	P	T	V	AA	AB	AC	BA
4000 … 5000 / B9	4000 / B9	514	695	695	660	660	98	115.5	75	120	86	160	292	482	452

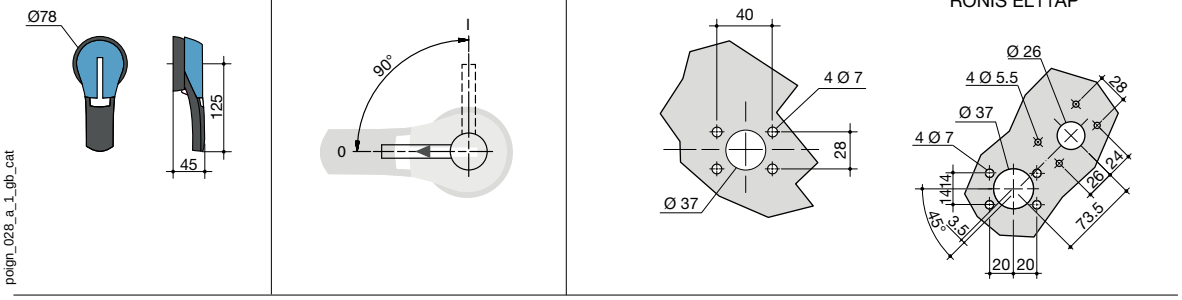
Dimensions for external handles

B3 to B5

Handle type	Front operation Direction of operation	Door drilling
S2 type		

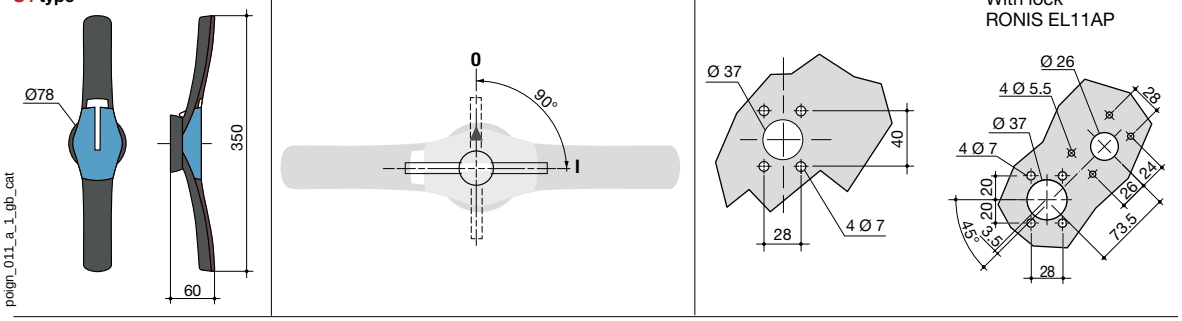


Handle type	Side operation Direction of operation	Door drilling
S2 type	**Right** side operation	

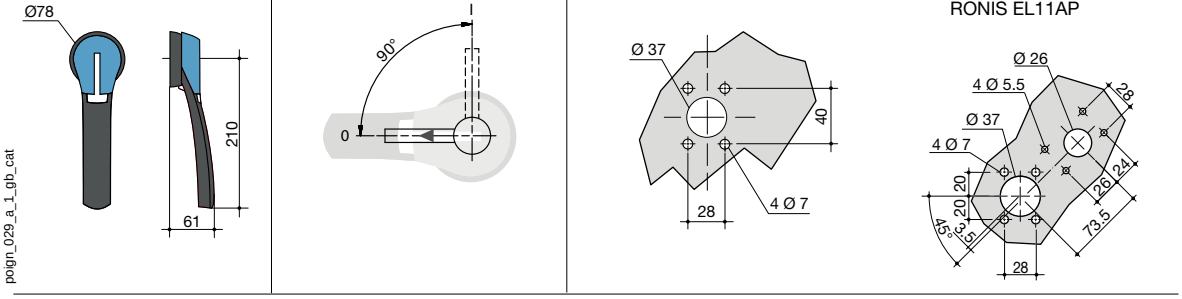


B6 - B7

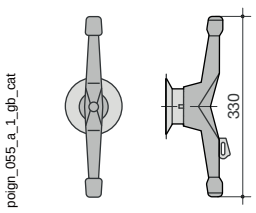
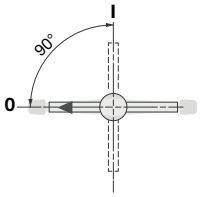
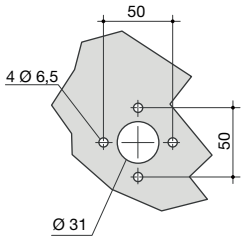
Handle type	Front operation Direction of operation	Door drilling
S4 type		

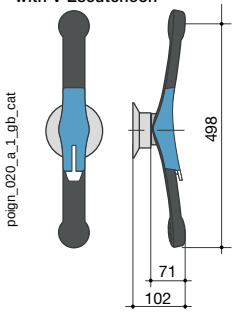
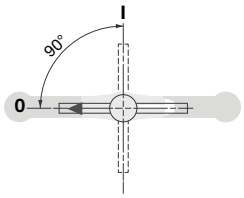
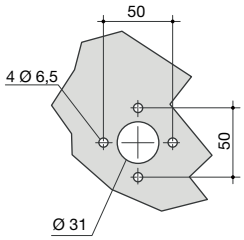


Handle type	Side operation Direction of operation	Door drilling
S3 type	**Right** side operation	

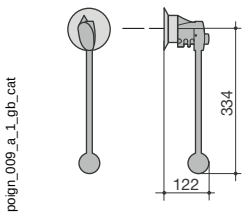
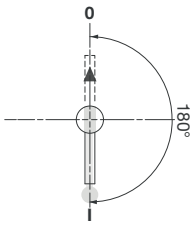
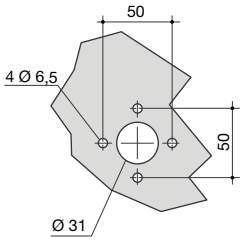


B7 - B8

Handle type	Front operation Direction of operation	Door drilling
V2 Type 		

Handle type	Front operation Direction of operation	Door drilling
S5 type with V Escutcheon 		

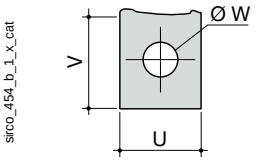
B9

Handle type	Front operation Direction of operation	Door drilling
V0 type 		

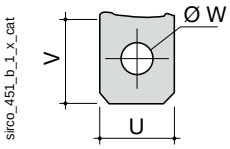
Connection terminal

SIRCO 125 to 630 A and SIRCO AC 200 to CD 630 A

SIRCO



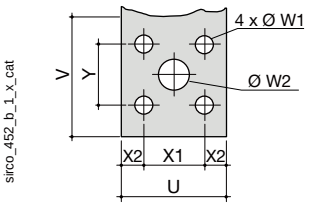
SIRCO AC



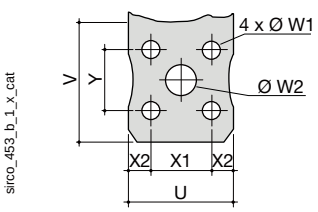
Rating (A) SIRCO	SIRCO AC	U	V	W
125 ... 160		20	25	9
200 ... 250	200 ... 250	25	21.5	11
	315	35		
315 ... 400	400 ... 500	32	29	
500				13
630	CD 630	45	41.5	

SIRCO 800 to 1000 A and SIRCO AC 630 to 1000 A

SIRCO



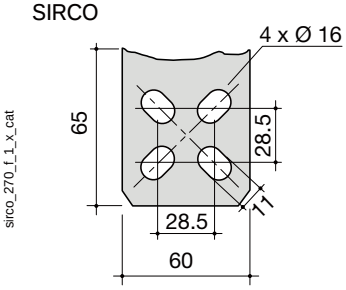
SIRCO AC



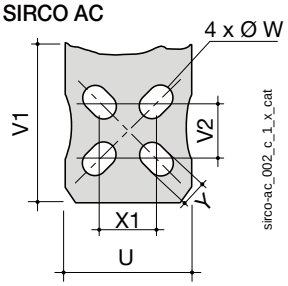
Rating (A) SIRCO	SIRCO AC	U	V	W1	W2	X1	X2	Y
800 ... 1000	630 ... 1000	50	60.5	9	15	33	8.5	33

SIRCO and SIRCO AC CD 1250 A

SIRCO

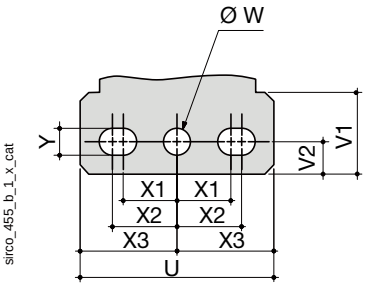


SIRCO AC



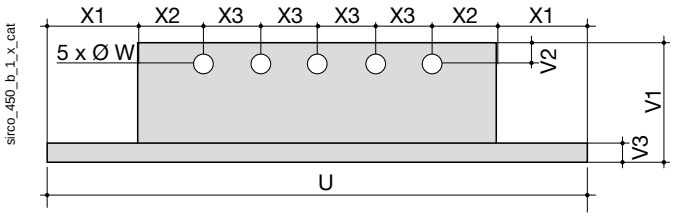
Rating (A) SIRCO	SIRCO AC	U	V1	V2	W	X1	Y
CD 1250 A	CD 1250 A	60	65	28.5	16	28.5	11

SIRCO 1250 to 3200 A and SIRCO AC 1250 to 1600 A



Rating (A)									
SIRCO	**SIRCO AC**	**U**	**V1**	**V2**	**W**	**X1**	**X2**	**X3**	**Y**
1250 ... 3200	1250 ... 1600	90	35.8	15	12.5	25	30	45	12.5

SIRCO 4000 to 5000 A and SIRCO AC 4000 A



Rating (A)									
SIRCO	**SIRCO AC**	**U**	**W**	**X1**	**X2**	**X3**	**V1**	**V2**	**V3**
4000 ... 5000	4000	286	13	48	35	30	86	15	15

SIRCO PV IEC 60947-3

Load break switches for photovoltaic applications

from 100 to 3200 A, up to 1500 VDC

sirco-pv_058.psd

sirco-PV_164.eps

The solution for

> Combiner box
> Recombiner box
> Inverter

Strong points

> Patented switching technology up to 500 VDC/pole
> Positive indication
> Up to 1500 VDC according to IEC 60947-3

Conformity to standards

> IEC 60947-3
> IEC 60364-7-712
> UL 98B(1)

Approvals and certifications(1)

(1) Product reference on request.

Function

SIRCO PV are manually operated load break switches.
Making and breaking capacity under load conditions up to 1500 VDC.
These extremely durable switches have been tested and approved for use in the most demanding applications.
They have been designed and tested for all types of applications: grounded, floating or bipolar.

Advantages

Optimise your investment

- Thanks to a reduced number of bridging bars, you can limit your costs and save mounting time.
- A 2 poles SIRCO PV will reduce heating and can be integrated in a smaller enclosure.

High quality materials

SIRCO PV is an extremely robust device in a glass fibre reinforced polyester frame.
This material provides:

- high mechanical strength,
- stability to temperature variations (RTI of 130°C),
- high dielectric strength (high CTI / tested as per standard ASTM D 2303).

Take advantage of an innovative design

The SIRCO PV can be directly connected to up to four independent PV panel strings. The global solution cost is therefore reduced in comparison with the use of four distinct switches.

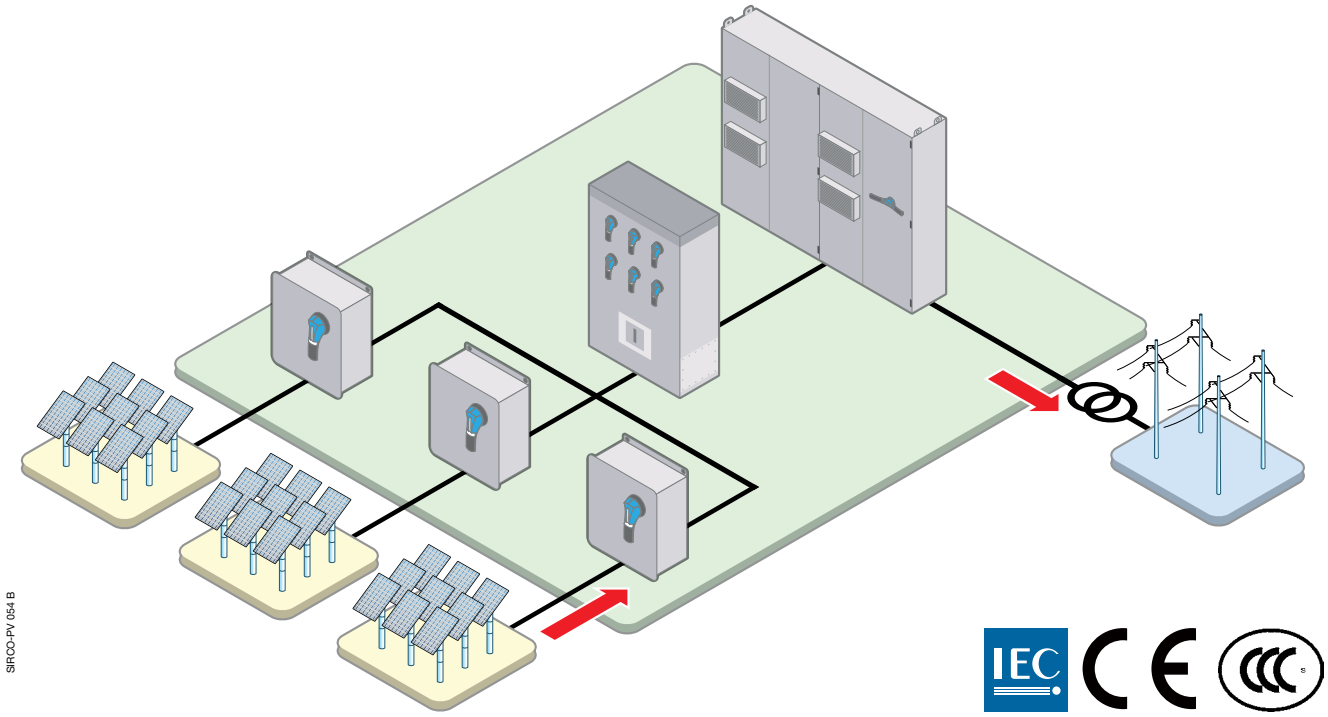
Reliability and performance

Our range of SIRCO PV load break switches is compliant to standards UL98B and IEC 60947-3.
SIRCO PV have been tested to critical currents and at a 10 kA short-circuit during 50 ms without specific protection.

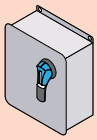
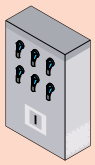
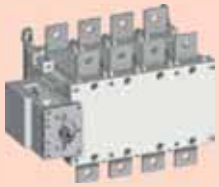
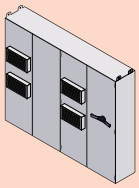
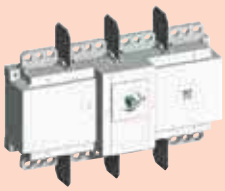
socomec Innovative Power Solutions

Typical PV architecture

The SIRCO PV range provides safe disconnection and isolation at all levels within your PV installation.



The SOCOMEC solutions

LEVEL OF INSTALLATION	SOCOMEC SOLUTIONS	
Combiner box		
		SIRCO PV One circuit up to 400 A at 1500 VDC
Recombiner box		
		SIRCO PV 4 circuits up to 500 A at 1000 VDC (1) 2 circuits up to 500 A at 1500 VDC
Inverter		
		SIRCO PV One circuit up to 3200 A at 1000 VDC up to 2000 A at 1500 VDC

(1) Please consult us.

References

1000 VDC - Back mounting

Rating (A)	Frame size	Number of poles	Switch body	Direct handle	External handle	Shaft for external handle	Quantity to be ordered to connect 2 poles in series
1 PV circuit							
100 A	B4	2 P	26PV **2010**	J1 type Black 1112 **1111** Red 1113 **1111**	S2 type (1) Black IP55 1421 **2111** Black IP65 1423 **2111** Red/Yellow IP65 1424 **2111**	200 mm 1400 **1020** 320 mm 1400 **1032** 400 mm 1400 **1040**	-
160 A	B4	2 P	26PV **2016**				
250 A	B4	2 P	26PV **2025**				
315 A	B4	2 P	26PV **2031**				
400 A	B4	4 P	26PV **4040**				2 x 2609 **0025**
500 A	B4	4 P	26PV **4050**				
630 A	B5	4 P	26PV **4063**				2 x 2709 **0027**
800 A	B5	4 P	26PV **4080**				
1250 A	B6	4 P	26PV **4120**	J4 type Black 1142 **1111** Red 1143 **1111**	S4 type (1) Black IP65 1443 **3111** Red/Yelow IP65 1444 **3111**	200 mm 1401 **1520** 320 mm 1401 **1532** 400 mm 1401 **1520**	1 x 2609 **1100**
2000 A	B7	4 P	26PV **4200**				2 x 2609 **1200**
3200 A	B8	4 P	26PV**4320**		V1 type Black IP65 2799 **7145**	320 mm 2799 **3018** 450 mm 2799 **3019**	2 x 2609 **1200**
2 PV circuits							
100 A	$B4_{DS}$	4 P	26PV **5010**	J2 type Black 1122 **1111** Red 1123 **1111**	S2 type (1) Black IP55 1421 **2111** Black IP65 1423 **2111** Red/Yellow IP65 1424 **2111**	200 mm 1400 **1020** 320 mm 1400 **1032** 400 mm 1400 **1040**	-
160 A	$B4_{DS}$	4 P	26PV **5016**				
250 A	$B4_{DS}$	4 P	26PV **5025**				
315 A	$B4_{DS}$	4 P	26PV **5031**				
630 A	$B5_{DS}$	8 P	26PV **8063**	J4 type Black 1142 **1111** Red 1143 **1111**	S4 type (1) Black IP65 1443 **3111** Red/Yellow IP65 1444 **3111**	200 mm 1401 **1520** 320 mm 1401 **1532** 400 mm 1401 **1520**	2 x 2709 **0027**
800 A	$B6_{DS}$	8 P	26PV **8080**		V1 type Black IP65 2799 **7145**	320 mm 4199 **3018**	1x 2609 **1100**
1250 A	$B6_{DS}$	8 P	26PV **8120**				
2000 A	$B7_{DS}$	8 P	26PV **8200**				1 x 2609 **1200**

(1) Defeatable handle.

1500 VDC - Back mounting

Rating (A)	Frame size	Number of poles	Switch body	Direct handle	External handle	Shaft for external handle	Quantity to be ordered to connect 2 poles in series
1 PV circuit							
160 A	B4T	3 P	26PV **3015**	J1 type Black 1112 **1111** Red 1113 **1111**	S2 type (1) Black IP55 1421 **2111** Black IP65 1423 **2111** Red/Yellow IP65 1424 **2111**	200 mm 1400 **1020** 320 mm 1400 **1032** 400 mm 1400 **1040**	Standard bridging bar 1 x 2609 **0026** Back bridging bar 1 x 2609 **0041**
250 A	B4T	3 P	26PV **3024**				
315 A	B4T	3 P	26PV **3030**				
400 A	B4T	3 P	26PV **3039**				
800 A	$B6_{DS}$	8 P	26PV **8080**	J4 type Black 1142 **1111** Red 1143 **1111**	V1 type Black IP65 2799 **7145**	320 mm 4199 **3018**	1 x 2609 **1100**
1250 A	$B6_{DS}$	8 P	26PV **8120**				
2000 A	$B7_{DS}$	8 P	26PV **8200**				1x 2609 **1200**

(1) Defeatable handle.

Accessories

Direct operation handle

Frame size	Handle type	Handle colour	Reference
B4 ... B5	B2	Black	2699 **5052**
		Red	2699 **5053**
	J1	Black	1112 **1111**
		Red	1113 **1111**
B6 ... B7	J4	Black	1142 **1111**
		Red	1143 **1111**
$B4_{DS}$ ... $B5_{DS}$	B2	Black	2699 **5052**
		Red	2699 **5053**
	J4	Black	1142 **1111**
		Red	1143 **1111**
	J2	Black	1122 **1111**
		Red	1123 **1111**
$B6_{DS}$...$B7_{DS}$	J4	Black	1142 **1111**
		Red	1143 **1111**
B8	J4	Black	1142 **1111**
		Red	1143 **1111**

B2 type handle

J1 type handle

J4 type handle

Door interlocked external operation handle

Use

Door interlocked external operation handles include an escutcheon, are padlockable and must be utilised with an extension shaft.

In a combiner box, located close to the solar cell strings, or located close to the inverter, we recommend to use a door interlocked external handle for its safety features.

Example

The locking function of the enclosure in the "ON" position will force the operator to safely disconnect and isolate the solar cell strings prior to any intervention.

Opening the door when the switch is on "ON" position is possible by defeating the locking function using a tool (authorised persons only).

The interlocking function is restored when the door is re-closed.

Frame size	Handle type	Handle colour	Degree of protection	Reference
B4 ... B5	S2	Black	IP55	1421 **2111**
	S2	Black	IP65	1423 **2111**
	S2	Red/ Yellow	IP65	1424 **2111**
B6 ... B7	S4	Black	IP65	1443 **3111**
	S4	Red/ Yellow	IP65	1444 **3111**
B8	V1	Black	IP65	2799 **7145**
$B4_{DS}$	S2	Black	IP55	1421 **2111**
	S2	Black	IP65	1423 **2111**
	S2	Red/ Yellow	IP65	1424 **2111**
$B5_{DS}$	S4	Black	IP65	1443 **3111**
	S4	Red/ Yellow	IP65	1444 **3111**
$B6_{DS}$ ... $B7_{DS}$ B8	V1	Black	IP65	2799 **7145**

Reinforced S2 type handle

S4 type handle

V1 type handle

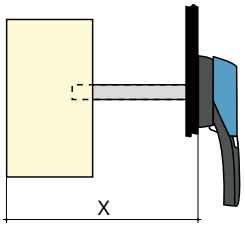
Accessories (continued)

Shaft for external handle

Use

Standard lengths:
- 200 mm,
- 320 mm,
- 400 mm.

Other lengths: Please consult us.



Frame size	Handle type	Dimensions X (mm)	Length (mm)	Reference
B4	S2	150 ... 295	200	1400 **1020**
B4	S2	150 ... 415	320	1400 **1032**
B4	S2	150 ... 495	400	1400 **1040**
B5	S2	203 ... 328	200	1400 **1020**
B5	S2	203 ... 448	320	1400 **1032**
B5	S2	203 ... 525	400	1400 **1040**
B6	S4	220 ... 343	200	1401 **1520**
B6	S4	220 ... 463	320	1401 **1532**
B6	S4	220 ... 543	400	1401 **1540**
B7	S4	305 ... 366	200	1401 **1520**
B7	S4	305 ... 485	320	1401 **1532**
B7	S4	305 ... 564	400	1401 **1540**
B8	V1	415 ... 690	320	2799 **3018**
B8	V1	415 ... 820	450	2799 **3019**
$B4_{DS}$	S2	210...310	200	1400 **1020**
$B4_{DS}$	S2	210...430	320	1400 **1032**
$B4_{DS}$	S2	210...510	400	1400 **1040**
$B5_{DS}$	S4	280...390	200	1401 **1520**
$B5_{DS}$	S4	280...510	320	1401 **1532**
$B5_{DS}$	S4	280...590	400	1401 **1540**
$B6_{DS}$	V1	425...577	320	4199 **3018**
$B6_{DS}$	V1	425...697	400	4199 **3019**
$B7_{DS}$	V1	425...697	320	4199 **3018**
$B7_{DS}$	V1	425...777	400	4199 **3019**

Shaft guide for external operation

Use

To guide the shaft extension into the external handle.

This accessory enables the handle to engage the extension shaft with a misalignment of up to 15 mm.

Required for a shaft length over 320 mm.

Description	Reference
Shaft guide	1429 **0000**

S-type handle adapter

Use

Enables S-type handles to be fitted in place of existing older style Socomec handles. Adapter can also be utilised as a spacer to increase the distance between the panel door and the handle lever.

Dimensions

Adds 12 mm to the depth of the handle.

Handle colour	External IP(1)	To be ordered in multiples of	Reference
Black	IP65	1	1493 **0000**

(1) IP: protection degree according to IEC 60529 standard.

Auxiliary contact

Use

Pre-break and signalling of positions 0 and I:
- 1 to 2 NO/NC auxiliary contacts,
- 1 to 4 NO + NC auxiliary contacts,
- 1 to 2 low level NO/NC auxiliary contacts.

Characteristics

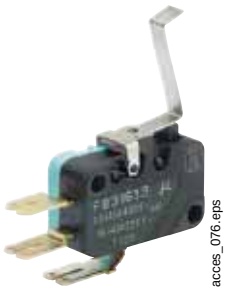
NO/NC AC: IP2 with front operation.

Connection to the control circuit

By 6.35 mm fast-on terminal.

Electrical characteristics

30 000 operations.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NO/NC changeover auxiliary contacts

Frame size	Position AC	Type	Reference
B4 ... B8	1 contact	NO/NC	2699 **0031**
B4 ... B8	2 contacts	NO/NC	2699 **0032**
$B4_{DS}$ ... $B7_{DS}$	1 contact	NO/NC	2699 **0061**
$B4_{DS}$ ... $B7_{DS}$	2 contacts	NO/NC	2699 **0062**

Low level NO/NC auxiliary contacts

Frame size	Position AC	Type	Reference
B4 ... B7	1 contact	NO/NC	2699 **0301**
B4 ... B7	2 contacts	NO/NC	2699 **0302**

Terminal screen

Use

Top and bottom protection against direct contact with terminals or connection parts.

Frame size	No. of poles	Position	Pack	Reference
B4	2 P	Top or bottom	1 unit	2698 **3020**
B4T	3 P	Top or bottom	1 unit	2698**4020**
B4	4 P	Top or bottom	1 unit	2698 **4020**
B5	3 P	Top or bottom	1 unit	2698 **3050**
B5	4 P	Top or bottom	1 unit	2698 **4050**
B6	4 P	Top or bottom	1 unit	2698 **4080**
B7	4 P	Top or bottom	1 unit	2698 **4120**
B8	4 P	Top or bottom	1 unit	2698 **4200**
$B4_{DS}$	2 P	Top or bottom	1 unit	1509 **3025**
$B5_{DS}$	6 P	Top and bottom	2 units	1509 **3063**
$B5_{DS}$	8 P	Top and bottom	2 units	1509 **4063**
$B6_{DS}$	8 P	Top and bottom	2 units	1509 **4080**


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Inter-phase barrier

Use

Safe isolation between the terminals.

Frame size	No. of poles	Reference
B4	2 P	2998 **0023**
B4T	3 P	2998 **0023**
B4	4 P	2998 **0024**
B5	4 P	2998 **0014**
B6...B8	3 P	Included
B6...B8	4 P	Included

The inter-phase barriers are not mandatory but we recommand to separate the polarities + and -.

Accessories (continued)

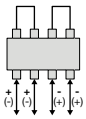
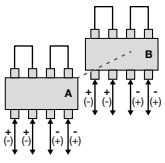
Bridging bars for connecting poles in series

Use

The bridging bars permit easy connection of the poles in series, allowing the following configurations(1).

(1) Other connections: refer to mounting instructions.

1000 VDC - 1 independent PV circuit

Switch body Reference	Rating (A)	Frame size	Fig.	Quantity of bridging bars kits to order per switch - ungrounded	Fig.	Reference
26PV **4040**	400	B4		4		2609 **0025**
26PV **4050**	500					
26PV **4063**	630	B5		4		2709 **0027**
26PV **4080**	800					
26PV **4120**	1250	B6		2		2609 **1100**
26PV **4200**	2000	B7		2		2609 **1200**
26PV **4320**	3200	B8		2		
26PV **8063**	630	$B5_{DS}$		8		2709 **0027**
26PV **8080**	800	$B6_{DS}$		4		2609 **1100**
26PV **8120**	1250					
26PV **8200**	2000	$B7_{DS}$		4		2609 **1200**

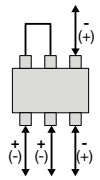
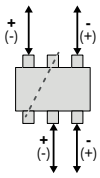
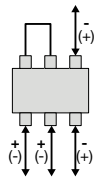
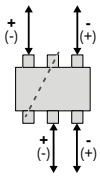
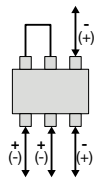
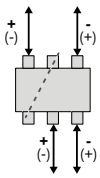
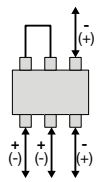
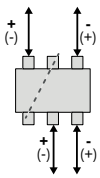
Bridging bars for connecting poles in series (continued)

Use

The bridging bars permit easy connection of the poles in series, allowing the following configurations(1).

(1) Other connections: refer to mounting instructions.

1500 VDC - 1 independent PV circuit

Switch body Reference	Rating (A)	Frame size	Quantity to be ordered to connect 2 poles in series	Fig.	Quantity of bridging bars kits to order per switch - ungrounded	Fig.	Reference
26PV **3015**	160	B4T	1		1		2609 **0026**
							2609 **0041**
26PV **3024**	250	B4T	1		1		2609 **0026**
							2609 **0041**
26PV **3030**	315	B4T	1		1		2609 **0026**
							2609 **0041**
26PV **3039**	400	B4T	1		1		2609 **0026**
							2609 **0041**

Accessories (continued)

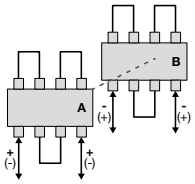
Bridging bars for connecting poles in series (continued)

Use

The bridging bars permit easy connection of the poles in series, allowing the following configurations(1).

(1) Other connections: refer to mounting instructions.

1500 VDC - 1 independent PV circuit

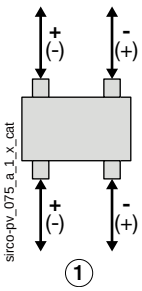
Switch body Reference	Rating (A)	Frame size	Quantity to be ordered to connect 2 poles in series	Fig.	Quantity of bridging bars kits to order per switch - ungrounded	Fig.	Reference
26PV **8080**	800	$B6_{DS}$	1		4		2609 **1100**
26PV **8120**	1250	$B6_{DS}$	1		4		2609 **1100**
26PV **8200**	2000	$B7_{DS}$	1		4		2609 **1200**

Characteristics

Characteristics according to IEC 60947-3

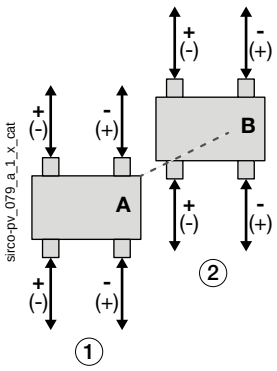
Rated Current I_n			**100 A**		**160 A**			**250 A**		
Reference			26PV **2010**	26PV **5010**	26PV **2016**	26PV **5016**	26PV **3015**	26PV **2025**	26PV **5025**	26PV **3024**
Frame size			**B4**	**$B4_{DS}$**	**B4**	**$B4_{DS}$**	**B4T**	**B4**	**$B4_{DS}$**	**B4T**
Thermal current at 40°C (A)			100	100	160	160	160	250	250	250
Thermal current at 45°C (A)			100	100	160	160	160	250	250	250
Thermal current at 50°C (A)			100	100	160	160	160	250	250	250
Thermal current at 55°C (A)			100	100	160	160	160	250	250	250
Thermal current at 60°C (A)			100	100	160	160	160	250	250	250
Thermal current at 65°C (A)			100	100	160	160	152	250	250	237
Thermal current at 70°C (A)			100	100	160	160	144	250	250	225
Rated insulation voltage U_i (V)			1500	1500	1500	1500	1500	1500	1500	1500
Rated impulse withstand voltage U_{imp} (kV)			12	12	12	12	12	12	12	12
Number of circuits		**Rated voltage**	**Utilisation category**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**
I_e (A)	1 circuit	1000 VDC	DC-21 B	100	-	160	-	-	250	-	-
	2 circuits			-	100	-	160	-	-	250	-
	1 circuit	1500 VDC	DC-21 B	-	-	-	-	-	-	-	-
	2 circuits			-	-	-	-	-	-	-	-
	1 circuit		DC-PV1	-	-	-	-	160	-	-	250
Number of pole(s) in series per circuit				1P+; 1P- (1)	1P+; 1P- (2)	1P+; 1P- (1)	1P+; 1P- (2)	2P+; 1P- (3)	1P+; 1P- (1)	1P+; 1P- (2)	2P+; 1P- (3)
Number of pole(s) of the device				2 P	4 P	2 P	4 P	3 P	2 P	4 P	3 P
Short-circuit capacity (without protection)											
Rated short-time withstand current 0.3 s. (kA eff)				10	10	10	10	10	10	10	10
Rated short-time withstand current 1 s. (kA eff)				5	5	5	5	5	5	5	5
Power dissipation per poles of the PV switch (W/P) @ 40°C				0.8	0.8	2	2	2.5	4.7	4.7	5
Humidity according to IEC 60947-1 Annexe Q (%)				95	95	95	95	95	95	95	95
Connection											
Nominal Cu cable section (mm²)				35	35	70	70	70	120	120	120
Nominal Cu busbar width (mm)				32	32	32	32	32	32	32	32

(1)



1. Utility 1
2. Utility 2

(2)



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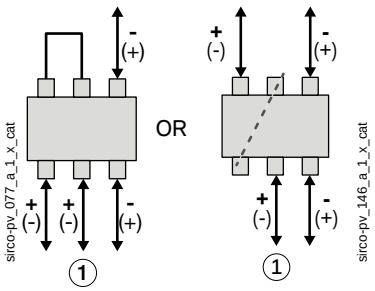
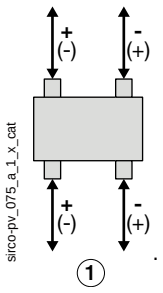


Characteristics (continued)

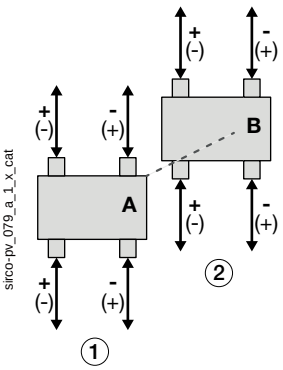
Characteristics according to IEC 60947-3

Rated Current I_n				**315 A**		
Reference				26PV **2031**	26PV **5031**	26PV **3030**
Frame size				**B4**	**$B4_{DS}$**	**B4T**
Thermal current at 40°C (A)				315	315	315
Thermal current at 45°C (A)				315	315	315
Thermal current at 50°C (A)				315	315	315
Thermal current at 55°C (A)				315	315	315
Thermal current at 60°C (A)				315	315	315
Thermal current at 65°C (A)				315	315	299
Thermal current at 70°C (A)				315	315	283
Rated insulation voltage U_i (V)				1500	1500	1500
Rated impulse withstand voltage U_{imp} (kV)				12	12	12
Number of circuits		**Rated voltage**	**Utilisation category**	**I_e (A)**	**I_e (A)**	**I_e (A)**
I_e (A)	1 circuit	1000 VDC	DC-21 B	315		-
	2 circuits			-	315	-
	1 circuit	1500 VDC	DC-21 B	-	-	-
	2 circuits			-	-	-
	1 circuit		DC-PV1		-	315
Number of pole(s) in series per circuit				1P+; 1P-(1)	1P+; 1P-(2)	2P+; 1P-(3)
Number of pole(s) of the device				2 P	4 P	3 P
Short-circuit capacity (without protection)						
Rated short-time withstand current 0.3 s. (kA eff)				10	10	10
Rated short-time withstand current 1 s. (kA eff)				5	5	5
Power dissipation per poles of the PV switch (W/P) @ 40°C				8	8	9.5
Humidity according to IEC 60947-1 Annexe Q (%)				95	95	95
Connection						
Nominal Cu cable section (mm^2)				185	185	185
Nominal Cu busbar width (mm)				32	32	32

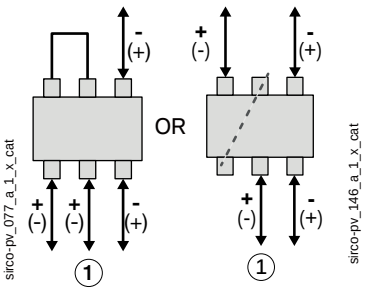
(1)



(2)



(3)

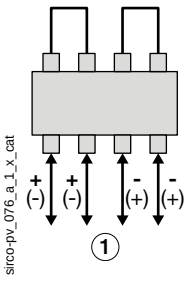


1. Utility 1
2. Utility 2

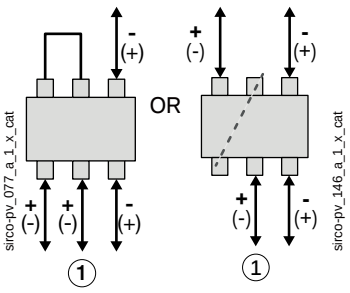
Characteristics according to IEC 60947-3

Rated Current I_n				**400 A**		**500 A**
Reference				26PV **4040**	26PV **3039**	26PV **4050**
Frame size				**B4**	**B4T**	**B4**
Thermal current at 40°C (A)				400	400	500
Thermal current at 45°C (A)				400	400	500
Thermal current at 50°C (A)				400	400	500
Thermal current at 55°C (A)				400	400	500
Thermal current at 60°C (A)				400	400	500
Thermal current at 65°C (A)				380	380	475
Thermal current at 70°C (A)				360	360	450
Rated insulation voltage U_i (V)				1500	1500	1500
Rated impulse withstand voltage U_{imp} (kV)				12	12	12
Number of circuits		**Rated voltage**	**Utilisation category**	**I_e (A)**	**I_e (A)**	**I_e (A)**
I_e (A)	1 circuit	1000 VDC	DC-21 B	400	-	500
	2 circuits			-	-	-
	1 circuit	1500 VDC	DC-21 B	-	-	-
	2 circuits			-	-	-
	1 circuit		DC-PV1	-	400	-
Number of pole(s) in series per circuit				2P+; 2P- (1)	2P+; 1P- (2)	2P+; 2P- (1)
Number of pole(s) of the device				4 P	3 P	4 P
Short-circuit capacity (without protection)						
Rated short-time withstand current 0.3 s. (kA eff)				10	10	10
Rated short-time withstand current 1 s. (kA eff)				5	5	5
Power dissipation per poles of the PV switch (W/P) @ 40°C				20	15	30
Humidity according to IEC 60947-1 Annexe Q (%)				95	95	95
Connection						
Nominal Cu cable section (mm²)				240	240	2 x 150
Nominal Cu busbar width (mm)				32	32	32

(1)



(2)

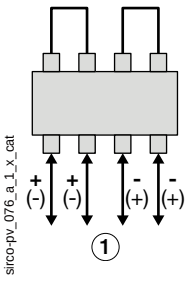


Characteristics (continued)

Characteristics according to IEC 60947-3

Rated Current I_n				**630 A**		**800 A**		
Reference				26PV **4063**	26PV **8063**	26PV **4080**	26PV **8080**	
Frame size				**B5**	**$B5_{DS}$**	**B5**	**$B5_{DS}$**	
Thermal current at 40°C (A)				630	630	800	800	
Thermal current at 45°C (A)				630	630	760	760	
Thermal current at 50°C (A)				630	630	720	720	
Thermal current at 55°C (A)				630	630	685	685	
Thermal current at 60°C (A)				560	560	650	650	
Thermal current at 65°C (A)				540	540	620	620	
Thermal current at 70°C (A)				510	510	590	590	
Rated insulation voltage U_i (V)				1500	1500	1200	1500	
Rated impulse withstand voltage U_{imp} (kV)				12	12	12	12	
Number of circuits		**Rated voltage**	**Utilisation category**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**
I_e (A)	1 circuit	1000 VDC	DC-21 B	630	-	800	-	
	2 circuits			-	630	-	800	-
	1 circuit	1500 VDC	DC-21 B	-	-	-	-	800
	2 circuits			-	-	-	-	
Number of pole(s) in series per circuit				2P+; 2P- (1)	2P+; 2P- (2)	2P+; 2P- (1)	2P+; 2P- (2)	4P+, 4P- (3)
Number of pole(s) of the device				4 P	8 P	4 P	8 P	
Short-circuit capacity (without protection)								
Rated short-time withstand current 0.3 s. (kA eff)				10	10	10	10	
Rated short-time withstand current 1 s. (kA eff)				5	5	5	5	
Power dissipation per poles of the PV switch (W/P) @ 40°C				40	40	70	70	
Humidity according to IEC 60947-1 Annexe Q (%)				95	95	95	95	
Connection								
Nominal Cu cable section (mm²)				2 x 185	2 x 185	2 x 240	2 x 240	
Nominal Cu busbar width (mm)				40	40	50	50	

(1)



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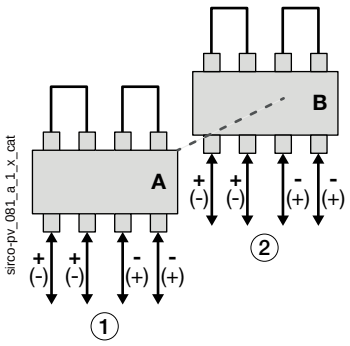

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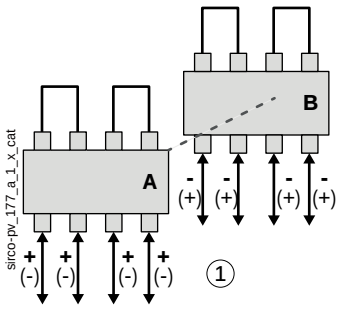
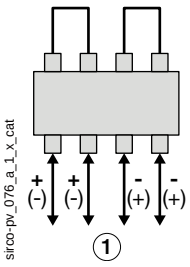


1. Utility 1
2. Utility 2

Characteristics according to IEC 60947-3

Rated Current I_n			**1250 A**			**2000 A**			**3200 A**
Reference			26PV **4120**	26PV **8120**		26PV **4200**	26PV **8200**		26PV **4320**
Frame size			**B6**	**$B6_{DS}$**		**B7**	**$B7_{DS}$**		**B8**
Thermal current at 40°C (A)			1250	1250		2000	2000		3200
Thermal current at 45°C (A)			1250	1250		2000	2000		3200
Thermal current at 50°C (A)			1250	1250		1850	1850		3200
Thermal current at 55°C (A)			1180	1180		1730	1730		3040
Thermal current at 60°C (A)			1125	1125		1600	1600		2888
Thermal current at 65°C (A)			1050	1050		1520	1520		2743
Thermal current at 70°C (A)			1000	1000		1440	1440		2606
Rated insulation voltage U_i (V)			-	-		1500	1500		1500
Rated impulse withstand voltage U_{imp} (kV)			12	12		12	12		12
Number of circuits	**Rated voltage**	**Utilisation category**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**
I_e (A) 1 circuit	1000 VDC	DC-21 B	1250	-		2000	-		3200
I_e (A) 2 circuits	1000 VDC	DC-21 B	-	1250	-	-	2000	-	-
I_e (A) 1 circuit	1500 VDC	DC-21 B	-	-	1250			2000	
I_e (A) 2 circuits			-	-		-	-		-
Number of pole(s) in series per circuit			2P+; 2P- (1)	2P+; 2P- (2)	4P+; 4P- (3)	2P+; 2P- (1)	2P+; 2P- (2)	4P+; 4P- (3)	4P+; 4P- (1)
Number of pole(s) of the device			4 P	8 P		4 P	8 P		4 P
Short-circuit capacity (without protection)									
Rated short-time withstand current 0.3 s. (kA eff)			10	10		10	10		10
Rated short-time withstand current 1 s. (kA eff)			5	5		5	5		5
Power dissipation per poles of the PV switch (W/P) @ 40°C			-	63		-	125		-
Humidity according to IEC 60947-1 Annexe Q (%)			95	95		95	95		95
Connection									
Nominal Cu cable section (mm²)			2 x 240	2 x 240		-	-		-
Nominal Cu busbar width (mm)			63	63		100	100		4 x 100 x 5

(1)



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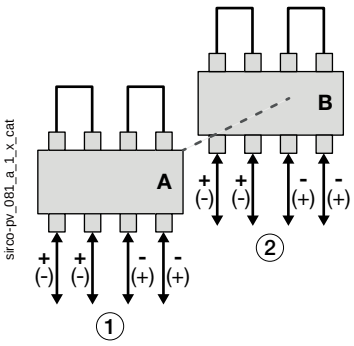

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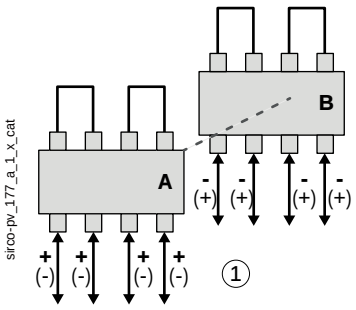
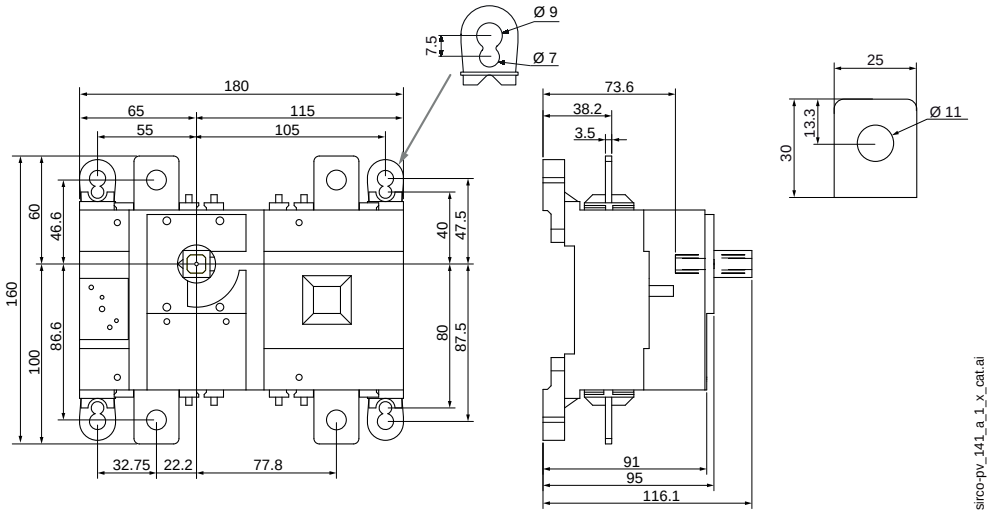


1. Utility 1
2. Utility 2

Dimensions (mm)

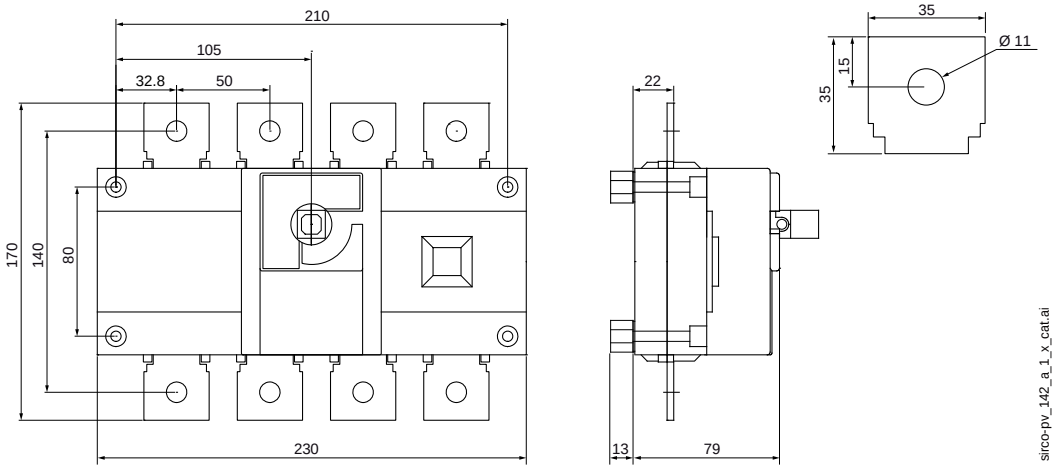
100 to 315 A - B4 - 2P - 1000 VDC - 1 circuit

26PV 2010 - 26PV 2016 - 26PV 2025 - 26PV 2031



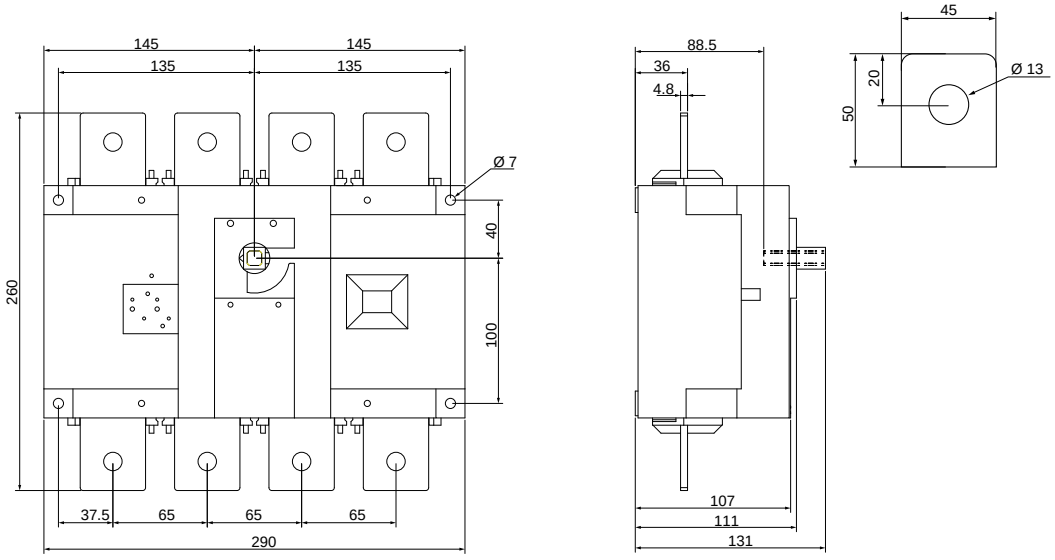
400 to 500 A - B4 - 4P - 1000 VDC - 1 circuit

26PV 4040 - 26PV 4050



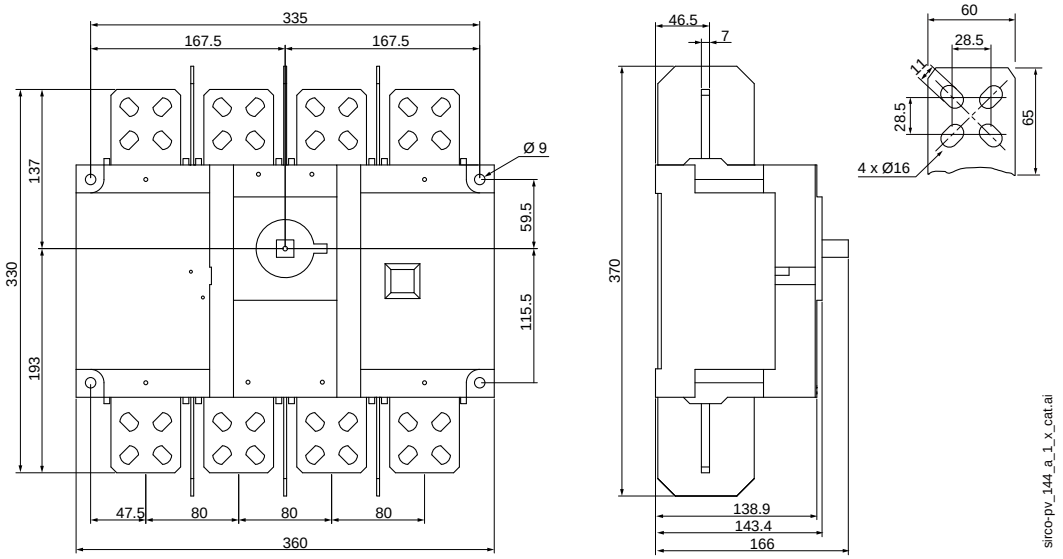
630 to 800 A - B5 - 4P - 1000 VDC - 1 circuit

26PV 4063 - 26PV 4080



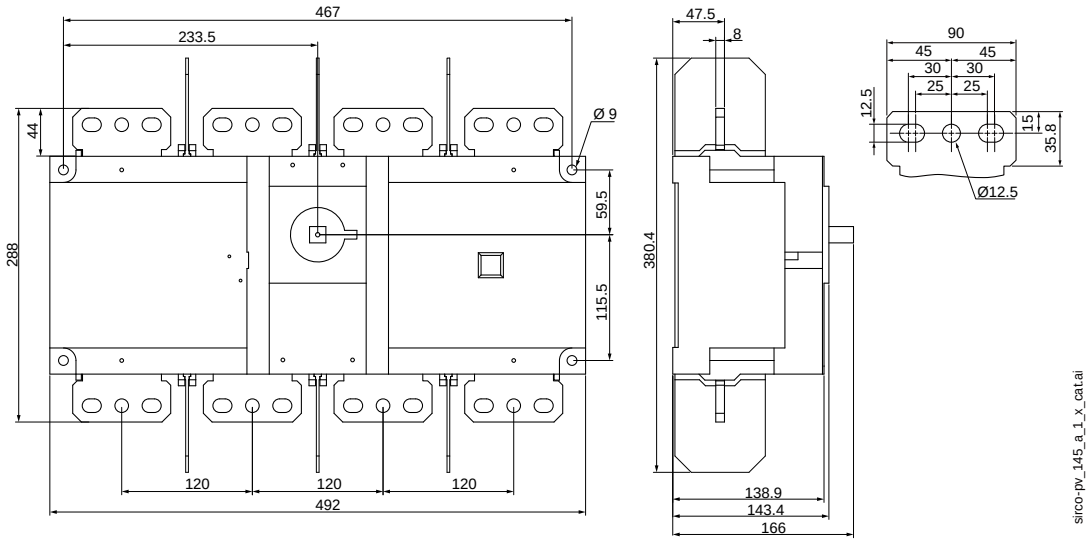
1250 A - B6 - 4P - 1000 VDC - 1 circuit

26PV 4120



2000 A - B7 - 4P - 1000 VDC - 1 circuit

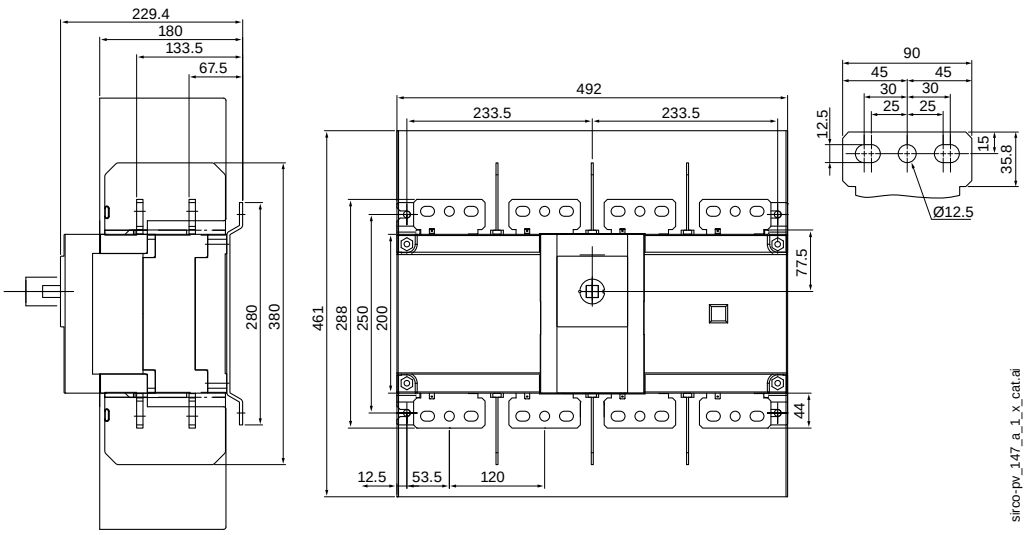
26PV 4200



Dimensions (mm) (continued)

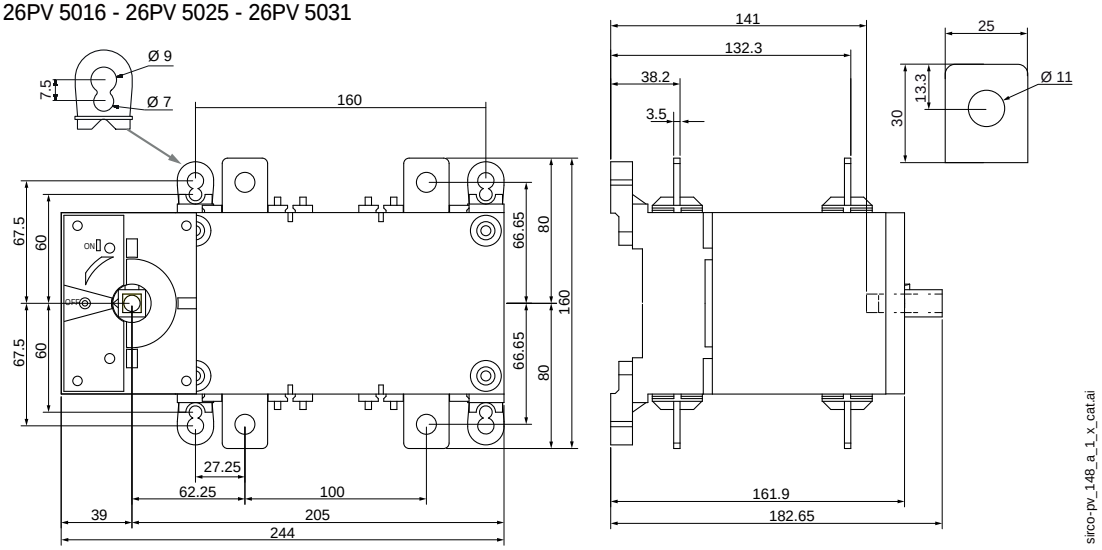
3200 A - B8 - 4P - 1000 VDC - 1 circuit

26PV 4320



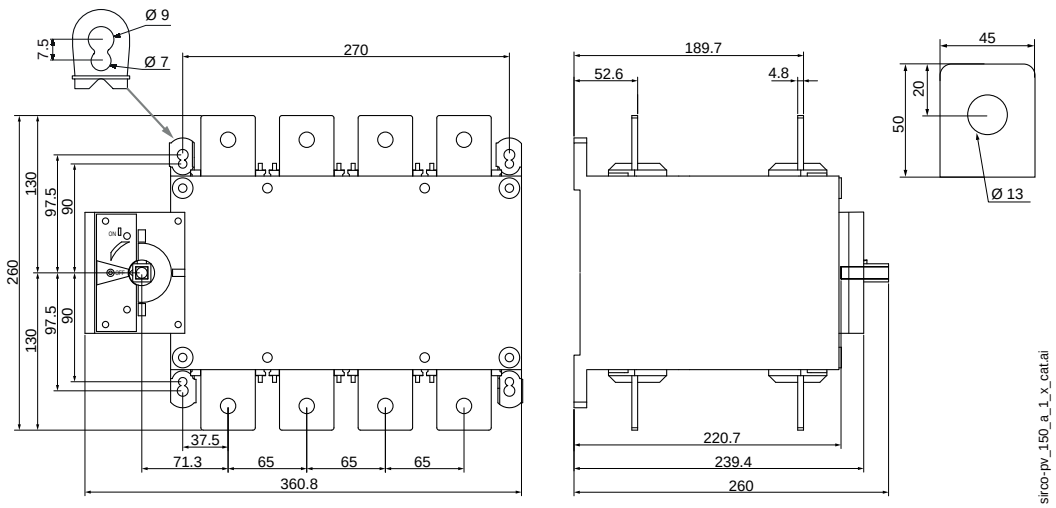
100 to 315 A - $B4_{DS}$ - 4P - 1000 VDC - 2 circuits

26PV 5010 - 26PV 5016 - 26PV 5025 - 26PV 5031



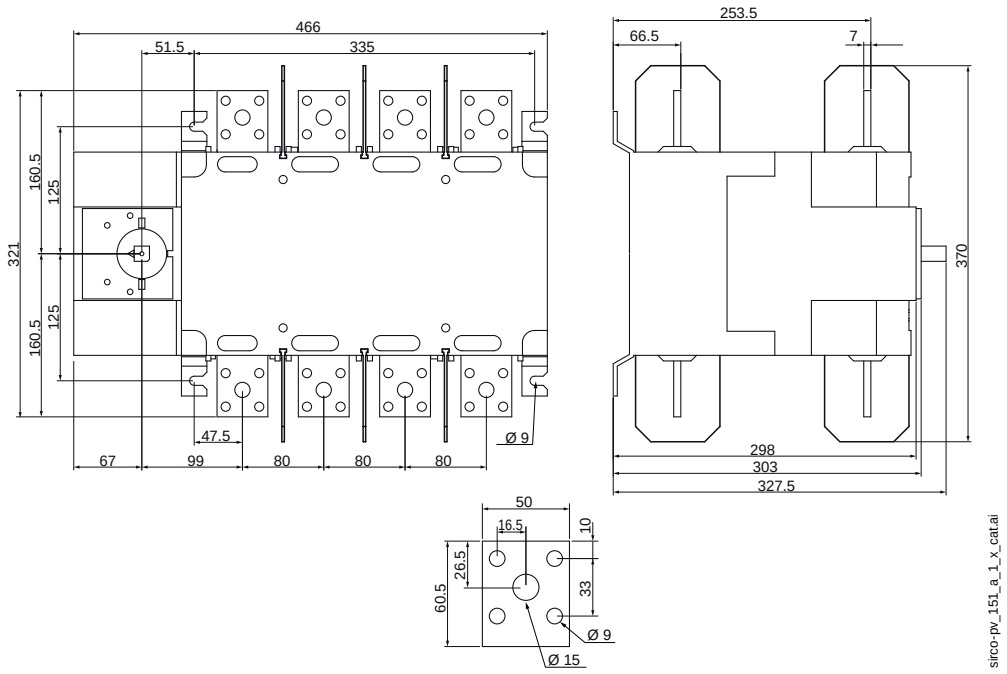
630 A - $B5_{DS}$ - 8P - 1000 VDC - 2 circuits

26PV 8063



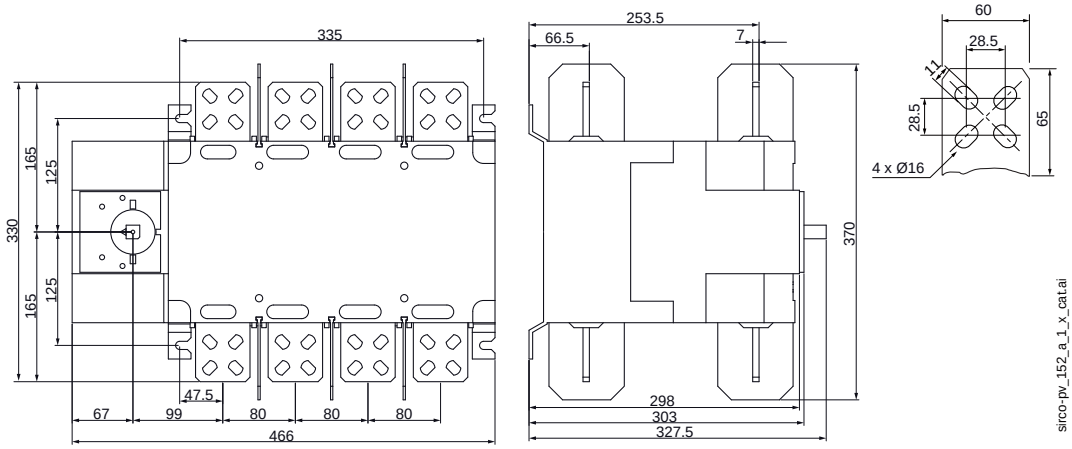
800 A - $B6_{DS}$ - 8P - 1000 VDC - 2 circuits

26PV 8080



1250 A - $B6_{DS}$ - 8P - 1000 VDC - 2 circuits

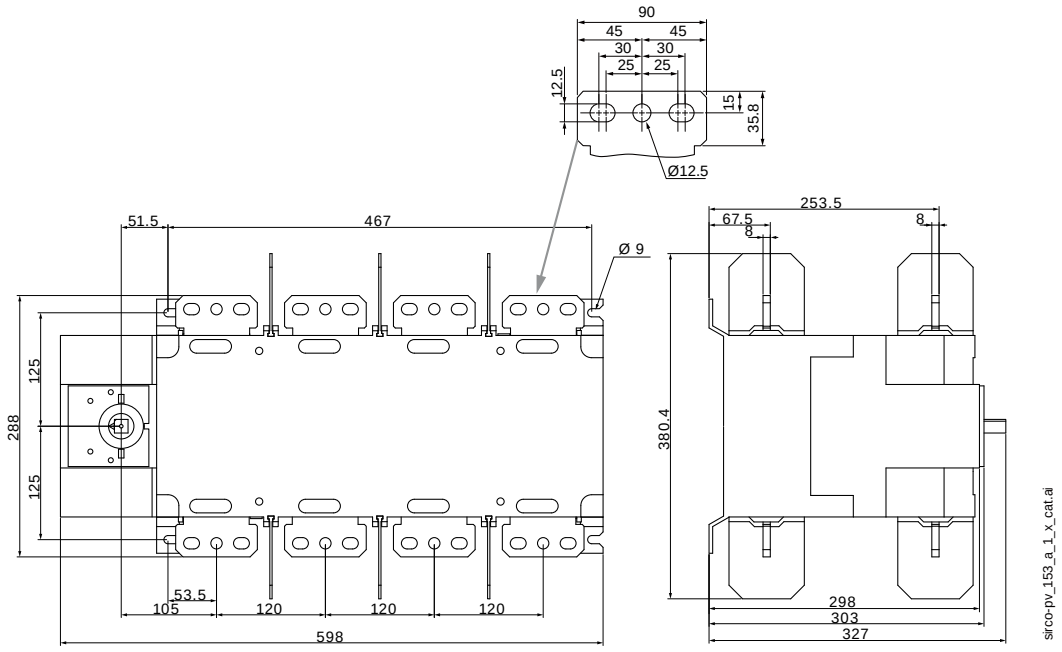
26PV 8120



Dimensions (mm) (continued)

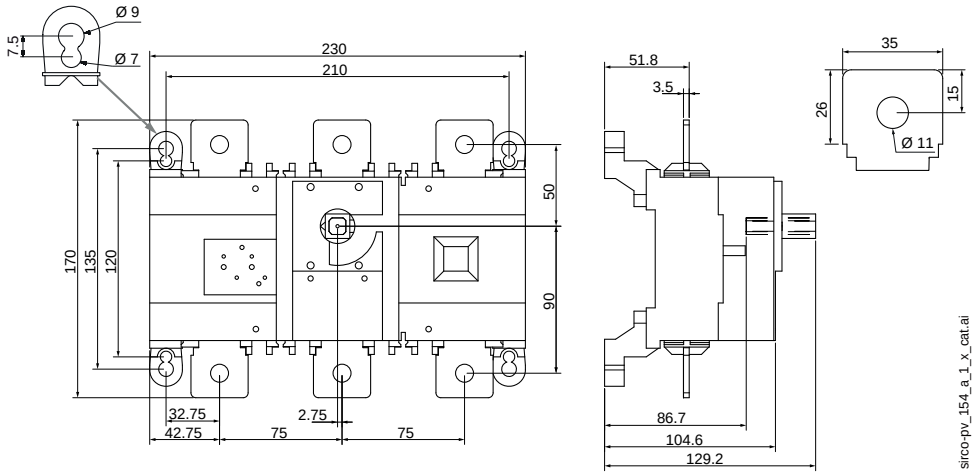
2000 A - $B7_{DS}$ - 8P - 1000 VDC - 2 circuits

26PV 8200



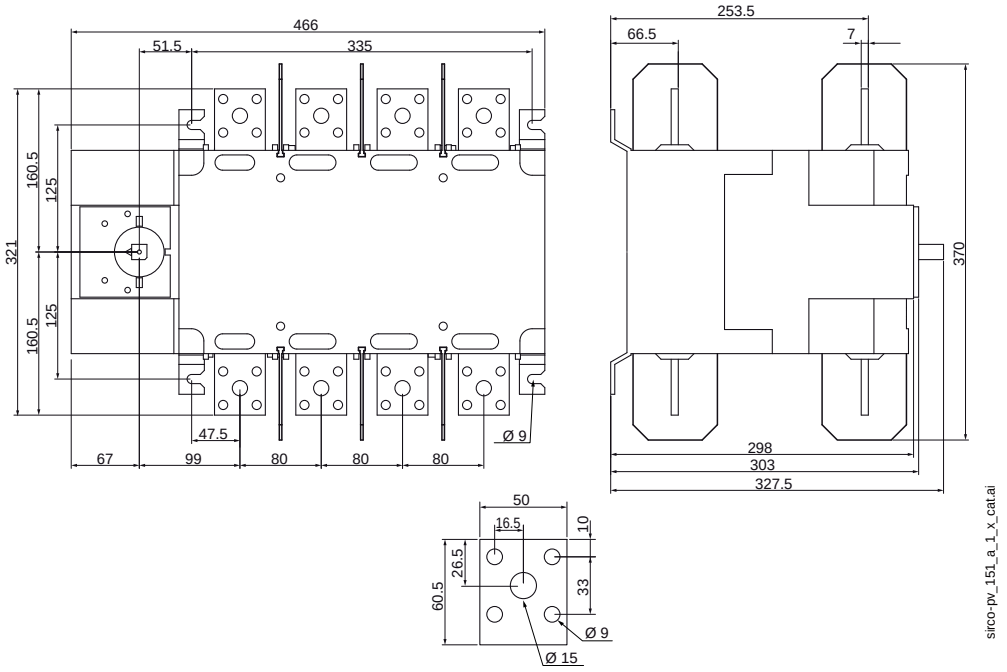
160 to 400 A - B4T - 3P - 1500 VDC - 1 circuit

26PV 3015 - 26PV 3024 - 26PV 3030 - 26PV 3039



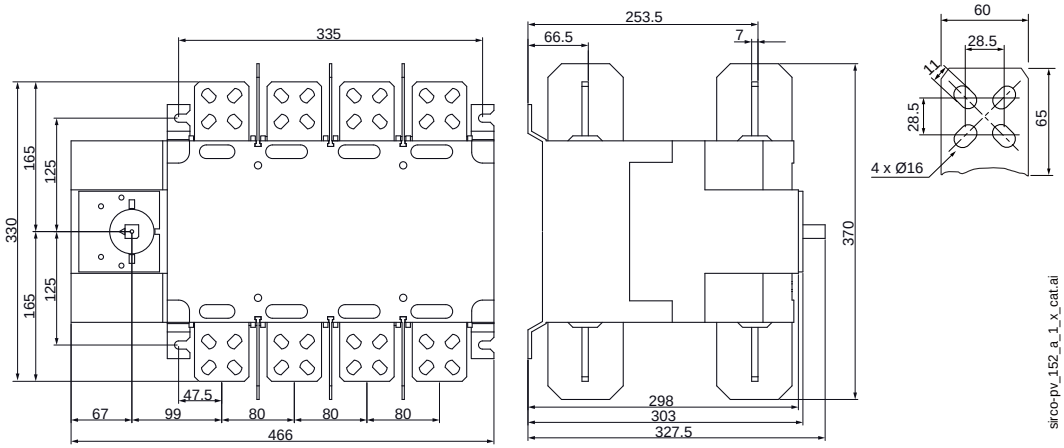
800 A - $B6_{DS}$ - 8P - 1500 VDC - 1 circuit

26PV 8080



1250 A - $B6_{DS}$ - 8P - 1500 VDC - 1 circuit

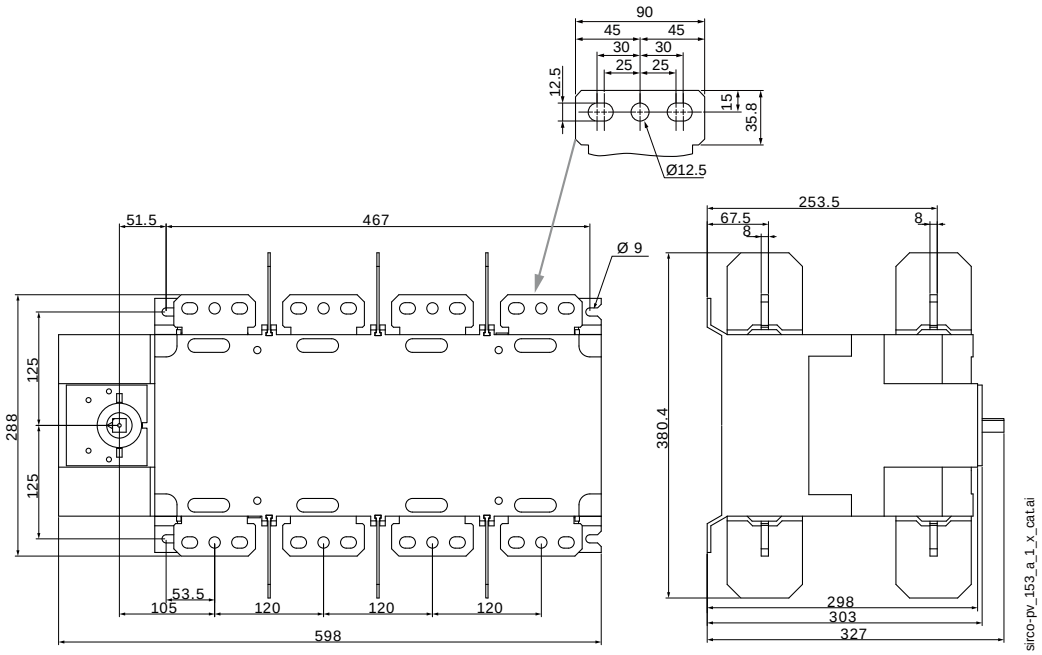
26PV 8120



Dimensions (mm) (continued)

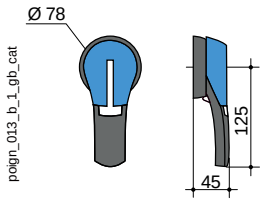
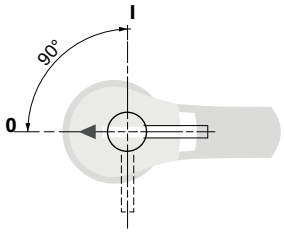
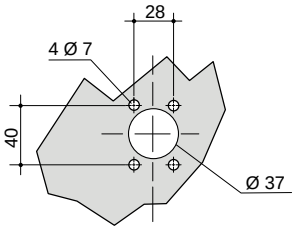
2000 A - $B7_{DS}$ - 8P - 1500 VDC - 1 circuit

26PV 8200

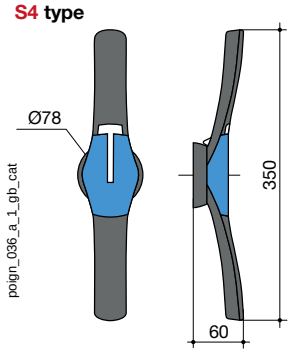
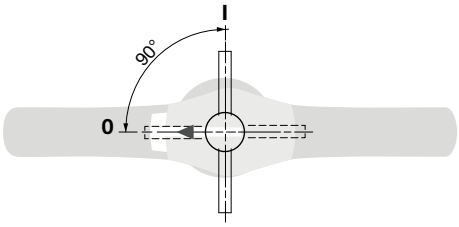
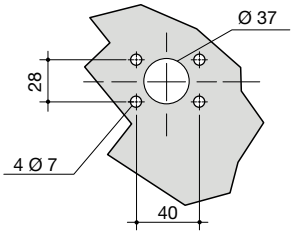


Dimensions for external handles (mm)

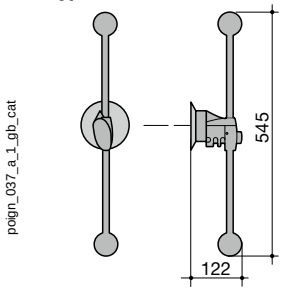
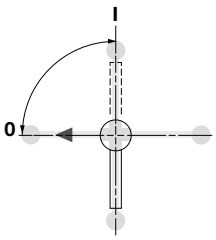
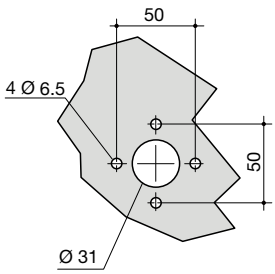
B4 - $B4_{DS}$ - B5

Handle type	Front operation Direction of operation	Door drilling
S2 type 		

$B5_{DS}$ - B6 - B7

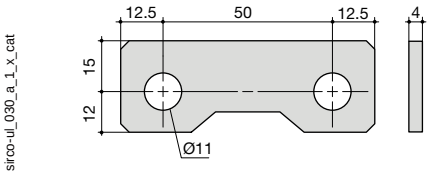
Handle type	Front operation Direction of operation	Door drilling
S4 type 		

B8 - $B6_{DS}$ - $B7_{DS}$

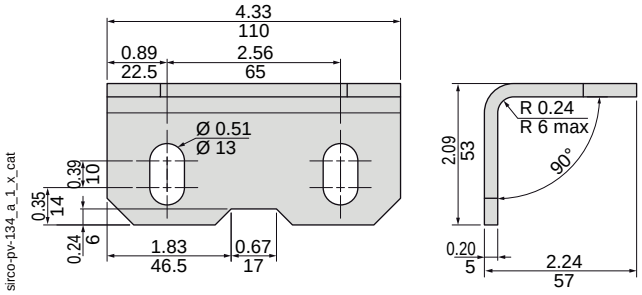
Handle type	Front operation Direction of operation	Door drilling
V1 type 		

Bridging bars (mm)

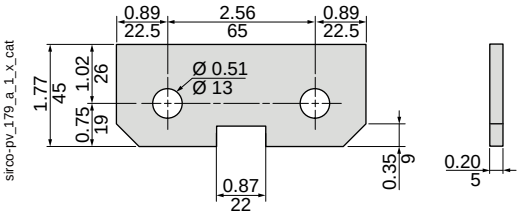
2609 0025



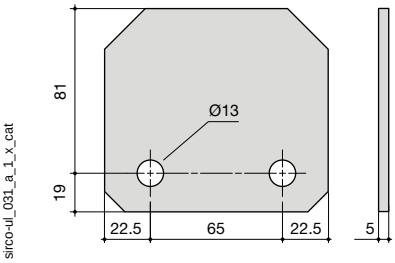
2709 0045



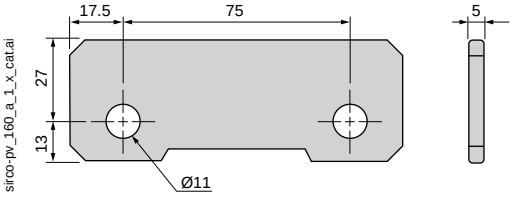
2709 0027



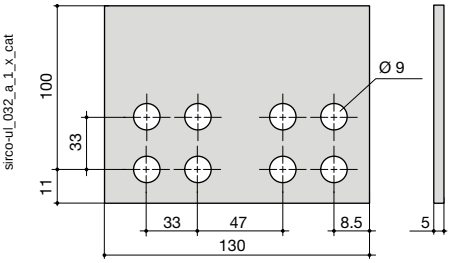
2609 0080



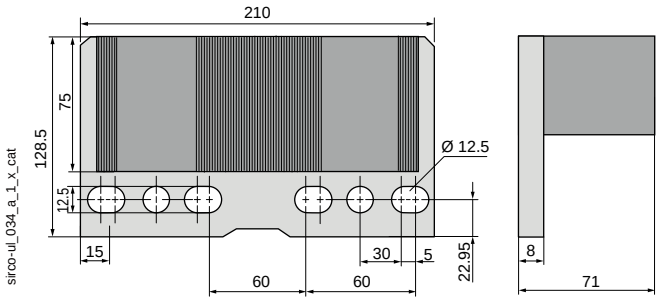
2609 0026



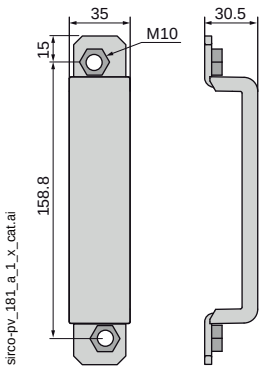
2609 1100



2609 1200

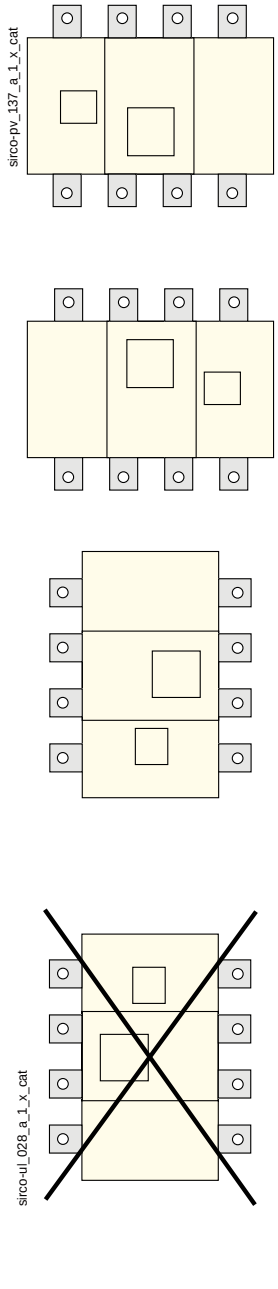


2609 0041

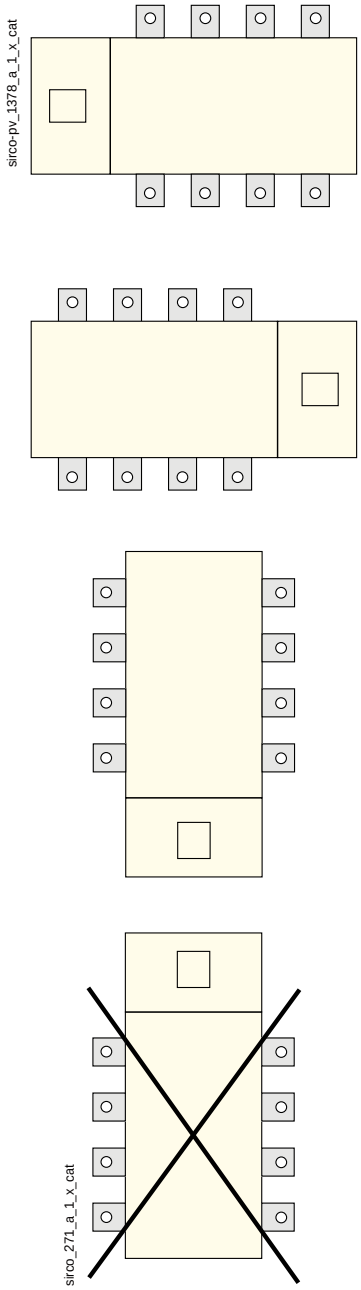


Mounting orientation

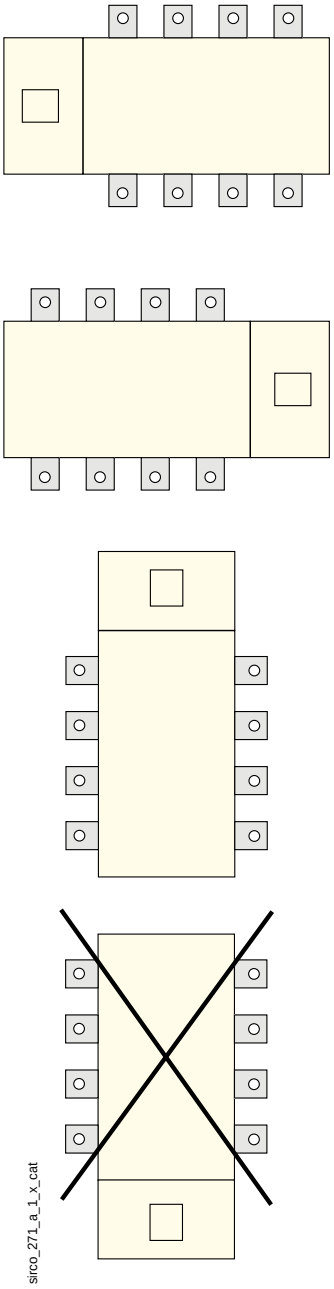
B4 to B8



$B4_{DS}$ - $B5_{DS}$



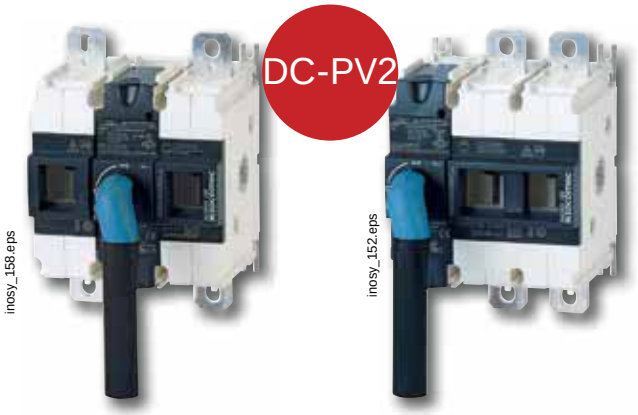
$B6_{DS}$ - $B7_{DS}$



INOSYS LBS

Load break switches for DC and PV applications

160 to 630 A, up to 1500 VDC



INOSYS LBS
1 + 1 poles

INOSYS LBS
2 poles

Functions

INOSYS LBS is a range of load break switches that can be manually controlled. These switches can be operated manually using the handle to disconnect all or part of the electrical installation. They ensure on-load opening / closing and safe disconnection of any low voltage electrical circuit up to 1500 VDC. They can also be used for emergency power switching applications. They are available for DC-PV2 utilization category.

Advantages

High performance power switching in confined spaces

INOSYS LBS load break switches incorporate patented technology that provides a breaking capacity of between 500 and 750 VDC per pole, providing 1500 VDC in just 2 poles, and significantly limiting power dissipation. All in an exceptionally compact enclosure.

Safe to use

- Direct position indicator on the bar and visible contact with containment of the electrical arc.
- The switch is completely independent of the operating speed, which ensures safe use under any conditions.
- High temperatures permitted: without derating up to 55 °C (131°F), operational from -40 to +70 °C.

Designed for harsh environments.

- Vibration-tested (13.2 Hz to 100 Hz at 0.7 G).
- Impact-tested (15 g for three cycles).
- Humidity-tested (2 cycles, 55 °C, 95% humidity).
- Salt spray-tested (3 cycles with storage humidity, 40 °C, 93% humidity after each cycle).

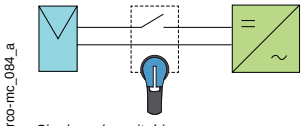
Easy to install

- Wiring: the non-polarisation of the switch allows for all types of wiring and connections.
- Integrated auxiliary contacts.

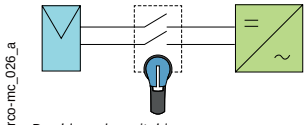
Modular solution for flexible configuration

- Single or double-pole switch

The same switch can be used on earth-connected or insulated networks with a simple change in the wiring configuration.



Single-pole switching



Double-pole switching

The solution for

> Disconnection within PV installation
> Battery protection
> DC equipment & process isolation

Strong points

> High-performance switching in a compact design
> Easy integration
> Reinforced safety with visible contact indication
> Efficient with low power-loss

Compliance with standards

> IEC 60947-3, DC-21B & DC-PV2
> UL98B File E346418
> KEMA-KEUR
> CCC

Compatible with requirements

> IEC 60364-7-712
> NEC art. 690
> AS/NZS 5033

Compliance with environmental standards

> IEC 60947-1 Annex Q, Stage F
> IEC 60068-2-1
> IEC 60068-2-2
> IEC 60068-2-27
> IEC 60068-2-30
> IEC 60068-2-52
> IEC 60068-2-6

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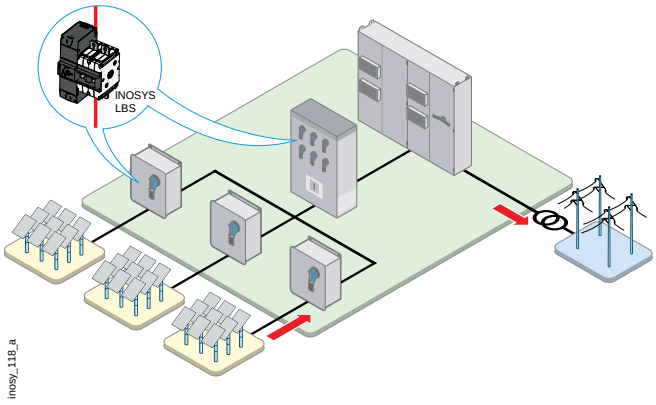
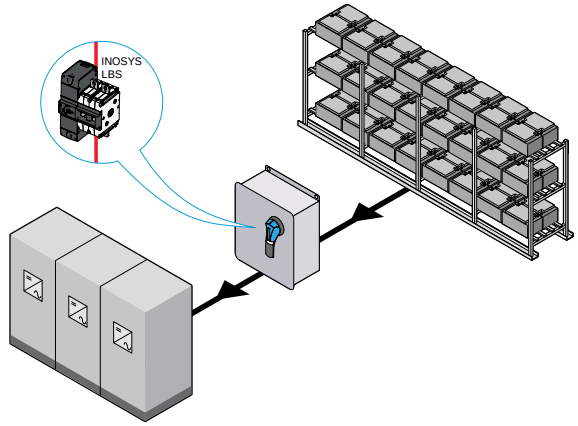
Typical applications: local safe disconnection for DC and PV applications

PV system: Junction box, combiner box or inverter



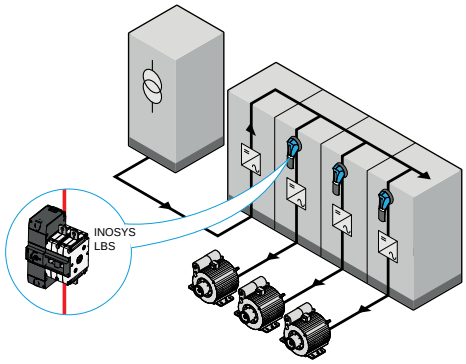
inosy_118_a

Battery isolation



inosy_013_b_1_x_cat

DC process isolation



inosy_014_b_1_x_cat

The SOCOMEC solutions

SIRCO PV

Manual PV switches

sirco-pv_059 - 060 - 061

Up to 3200 A at 1000 VDC
Up to 2000 A at 1500 VDC
Up to 4 circuits

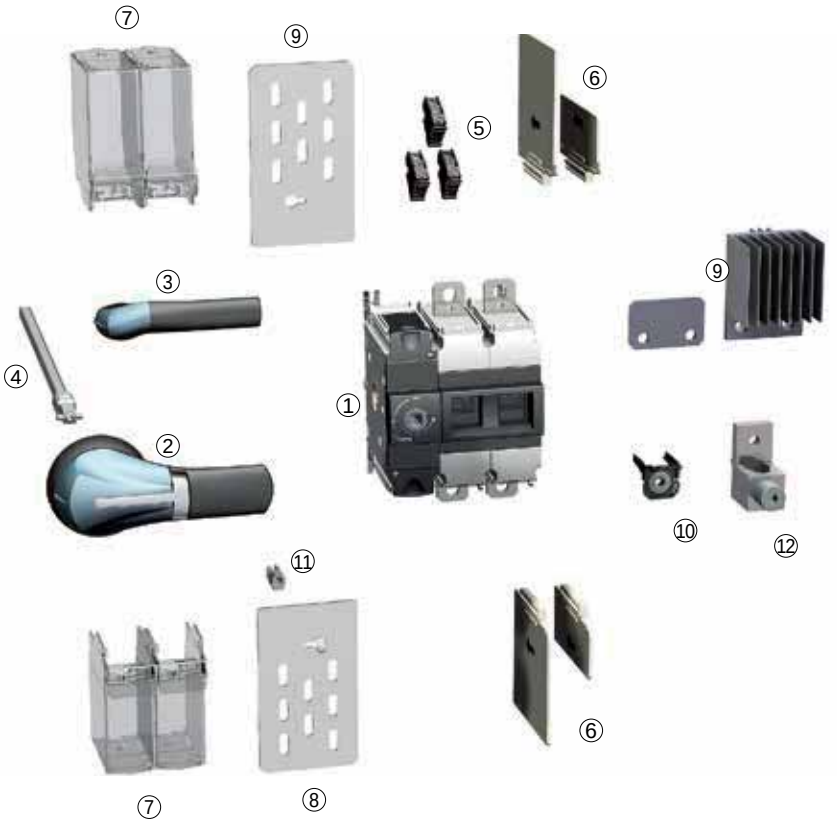
INOSYS LBS

Visible breaking switches for DC and PV applications

inosy_152

Up to 630 A (IEC) and
600 A (UL) at 1500 VDC

Introduction



inosy_168_a_1_x_cat.ai

1. INOSYS LBS 400 A - 1500 V DC
2. External operation handle
3. Direct operation handle
4. Shaft for external operation
5. Auxiliary contact
6. Inter-phase barriers
7. Terminal shrouds
8. Terminal screen
9. Bridging bar to arrange the poles in series
10. Captive nut
11. Mounting insert
12. Cage terminals

References

INOSYS LBS

1000 VDC - 1 circuit

Rating (A)	Frame size	No. of poles per circuit	Switch body(1)	External operation	Aux. Contact
160 A	F2	2 P (1 P+, 1 P-)	86P0 **2016**	Shaft 320 mm 1400 **1032** Handle type S2 Black IP65 742F **2111**	NO/NC 8499 **0001**
250 A	F2	2 P (1 P+, 1 P-)	86P0 **2025**		
315 A	F2	2 P (1 P+, 1 P-)	86P0 **2031**		
400 A	F3	2 P (1 P+, 1 P-)	86P0 **2040**	Shaft 320 mm 1400 **1032** Handle type S2L Black IP65 14AF **2111**	

(1) The switches are supplied without accessories.
(2) Please contact us

1500 VDC - 1 circuit

Rating (A)	Frame size	No. of poles per circuit	Switch body(1)	External operation	Aux. Contact
160 A	F2	2 P (1 P+, 1 P-)	86P0 **2017**	Shaft 320 mm 1400 **1032** Handle type S2 Black IP 65 742F **2111**	NO/NC 8499 **0001**
			86P1 **1017**(3)		
		3 P (2 P+, 1P-)	86P0 **3016**		
250 A	F2	2 P (1 P+, 1 P-)	86P0 **2026**		
			86P1 **1026**(3)		
		3 P (2 P+, 1 P-)	86P0 **3025**		
315 A	F2	2 P (1 P+, 1 P-)	86P0 **2032**		
			86P1 **1032**(3)		
		3 P (2 P+, 1 P-)	86P0 **3031**		
400 A	F3	2 P (1 P+, 1 P-)	86P0 **2041**	Shaft 320 mm 1400 **1032** Handle type S2L Black IP 65 14AF **2111**	
			86P1 **1041**(3)		
630 A	F3	2 P (1 P+, 1 P-)	86P0 **2064**		
			86P1 **1064**(3)		

1500 VDC - 2 circuits

Rating (A)	Frame size	No. of poles per circuit	Switch body(1)	External operation	Aux. Contact
400 A	F3	2 P (1 P+, 1 P-)	86P2 **2041**(2)	Shaft 320 mm 1400 **1032** Handle type S2L Black IP 65 14AF **2111**	NO/NC 8499 **0001**
500 A			86P2 **2051**		
630 A			86P2 **2064**(2)		

(1) The switches are supplied without accessories.
(2) Centred mechanism.

Accessories

Direct operation handle

Frame size	Handle type	Handle colour	Reference
F2	E2	Black	8499 **5022**
F2	E2	Red	8499 **5023**
F3	E3	Black	8499 **5032**

E2 handle

acces_400_a_1_cat

External operation handle

Use

The external control handles include a breastplate and can be padlocked. External handles should be used with a shaft extension.

Note: We recommend using IP55 for indoor and IP65 for outdoor applications.

Example of use:

When the handle is locked in the "ON" position, the operator must make sure to disconnect and isolate the circuit before accessing the board and carrying out maintenance work.

You can open the door when the switch is in the "ON" position by bypassing the lock function with a specially designed tool (authorised persons only). The lock is automatically re-applied when the door is closed.

Handle type S2

acces_150.eps

Frame size	Handle type	Handle colour	Protection degree	Front operation Reference	Side operation Reference(2)
F2	S2	Black	IP55	7421 **2111**	
F2	S2	Black	IP65	742F **2111**	14YA **2111**
F2	S2	Red	IP65	742G **2111**	14YB **2111**
F3	S2L(1)	Black	IP55	14A1 **2111**	
F3	S2L(1)	Black	IP65	14AF **2111**	14AA **2111**
F3	S2L(1)	Red	IP65	14AG **2111**	14AB **2111**

(1) S2L handles have an extended socket; please see the section on dimensions.
(2) only comptatible with left mechanism version.

Shaft for external operation

Frame size	Handle type	Length (mm)	Reference
F2 - F3	S2, S2L	200	1400 **1020**
F2 - F3	S2, S2L	320	1400 **1032**
F2 - F3	S2, S2L	400	1400 **1040**

Other colour schemes: please contact us.

Shaft for S2 and S2L handles

acces_401_a_1_cat

Shaft guide for external operation

Use

Allows you to guide the shaft for external control.

This accessory can correct any misalignment of the control shaft by up to 15 mm.

Recommended for shaft lengths over 320 mm.

Description	Reference
Shaft guide	1429 **0000**

acces_260_a_2_cat

Auxiliary contact

Use

Provide information about the position and pre-break depending on installation location.

Characteristics

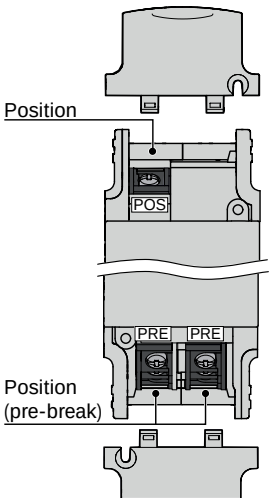
Switching type: NO/NC,
IP2X with front control (screw cap).
10 000 operations.
Max. 3 per switch.

acces_402_a_1_cat

Frame size	Connection type	Type	Reference
F2 - F3	Screws	Standard NO/NC	8499 **0001**
F2 - F3	Screws	Low level NO/NC	8499 **0002**

Characteristics

Type of auxiliary contact	Min. current (A)	I_{th} (A)	Operating current I_e (A)			
			24 VDC	48 VDC	230 VAC	440 VAC
			DC-14	DC-14	AC-15	AC-15
Standard	12.5 mA / 24 V	16	1	0.2	4	4
Low level	1 mA / 4 V	16	1	0.2	2	1



acces_465_a_1_gb_cat

Bridging bar for poles in series

Use

The bridging bars enable the poles to be connected in series, allowing the following configurations.

acces_411_a_1_cat

1500 VDC – 1 circuit – dual polarity switching

Frame size	Rating (A)	No. of poles per circuit	Quantity to order	Reference
F2	160 ... 315	3 P	1	8409 **0016**(1)

(1) Kit includes 2 identical bridging bars.

1500 VDC – 1 circuit with full voltage switching per polarity / 2 circuits – single polarity switching

Frame size	Rating (A)	No. of poles per circuit	Quantity to order	Reference
F3	400	4 P / 2 P	2	8409 **0040**(1)
F3	500	4 P / 2 P	2	8409 **0041**
F3	630	4 P / 2 P	2	8409 **0063**

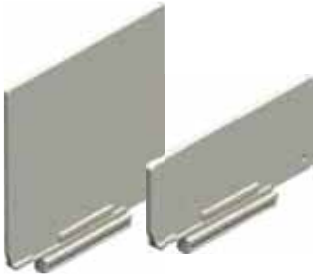
(1) Kit includes 2 identical bridging bars.

Accessories (continued)

Inter-phase barriers

Use

Safety isolating break between the terminals, essential for use at 1000 VDC and 1500 VDC or between 2 circuits.



acces_405_a_1_cat acces_406_a_1_cat

Frame size	Type	Packaging (units)	Reference
F2 - F3	Short	2	8499 **2202**
F2 - F3	Short	3	8499 **2203**
F2 - F3	Long	2	8499 **2212**
F2 - F3	Long	3	8499 **2213**

Terminal shrouds

Use

For top or bottom protection against direct contact with terminals or connection parts; provides IP4 protection and phase separation. 1 P type to cover 1 pole connection.

Advantages

Perforations for thermographic inspection / voltage check without the need to remove the shrouds. Terminal shrouds can be fixed in place with a holding insert. Includes break-off tabs for precise adaptation to cables or insulated bars.

acces_407_a_1_cat

Frame size	Packaging (units)	No. of poles	Position	Reference
F2	3	1 P	Top or bottom	8499 **4213** (1)
F2	4	1 P	Top or bottom	8499 **4214** (1)
F3	4	1 P	Top or bottom	8499 **4314** (1)

(1) Compatible with the holding insert which can be fitted to lock the shrouds in place.

Terminal screens

Use

Provides top and bottom protection against direct contact with terminals or connection parts.

Advantages

Perforations for thermal checks.

Assembly requires mounting inserts (provided with terminal screens).

acces_408_a_1_cat

Frame size	No. of poles	Position	Reference(1)
F2	2 P	Top and bottom	8499 **3222**
F2	3 P	Top and bottom	8499 **3232**
F3	2 P	Top and bottom	8499 **3322**

(1) Each reference comprises 2 terminal screens for top and bottom protection.

Mounting insert

Use

Used to secure terminal shrouds / inter-phase barriers on the switch.

Frame size	Packaging (units)	Reference
F2 - F3	10	8499 **6220**
F2 - F3	100	8499 **6221**

acces_409_a_1_cat

Captive nut

Use

This accessory enables simple one-sided connection to the power terminals. It can be mounted on either side of the terminal for front or rear connection.

Frame size	Packaging (units)	Reference
F2	12	8499 **6120**
F2	120	8499 **6121**
F3	12	8499 **6130**
F3	120	8499 **6131**

acces_399_a_1_cat

Voltage tap

Use

Allows you to connect sensors or measure voltage with a fast-on connection.

Frame size	Packaging (units)	Reference
F2	12	8499 **9012**
F3	12	8499 **9013**

acces_412_a_1_cat

Characteristics

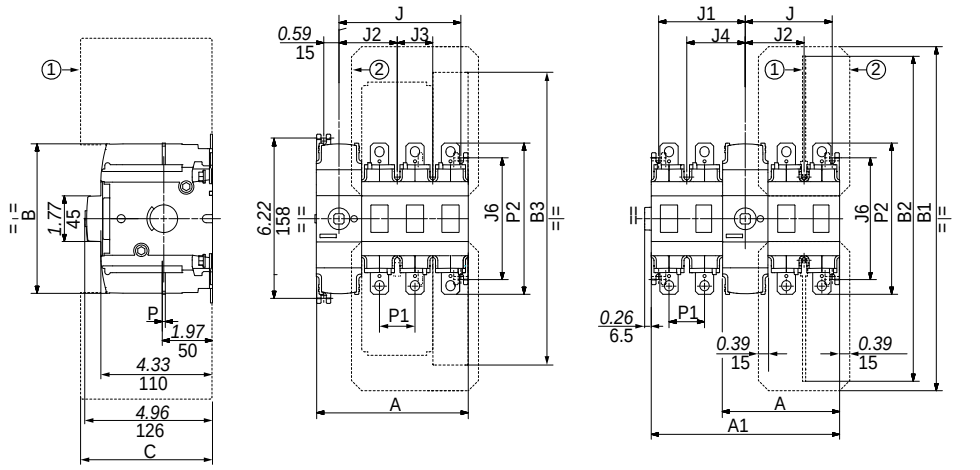
Characteristics according to IEC 60947-3

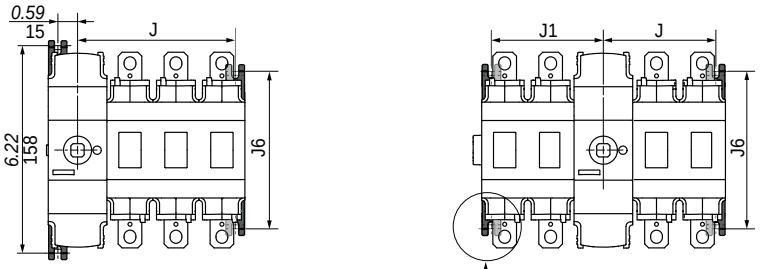
Rated current I_n			**160 A**	**250 A**	**315 A**	**400 A**	**500 A**	**630 A**
Frame size			**F2**	**F2**	**F2**	**F3**	**F3**	**F3**
Thermal current at 40 °C (A)			160	250	315	400	500	630
Thermal current at 50 °C (A)			160	250	315	400	500	630
Thermal current at 60 °C (A)			160	250	315	400	500	630
Rated insulation voltage U_i (V)			1500	1500	1500	1500	1500	1500
Rated impulse withstand voltage U_{imp} (kV)			12	12	12	12	12	12
Number of circuits	**Nominal voltage**	**Utilisation category**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**
1 circuit	1000 VDC (1)	DC-21 B	160	250	315	400	500	630
1 circuit	1500 VDC (2)	DC-21 B	160	250	315	400	500	630
Number of circuits	**Nominal voltage**	**Utilisation category**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**	**I_e (A)**
1 circuit	1000 VDC (1)	PV2	-	-	-	-	-	-
1 circuit	1500 VDC (2)	PV2	160	250	315	400	500	630
2 circuits	1500 VDC (2)	PV2	-	-	-	400	500	630
Short-circuit operation at 1000 VDC and 1500 VDC (unprotected)								
Current rated as short-time withstand I_{cw} 1s (kA rms)			5	5	5	8	8	8
Rated short-circuit breaking capacity I_{cm} (peak kA) – 60 ms			10	10	10	10	10	10
Connection								
Recommended Cu rigid cable cross-section (3)			70	120	185	240	2 x 150	2 x 185
Recommended width of copper bars (mm) (3)			20	20	20	25	25	25
Mechanical characteristics								
Durability (number of operating cycles)			8000	8000	8000	8000	8000	8000
Power dissipation per pole (W/pole)			4.5	11.2	13	13	21.6	30.2

(1) 2 poles in series.
(2) 2 or 3 poles in series.
(3) For aluminium connections, please contact us.

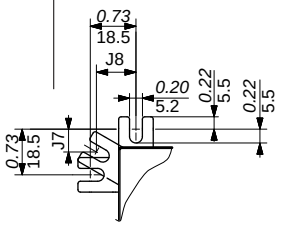
Dimensions (in/mm)

INOSYS LBS





1. Inter-phase barrier.
2. Terminal screens.



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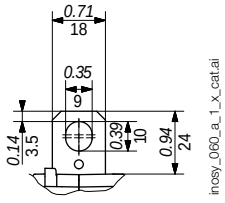
Wiring terminal F2



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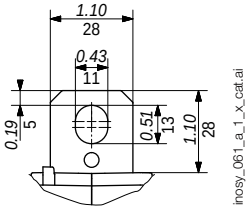
Wiring terminal F3



inosy_061_a_1_x_cat.ai

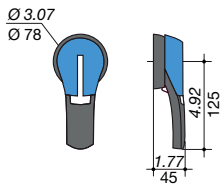
			A		A1	J	J1	J	
Rating (A)	Frame size	Units	2 P	3 P	1+1 P / 2+2 P	1+1 P / 2+2 P	1+1 P / 2+2 P	2 P	3 P
160 … 315	F2	inches	4.60	5.98	4.60 / 7.36	1.97 / 3.37	2.05 / 3.44	3.35	4.72
		mm	117	152	117 / 187	50.5 / 85.5	52.5 / 87.5	85.5	120.5
400	F3	inches	5.40	7.17	5.40 / 8.94	2.36 / 4.15	2.44 / 4.23	4.13	-
		mm	137	182	137 / 227	60.5 / 105.5	62.5 / 107.5	105.5	-

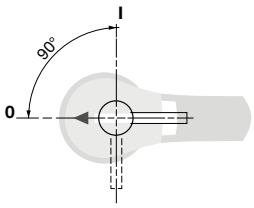
Rating (A)	Frame size	Units	B	B1	B2			B3	C		J2	J3	J4	J6	P1	P2
					IEC short	IEC long	UL		IEC	UL						
160 … 315	F2	inches	5.90	13.35	7.85	12.61	10.31	11.64	4.33	4.33	2.26	1.38	2.34	4.72	1.38	5.87
		mm	154	339	199	320	262	296	110	110	57.5	35	59.5	120	35	149
400	F3	inches	5.90	16.28	9.35	14.11	15.5	14.12	4.33	5.31	2.64	1.77	2.72	6.22	1.77	7.87
		mm	154	414	237	358	394	359	110	135	67.5	45	69.5	158	45	200

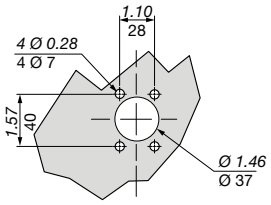
Dimensions of external handles (in/mm)

F2

Handle type	Front operation Direction of operation	Door drilling
S2 type		



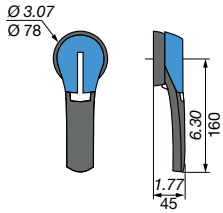


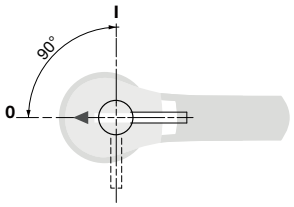


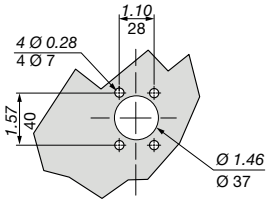
poign_013_b_1_us_cat.eps

F3

Handle type	Front operation Direction of operation	Door drilling
S2L type		







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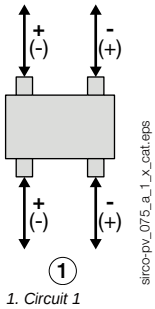
Wiring configuration

1 circuit - 1000 VDC

F2-F3 - 2 P

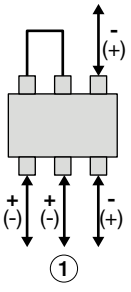


sirco-pv_075_a_1_x_cat.eps

1. Circuit 1

1 circuit - 1500 VDC

F2 - 3 P



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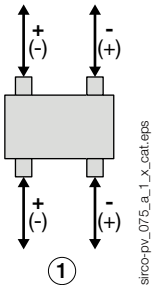
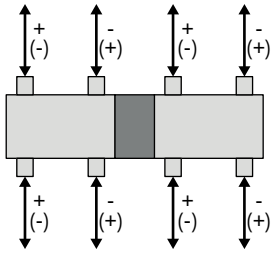
F2-F3 - 2 P



sirco-pv_075_a_1_x_cat.eps

2 circuits - 1500 VDC

F3 - 2 P



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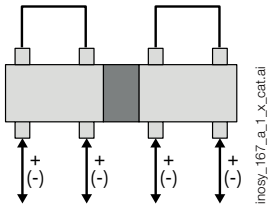
1 circuit - 1500 VDC per polarity



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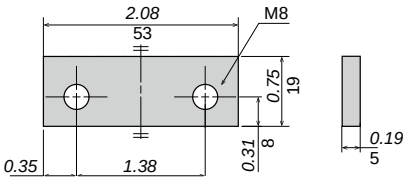
Innovative Power Solutions

Bridging bars (in/mm)

F2

8409 0016(1)

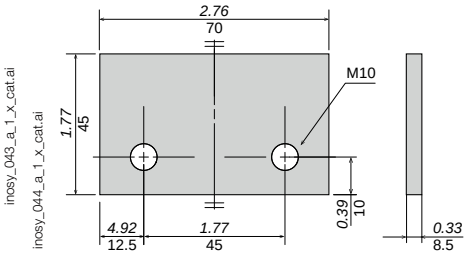
(1) Kit includes 2 identical bars.



F3

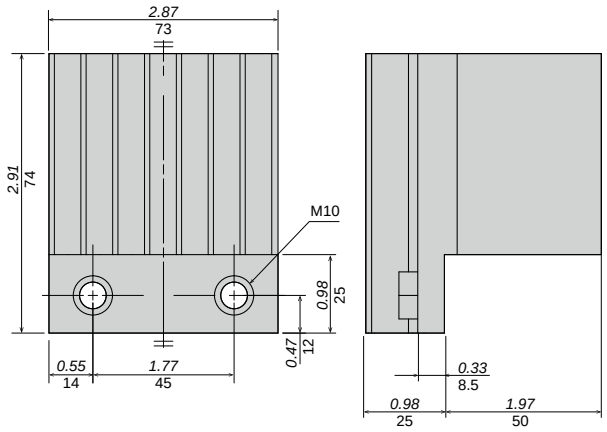
8409 0040 (1)

(1) Kit comprises 2 identical bars.

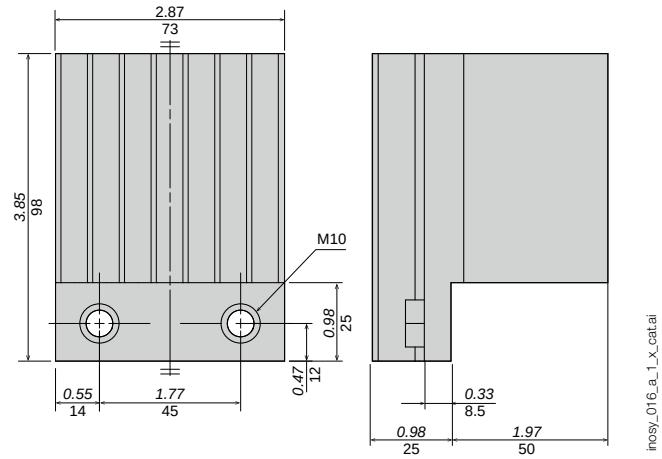


F3

8409 0041



8409 0063



Mounting orientation

F2 - F3

All mounting orientations are possible. Derating may apply - please consult us.

Load break switches

for specific applications

Despite already offering a wide range of load break switches, SOCOMEC also manufactures specific products to suit any requirement. Some of these products can be seen on these two pages. This list is not exhaustive.
Please do not hesitate to contact us.

SIRCO range with overrated neutral

sirco_255

The use of power electronics is becoming more and more frequent. Chopper, rectifiers and current inverters distort the signal by reinjecting the 3rd order harmonics which are combined in the neutral.
Range available from 125 to 1800 A.

SIRCO 3 x 250 A with 400 A rated neutral

Compliance with standards

- > IEC 60947-3
- > BS EN 60947-3
- > EN 60947-3
- > NBN EN 60947-3
- > VDE 0660-107 (1992)

SIRCO high short-circuit withstand

sirco_353

- 80 kA rms 1 s.
- 110 kA rms 0.1 s.
- 240 kA peak.

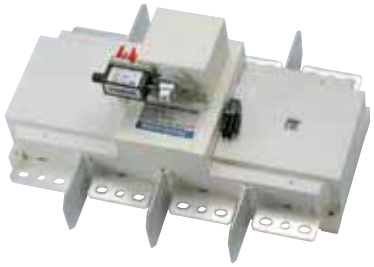
SIRCO early break AC

sirco_380

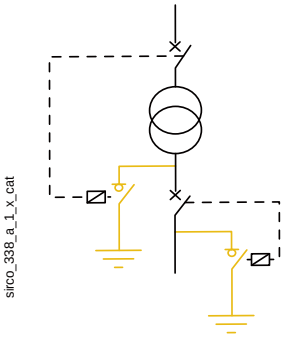
SIRCO 3 x 1250 A with early prebreak AC

- Complete range from 125 to 3200 A.
- Double positive break indication given through a position indication window, located directly on the product, and by the operating handle.
- Features an early break auxiliary contact as standard.
- Severe load duty categories (AC-22 and AC-23).
- High resistance to damp heat (supplied "tropicalised").

SIRCO for earthing


sirco_363

- From 800 to 1800 A.
- 50 kA rms 1 s.
- Special S4 type handle.
- Undervoltage coil interlocking.


sirco_338_a_1_x_cat

Remotely operated load break switches

SIRCO MOT AT


sirco_310

Function

SIRCO MOT AT are remotely operated 3/4 pole load break switches. They make and break under load conditions and provide safety isolation for any low voltage electrical circuit.
This is ensured via volt-free contacts using either a pulse or contactor logic.

Advantages

- Extended power range
  These products offer great flexibility thanks to a wide power supply range of 208 to 277 VAC ±20%.
- Integrated auxiliary contacts
  As part of the product monitoring function, the SIRCO MOT AT enables the transmission of information relating to their position. This is possible thanks to the standard integration of an auxiliary contact for each position.

General characteristics

- 2 stable positions (I, 0).
- One auxiliary contact per position as standard.
- Positive break indication
- AUT/MAN selector.
- Manual emergency operation.
- Padlocking in position 0 (position I optional).
- Ratings: from 125 to 3200 A.

References

Rating (A)		125	160	250	400	630	800
No. of poles	Power supply voltage	Reference	Reference	Reference	Reference	Reference	Reference
3 P	230 VAC	9915 **3012**	9915 **3016**	9915 **3025**	9915 **3040**	9915 **3063**	9915 **3080**
4 P	230 VAC	9915 **4012**	9915 **4016**	9915 **4025**	9915 **4040**	9915 **4063**	9915 **4080**

Rating (A)		1000	1250	1600	2000	2500	3200
No. of poles	Power supply voltage	Reference	Reference	Reference	Reference	Reference	Reference
3 P	230 VAC	9915 **3100**	9915 **3120**	9915 **3160**	9915 **3200**	9915 **3250**	9915 **3320**
4 P	230 VAC	9915 **4100**	9915 **4120**	9915 **4160**	9915 **4200**	9915 **4250**	9915 **4320**

UL and CSA load break switches
from 16 to 1200 A

sirco-ul_022_b_1_cat.eps

Something to think about

> SOCOMEC also offers a full range of load break switches, with direct or front external control that fully comply with UL & CSA standards.

> A specific UL/CSA product catalogue is available on request, don't hesitate to contact us for your copy.

> Important:
all electrical equipment designed for the North American market must conform to UL/CSA standards.

Compliance with standards

> UL 508
(file UL E 173959)

> UL 98
(file UL E 201138)

> CSA 22.2 nº4
(file CSA 189705)

Function

Standard UL 508: load break switches for control of electric motors

They ensure on-load making and breaking and provide safety isolation for motor control up to 600 V.

Standard UL 98 and UL 489: load break switches

They ensure on-load making and breaking and provide safety isolation for all electrical circuits up to 600 V.

General characteristics

SIRCO M

- Positive break indication
- Backplate or DIN-rail mounting.
- Padlocking in position 0 with max. 3 padlocks for external control.
- Door locked when the switch is on for devices with external front operation.

SIRCO

- Positive break indication.
- Padlocking in position 0 with max. 3 padlocks for external control.
- Door locked when the switch is on for devices with external front operation.

INOSYS LBS

- Visible breaking (contact position indication).
- Shunt or undervoltage tripping function from 24 to 220 VDC and from 24 to 230 VAC.
- Opening and closing independent of speed of movement.
- No de-rating up to 60°C and an operating temperature range of -25 to +70°C.

Standard UL 508: motor control

SIRCO M

Rating (A)	16	20	25	30	40	60	80
N° of poles							
3 P	•	•	•	•	•	•	•
4 P	•	•	•	•	•	•	•
Operation type							
Frontal direct/external	•	•	•	•	•	•	•
Type of mounting							
Front/back	•	•	•	•	•		


sircm_132_a

Standard UL 489 : load break switches

SIRCO V

Rating (A)		30
N° of poles	**Operation type**	
3 P	Frontal direct/external	•
3 P + switched neutral	Lateral direct/external	•

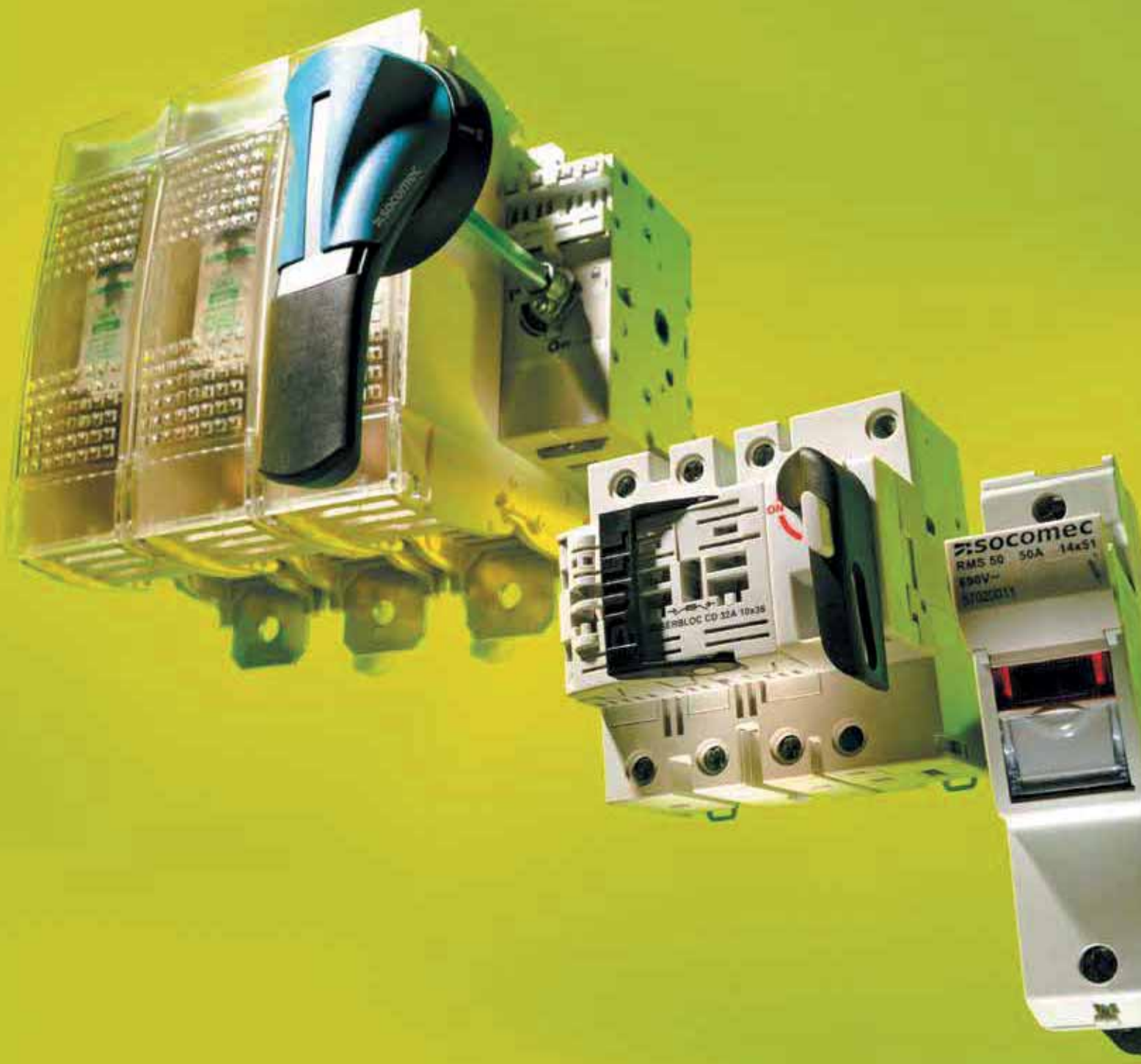

sirco_092_a_1_cat

Standard UL 98 : load break switches

SIRCO M and SIRCO

Type	SIRCO M			SIRCO					
Rating (A)	**30**	**60**	**100**	**200**	**400**	**600**	**800**	**1000**	**1200**
N° of poles									
3 P	•	•	•	•	•	•	•	•	•
4 P	•	•	•	•	•	•	•	•	•
Operation type									
External front	•	•	•	•	•	•	•	•	•


sirco_ul_022_b_1_cat


socomec
RMS 50 50A 14x51
690V~
ON

Fuse protection

Front/side-control fuse combination switches

Motor protection

FUSERBLOC
< 50 A
p. 106

Protection for main switchboards

FUSERBLOC
50 to 400 A
p. 106

Protection for distribution boards

FUSERBLOC
630 to 1250 A
p. 106

Direct-control fuse combination switches

Motor protection

FUSERBLOC
< 50 A
Consult us

Protection for main switchboards

FUSERBLOC
50 to 400 A
Consult us

Front/side-control uR fuse combination switches

Semi-conductor protection

FUSERBLOC
for uR fuses
50 à 1250 A
Consult us

Fuse combination switches with tripping function and visible breaking

FUSOMAT
250 to 1250 A
Consult us

SIDERMAT
combination
1600 to 1800 A
Consult us

Fused disconnectors

RM - RMS
32 to 125 A
Consult us

new
RM CC
Class CC
30 A
Consult us

Fuse base

Fuse base
160 to 2500 A
Consult us

IP2X fuse base
160 to 2500 A
Consult us

Industrial fuses

Distribution protection

gG fuses
0.5 to 1250 A
Consult us

Motor protection

aM fuses
0.16 to 1250 A
Consult us

Semi-conductor protection

uR fuses
5 to 2000 A
Consult us

Photovoltaic industrial fuses

RM PV
32 to 50 A
Consult us

RM PV
32 A
1500 VDC
Consult us

PV
fuse bases
32 to 600 A
Consult us

gPV fuses
1 to 600 A
Consult us

Special products

Fuse combination switches for special applications

p. 128

Fuse protection solutions
> 2500 A
Contact us

UL / CSA range

Fused isolator switches compliant with standards UL489, UL98 and CSA C22.2

Approuvés pour l'utilisation dans les applications les plus sévères, telles que l'interrupteur de tête (Service Entrance) et pour la protection et déconnexion du moteur :

- Standard positions 0 and 1
- Standard positions 0, 1 and Test.

For UL class CC, J, L... fuses : please contact us.

30 to 800 A
Consult us

Compliant with standard IEC/ EN 61439

All the steps for producing an assembly that complies with this standard can be found in our guide, "Implementing standard IEC / EN 61439". https://www.socomec.com/catalogues-brochures_en.html

Fuse solutions: undeniable advantages over circuit breakers

SOCOMEC has always promoted the benefits of fuses for both personal and equipment safety. In fact, fuse protection offers serious benefits compared to the circuit breaker in a large number of applications.
Fuse switches guarantee reliable breaking and protection, from the distribution of power to protection of the motor. Key benefits at a glance:

- Highly limited short circuits

The thermal and mechanical effects generated during a short circuit can be considerable. The speed of a fuse's break capacity ensures a much better limitation of the fault current than circuit breaker solutions (see Fig. 1).

- High breaking capacity

Our fuses have a 100 kA breaking capacity (or more); so you don't have to worry about the short-circuit current when choosing the product for you.

- Easy selection

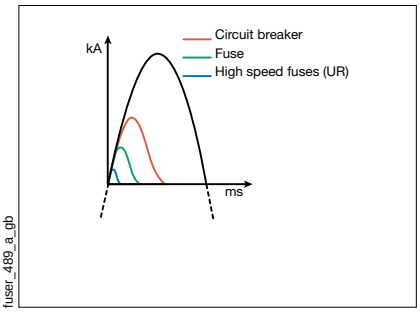
Discrimination between upstream and downstream fuses of the same type is guaranteed as long as the upstream fuse rating is 1.6 times or more higher than the downstream fuse. This feature guarantees a seamless supply of energy (see the example in Fig. 2).

- Confined breaking

During a short-circuit, the generated energy is absorbed by the silica and remains contained in the body of the fuse, avoiding the spread of the arc or even the projection of incandescent materials.

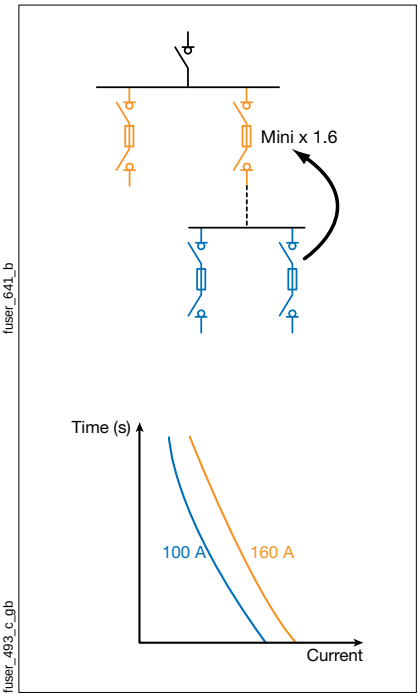
- Double breaking

Our switch disconnectors break the circuit upstream and downstream of the fuse, allowing it to be replaced safely.



fuser_489_a_gb

Fig. 1: Limiting the current



fuser_641_b

fuser_493_c_gb

Fig. 2: Example of total selectivity

Good to know

- Controlled with the high/low voltage transformer sensor, triggering fuse switch disconnectors are the best way to ensure cut-off and general protection functions.
- Protecting your system with ultra-rapid (uR) fuses is the only way to effectively protect the semiconductors used in electronic equipment (variable speed drives, etc.) against short circuits.

Photovoltaic applications

SOCOMEC offers solutions for fuse load break switches and fuse disconnect switches.
Contact us

Technical specifications

All the information you need about how to control your electrical system is just one click away!

qrcode_010_a_gb.eps

www.socomec.com/application-guide-scp_en

appli_563_a

socomec
Innovative Power Solutions

Why choose Socomec?

With over 90 years of experience, SOCOMEC offers a range of switches and components for building a complete fuse protection solution. Working with us will also bring you plenty of other benefits:

An active commercial network

Our service teams have built their reputation on reassuring guidance, flexible skills and reactivity.

Quality products

SOCOMEC is recognised by its customers for the reliability of its fuse solutions.

A wide range

Whatever your business (industry, data centres, photovoltaics, etc.), we can meet all your electrical protection needs with this product range.

Customised solutions

Do our standard products not meet your needs? As a specialised manufacturer, we can adapt our products to your specific needs. Contact us today to look into every option. Contact your SOCOMEC representative.

What you need to know!

We also offer a wide range of devices that safely protect both people and electronic devices (differential protection, surge protection).

See the section, "Electronic protection". page 319.

resys_081_a

sgys_076_a_1_cat

Selection guide

Fuse protection

Application? → Type of operation?

	Industry						
							
	FUSERBLOC Front/side control **25 to 1250 A** *p. 106*	***FUSERBLOC*** Direct control **25 to 400 A** *Consult us*	***FUSOMAT SIDERMAT*** combination **250 to 1800 A** *Consult us*	***RM - RMS*** **32 to 125 A** *Consult us*	Fuse bases **160 to 2500 A** *Consult us*	gG and AM NFC/DIN **0.16 to 1250 A** *Consult us*	
Applications							
Transformer output			•			•	
Section connectors				•	•	•	
Cabinet entrance	•	•	•			•	
Wiring						•	
Motor circuits	•	•	•			•	
Semi-conductor protection				•	•		
Photovoltaic installations							
Device operation							
Manual	•	•	•				
Via tripping			•				
Location of manual handle							
Front		•	•				
Side		•	up to 1250 A				
Via a panel		up to 32 A					
Location of external handle							
Front	•		•				
Right side	•		up to 1250 A				
Left side	Contact us						
Central	Contact us						
Breaking							
Fully visible	•	•	•				
Visible			•				
Fuses							
NFC/DIN	• / •	• / •	- / •	• / -	- / •	•	
BS	see the UK catalogue	see the UK catalogue				•	
UL	see UL catalogue	see UL catalogue				•	
Other							

socomec Innovative Power Solutions

Location of operating handle? → Positive or visible break indication? → Type of fuse?

	Power electronics (inverters, UPS)		Photovoltaics			
						
	FUSERBLOC for uR fuses **50 to 1250 A** *Consult us*	uR fuses **5 to 2000 A** *Consult us*	***RM PV*** **32 to 50 A** *Consult us*	***RM PV*** **32 A - 1500 VDC** *Consult us*	PV fuse bases **2 to 600 A** *Consult us*	gPV fuses **1 to 600 A** *Consult us*
	•	•				
			•	•	•	•
	•					
	•					
	•					
	•					
	•					
	•					
	• / •	•				
		•	gPV	gPV	gPV	gPV

FUSERBLOC

Front/side-control fuse combination switches
for industrial fuses up to 1250 A


fuser_548

FUSERBLOC
from 630 to 1250 A


fuser_532

FUSERBLOC
from 50 to 400 A


fuser_539

FUSERBLOC
from 25 to 32 A

Function

The front/right-side FUSERBLOC is a manually operated multi-pole fuse load break switch.
They make and break on load and provide safety isolation and protection against overcurrent for any low voltage electrical circuit.
This range includes both direct and external-control models, with 2, 3 and 4 poles and from 25 to 1250 A.

Advantages

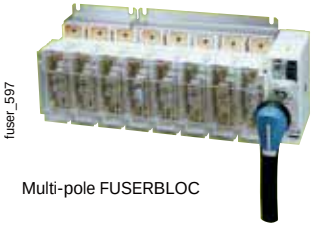
Improved safety
- Complete isolation of the fuse with double breaking per pole (top and bottom of fuse).
- Positive break indication

High breaking capacity
Protection against overloads and short-circuits thanks to high breaking capacity fuses (100 kA rms).

Multi-use
A single device can be operated with a handle, either mounted directly on the unit itself or externally, on the door or on the side of an electrical enclosure or cabinet.

Specific functionalities for simplified use
- TEST position for front/side-control devices up to 400 A allows control circuits to be tested without switching power, thanks to the use of U-type auxiliary contacts. In the TEST position, the cabinet door can be opened.
- Mechanical or electronic fuse blown detection system (see DDMM or FMD).

Customised solutions


fuser_597

Multi-pole FUSERBLOC


fuser_426.eps

Centred operation

The solution for
- Motor feeders
- Protection of industrial cabinets

Strong points
- Improved safety
- High breaking capacity
- Multi-use
- Specific functionalities for simplified use

Extended range
- Centred or left side operation, rear connections, plug-in connections.
  Contact us

Compliance with standards
- IEC 60947-3
- EN 60947-3
- BS EN 60947-3
- NBN EN 60947-3
- IEC 60269-1
- DIN EN 60269-1
- NF EN 60269-1
- IEC 60269-2
- GB/T14048.3
- VDE 0636-1
- VDE 0660-107
- UL standards: see FUSERBLOC UL

Approvals and certifications(1)

(1) *Product references on request.*

What you need to know

- In addition to the FUSERBLOC rating, product selection also depends on the fuse characteristics and functional specifications, which need to be in accordance with the application. SOCOMEC FUSERBLOC devices are equipped with NFC/DIN fuses (for BS fuses, please contact us)

1. FUSERBLOC fuse combination switch
2. Handle for external front and side control
3. U-type auxiliary contacts (pre-break and position signalling)
4. Auxiliary power contacts (position signalling)
5. Mechanical fuse melting detection device (DDMM)
6. Upstream and downstream terminal shrouds
7. Integrated solid neutral link
8. Electronic fuse melting detection (FMD) makes it possible to have an automatic supervision or management system. Compatible with BS88, DIN and UL fuses
   - Visual LED signalling
   - Bi-stable relay for automation devices: alarm, tripping, etc.
   - TEST button: test the device is working properly at any time
   - Mounting plate or DIN rail, on door or directly on the FUSERBLOC
9. Direct control box.

- Whether it is 3-pole + switched neutral or 3-pole + solid neutral, the 25 to 32 A FUSERBLOC with direct and external control is the best compact solution.

fuser_705

- For ratings 25 to 400 A, the flat mounting kit provides a compact solution ideally suited to plug-in units.
- Maintaining outputs from the DC common bus.

fuser_702

References

NFC and DIN – front/right-side operation – 25 to 125 A

Rating (A) / Fuse size / Casing size	No. of poles	Switch body	Direct front handle I-0-TEST	External front handle I - 0	TEST external front handle I - 0 - TEST	External right-side handle I - 0	Shaft for handle	Auxiliary contact	Terminal shrouds	Electronic fuse blown indication[5]
CD 25 A / 10 x 38 / 0	3 P	3631 **3002**[1]	3629 **4012**	Type S1 Black IP55 1411 **2111**[2] Black IP65 1413 **2111** Red/Yellow IP65 1414 **2111**	Type S1 Black IP65 1413 **2115** Red IP65 1414 **2115**	Type S1 Black IP55 1415 **2111**[2] Black IP65 1417 **2111** Red/Yellow IP65 1418 **2111**	200 mm 1401 **0520** 320 mm 1401 **0532**[2]	Type U 1 contact NC 3999 **0701**[3] 1 contact NO 3999 **0702**[3]		
	3 P + switched neutral	3631 **4002**[1]								
	3 P+ solid neutral	3631 **5002**[1]								
CD 32 A / 10 x 38 / 0	3 P	3631 **3003**								
	3 P + switched neutral	3631 **4003**								
	3 P+ solid neutral	3631 **5003**								
CD 32 A / 14 x 51 / 0	3 P	3631 **3004**[1]								
	3 P + switched neutral	3631 **4004**[1]								
	3 P+ solid neutral	3631 **5004**[1]								
50 A / 14 x 51 / 11	2 P	3831 **2005**	3999 **5020**							
	3 P	3831 **3005**[1]								
	4 P	3831 **6005**[1]								
63 A / 00C / 12	2 P	3831 **2006**								3 LEDs 155…260 VAC 3899 **3120** 3 LEDs 380 - 690 VAC 3899 **3380**
	3 P	3831 **3006**[1]								
	4 P	3831 **6006**[1]								
100 A / 22 x 58 / 13	2 P	3831 **2010**		S2 type Black IP55 1421 **2111**[2] Black IP65 1423 **2111** Red IP65 1424 **2111**	S2 type Black IP65 1423 **2115** Red IP65 1424 **2115**	S2 type Black IP55 1425 **2111**[2] Black IP65 1427 **2111** Red IP65 1428 **2111**	200 mm 1400 **1020** 320 mm 1400 **1032**[2] 500 mm 1400 **1050**		2 P 3998 **2016**[4] 3 P 3998 **3016**[4] 4 P 3998 **4016**[4]	
	3 P	3831 **3010**[1]								
	4 P	3831 **6010**[1]								
125 A / 22 x 58 / 13	2 P	3831 **2011**								
	3 P	3831 **3011**								
	4 P	3831 **6011**								
125 A / 00 / 13	2 P	3831 **2012**								3 LEDs 155…260 VAC 3899 **3120** 3 LEDs 380…690 VAC 3899 **3380**
	3 P	3831 **3012**								
	4 P	3831 **6012**								

(1) Available enclosed (see "Enclosed fuse switches").
(2) Standard.
(3) Maximum 4 contacts.
(4) Top or bottom. Provide 2 terminal shrouds for complete upstream and downstream protection.
(5) Mechanical fuse blown auxiliary contact (DDMM), see "Accessories".

NFC and DIN – front/right-side operation – 160 to 1250 A

Rating (A) / Fuse / Casing size	No. of poles	Switch body	Direct front handle I-0-TEST	External front handle I - 0	External front TEST handle I - 0 - Test	External right side handle I - 0	Shaft for handle	Auxiliary contact	Terminal shrouds	Electronic fuse blown indication[6]
160 A / 00 / 13	2 P	3831 **2015**	3999 **5020**	S2 type Black IP55 1421 **2111**[2] Black IP65 1423 **2111** Red IP65 1424 **2111**	S2 type Black IP65 1423 **2115** Red IP65 1424 **2115**	S2 type Black IP55 1425 **2111**[2] Black IP65 1427 **2111** Red IP65 1428 **2111**	200 mm 1400 **1020** 320 mm 1400 **1032** 500 mm 1400 **1050**	Type U 1 contact NC 3999 **0701**[3] 1 contact NO 3999 **0702**[3]	2 P 3998 **2016**[5] 3 P 3998 **3016**[5] 4 P 3998 **4016**[5]	3 LEDs 155…260 VAC 3899 **3120** 3 LEDs 380…690 VAC 3899 **3380**
	3 P	3831 **3015**								
	4 P	3831 **6015**								
160 A / 0 / 14	2 P	3831 **2016**								
	3 P	3831 **3016**[1]								
	4 P	3831 **6016**[1]								
250 A / 1 / 15	2 P	3831 **2024**	3999 **5021**					Type U 1 contact NC 3999 **0701**[4] 1 contact NO 3999 **0702**[4]	2 P 3998 **2025**[5] 3 P 3998 **3025**[5] 4 P 3998 **4025**[5]	
	3 P	3831 **3024**[1]								
	4 P	3831 **6024**[1]								
400 A / 2 / 16	2 P	3831 **2038**							2 P 3898 **2040** 3 P 3898 **3040** 4 P 3898 **4040**	
	3 P	3831 **3038**[1]								
	4 P	3831 **6038**[1]								
630 A / 3 / 17	2 P	3811 **2063**	3899 **6011**	Type S3 Black IP65 1433 **3111**[2] Red IP65 1434 **3111**		Type S3 Black IP65 1437 **7911**	200 mm 1400 **1220** 320 mm 1400 **1232** 500 mm 1400 **1250**		2 P 3898 **2080**[5] 3 P 3898 **3080**[5] 4 P 3898 **4080**[5]	
	3 P	3811 **3063**[1]								
	4 P	3811 **6063**[1]								
800 A / 3 / 17	2 P	3811 **2080**								
	3 P	3811 **3080**								
	4 P	3811 **6080**								
800 A / 4 / 18	2 P	3811 **2081**	1141 **3011**	Type S4 Black IP65 1443 **3111**[2] Red IP65 1444 **3111**					2 P 3898 **2120**[5] 3 P 3898 **3120**[5] 4 P 3898 **4120**[5]	
	3 P	3811 **3081**								
	4 P	3811 **6081**								
1250 A / 4 / 18	2 P	3811 **2120**								
	3 P	3811 **3120**								
	4 P	3811 **6120**								

(1) Available enclosed (see "Enclosed fuse switches").
(2) Standard.
(3) Maximum 4 contacts.
(4) Maximum 8 contacts.
(5) Top or bottom. Provide 2 terminal shrouds for complete upstream and downstream protection.
(6) Mechanical fuse blown auxiliary contact (DDMM), see "Accessories".

Accessories

Frame front handle can be locked in position 0 for direct control

Rating (A)	Frame size	Command	Handle colour	References
50 - 160	11-12-13-14	I-0-TEST	Black	3999 **5020**
250 - 400	15-16	I-0-TEST	Black	3999 **5021**

Direct front-operation handle

Front operation				
Rating (A)	Frame size	Figure N°	Handle colour	References
20 - 32	0	1	Black	3629 **4012**
20 - 32	0	1	Red	3629 **4013**
630 - 800	17	2	Black	3899 **6011**
800 - 1250	18	3	Black	1141 **3011**

Fig. 1

Fig. 2

Fig. 3

Handle locks in position 0 for external control

Padlockable handle in position 0							
Rating (A)	Frame size	Handle type	Handle colour	Command	External IP(1)	Defeatable handle	Reference
CD 25 ... 63	0/11/12	S1	Black	I - 0	IP55	Yes	1411 **2111**
CD 25 ... 63	0/11/12	S1	Black	I - 0	IP65	Yes	1413 **2111**
CD 25 ... 63	0/11/12	S1	Red/Yellow	I - 0	IP65	Yes	1414 **2111**
CD 25 ... 63	0/11/12	S1	Black	I - 0 - Test	IP65	Yes	1413 **2115**
CD 25 ... 63	0/11/12	S1	Red/Yellow	I - 0 - Test	IP65	Yes	1414 **2115**
100 - 400	13 ... 16	S2	Black	I - 0	IP55	Yes	1421 **2111**
100 - 400	13 ... 16	S2	Black	I - 0	IP65	Yes	1423 **2111**
100 - 400	13 ... 16	S2	Red/Yellow	I - 0	IP65	Yes	1424 **2111**
100 - 400	13 ... 16	S2	Black	I - 0 - Test	IP55	Yes	1423 **2115**
100 - 400	13 ... 16	S2	Red/Yellow	I - 0 - Test	IP65	Yes	1424 **2115**
630 ... 800	17	S3	Black	I - 0	IP65	Yes	1433 **3111**
630 ... 800	17	S3	Red/Yellow	I - 0	IP65	Yes	1434 **3111**
800 ... 1250	18	S4	Black	I - 0	IP65	Yes	1443 **3111**
800 ... 1250	18	S4	Red/Yellow	I - 0	IP65	Yes	1444 **3111**

(1) IP: protection index according to IEC 60529.

Handle type S1

Handle type S2

Handle type S3

Handle type S4

Padlockable handle in position 1-0 for external control

Padlockable handle in position 0 and I					
Rating (A)	Frame size	Handle type	Handle colour	External IP(1)	Reference
CD 25 ... 63	0/11/12	S1	Black	IP65	1413 **2311**
100 - 400	13 ... 16	S2	Black	IP65	1423 **2311**

(1) IP: protection index according to IEC 60529.

Handle type S1

Padlockable metal handle in position 1-0 for external front control

Rating (A)	Frame size	Handle type	Handle colour	External IP(1)	Defeatable handle	Reference
CD 25 ... 63	0/11/12	S1	Black	IP65	Yes	141D **2911**
CD 25 ... 63	0/11/12	S1	Red/Yellow	IP65	Yes	141E **2911**
100 - 400	13 ... 16	S2	Black	IP65	Yes	142D **2911**
100 - 400	13 ... 16	S2	Red/Yellow	IP65	Yes	142E **2911**
600 ...800	17	S3	Black	IP65	Yes	143D **3911**
600 ...800	17	S3	Red/Yellow	IP65	Yes	143E **3911**
800 ... 1250	18	S4	Black	IP65	Yes	144D **3911**
800 ... 1250	18	S4	Red/Yellow	IP65	Yes	144E **3911**

(1) IP: protection index according to IEC 60529.

Handle type S1

Handle type S3

Handle locks in position 1-0 for external side control

Rating (A)	Frame size	Handle type	Handle colour	External IP(1)	Reference
CD 25 ... 63	0/11/12	S1	Black	IP55	1415 **2111**
CD 25 ... 63	0/11/12	S1	Black	IP65	1417 **2111**
CD 25 ... 63	0/11/12	S1	Red/Yellow	IP65	1418 **2111**
100 - 400	13 ... 16	S2	Black	IP55	1425 **2111**
100 - 400	13 ... 16	S2	Black	IP65	1427 **2111**
100 - 400	13 ... 16	S2	Red/Yellow	IP65	1428 **2111**
630 ... 1250	17/18	S3	Black	IP65	1437 **3111**
630 ... 1250	17/18	S3	Red/Yellow	IP65	1438 **3111**

(1) IP: protection index according to IEC 60529.


Handle type S1

Handle type S3

Type S handle adapter

Use
Handle extension.

Dimensions
Adds 12 mm to the handle depth.

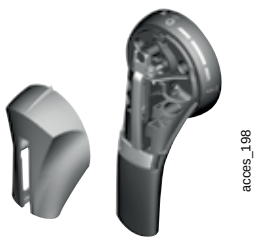
Handle colour	Available for order in multiples of	External IP(1)	Reference
Black	1	IP65	1493 **0000**

(1) IP: protection index according to IEC 60529.

Alternative colour Type S handle cover

Use
For single lever handle types S1, S2, S3 and double lever handle type S4.
Other colours available - please contact us.

Handle colour	Available for order in multiples of	Handle type	Reference
Light grey	50	S1, S2. S3	1401 **0001**
Dark grey	50	S1, S2. S3	1401 **0011**
Light grey	50	S4	1401 **0031**
Dark grey	50	S4	1401 **0041**



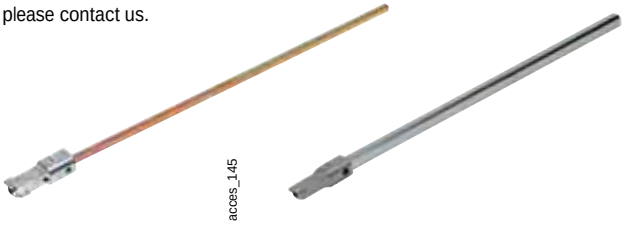
Accessories (continued)

Shaft extensions for external front

Use

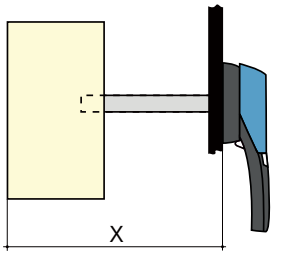
Standard lengths:
- 200 mm
- 320 mm
- 400 mm
- 500 mm.

Other lengths available - please contact us.



Rating (A)	Frame size	Shaft length (mm)	Reference
CD 25 …CD 32	0	200	1401 **0520**
CD 25 …CD 32	0	320	1401 **0532**
CD 25 …CD 32	0	400	1401 **0540**(1)
50 - 400	11 … 16	200	1400 **1020**
50 - 400	11 … 16	320	1400 **1032**
50 - 400	11 … 16	500	1400 **1050**(2)
630 …800	17	200	1400 **1220**
630 …1250	17/18	320	1400 **1232**
630 … 1250	17/18	500	1400 **1250**(1)

(1) Use the accessory "guide cone for external operation".
(2) Use the accessory "shaft extension support for external front operation".



Dimension X (mm) for FUSERBLOC NFC and DIN

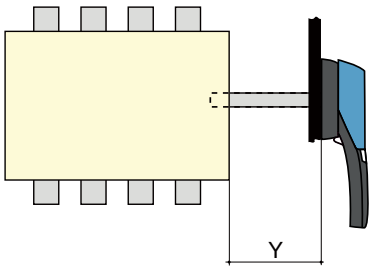
Rating (A)	CD 25 …CD 32	50	63	100 … 160	160	250 …400	630 … 800	800 … 1250
Fuse size	10x38/14x51	14x51	00C	22x58/00	0	1/2	3	4
Frame size	0	11	12	13	14	15/16	17	18
Shaft extension length (mm)								
200	102 … 245	100 … 230	125 … 230	135 … 230	145 … 230	160 … 230	270 … 304	
320	102 … 365	100 … 350	125 … 350	135 … 350	145 … 350	160 … 350	270 … 424	304 - 424
400	102 … 445	100 - 430	125 - 430	135 - 430	145 - 430	160 - 430	270 - 504	304 - 504
500		100 … 530	125 … 530	135 … 530	145 … 530	160 … 530	270 … 604	304 - 604

Shaft for external side operation

Use

Standard length, 200 mm.

Rating (A)	Frame size	Handle type	Dimension Y (mm)	Shaft length (mm)	Reference
CD 25 …CD 32	0	S	36 … 159	200	1401 **0520**
50 - 400	11 … 16	S	36 … 172	200	1400 **1020**
630 … 1250	17/18	S	15 … 150	200	1400 **1220**



Shaft guide for external operation

Use

For use with S Type handles, to guide the shaft extension into the external handle.
This accessory enables the handle to engage the extension shaft with a misalignment of up to 15 mm.
Required for a shaft length over 320 mm.

Designation	Reference
Shaft guide	1429 **0000**

Key handle interlocking system

Use

Locking in position 0 of the direct, front or right side operation:

- using a padlock (not supplied) in direct right side operation: available as standard on the handle,
- using a padlock (not supplied): right-side or front operation switch from 50 to 1250 A, integrated as standard
- using a lock (not supplied) in external operation.

Locking using RONIS EL 11 AP lock (not supplied)

Rating (A)	Frame size	Command	Figure N°	Reference
CD 25 ... 1250	0 ... 18	external front	1	1499 **7701**

Locking using Type K CASTELL lock (not supplied)

Rating (A)	Frame size	Command	Figure N°	Reference
CD 25 ... 1250	0 ... 18	external front	3	1499 **7702**

Locking using Type FS CASTELL lock (not supplied)

Rating (A)	Frame size	Command	Figure N°	Reference
CD 25 ... 1250	0 ... 18	external front	2	1499 **7703**

Locking using XOP (not supplied)

Rating (A)	Frame size	Command	Reference
CD 25 ... 1250	0 18	external front	1499 **7702**

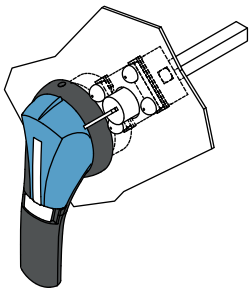


Fig. 1

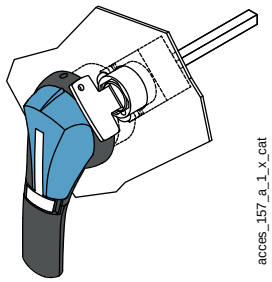


Fig. 2

Flat mounting kit

Use

The flat mounting kit is ideally suited to pull-out units.
Kit to be used with a handle for flat mounting.

Rating (A)	Frame size	Type	Reference
CD 25 ...CD 32	0	Kit + 200 mm shaft	1429 **7709**
50 - 400	11 ... 16	Kit + 200 mm shaft	1429 **7710**

Handle for flat mounting kit

Padlockable handle in position 0

Rating (A)	Frame size	Handle type	Handle colour	External IP(1)	Reference
CD 25 ... 63	0/11/12	S1	Black	IP55	1411 **2111**(2)
CD 25 ... 63	0/11/12	S1	Red/Yellow	IP65	1414 **2111**(2)
100 - 400	13 ... 16	S2	Black	IP55	1421 **2111**(2)
100 - 400	13 ... 16	S2	Red/Yellow	IP65	1424 **2111**(2)

(1) IP: protection index according to IEC 60529.
(2) Defeatable handle in position I.

Handle type S2

External front operation shaft support accessory

Use

This support maintains shaft position for extension shafts greater than 320 mm in length.

Rating (A)	Frame size	Reference
50 - 400	11 ... 16	3899 **0400**

Accessories (continued)

Integrated solid neutral link

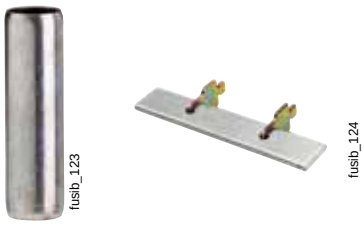
Use
Fixing the solid neutral onto the mechanism produces a device with a solid neutral of the same size as a standard three-pole device (+ 6 mm).

For external front operation			
Rating (A)	**Frame size**	**Bar rating (A)**	**Reference**
100 ... 125	13	125	3829 **9310**
160	13	160	3829 **9320**
160	14	200	3829 **9320**
250	15	250	3829 **9325**
400	16	400	3829 **9339**
630 ... 800	17	800	3829 **9308**
800 ...1250	18	1250	3829 **9312**

Solid neutral module for front control

Rating (A)	**Frame size**	**I_{max}(A)**	**Distance (mm)**	**Reference**
50	11	50	27	3629 **9227**
63	12	63	32	3629 **9232**
100 ... 160	13	160	36	3629 **9236**
160	14	160	50	3629 **9250**
250	15	250	60	3629 **9260**
400	16	400	66	3629 **9265**
630 ... 800	17	800	94	3629 **9294**
800 ... 1250	18	1250	120	3629 **9212**

Solid neutral link



NFC and DIN devices				
Rating (A)	**Frame size**	**Fuse size**	**I_{max}(A)**	**Reference**
50	11	14 x 51	50	6029 **0000**
100 ... 125	13	22 x 58	125	6039 **0000**
63 ... 160	12/13	00C / 00	160	6420 **0000**
160	14	0	160	6421 **0000**
250	15	1	250	6421 **0001**
400	16	2	400	6421 **0002**
630 ... 800	17	3	800	6421 **0003**
800 - 1250	18	4	1250	6441 **0005**

Terminal shrouds

Use
Top or bottom IP20 protection (on the front) against direct contact with terminals or connection parts.

2 sets required to fully shroud both incoming and outgoing terminals.

Rating (A)	**Frame size**	**Position**	**No. of poles**	**Reference**
CD 25 ... 63	0/12	Upstream/downstream	2 / 3 / 4 P	integrated
100 ... 160	13/14	Upstream/downstream	2 P	3998 **2016**
100 ... 160	13/14	Upstream/downstream	3 P	3998 **3016**
100 ... 160	13/14	Upstream/downstream	4 P	3998 **4016**
250 - 400	15	Upstream/downstream	2 P	3998 **2025**
250 - 400	15	Upstream/downstream	3 P	3998 **3025**
250 - 400	15	Upstream/downstream	4 P	3998 **4025**
400	16	Upstream/downstream	2 P	3898 **2040**
400	16	Upstream/downstream	3 P	3898 **3040**
400	16	Upstream/downstream	4 P	3898 **4040**
630 ... 800	17	Upstream/downstream	2 P	3898 **2080**
600 ... 800	17	Upstream/downstream	3 P	3898 **3080**
600 ... 800	17	Upstream/downstream	4 P	3898 **4080**
800 ... 1250	18	Upstream/downstream	2 P	3898 **2120**
800 ... 1250	18	Upstream/downstream	3 P	3898 **3120**
800 ... 1250	18	Upstream/downstream	4 P	3898 **4120**

Type S and Type ST auxiliary contacts

Use
For FUSERBLOCs 50 to 1250 A, position 0 and I signalling by 1 to 4 NO + NC auxiliary contacts.

Electrical principle
The NO + NC Type S auxiliary contacts can be configured as 2 NC or 2 NO.

Connection
By terminals with max. cross-section 10 mm².

Mechanical characteristics
30,000 operations.


acces_051


acces_083

References

Type S auxiliary contacts 0-I for external front and right-side operation

Rating (A)	Frame size	Contact type	Auxiliary contact type S Reference	Actuating kit for auxiliary contact (optional) Reference
50 … 1250	11 … 18	NC+NO	3999 **0041** (1)	3999 **0003**

Type ST auxiliary contacts I-0-TEST for external front and right-side operation

Rating (A)	Frame size	Contact type	Description	Auxiliary contact type ST Reference	Actuating kit for auxiliary contact Reference
50 - 400	11 … 16	NC+NO	TEST + ON	3999 **0141**(2)	3999 **0103**
50 - 400	11 … 16	2 O	TEST + ON	3999 **0241**(2)	3999 **0103**

(1) Actuating kit for auxiliary contact type S signalling included.
(2) Actuating kit for auxiliary contact type ST signalling to be ordered in addition.

Characteristics

Rating (A)	Current Nominal (A)	Operating current I_e (A) 250 VAC AC-13	400 VAC AC-13
50 … 1250	20	10	8

Important

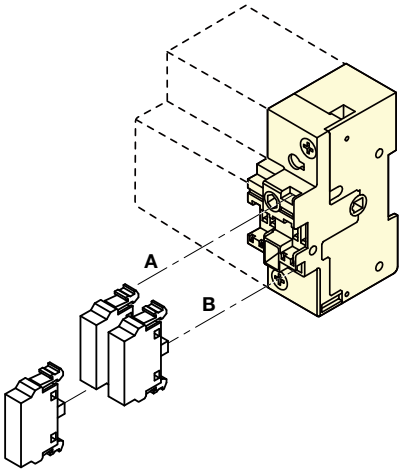
> For 400 A rating, casing 16, an adaptation kit reference 3999 000 must be ordered in addition to the auxiliary contact kit.

Type U auxiliary contacts(1)

Use
Compact universal type auxiliaries can be configured to be operated on both standard and TEST position switches. Each housing can accommodate up to 2 interlocked auxiliary contacts.

Connection to the control circuit
By terminals with max. section 2 x 2.5 mm²
For FUSERBLOC CD 25 to 400 A: pre-break and signalling of positions 0, I and Test
For FUSERBLOC ≥ 630 A: pre-break and signalling of positions 0 and I.


acces_056



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References

NC auxiliary contacts

Rating (A)	Frame size	Contact	Reference(1)
CD 25 … 1250	0 … 18	1	3999 **0701** (2)

NO auxiliary contacts

Rating (A)	Frame size	Contact	Reference(1)
CD 25 … 1250	0 … 18	1	3999 **0702** (2)

(1) CD 25 - CD 32: Cannot be mounted in direct operation.
(2) CD 25-160 A - 4 AC Max with no additional holder for auxiliary contact.
250-400 A - 8 AC Max with no additional holder for auxiliary contacts.

Contact holder for additional auxiliary contacts

Rating (A)	Frame size	Contact	Reference
CD 25 …CD 32	0	4 (2 x 2 max)	3999 **0710**
50 - 400	11 … 16	4 (2 x 2 max)	3999 **0600**

Characteristics

Rating (A)	Operating current I_e (A) 250 VAC AC-15	400 VAC AC-15	24 VDC DC-13	48 VDC DC-13
CD 25 … 1250	3	1.8	2.8	1.4

(1) Type U auxiliary contacts cannot be mounted in conjunction with integrated solid neutral.

Accessories (continued)

Electronic fuse blown indication (FMD)

Use
For BS88, DIN and UL fuse cartridge, with or without striker.

Principle
The Fuse Melting Device (FMD) detects fuse blowing using a bistable relay and a signalling LED.
It can be mounted on a DIN rail, a back plate, next to the FUSERBLOC, or on the door.

3-LED version

References

For FUSERBLOC 63 to 1250 A - size 000 to 4		
No. of LEDs	**Ph/Ph operating voltage**	**Reference**
3	155 - 260 VAC	3899 **3120**
3	380 - 690 VAC	3899 **3380**

Accessories		**Reference**
Kit to connect accessories	Standard	3819 **9120**
Kit to connect accessories	Door mounted	3829 **9120**

Relay characteristics	**Relay operational current I_c (A)**	
Rating (A)	**AC-15**	**DC-13**
63 - 1250	2.5 A	0.2

Important

> For 400 A rating, casing 16, mounted on the device itself, an adaptation kit reference 3999 0000 must be ordered in addition to the FMD.

DDMM-type auxiliary contact for NFC/DIN-striking fuse device

Use
For fuse cartridge with striker (size 14 x 51; 22 x 58; 0; 1; 2; 3 and 4).

Electrical principle
NO/switched neutral auxiliary contact detects fuse blowing.

Connection to the control circuit
By 6.35 mm fast-on terminal.

Mechanical characteristics
30,000 operations.

References

NO/NC type auxiliary contacts for 2 poles				
Rating (A)	**Frame size**	**Fusibles(1)**	**Contact**	**Reference**
50	11	14 x 51	1st	3994 **0405**
100 ... 125	13	22 x 58	1st	3994 **0210**
160	14	NH0	1st	3994 **0216**
250	15	NH1-NH2	1st	3994 **0225**
400(1)	16	NH2	1st	3894 **0440**
630 ... 800	17	NH3	1st	3894 **1206**
800 ... 1250	18	NH4	1st	3894 **1212**

NO/NC type auxiliary contacts for 3 poles				
Rating (A)	**Frame size**	**Fuses**	**Contact**	**Reference**
CD 32	0	14 x 51	1st	3994 **0303**
50	11	14 x 51	1st	3994 **0405**
100 ... 125	13	22 x 58	1st	3994 **0310**
160	14	NH0 - NH00	1st	3994 **0316**
250	15	NH1-NH2	1st	3994 **0325**
400(1)	16	NH2	1st	3894 **0440**
630 ... 800	17	NH3	1st	3894 **1306**
800 ... 1250	18	NH4	1st	3894 **1312**
50 ... 250	11/13/14/15	14x51 ... NH2	2:	3994 **1901**
400	16	NH2	2:	3994 **1902**
630 ... 1250	17/18	NH3-NH4	2:	3994 **1901**

NO/NC type auxiliary contacts for 4-pole or 3-pole + neutral				
Rating (A)	**Frame size**	**Fuses**	**Contact**	**Reference**
50	11	14 x 51	1st	3994 **0405**
100 ... 125	13	22 x 58	1st	3994 **0410**
160	14	NH0	1st	3994 **0416**
250	15	NH1-NH2	1st	3994 **0425**
400(1)	16	NH2	1st	3894 **0440**
630 ... 800	17	NH3	1st	3894 **1406**
800 ... 1250	18	NH4	1st	3894 **1412**
50 ... 250	11/13/14/15	14x51 ... NH2	2:	3994 **1901**
400	16	NH2	2:	3994 **1902**
630 ... 1250	17/18	NH3-NH4	2:	3994 **1901**

(1) NH00 fuse = size 00. NH4 fuse = size 4.

DDMM for cylindrical fuses

DDMM for NH fuses

Characteristics

		Operating current I_e (A)			
Rating (A)	**Current Nominal (A)**	**250 VAC AC-13**	**400 VAC AC-13**	**24 VDC DC-13**	**48 VDC DC-13**
CD 32 ... 1250	16	4	3	12	2

Cage terminals

Use

Connection of bare copper cables onto the terminals (without lugs).

References

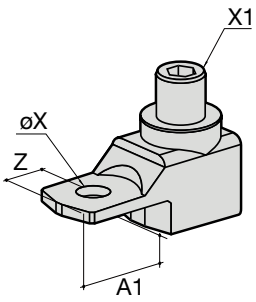
Rating max (A)	Frame size	No. of poles	Reference
CD 25 ... 63	0 ... 12	2 / 3 / 4 P	integrated
100 ... 160	13/14	3 P	5400 **3016**
100 ... 160	13/14	4 P	5400 **4016**
250	15	3 P	5400 **3025**
250	15	4 P	5400 **4025**
400	16	3 P	5400 **3040**
400	16	4 P	5400 **4040**

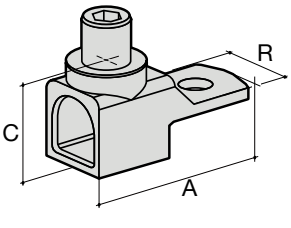
Connections

Rating (A)	Cable section: flexible (mm^2)	Cable section: rigid (mm^2)	Flexible bar width (mm)	Stripped (mm)
100 ... 160	16 ... 95	16 ... 95	13	22
250	16 ... 185	16 ... 185	18	27
400	50 ... 240	50 ... 300	20	34

Dimensions

Rating (A)	A	A1	C	R	ØX	X1	Z
100 ... 160	47.5	22.5	25	20	8.5	M12	10
250	62	31.5	31.5	25	10.5	M16	14
400	71.5	32	38	32	10.5	M20	15





Label

Use

Customisable self-adhesive label allowing identification of the devices.

Dimensions W x H (mm)	To be ordered in multiples of	Reference
18 x 13	50	7769 **9999**

Characteristics according to IEC 60947-3

25 to 125 A

References *"x" corresponds to digit for number of pole (2 = 2 P, 3 = 3 P, 6 = 4 P)*		**3631 x002**	**3631 x003**	**3631 x004**	**3831 x005**	**3831 x006**	**3831 x010**	**3831 x011**	**3831 x012**
Type		**CD 25 A**	**CD 32 A**	**CD 32 A**	**Mod. 50 A**	**Mod. 63 A**	**Mod. 100 A**	**Mod. 125 A**	**Mod. 125 A**
Frame size		0	0	0	11	12	13	13	13
Casing pitch per power pole (mm)		-	-	-	27	32	36	36	36
Number of poles		3, 4(switched neutral), 4(solid neutral)	3, 4(switched neutral), 4(solid neutral)	3, 4(switched neutral), 4(solid neutral)	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4
Assigned thermal current I_{th} (35 °C)		25 A	32 A	32 A	50 A	63 A	100 A	125 A	125 A
NFC/DIN fuse size		NFC 10 x 38	NFC 10 x 38	NFC 14 x 51	NFC 14 x 51	NH000	NFC 22 x 58	NFC 22 x 58	NH00
Rated operating voltage U_e (V)		690 V	690 V	690 V	690 V	690 V	690 V	690 V	690 V
Rated insulation voltage U_i (V)		800	800	690	800	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV)		8	8	8	8	8	8	8	8
Short-circuit characteristics									
Prospective short-circuit current at U_e 400/415V AC (kA rms)		100	100	100	100	100	100	100	50
Prospective short-circuit current at U_e 660/690V AC (kA rms)		100	100	-	100	100	100	100	50
Rated peak withstand current in I_{cc} U_e 415 V AC (kA peak) (single switch)		5.5	5.5	5.5	5.52	7.3	11.9	13.6	-
Rated peak withstand current in I_{cc} U_e 690 V AC (kA peak) (single switch)		5.2	6.1	-	6.5	7.3	15.8	20.4	10.4
Rated operating current Ie (A)									
Nominal voltage	**Operating category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 V AC	AC 21 A / AC 21 B	25/25	32/32	32/32	50/50	63/63	100/100	125/125	125/125
415 V AC	AC 22 A / AC 22 B	25/25	32/32	32/32	50/50	63/63	100/100	125/125	125/125
415 V AC	AC 23 A / AC 23 B	25/25	32/32	32/32	50/50	63/63	100/100	125/125	125/125
500 V AC	AC 21 A / AC 21 B	25/25	32/32	32/32	50/50	63/63	100/100	125/125	125/125
500 V AC	AC 22 A / AC 22 B	25/25	32/32	32/32	50/50	63/63	100/100	125/125	125/125
500 V AC	AC 23 A / AC 23 B	25/25	32/32	32/32	50/50	63/63	100/100	125/125	125/125
690 V AC	AC 20 A / AC 20 B	25/25	32/32	32/32	50/50	63/63	100/100	125/125	125/125
690 V AC	AC 21 A / AC 21 B	25/25	32/32	32/32	50/50	63/63	100/100	100/100	125/125
690 V AC(2)	AC 22 A / AC 22 B	25/25	32/32	32/32	50/50	63/63	100/100	100/100	125/125
690 V AC(2)	AC 23 A / AC 23 B	25/25	32/32	32/32	50/50	63/63	100/100	100/100	125/125
220 V DC	DC 21 A / DC 21 B	-/25	-/32	-/32	-	-/63	100/100	100/100	125/125
220 V DC	DC 22 A / DC 22 B	-/25	-/32	-/32	-	-	100/100	100/100	125/125
220 V DC	DC 23 A / DC 23 B	-/25(3)	-/25(3)	-/25(3)	-	-	100/100	100/100	125/125
440 V DC	DC 21 A / DC 21 B	-	-	-	-	-/63(4)	100(4)/100(4)	100(4)/100(4)	125(4)/125(4)
440 V DC	DC 22 A / DC 22 B	-	-	-	-	-	100(4)/100(4)	100(4)/100(4)	125(4)/125(4)
440 V DC	DC 23 A / DC 23 B	-	-	-	-	-	100(4)/100(4)	100(4)/100(4)	125(4)/125(4)
Rated operating power in AC-23 (kW)									
At U_e 415 VAC without pre-break auxiliary contact (1)(5)		11/11	15/15	15/15	25/25	30/30	51/51	63/63	63/63
At U_e 690 VAC without pre-break auxiliary contact (1)(5)		22/22	25/25	25/25	45/45	55/55	90/90	90/90	90/90
Reactive power (kvar)									
At U_e 415 VAC (5)		11	15	15	23	28	45	55	55
Power dissipation (W / pole)									
Dissipated power		3.1	4.1	5.9	7.3	8.4	14.5	19.9	20.3
Power dissipated by fuse		2.4	2.9	4.3	4.6	6	9	11	12.5
Power dissipated by switch body		0.7	1.2	1.6	2.45	4.35	6.8	8.63	6
Wiring capacity of conductors									
Minimum Cu cable cross-section (mm^2)		2.5	2.5	2.5	6	10	25	35	35
Minimum Cu cable cross-section (mm^2)		16	16	16	25	25	95	95	95
Maximum busbar width (mm)		-	-	-	-	-	20	20	20
Min. tightening torque (Nm)		2	2	2	3	3	9	9	9
Mechanical characteristics									
Durability (number of operating cycles)		10 000	10 000	10 000	10 000	10 000	10 000	10 000	10 000
Operating torque (Nm)		4.1	4.1	4.1	8.7	8.7	9.7	9.7	10.2
Weight of a 3-pole device without extras (kg)		0.48	0.48	0.50	0.80	1	1.5	1.5	1.5
Weight of a 4-pole device without extras (kg)		0.50	0.50	0.52	1	1.3	2	2	2
Weight of 1 P extra (kg)		-	-	-	0.2	0.3	0.5	0.5	0.5
Storage temperature (°C)		-50 …+85							
Operating temperature (°C)		-20…+70							
Regulatory compliance		IEC 60947-3							
Certification		IEC, KEMA, Loyd's and CCC							
Degree of pollution		3	3	3	3	3	3	3	3

(1) Category with index A = frequent operation / Category with index B = infrequent operation.
(2) With terminal shrouds or phase barrier.
(3) 3-pole device with 2 poles in series for the '+' and 1 pole for the '-'.
(4) 4-pole device with 2 poles in series per polarity.
(5) The power value is given for information only; the current values vary from one manufacturer to another.
(6) For a rated operational voltage Ue = 400 VAC.

160 to 1250 A

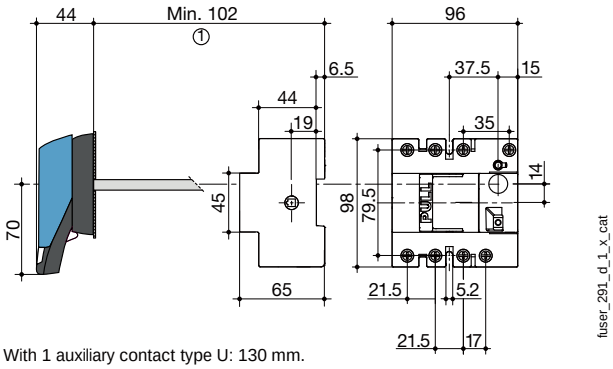
References *"x" corresponds to digit for number of pole (2 = 2 P, 3 = 3 P, 6 = 4 P)*		**3831 x015**	**3831 x016**	**3831 x024**	**3831 x038**	**3811 x063**	**3811 x080**	**3811 x081**	**3811 x120**
Type		**Mod. 160 A**	**Mod. 160 A**	**Mod. 250 A**	**Mod. 400 A**	**Mod. 630 A**	**Mod. 800 A**	**Mod. 800 A**	**Mod. 1250 A**
Frame size		13	14	15	16	17	17	18	18
Casing pitch per power pole (mm)		36	50	60	66	94	94	120	120
Number of poles		2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4
Assigned thermal current I_{th} (35 °C)		160 A	160 A	250 A	400 A	630 A	800 A	800 A	1250 A
NFC/DIN fuse size		NH00	NH0	NH1	NH2	NH3	NH3	NH4	NH4
Rated operating voltage U_e (V)		690 V	600 V	690 V	690 V	690 V	690 V	415 V	415 V
Rated insulation voltage U_i (V)		800	800	800	1,000	1,000	1,000	1,000	1,000
Rated impulse withstand voltage U_{imp} (kV)		8	8	8	12	12	12	12	12
Short-circuit characteristics									
Prospective short-circuit current at U_e 400/415V AC (kA rms)		50	100	100	50	100	100	100	100
Prospective short-circuit current at U_e 660/690V AC (kA rms)		50	50	50	50	100	100	-	-
Rated peak withstand current in I_{cc} U_e 415 V AC (kA peak) (single switch)		18.95	22.66	23.9	33.5	48	54.18	50.8	53.2
Rated peak withstand current in I_{cc} U_e 690 V AC (kA peak) (single switch)		13.5	14	29	29.9	58.7	58.7	-	-
Rated operating current Ie (A)									
Nominal voltage	**Operating category**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**
415 V AC	AC 21 A / AC 21 B	160/160	160/160	250/250	400/400	-/630	-/800	-/800	-/1250
415 V AC	AC 22 A / AC 22 B	160/160	160/160	250/250	400/400	-/630	-/800	-/800	-/1250
415 V AC	AC 23 A / AC 23 B	160/160	160/160	250/250	400/400	-/630	-/800	-/800	-/1250
500 V AC	AC 21 A / AC 21 B	160/160	160/160	250/250	-/400	-/630	-/800	-/800	-/1250
500 V AC	AC 22 A / AC 22 B	160/160	160/160	250/250	-/400	-/630	-/800	-/800	-/1250
500 V AC	AC 23 A / AC 23 B	160/160	160/160	250/250	-	-	-	-	-
690 V AC	AC 20 A / AC 20 B	160/160	160/160	250/250	400/400	630/630	800/800	800/800	1250/1250
690 V AC	AC 21 A / AC 21 B	160/160	160/160	250/250	-/400	-/630	-/800	-/800	-/1250
690 V AC[2]	AC 22 A / AC 22 B	160/160	160/160	250/250	-/400	-/630	-/800 [6]	-/800	-/1250
690 V AC[2]	AC 23 A / AC 23 B	125/125	125/125	250/250	250/315	-	-	-	-
220 V DC	DC 21 A / DC 21 B	160/160	160/160	250/250	-	-	-	-	-
220 V DC	DC 22 A / DC 22 B	160/160	160/160	250/250	-	-	-	-	-
220 V DC	DC 23 A / DC 23 B	125/125	125/125	200/200	-	-	-	-	-
440 V DC	DC 21 A / DC 21 B	160[3]/160[3]	160[3]/160[3]	250[3]/250[3]	-	-	-	-	-
440 V DC	DC 22 A / DC 22 B	160[3]/160[3]	160[3]/160[3]	250[3]/250[3]	-	-	-	-	-
440 V DC	DC 23 A / DC 23 B	125[3]/125[3]	125[3]/125[3]	200[3]/200[3]	-	-	-	-	-
Rated operating power in AC-23 (kW)									
At U_e 415 VAC without pre-break auxiliary contact [1][5]		80/80	80/80	132/132	220/220	355/355	450/450	450/450	560/560
At U_e 690 VAC without pre-break auxiliary contact [1][5]		110/110	110/110	220/220	220/295	295/400	400/400	400/400	400/475
Reactive power (kvar)									
At U_e 415 VAC [5]		75	75	115	185	290	365	355	460
Power dissipation (W / pole)									
Power dissipation		21.6	23	41.1	57.4	122	134		264
Power dissipated by fuse		12	15	23	33	60	65	70	110
Power dissipated by switch body		10.4	10.4	19	24.4	61	68		154
Wiring capacity of conductors									
Minimum Cu cable cross-section (mm^2)		35	50	95	185	2 x 150	2 x 185		
Minimum Cu cable cross-section (mm^2)		95	95	240	240	2 x 300	2 x 300	4 x 185	4 x 185
Maximum busbar width (mm)		20	20	32	45	63	63	80	80
Min. tightening torque (Nm)		9	9	20	20	40	40	40	40
Mechanical characteristics									
Durability (number of operating cycles)		10 000	10 000	10 000	10 000	5 000	8 000	3 000	3 000
Operating torque (Nm)		10.2	9.7	13	17	56	57	62	62
Weight of a 3-pole device without extras (kg)		1.8	1.8	3.2	4.8	16	17	25	25
Weight of a 4-pole device without extras (kg)		2.3	2.3	4.5	6.1	20	21.5	30	30
Weight of 1 P extra (kg)		0.5	0.5	1.3	1.3			3	3
Storage temperature (°C)		-50 …+85							
Operating temperature (°C)		-20…+70							
Regulatory compliance		IEC 60947-3							
Certification		IEC, KEMA, Loyd's and CCC							
Degree of pollution		3	3	3	3	3	3	3	3

(1) Category with index A = frequent operation / Category with index B = infrequent operation.
(2) With terminal shrouds or phase barrier.
(3) 3-pole device with 2 poles in series for the '+' and 1 pole for the '-'.
(4) 4-pole device with 2 poles in series per polarity.
(5) The power value is given for information only; the current values vary from one manufacturer to another.
(6) For a rated operational voltage Ue = 400 VAC.

Dimensions for front/side external operation

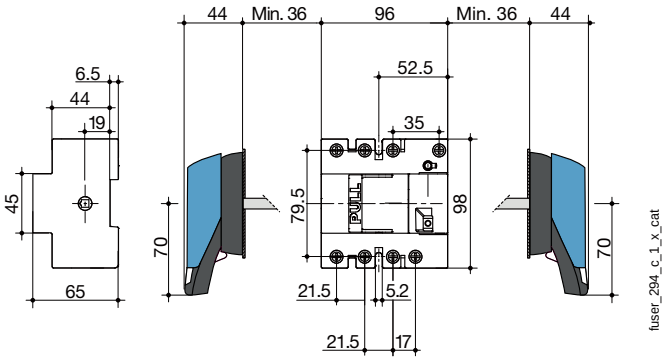
25 to 32 A (size 10 x 38)

External front operation



fuser_291_d_1_x_cat

External side operation

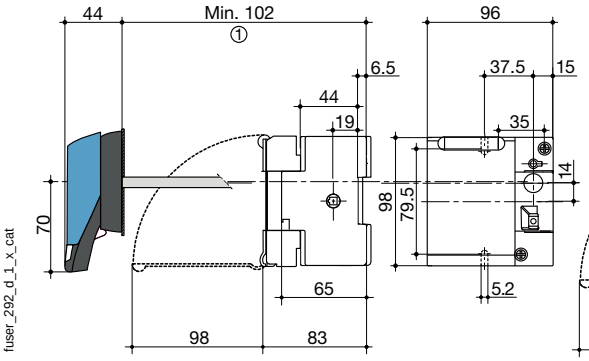


fuser_294_c_1_x_cat

1. With 1 auxiliary contact type U: 130 mm.
With 2 auxiliary contacts type U: 155 mm.

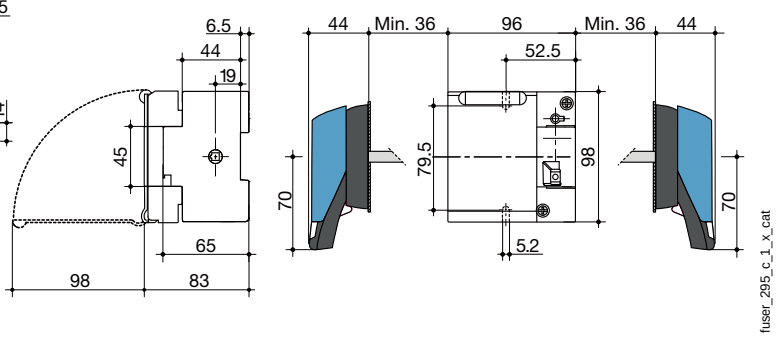
32 A (size 14 x 51)

External front operation



fuser_292_d_1_x_cat

External side operation

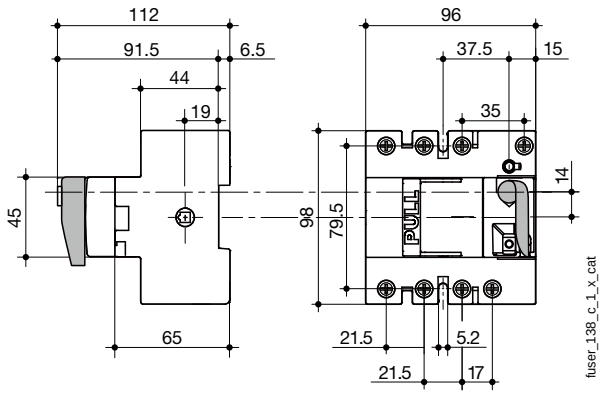


fuser_295_c_1_x_cat

1. With 1 auxiliary contact type U: 130 mm.
With 2 auxiliary contacts type U: 155 mm.

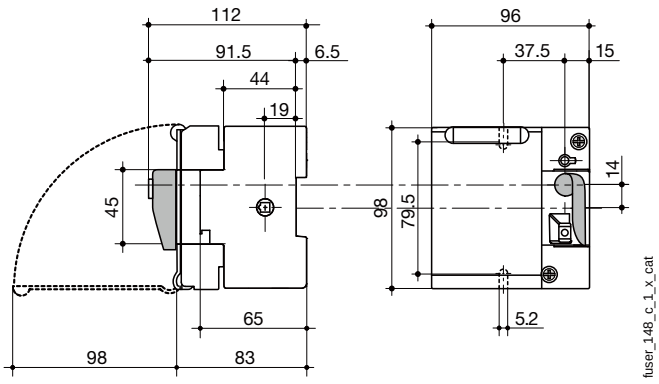
Dimensions - direct operation

25 A (size 10 x 38)



fuser_138_c_1_x_cat

32 A (size 14 x 51)

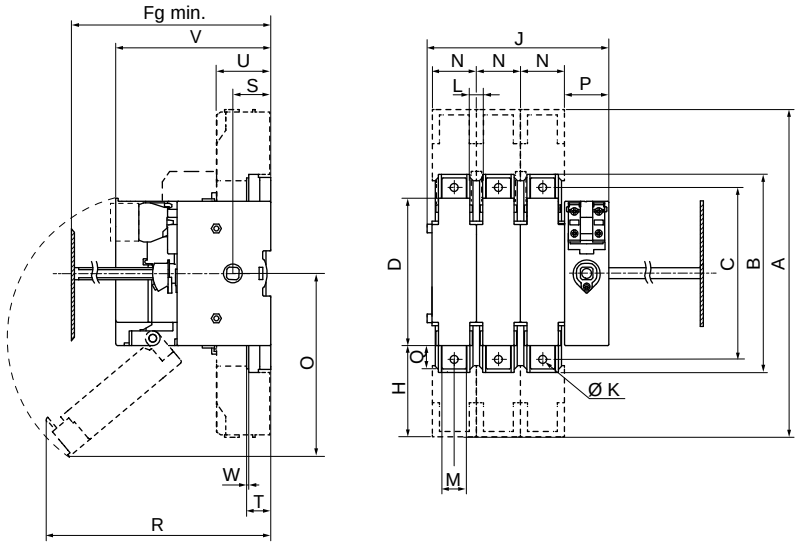


fuser_148_c_1_x_cat

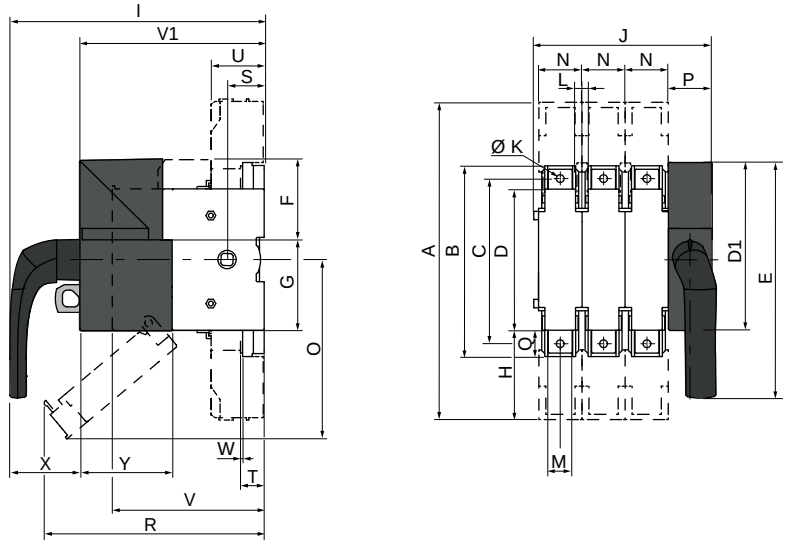
Dimensions for direct front and front/side external operation

50 to 160 A

50 - 63 A: cage connection.
100 - 160 A: cage connection.



fuser_751_a_1_x_cat.ai

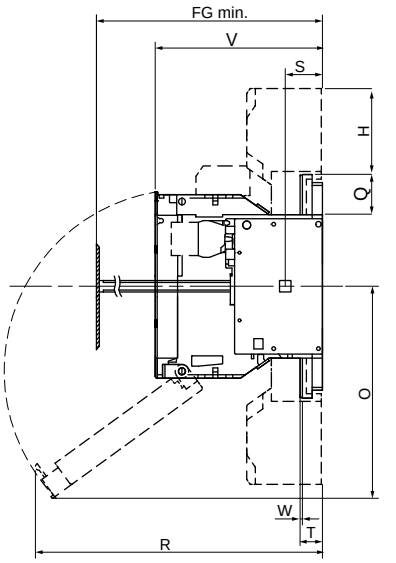


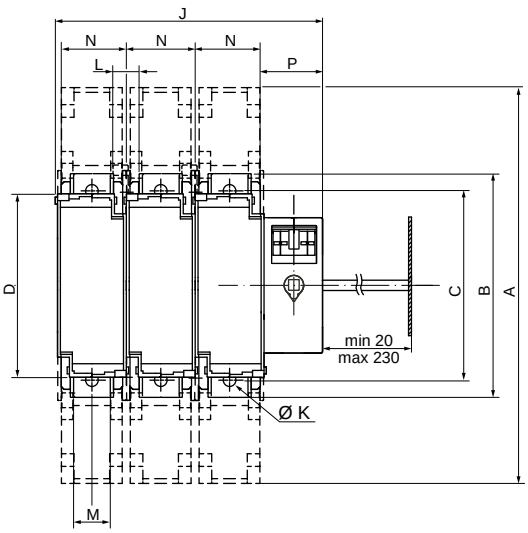
fuser_752_a_1_x_cat.ai

Rating (A)	Fuse size	Frame size	Fg min.	A	B	C	D	D1	E	F	G	H	I	J		K	L	M	N	O	P	Q	R	S	T	U	V	V1	W	X	Y
														3P	4P																
50	14 x 51	11	100		118		106	143	200	67.5	75.5		212.1	121	148	6.2	15	12	27	85	36.8	15	153	31			87	153.6	2	58.5	77
63	00C	12	125		118		106	143	200	67.5	75.5		212.1	136	168	6.2	20	12	32	159	36.8	15	145	31			116	153.6	2	58.5	77
100	22x58	13	135	268	162	141	127	143	200	67.5	75.5	75	212.1	148	184	8.5	16	20	36	141	36.8	41	187	31	19.5	43.5	116	153.6	2.5	58.5	77
125	22x58	13	135	268	162	141	127	143	200	67.5	75.5	75	212.1	148	184	8.5	16	20	36	141	36.8	41	179	31	19.5	43.6	116	153.6	2.5	58.5	77
125	NH00	13	135	268	162	141	127	143	200	67.5	75.5	75	212.1	148	184	8.5	16	20	36	141	36.8	41	193	31	19.5	43.7	126	153.6	2.5	58.5	77
160	NH00	13	135	268	162	141	127	143	200	67.5	75.5	75	212.1	148	184	8.5	16	20	36	141	36.8	41	193	31	19.5	43.8	126	153.6	2.5	58.5	77
160	NH0	14	145	268	162	141	140	143	200	67.5	75.5	75	212.1	190	240	8.5	20	20	50	174	36.8	41	229	31	19.5	43.9	136	153.6	2.5	58.5	77

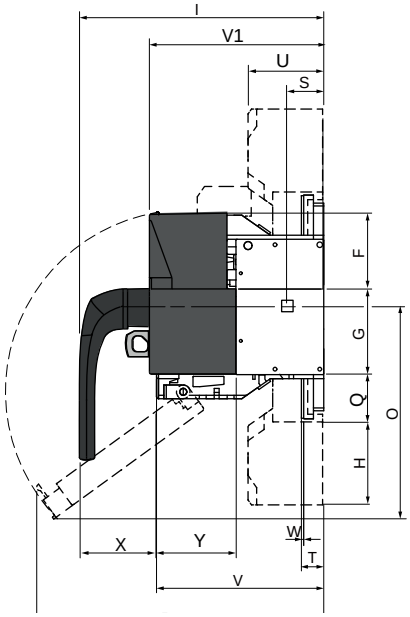
Dimensions for direct front and front/side external operation (continued)

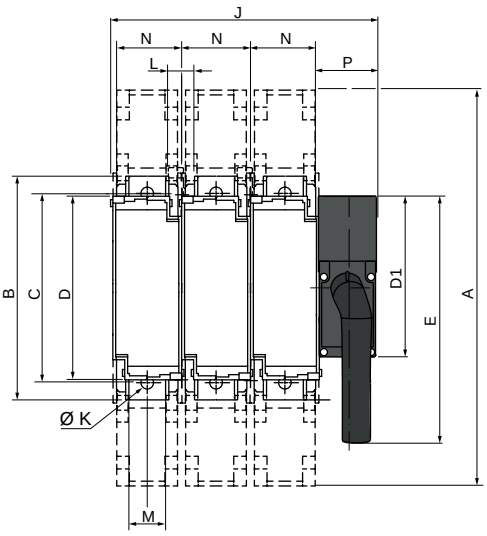
250 A





fuser_748_a_1_x_cat.ai

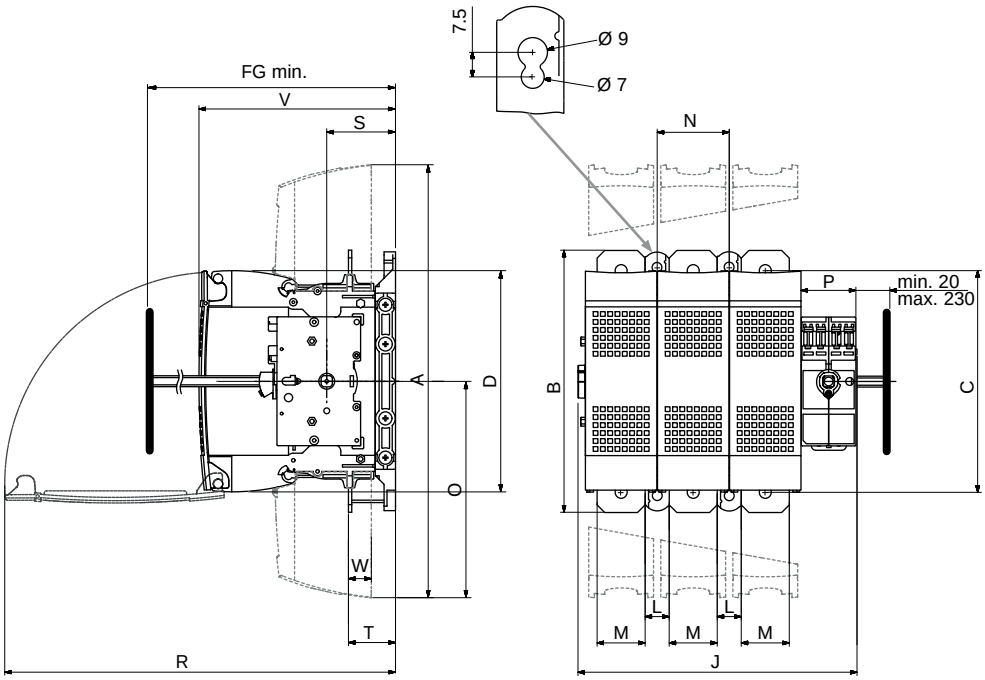




fuser_749_a_1_x_cat.ai

Rating (A)	Fuse size	Frame size	Fg min.	A	B	C	D	D1	E	F	G	H	I	J		K	L	M	N	O	P	Q	R	S	T	U	V	V1	W	X	Y
														3P	4P																
250	NH1	15	154	345	195	166	162	143	220	67.5	75.5	110	212.1	234	294	8.5	28	32	60	185	51.6	52	251	31	19.5	65	146	142	2.5	58.5	77

400 A



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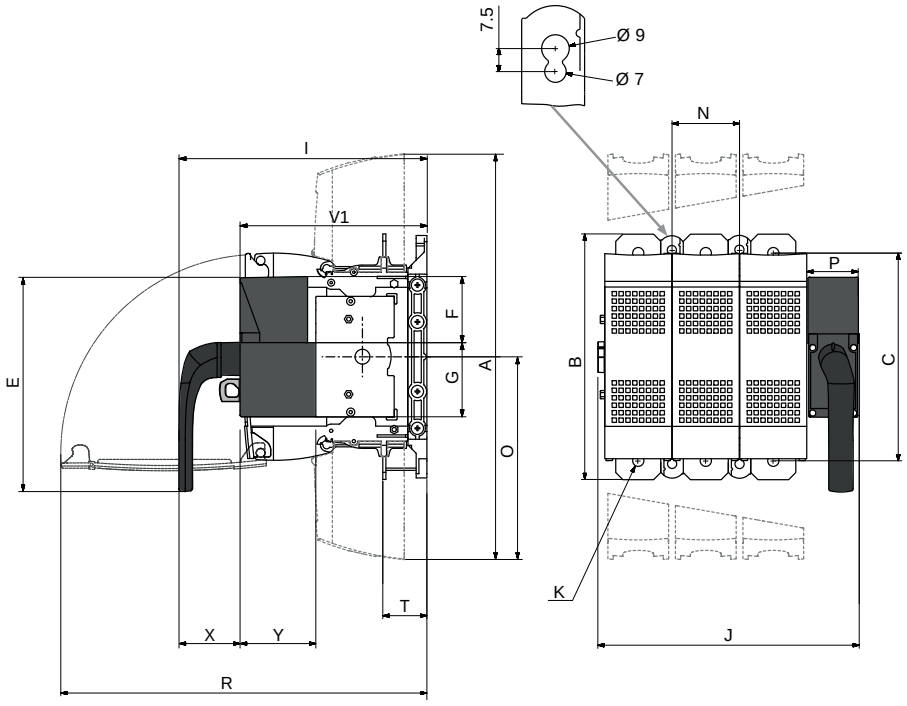
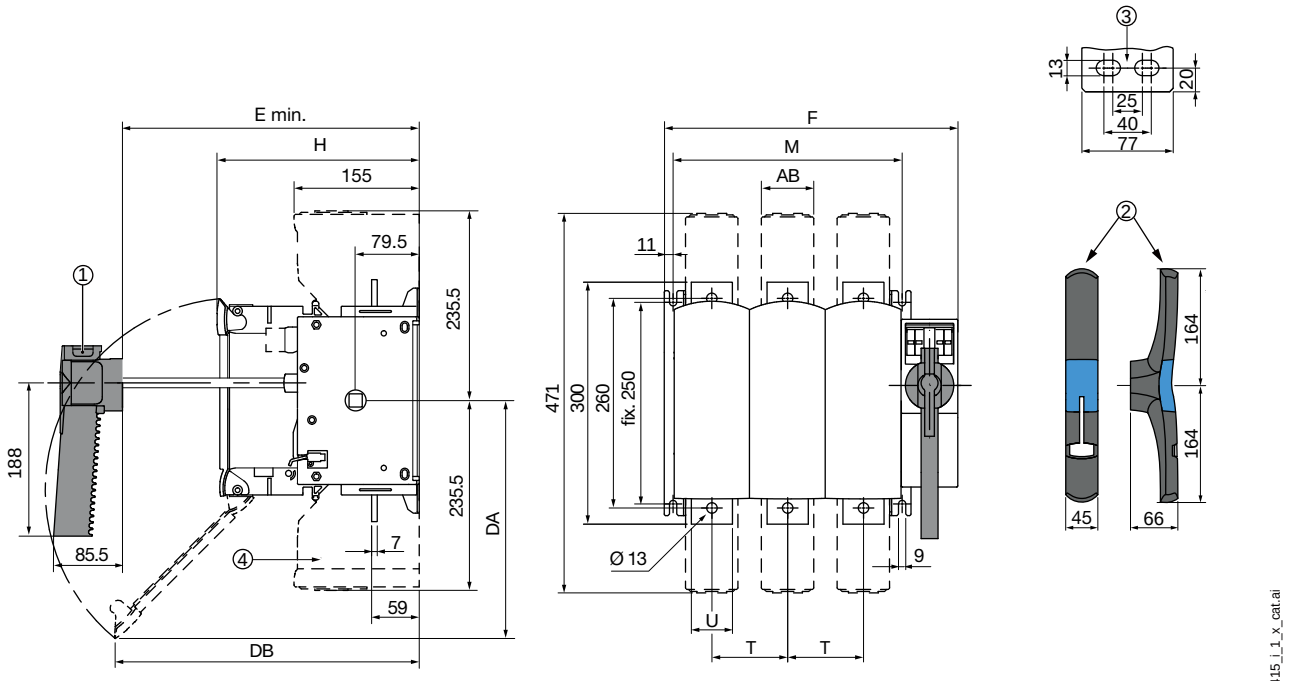


fuser_750_a_1_x_cat.ai

Rating (A)	Fuse size	Frame size	Fg min.	A	B	C	D	D1	E	F	G	I	J		K	L	M	N	O	P	R	S	T	V	V1	W	X	Y
													3P	4P														
400	NH2	16	188	397	240	203	203	143	220	67.5	75.5	239	256	321	11	34	32	66	199	50	360	63	43	180	184	3	58.5	77

Dimensions for direct and external operation

630 to 1250 A

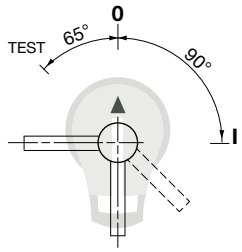
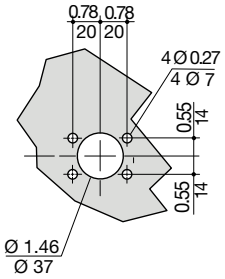
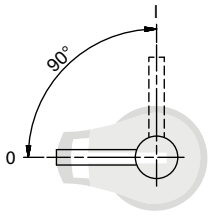
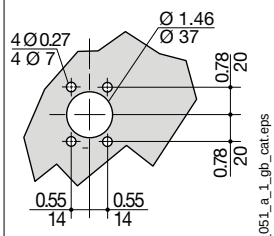


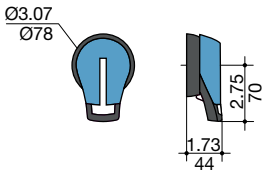
1. Handle for casing size 17.
2. Handle for casing size 18.
3. Connection terminals for casing size 18.
4. Terminal cover.

Rating (A)	Fuse size	Frame size	Overall dimensions	Case					Switch mounting		Connection		Terminal shrouds
			E min.	F 3 P	F 4 P	H	DA	DB	M 3p.	M 4p.	T	U	AB
630	3	17	265	364	458	250	300	380	284	378	94	51	65
800	3	17	265	364	458	250	300	380	284	378	94	51	65
800	4	18	304	442	562	289	355	295	362	482	120	77	88
CD 1250	4	18	304	442	562	289	355	295	362	482	120	77	88

Dimensions for external handles

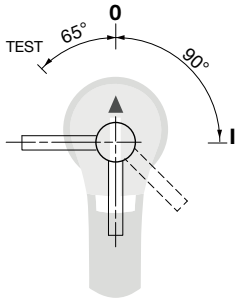
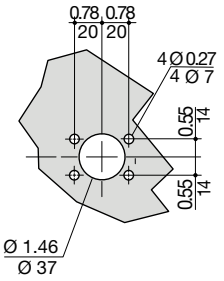
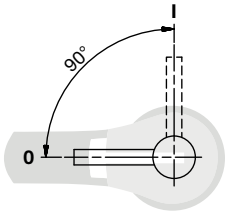
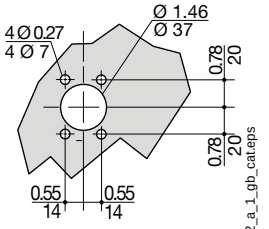
25 to 32 A

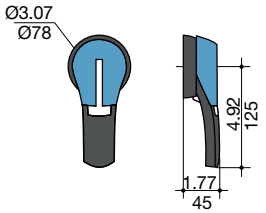
Handle type	Front operation		Side operation	
	Direction of operation	Door drilling	Direction of operation	Door drilling
S1 type Box size 0				



poign_051_a_1_gb_cat.eps

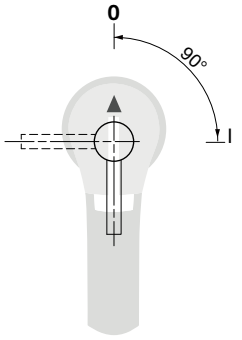
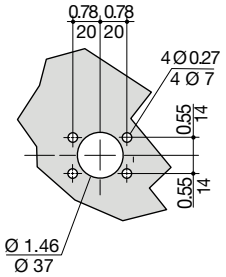
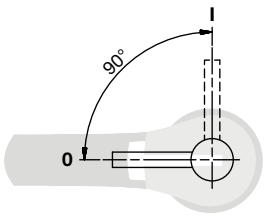
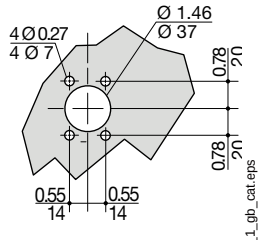
50 to 400 A

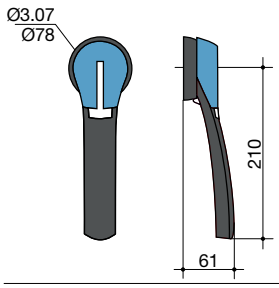
Handle type	Front operation		Side operation	
	Direction of operation	Door drilling	Direction of operation	Door drilling
S2 type Box size 11-16				



poign_052_a_1_gb_cat.eps

630 to 800 A

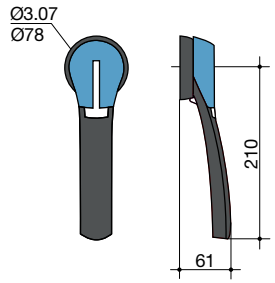
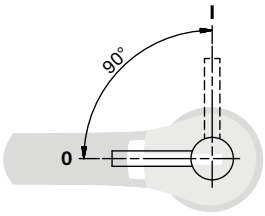
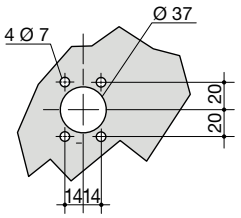
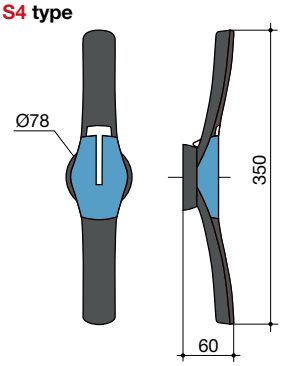
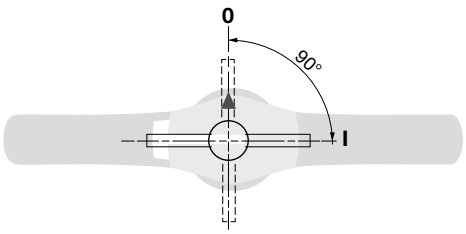
Handle type	Front operation		Side operation	
	Direction of operation	Door drilling	Direction of operation	Door drilling
S3 type Box size 17				



poign_053_a_1_gb_cat.eps

Dimensions for external handles (continued)

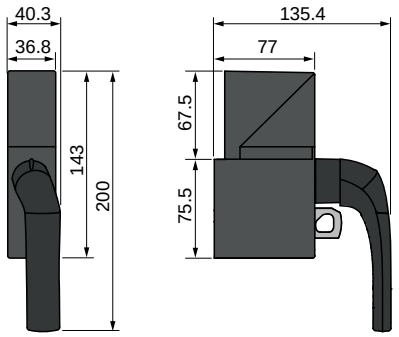
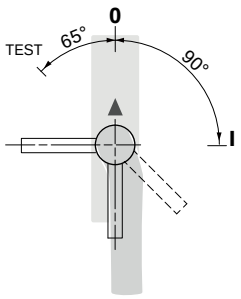
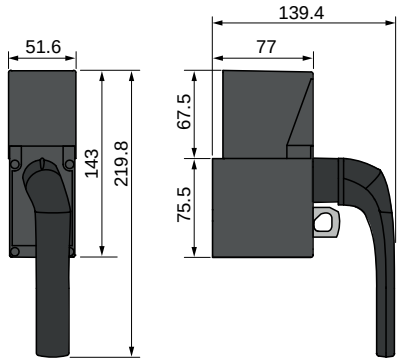
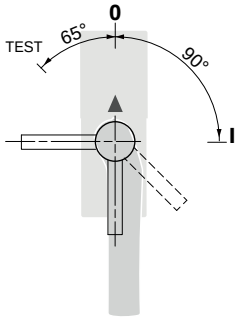
800 to 1250 A

Handle type	Front operation Direction of operation	Side operation Direction of operation	Door drilling
S3 type Box size 18 			
S4 type 			

poign_054_a_1_gb_cat.eps

Dimensions for direct-control casings

50 to 400 A

Case handle type	Direct control Operating direction
50 to 160 A Case 11 to 14	 
250 to 400 A Case 15 to 16	 

fuser_753_a_1_en_cat.ai

Fuse combination switches

for special applications

Despite already offering a wide range of fuse combination switches, SOCOMEC also manufactures specific products suitable for all your requirements. A small selection of these products can be seen on these two pages. The list is not exhaustive.
Please contact us for more information.

Compliance with standards

- IEC 60947-3
- BS EN 60947-3
- IEC 60269-2
- VDE 0660-107

Multi-pole *FUSERBLOC*

fuser_597.eps

Thanks to the modular concept of FUSERBLOC it is possible to produce multi-pole devices and combine ratings from 50 to 1250 A.
This is interesting when several motors need to be operated through a single handle.
Example: protecting three AC motors and a single DC motor.
This simple concept also provides a considerable space saving in electrical cabinets when compared to other solutions.

Fuse combination changeover switch

fuser_426.eps

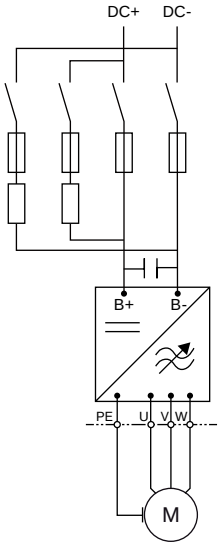
Available from 20 to 400 A, the FUSERBLOC changeover switch range is a great solution for safeguarding your energy supply and protecting and isolating pumps and sensitive loads.

LMDC *FUSERBLOC*

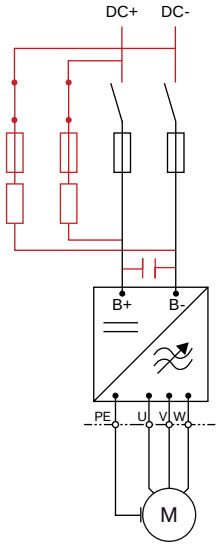
fuser-im_002.eps

Protect variable speed drives under a common DC bus.
Multifunctional device for performing maintenance work on a branch of the electrical installation while leaving the rest of the equipment switched on.
Isolation, protection and precharge switch-capacitor within a single device.

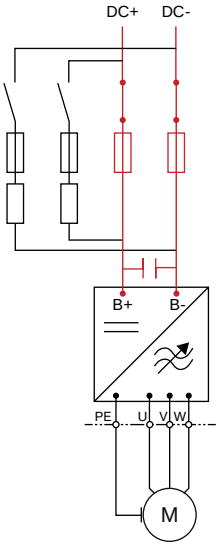
Example: VSD disconnected from the common DC bus. When the inverter capacitors discharge, the direct power would otherwise prompt an inrush current that can damage the inverter, or even shut down the entire system (voltage drop). This inrush current must be limited.



Disconnected variable speed drive and motor

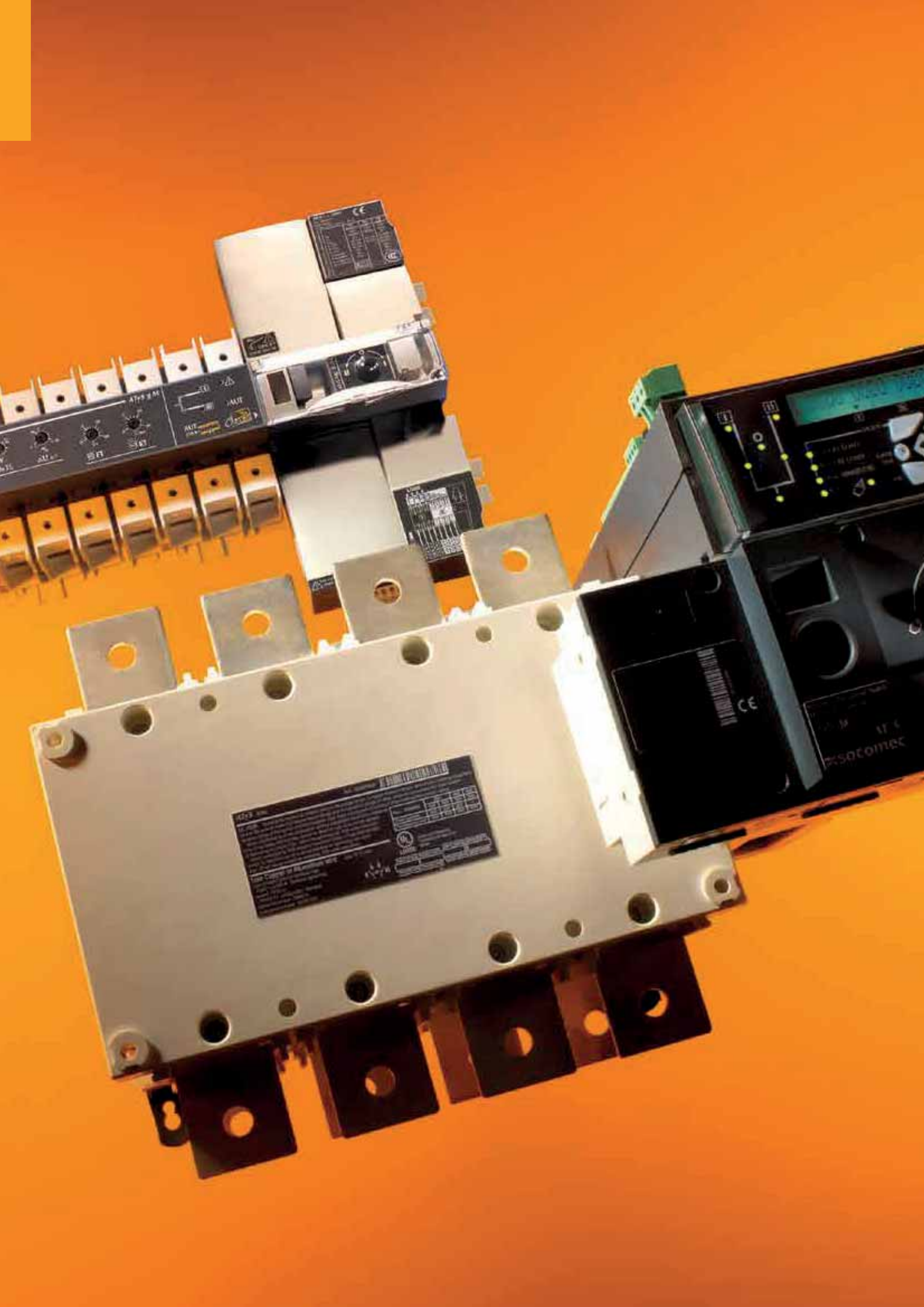


The device is manually switched ON and the capacitors are charged through the precharge circuit while limiting the inrush current.



The device automatically switches over to the main protection circuit, connecting the VSD to the DC bus.

fuser-im_012_a_1_x_cat.ai



Transfer switches

Manual transfer switches

COMO CS
25 to 100 A
p. 138

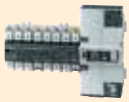
SIRCOVER
125 to 3200 A
p. 144

Motorised modular transfer switches

ATyS M range *p. 162*

40 to 160 A

ATyS d M
p. 164



ATyS t M
ATyS g M
p. 166

ATyS p M
p. 168

Motorised transfer switches

ATyS S range *p. 176* ATyS range *p. 184*

40 to 6300 A

ATyS S
ATyS d S
p. 178

ATyS r
p. 186

ATyS g
p. 188

ATyS p
p. 190

ATyS d H
p. 208

Universal ATS controller

Automatic control of different switching technologies: circuit breakers, contactors, switches.

new
ATyS C25
p. 212

new
ATyS C55
p. 214

new
ATyS C65
p. 214

UL product range

UL range *p. 216*

SIRCOVER UL1008
100 to 1200 A
Consult us

ATyS UL1008
100 to 400 A
Consult us

Enclosed solutions

SOCOMEC offers a range of pre-equipped enclosures in steel or polyester.

Enclosed
SIRCOVER
Conulst us

Enclosed
ATyS M
Conulst us

Enclosed
ATyS
Conulst us

Any particular requirement?

Thanks to our extensive experience we have developed an impressive portfolio of customised solutions (motorised transfer switches with overlapping contacts and cooled poles, specific software, etc.). Please contact us if you have any specific requests.

For all your applications, even the most critical, trust the experts.

Security and reliability for your transfer applications

An undisputed leader in the field of changeover switching, SOCOMEC is continuously innovating to ensure the continuity of electrical distribution.

From the COMO CS manual transfer switch (25 - 100 A) to the ATyS p automatic transfer switch (up to 3200 A) and the ATyS d H remotely operated transfer switch (up to 6300 A), our range of changeover switches cover most applications as standard.

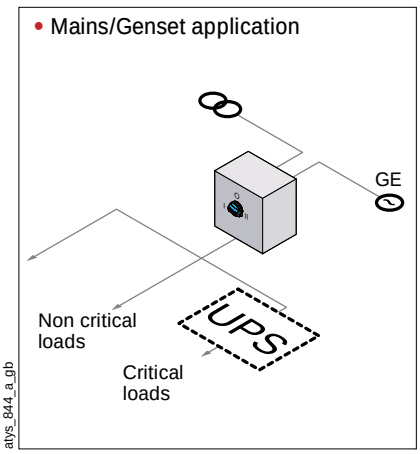
Products for all switching applications from 25 to 6300 A

SOCOMEC transfer switches can be used not only for normal/emergency source switching, but also to manage the switching of loads or for earthing/earthing solutions.

Your application	Manual changeover switches	Motorised changeover switches	Automatic changeover switches
Changeover switches (network/network - network/genset - genset/genset)	•	•	•
Bypass application	•	•	•
Other AC applications (load switching - grounding/earthing - phase switching)	•		
Photovoltaic applications	•		

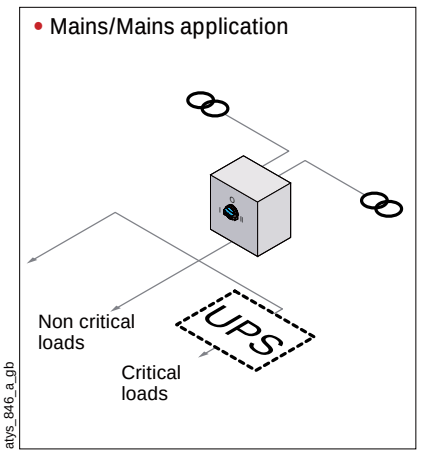
Secure switching for all your transfers

• Mains/Genset application



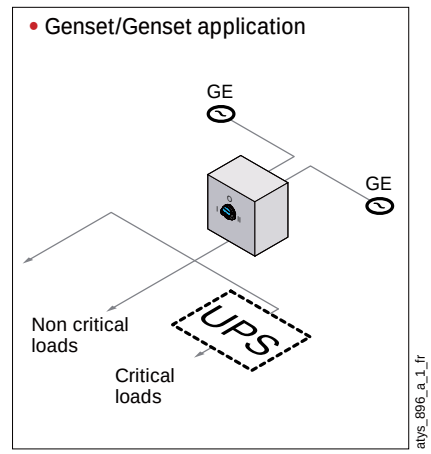
atys_844_a_gb

• Mains/Mains application



atys_846_a_gb

• Genset/Genset application



atys_896_a_1_fr

Expert Services

> Study, definition, advice, implementation, maintenance and training…
> Our Expert Services extend to a complete offer of customised services to make your project a success.

socomec Innovative Power Solutions

Secure switching compliant with standard IEC 60947-6-1

The standard IEC 60947-6-1 “Low-voltage switchgear and controlgear – Multiple function equipment – Transfer Switching Equipment” is dedicated to changeover switches.

This standard applies to Transfer Switching Equipment (TSE) with interruption of the supply to the load during transfer, the rated voltage of which does not exceed 1000 VAC or 1500 VDC, be it any of the following:

- MTSE
  According to the standard IEC 60947-6-1, MTSE (Manually operated Transfer Switching Equipment) is manually operated transfer switching equipment. As such, it requires a person to be present to operate the handle.
- RTSE
  According to the standard IEC 60947-6-1, RTSE (Remotely operated Transfer Switching Equipment) is transfer switching equipment that is controlled remotely. As such, they require an external controller to provide them with commands.
- ATSE
  According to the standard IEC 60947-6-1, ATSE (Automatic Transfer Switching Equipment) is transfer switching equipment that is controlled automatically. It differs from RTSE in that it has an integrated controller. As such, these devices are self-monitoring in terms of power source availability, and will start up the genset if required and switch automatically to the power source that is present.

This standard also defines categories of use, depending on the needs of the application, which may apply to the TSE:

Type of current	Utilisation category		Type of load
	Application A (1)	Application B (2)	
Alternating current	AC-31A	AC-31B	Non-inductive or low-inductive loads
	AC-32A	AC-32B	Mixed resistive and inductive loads, including moderate overvoltages
	AC-33A	AC-33B	Motors or various loads including motors, resistive loads and loads comprising up to 30% incandescent lamps

(1) Application A: Frequent switching.
(2) Application B: Infrequent switching.

UL applications

SOCOMEC UL 1008 transfer switches are designed for use in “total system optional standby power” applications with a secure transfer of load power between a regular source and a backup source.

“Optional standby systems” are installed to provide a backup power supply for buildings where a power failure could mean disruption, interruptions to operation or damage to products or processes.

Selection guide

Manually operated Transfer Switching Equipment

How many poles ? → What type of operations ?

	COMO CS 25 to 100 A p. 138	
Number of poles		
3 P	•	
4 P	•	
Switch operation		
I-0-II	•	
I-I+II-II	•	
Bypass	•	
Indication of breaking		
Positive break indication	•	
Operating handle		
Front direct/external operation	•	
Door mountable switch	•	

(1) Depending on the version. From 125 to 3200 A for SIRCOVER I-0-II; from 125 to 1800 A for SIRCOVER I-I+II-II and from 125 to 1600 A for SIRCOVER Bypass.

What type of breaking indication ?

	
	SIRCOVER 125 à 3200 A [1] *p. 144*
	•
	•
	•
	•
	•
	•
	•

Selection guide

Remotely operated and Automatic Transfer Switching Equipment

ATyS

Which type of power supply? ▶ Which application?

	RTSE (Remotely operated)					
	40 to 125 A		40 to 160 A	125 to 3200 A	4000 to 6300 A	
						
	ATyS S *p. 178*	***ATyS d S*** *p. 178*	***ATyS d M*** *p. 164*	***ATyS r*** *p. 186*	***ATyS d H*** *p. 208*	
Type of power supply						
Power supply 12, 24 or 48 VDC	•					
Single power supply 230 VAC	•			•		
Dual power supply 230 VAC		•	•		•	
Connection of remote control interface						
D10						
D20						
Application						
Mains/Mains	• (1)	• (1)	• (1)	• (1)	• (1)	
Mains/Genset	• (1)	• (1)	• (1)	• (1)	• (1)	
Genset/Genset	• (1)	• (1)	• (1)	• (1)	• (1)	
Configuration						
Configuration using potentiometers and dip switches						
Configuration using display and keyboard						
Voltage and frequency auto-configuration						
Functions						
Contact for product availability				•		
Fixed function inputs/outputs (defined by the factory)	•	•	•	•	•	
Configurable inputs/outputs						
Voltage and frequency checks						
Phase rotation check						
Unbalanced phase check						
LED indication of source availability						
LED position indication						
Programming of genset startup						
Genset connected on switch II	•	•	•	•	•	
Genset connected on switch I	•	•	•	•	•	
Test On Load						
Test Off Load						
Load shedding						
Display and measurement of powers and energy (when utilising CTs)						
Supervision						
Programming of genset startup						
RS485 communication						
Ethernet communication						
Webserver via Ethernet module						
Data logging						

(1) With an external controller.
(2) Only on two pole versions.
(3) Only available on the version with COM.
(4) Configurable output.

Functionalities? → Need of supervision?

	ATSE (Automatic)				
	40 to 160 A				
					
	ATyS t M *p. 166*	*ATyS g M* *p. 166*	*ATyS p M* *p. 168*	*ATyS g* *p. 188*	*ATyS p* *p. 190*
	•	•	•	•	•
			•	•	
			•		•
	•	•	•	•	•
		•	•	•	•
	•	•		•	
			•		•
	•	• (2)		•	•
		•	• (4)	•	•
	•	•		•	•
			•		•
	•	•	•	•	•
			•	•	•
			•		•
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			• (3)	•	•
					•
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					•

COMO CS

Manual Cam Transfer Switches
from 25 to 100 A

COMO CS - Door mounting
I-II 3 P 25 A

COMO CS in enclosure
I-0-II 3 P 40 A

The solution for

> Industry
(machine control)

Strong points

> Simple installation
> Quick mounting
> Effective in all circumstances

Compliance with standards

> IEC 60947-3

> UL 60947-4-1

88EJ &5LM6

** cULus under certification.*

Function

COMO CS are manually operated multi-pole transfer switches. They ensure switching, transfer of sources or transfer of two low voltage circuits on load as well as their safe disconnection.

Advantages

Simple installation

The “quick fix” allows significant time saving in fixing the handle to the device. The devices sold in enclosed version are ready for installation.

Quick mounting

The accessories offered are common to all the products in the range. The products are designed for installation:

- on the rear of the cabinet on a backplate,
- on the rear of the cabinet on a DIN rail,
- on the door with a direct handle.

Effective in all circumstances

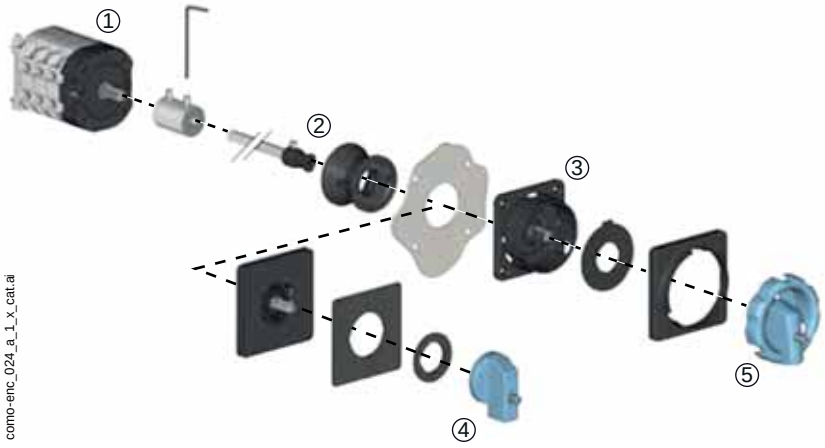
The devices are available with 3 standard switching types that can cover a wide variety of applications:

- I-II
- I-0-II
- I-0-II with bypass

Please consult us for adaptations to specific wiring diagrams.

Configurations

Backplate switch mounted with external handle



Functional diagram (for further details see the installation instructions supplied with the product).
1. Shaft extension
2. Shaft guide
3. Signalling plate
4. Non padlockable handle

Direct quickfixing handle for door or backplate mounted switch

5. Padlockable handle

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References

COMO CS

Backplate mounting with direct quickfixing handles or external handles

Rating (A)	N° of poles	Switching type	Switch body rear mounting[1]	Padlockable direct quick fixing handle	Non-padlockable direct quick fixing handle	Padlockable external handle [2]	Non-padlockable external handle [2]
25 A	3 P	I - II	4320 **3002**	Blue/Black 4359 **3042** Red/Yellow 4359 **3043**	Blue/Black 4359 **3022**	Blue/Black 4359 **1042** Red/Yellow 4359 **1043**	Blue/Black 4359 **2022**
	4 P	I - II	4320 **4002**				
	3 P	I - 0 - II	4330 **3002**				
	4 P	I - 0 - II	4330 **4002**				
	3 P	Bypass I - 0 - II	4350 **3002**				
	4 P	Bypass I - 0 - II	4350 **4002**				
40 A	3 P	I - II	4320 **3004**				
	4 P	I - II	4320 **4004**				
	3 P	I - 0 - II	4330 **3004**				
	4 P	I - 0 - II	4330 **4004**				
	3 P	Bypass I - 0 - II	4350 **3004**				
	4 P	Bypass I - 0 - II	4350 **4004**				
63 A	3 P	I - II	4320 **3006**				
	4 P	I - II	4320 **4006**				
	3 P	I - 0 - II	4330 **3006**				
	4 P	I - 0 - II	4330 **4006**				
	3 P	Bypass I - 0 - II	4350 **3006**				
	4 P	Bypass I - 0 - II	4350 **4006**				
100 A	3 P	I - II	4320 **3010**				
	4 P	I - II	4320 **4010**				
	3 P	I - 0 - II	4330 **3010**				
	4 P	I - 0 - II	4330 **4010**				
	3 P	Bypass I - 0 - II	4350 **3010**				
	4 P	Bypass I - 0 - II	4350 **4010**				

(1) Mounting on DIN rail and backplate from 25 to 40 A and mounting on backplate for ratings from 63 to 100 A.
(2) Delivered with shaft and plate for front external control.

Door mounting with direct quickfixing handles

Rating (A)	N° of poles	Switching type	Switch body mounting on door	Padlockable direct quick fixing handle	Non-padlockable direct quick fixing handle
25 A	3 P	I - II	4320 **3102**	Blue/Black 4359 **3042** Red/Yellow 4359 **3043**	Blue/Black 4359 **3022**
	4 P	I - II	4320 **4102**		
	3 P	I - 0 - II	4330 **3102**		
	4 P	I - 0 - II	4330 **4102**		
	3 P	Bypass I - 0 - II	4350 **3102**		
	4 P	Bypass I - 0 - II	4350 **4102**		
40 A	3 P	I - II	4320 **3104**		
	4 P	I - II	4320 **4104**		
	3 P	I - 0 - II	4330 **3104**		
	4 P	I - 0 - II	4330 **4104**		
	3 P	Bypass I - 0 - II	4350 **3104**		
	4 P	Bypass I - 0 - II	4350 **4104**		
63 A	3 P	I - II	4320 **3106**		
	4 P	I - II	4320 **4106**		
	3 P	I - 0 - II	4330 **3106**		
	4 P	I - 0 - II	4330 **4106**		
	3 P	Bypass I - 0 - II	4350 **3106**		
	4 P	Bypass I - 0 - II	4350 **4106**		
100 A	3 P	I - II	4320 **3110**		
	4 P	I - II	4320 **4110**		
	3 P	I - 0 - II	4330 **3110**		
	4 P	I - 0 - II	4330 **4110**		
	3 P	Bypass I - 0 - II	4350 **3110**		
	4 P	Bypass I - 0 - II	4350 **4110**		

Other solutions with enclosures

General characteristics


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Available for switching types I-II and I-0-II

- Different enclosure sizes adapted to your needs.
- Maximum safety during maintenance operations due to triple padlocking of the handle in position 0 (position I for switching type I-II).
- IP 65 / NEMA 4, 4X : When installed in an industrial environment, protection degree IP 65 and NEMA 4 , 4X ensures that the products are protected against dust and water jets.
- Red-yellow operating handle.

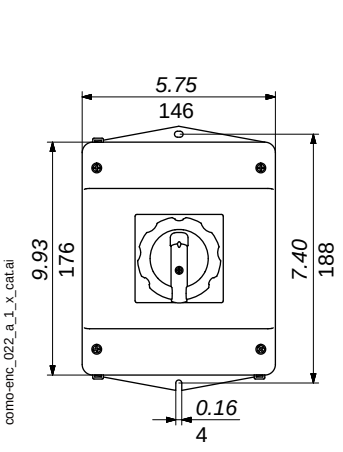
References

Rating (A)	No. of poles	Switching type	Reference
25 A	3 P	I - II	4321 **3C02**
	4 P	I - II	4321 **4C02**
	3 P	I - 0 - II	4331 **3C02**
	4 P	I - 0 - II	4331 **4C02**
40 A	3 P	I - II	4321 **3C04**
	4 P	I - II	4321 **4C04**
	3 P	I - 0 - II	4331 **3C04**
	4 P	I - 0 - II	4331 **4C04**
63 A	3 P	I - II	4321 **3C06**
	4 P	I - II	4321 **4C06**
	3 P	I - 0 - II	4331 **3C06**
	4 P	I - 0 - II	4331 **4C06**
100 A*	3 P	I - II	4321 **3C10**
	4 P	I - II	4321 **4C10**
	3 P	I - 0 - II	4331 **3C10**
	4 P	I - 0 - II	4331 **4C10**

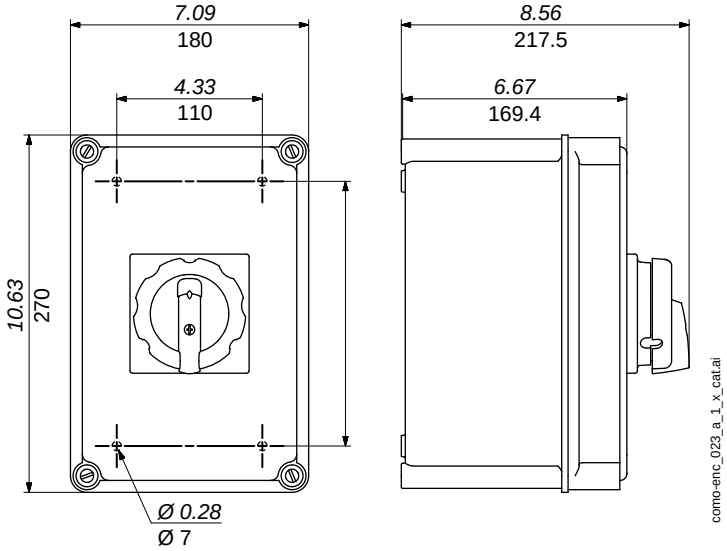
** For an ambient temperature of 35 °C*

Dimensions (in/mm)

25 to 40 A



63 to 100 A



Characteristics according to IEC 60947-3

25 to 100 A

Conventional free air thermal current I_{th} at 40 °C (A)	**25 A**	**40 A**	**63 A**	**100 A**
Conventional free air thermal current I_{th} at 50 °C (A)	25	34	63	100
Conventional free air thermal current I_{th} (60 °C) (A)	19	24	53	90
Rated insulation voltage U_i (V)	690	690	690	690
Rated impulse withstand voltage U_{imp} (kV)	4	6	6	6
Rated operational currents I_e (A)				
Utilisation category at 400 VAC				
AC-21A	25	40	63	100
AC-22A	20,5	40	63	100
AC-23A	15	29	63	63
AC-3	12	22	/	/
Utilisation category at 690 VAC				
AC-21A	25	40	63	100
AC-22A	20,5	40	63	100
AC-23A	8,5	17	63	63
AC-3	7	12,8	/	/
Operational power in AC-23 (kW)(1)				
At 400 VAC without pre-break AC	7,5	15	37	37
At 690 VAC without pre-break AC	4,8	15	/	/
Fuse protected short-circuit withstand with gG DIN fuses				
Prospective short-circuit (kA rms)	7	10	5	5
Associated fuse rating (A)	25	40	63	100
Rated operational voltage (Va.c)	690	690	690	690
Connection				
Minimum CU cable cross-section (mm^2)	0,5	1	1.5	4
Maximum CU cable cross-section (mm^2)	4	10	16	35
Tightening torque min - max (Nm)	0.8-1.2	1.2-1.5	2.5	1.5
Mechanical characteristics				
Durability (number of operating cycles)	100 000	100 000	100 000	100 000
Weight of a 3 pole device (g)	109	184	440	440
Weight of a 4 pole device (g)	130	221	535	535

(1) The power is given for information only, the current values vary from one manufacturer to another.

Characteristics according to UL 60947-4-1

25 to 100 A

General use rating (A)	**25 A**	**40 A**	**63 A**	**100 A**
UL certification file	88EJ		5LM6	
Short circuit rating at 600 VAC (kA)	10	5	/	
Type of fuse	RK5		/	
Max fuse rating (A)	150		/	
Max horsepower rating (HP)				
120 VAC / 1 phase	-	2	/	
120 VAC / 3 phase	-	5	/	
240 VAC / 1 phase	-	3	/	
240 VAC / 3 phase	-	10	/	
480 VAC / 3 phase	-	20	/	
600 VAC / 3 phase	5,2	20	/	
Connection terminals				
Solid wire (AWG)	#14-#12	#14-#8	#14-#4	#10-#2
Wire stripping distance (in/mm)	0.31 / 8	0.39 / 10	0.51 / 13	0.51 / 13
Mechanical characteristics				
Durability (number of operating cycles)	100000	100000	100000	100000
Tightening torque (Lb.in / N.m)	8.8 / 1	13.3 / 1.5	22,1 / 2.5	13.3 / 1.5
Weight of a 3 pole device (lb)	0.24	0.4	1	1
Weight of a 4 pole device (lb)	0.28	0.49	1.18	1.18

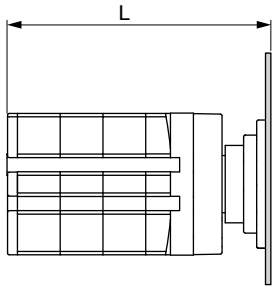
Dimensions (in/mm)

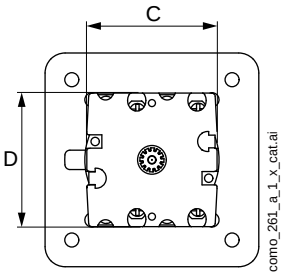
25 to 100A

Mounting on door - Fixing with direct handle

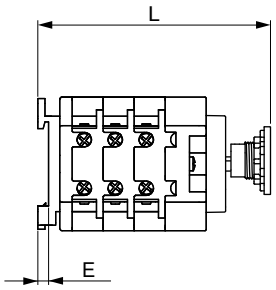
Door width		
Unit	**Mini**	**Maxi**
in	0.04	0.16
mm	1	4

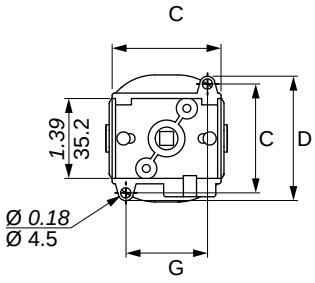
		L				C	D
		I-II /I-0-II		Bypass I-0-II			
Rating (A)	**Unit**	**3 P**	**4 P**	**3 P**	**4 P**		
25	in	3.19	3.66	4.13	4.61	1.54	1.57
	mm	81	93	105	117	39	40
40	in	3.31	4.82	4.33	4.84	2.11	2.2
	mm	84	97	110	123	53.6	56
63 - 100	in	4.45	5.28	6.1	6.93	2.91	2.8
	mm	113	134	155	176	74	71

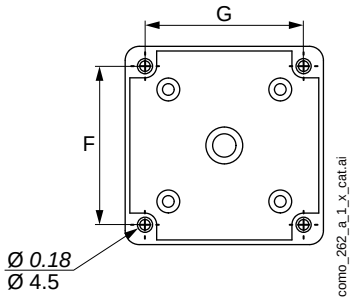




Mounting on backplate / DIN rail - Rear fixing of direct handle





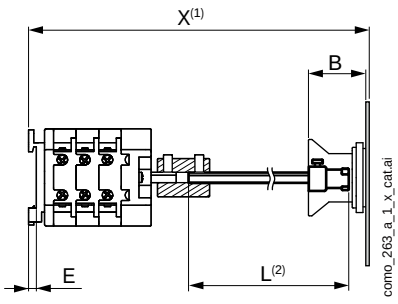


		L				E	C	D	F	G
		I-II /I-0-II		Bypass I-0-II						
Rating (A)	**Unit**	**3 P**	**4 P**	**3 P**	**4 P**					
25	in	3.20	3.68	4.15	4.57	0.18	1.89	2.2	1.65	1.42
	mm	81.4	93.4	105.4	116.1	4.5	48	56	47	36
40	in	3.73	4.28	4.28	5.08	0.18	1.89	2.2	1.65	1.42
	mm	94.7	107.7	120.7	129	4.5	48	56	47	36
63 … 100	in	5.10	5.97	6.83	7.54	-	2.99	2.99	2.68	2.68
	mm	129.5	151.5	173.5	191.5	-	76	76	68	68

Mounting on backplate / DIN rail - Rear fixing of external handle

		X-L [3]				E	B
		I-II /I-0-II		Bypass I-0-II			
Rating (A)	**Unit**	**3 P**	**4 P**	**3 P**	**4 P**		
25	in	3,15	3,63	4,10	4,57	0,18	1,24
	mm	80,1	92,1	104,1	116,1	4,5	31,6
40	in	3,54	4,06	4,57	5,08	0,18	1,24
	mm	90	103	116	129	4,5	31,6
63 …100	in	5,06	5,89	6,71	7,54	-	1,24
	mm	128,5	149,5	170,5	191,5	-	31,6

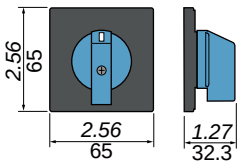
(1) X is the distance between the inside of the door and the fixing plate
(2) L is the total length of the shaft (max 200 mm)
(3) Minimum distance between the inside of the door and the fixing plate



Dimensions for handles

25 to 100 A

Handle type	Front operation Direction of operation	Door drilling
K1 type non padlockable	0 or I 90° 90° I II	1.89 48 Ø 0.20 Ø 5 0.88 22.3 1.89 48 0.94 24.1



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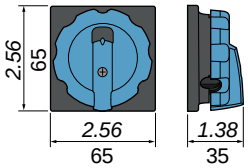
Handle type	Front operation Direction of operation	Door drilling
K1 type padlockable	0 or I 90° 90° I II	1.89 48 Ø 0.20 Ø 5 0.88 22.3 1.89 48 0.94 24.1



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SIRCOVER

Manual Transfer Switching Equipment
from 125 to 3200 A

SIRCOVER
250 A

SIRCOVER Bypass
500 A

Function

SIRCOVER products are manually operated transfer switches with positive break indication.
There are 4 ranges in the series:

- SIRCOVER for open transition switching (I-0-II) available in 3 or 4 pole.
- SIRCOVER for overlapping contact switching (I-I+II-II). For applications where both sources are synchronised and there is to be no interruption to the load supply during transfer - available in 3 or 4 pole.
- SIRCOVER Bypass. This combination of three interlocked load break switches provides 3+6 or 4+8 poles for bypass applications.
- SIRCOVER Bypass for overlapping contact switching (I-I+II-II). This combination of three interlocked load break switches provides bypass to an UPS or other devices when sources are synchronised and the UPS is on static bypass mode.

They provide on-load transfer between two sources for any low voltage power circuit, as well as safety isolation by double breaking per pole. Other applications include source inversion (e.g. to change the direction of a motor) or grounding/earthing.

Advantages

A complete range
There are 4 SIRCOVER models to meet every need: The standard model I-0-II, the overlapping contact model I-I+II-II, the bypass model and the bypass with overlapping contact model I-I+II-II.

Easy to connect
For ratings of 2000 to 3200 A, we offer copper bar connection pieces. This gives you the option of different connection methods - flat, edgewise with top or bottom bridging.

Stable positions
SIRCOVER devices have three stable positions, unaffected by voltage fluctuations and vibrations, protecting your loads from network disturbances.

On-load switching
With its AC-23 and AC-33 characteristics, tested according to standards IEC 60947-3 and IEC 60947-6-1, the SIRCOVER enables safe on-load switching for any type of load. With its on-load transfer capabilities, it is not necessary to isolate loads prior to transfer therefore the SIRCOVER offers an economical solution.

The solution for
> Manufacturing
> Power distribution

Strong points
> Complete range
> Easy to connect
> Stable positions
> On-load switching

Conformity to standards
> IEC 60947-6,-1
> IEC 60947-3
> GB/T 14048-11

Approvals and certifications(1)
BUREAU VERITAS

(1) Product references on request.

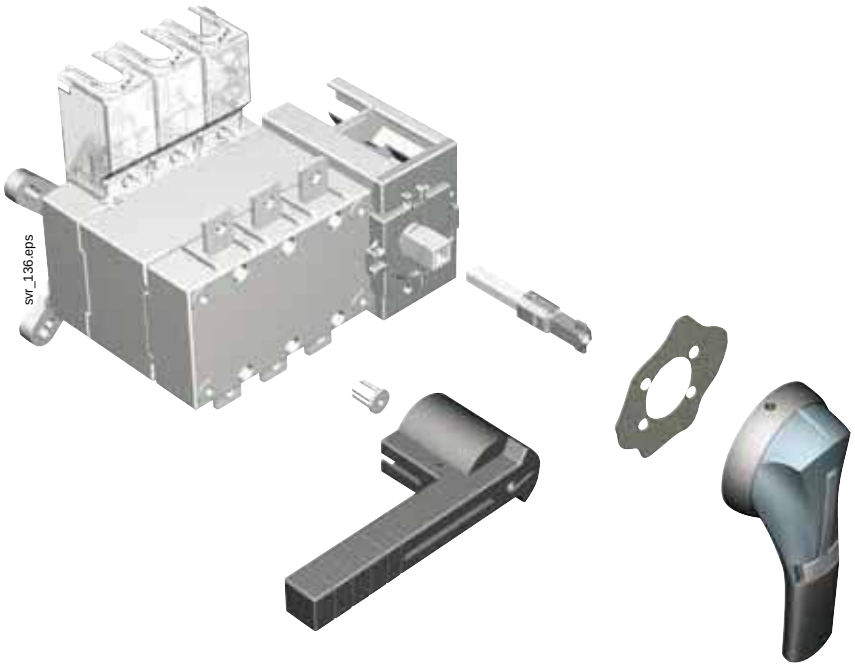
SIRCOVER in enclosure


See "Enclosed transfer switches".

socomec Innovative Power Solutions

What you need to know

- SIRCOVER (I-0-II) switches have **3 stable positions** and are available as 3 or 4 pole models with ratings of 63 to 3200 A. They are available in steel or polyester enclosures (125 to 1600 A).
- SIRCOVER switches with **3 overlapping contact positions (I-I+II-II)** are available as 3 or 4 pole models from 125 to 1600 A. They are available in steel enclosures.
- With **3 stable positions** (I-0-II) or **3 overlapping contact positions (I-I+II-II)**, SIRCOVER Bypass devices are a combination of three interlocked switches enabling the use with 3+6 or 4+8 poles from 125 to 1600 A. They are available in steel enclosures.
- All SIRCOVER can be operated with **direct front operation** or **external handles.**



- **Connection pieces for copper bars** allows the connection between the 2 power terminals of the same pole (Fig. 1 and 2) and the bridging of switch I and switch II on the top or the bottom for ratings 2000, 2500 and 3200 A (Fig. 3).

Fig. 1

Top or bottom
flat connection

Fig. 2

Top or bottom
edgewise connection

Fig. 3

Top or bottom
bridging connection

References

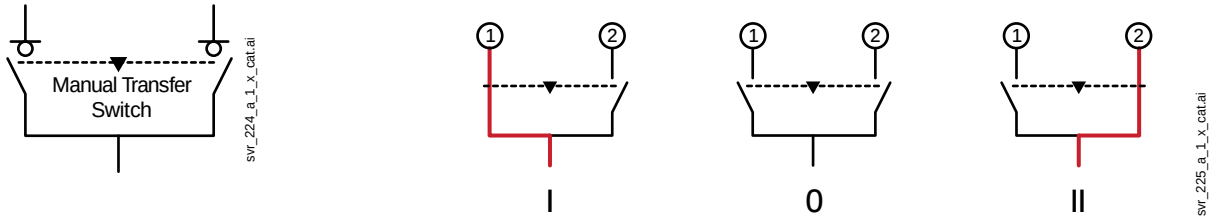
SIRCOVER I-0-II

Rating(A) / Frame size	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Bridging bars	Auxiliary contact	Terminal shrouds	Terminal screens
125 A / B3	3 P	41AC **3013**	J2 type Blue 1122 **1111** Red 1123 **1111**	S2 type Black IP55 1421 **2113** IP65 1423 **2113**(1)	200 mm 1400 **1020** 320 mm 1400 **1032**(1)	3 P 4109 **3019** 4 P 4109 **4019**	1st/2nd NO/NC contact 4109 **0021**(2)	3 P 2694 **3014**(3)(4) 4 P 2694 **4014**(3)(4)	3 P 1509 **3012** 4 P 1509 **4012**
	4 P	41AC **4013**							
160 A / B3	3 P	41AC **3016**							
	4 P	41AC **4016**							
200 A / B3	3 P	41AC **3020**							
	4 P	41AC **4020**							
250 A / B4	3 P	41AC **3025**				4109 **3025**		3 P 2694 **3021**(3)(4) 4 P 2694 **4021**(3)(4)	3 P 1509 **3025** 4 P 1509 **4025**
	4 P	41AC **4025**				4109 **4025**			
315 A / B4	3 P	41AC **3031**				3 P 4109 **3039** 4 P 4109 **4039**			
	4 P	41AC **4031**							
400 A / B4	3 P	41AC **3040**							
	4 P	41AC **4040**							
500 A / B5	3 P	41AC **3050**				4109 **3050**		3 P 2694 **3051**(3)(4) 4 P 2694 **4051**(3)(4)	3 P 1509 **3063** 4 P 1509 **4063**
	4 P	41AC **4050**				4109 **4050**			
630 A / B5	3 P	41AC **3063**				4109 **3063**			
	4 P	41AC **4063**				4109 **4063**			
800 A / B6	3 P	41AC **3080**	J3 type Black 1132 **1111**	S4 type Black IP65 1443 **3113**	200 mm 1401 **1520** 320 mm 1401 **1532**(1)	3 P 4109 **3080** 4 P 4109 **4080**			3 P 1509 **3080** 4 P 1509 **4080**
	4 P	41AC **4080**							
1000 A / B6	3 P	41AC **3100**							
	4 P	41AC **4100**							
1250 A / B6	3 P	41AC **3120**				4109 **3120**			
	4 P	41AC **4120**				4109 **4120**			
1600 A / B7	3 P	41AC **3160**				4109 **3160**			1509 **3160**
	4 P	41AC **4160**				4109 **4160**			1509 **4160**
2000 A / B8	3 P	41AC **3200**	S5 type Black 2799 **7042**	S5 type Black IP65 1453 **8113**	200 mm 2799 **3015** 320 mm 2799 **3018**(1) 450 mm 2799 **3019**	(5)	1st and 2nd NO/NC contact included		included
	4 P	41AC **4200**							
2500 A / B8	3 P	41AC **3250**							
	4 P	41AC **4250**							
3200 A / B8	3 P	41AC **3320**							
	4 P	41AC **4320**							

(1) Standard.
(2) 2 contacts supplied: one for position I and one for position II.
(3) To fully shroud the front and rear at the top and bottom, order quantity 4.
(4) To shroud front switch top and bottom, order quantity 2.
(5) See "Copper bar connection pieces".

Operating principle

SIRCOVER I-0-II



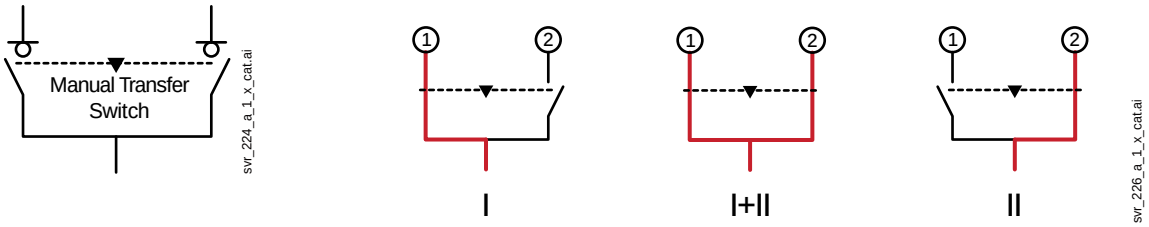
SIRCOVER I-I+II-II

Rating (A) / Frame size	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Bridging bars	Auxiliary contact	Terminal shrouds	Terminal screens
125 A / B3	3 P	4190 **3013**	J2 type Blue 1122 **1111** Red 1123 **1111**	S2 type Blue IP65 1423 **2114**	200 mm 1400 **1020** 320 mm 1400 **1032**(1)	3 P 4109 **3019** 4 P 4109 **4019**	1st/2nd NO/NC contact 4109 **0021**(2)	3 P 2694 **3014** (3)(4) 4 P 2694 **4014** (3)(4)	3 P 1509 **3012** 4 P 1509 **4012**
	4 P	4190 **4013**							
160 A / B3	3 P	4190 **3016**							
	4 P	4190 **4016**							
200 A / B3	3 P	4190 **3019**							
	4 P	4190 **4019**							
250 A / B4	3 P	4190 **3025**				4109 **3025**		3 P 2694 **3021** (3)(4) 4 P 2694 **4021** (3)(4)	3 P 1509 **3025** 4 P 1509 **4025**
	4 P	4190 **4025**				4109 **4025**			
400 A / B4	3 P	4190 **3039**				4109 **3039**			
	4 P	4190 **4039**				4109 **4039**			
630 A / B5	3 P	4190 **3063**				4109 **3063**		2694 **3051**(3)(4	1509 **3063**
	4 P	4190 **4063**				4109 **4063**		2694 **4051** (3)(4)	1509 **4063**
800 A / B6	3 P	4190 **3080**	J3 type Black 1132 **1111**	S4 type Blue IP65 1443 **3114**	200 mm 1401 **1520** 320 mm 1401 **1532**(1)	4109 **3080**			3 P 1509 **3080** 4 P 1509 **4080**
	4 P	4190 **4080**				4109 **4080**			
1250 A / B6	3 P	4190 **3120**				4109 **3120**			
	4 P	4190 **4120**				4109 **4120**			
1600 A / B7	3 P	4190 **3160**				4109 **3160**			1509 **3160**
	4 P	4190 **4160**				4109 **4160**			1509 **4160**

(1) Standard.
(2) 2 contacts supplied: one for position I and one for position II.
(3) To fully shroud the front and rear at the top and bottom, order quantity 4.
(4) To shroud front switch top and bottom, order quantity 2.
(5) See "Copper bar connection pieces".

Operating principle

SIRCOVER I-I+II-II



Warning: Please note that in I+II position there is an overlapping.
In case of 2 sources, make sure they are synchronised before operating.

References (continued)

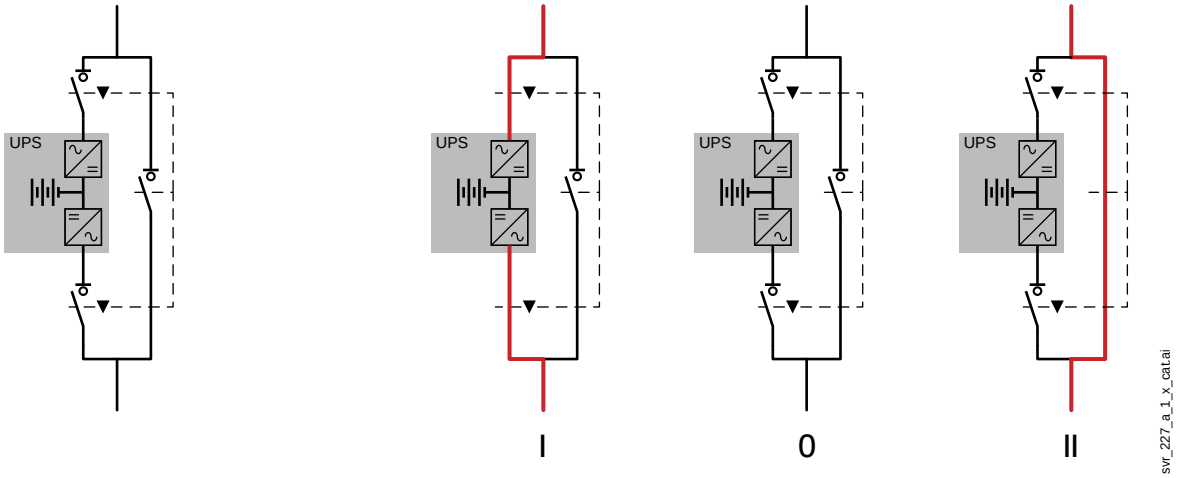
SIRCOVER Bypass I-0-II

Rating (A) / Frame size	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Bridging bars	Auxiliary contact	Terminal shrouds	Terminal screens
125 A / B3	3 P	41AC **7013**	J2 type Blue 1122 **1111** Red 1123 **1111**	S2 type Blue IP55 1421 **2113** Blue IP65 1423 **2113** (1)	200 mm 1400 **1020** 320 mm 1400 **1032**(1)	3 P 2x 4109 **3019** 4 P 2x 4109 **4019**	1st/2nd NO/NC contact 4109 **0021**(2)	3 P 2694 **3014** (3)(4) 4 P 2694 **4014** (3)(4)	3 P 1509 **3012** 4 P 1509 **4012**
	4 P	41AC **9013**							
160 A / B3	3 P	41AC **7016**							
	4 P	41AC **9016**							
200 A / B3	3 P	41AC **7020**							
	4 P	41AC **9020**							
250 A / B4	3 P	41AC **7025**	J3 type Black 1132 **1111**	S3 type Blue IP65 1433 **3113**	200 mm 1401 **1520** 320 mm 1401 **1532**(1)	2x 4109 **3025**		3 P 2694 **3021** (3)(4) 4 P 2694 **4021** (3)(4)	3 P 1509 **3025** 4 P 1509 **4025**
	4 P	41AC **9025**				2x 4109 **4025**			
400 A / B4	3 P	41AC **7040**				2x 4109 **3039**			
	4 P	41AC **9040**				2x 4109 **4039**			
630 A / B5	3 P	41AC **7063**				2x 4109 **3063**		2694 **3051** (3)(4)	1509 **3063**
	4 P	41AC **9063**				2x 4109 **4063**		2694 **4051** (3)(4)	1509 **4063**
800 A / B6	3 P	41AC **7080**	J4 type Black 1142 **1111** (5)	V2 type Black IP65 4199 **7146**	200 mm 2799 **3015** 320 mm 2799 **3018**(1) 450 mm 2799 **3019**	2x 4109 **3080**			3 P 1509 **3080** 4 P 1509 **4080**
	4 P	41AC **9080**				2x 4109 **4080**			
1250 A / B6	3 P	41AC **7120**				2x 4109 **3120**			
	4 P	41AC **9120**				2x 4109 **4120**			
1600 A / B7	3 P	41AC **7160**				2x 4109 **3160**			1509 **3160**
	4 P	41AC **9160**				2x 4109 **4160**			1509 **4160**

(1) Standard.
(2) 2 contacts supplied: one for position I and one for position II.
(3) To fully shroud the front and rear at the top and bottom, order quantity 6(or 4 if using bridging bars).
(4) To shroud front switch top and bottom, order quantity 2.
(5) Double lever handle.

Operating principle

SIRCOVER Bypass I-0-II



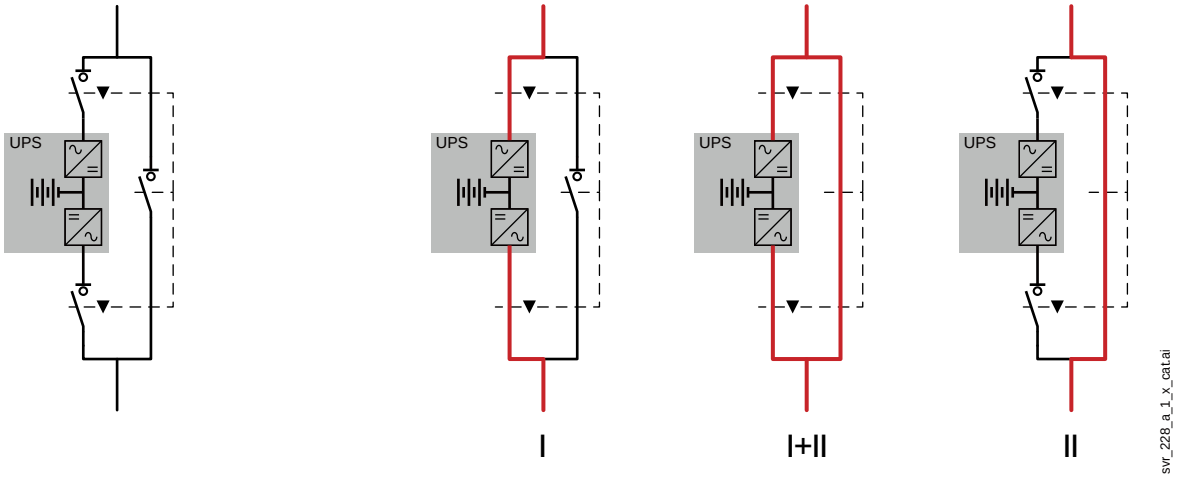
SIRCOVER Bypass I-I+II-II

Rating (A) / Frame size	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Bridging bars	Auxiliary contact	Terminal shrouds	Terminal screens
125 A / B3	3 P	46AC **7013**	J2 type Blue 1122 **1111** Red 1123 **1111**	S2 type Blue IP 65 1423 **2114** (1)	200 mm 1400 **1020** 320 mm 1400 **1032**(1)	3 P 2x 4109 **3019** 4 P 2x 4109 **4019**	1st/2nd NO/NC contact 4109 **0021**(2)	3 P 2694 **3014** (3)(4) 4 P 2694 **4014** (3)(4)	3 P 1509 **3012** 4 P 1509 **4012**
	4 P	46AC **9013**							
160 A / B3	3 P	46AC **7016**							
	4 P	46AC **9016**							
200 A / B3	3 P	46AC **7020**							
	4 P	46AC **9020**							
250 A / B4	3 P	46AC **7025**	J3 type Black 1132 **1111**	S3 type Blue IP65 1433 **3114**	200 mm 1401 **1520** 320 mm 1401 **1532**(1)	2x 4109 **3025**		3 P 2694 **3021** (3)(4) 4 P 2694 **4021** (3)(4)	3 P 1509 **3025** 4 P 1509 **4025**
	4 P	46AC **9025**				2x 4109 **4025**			
400 A / B4	3 P	46AC **7040**				2x 4109 **3039**			
	4 P	46AC **9040**				2x 4109 **4039**			
630 A / B5	3 P	46AC **7063**				2x 4109 **3063**		2694 **3051** (3)(4)	1509 **3063**
	4 P	46AC **9063**				2x 4109 **4063**		2694 **4051** (3)(4)	1509 **4063**
800 A / B6	3 P	46AC **7080**	J4 type Black 1142 **1111** (5)	V2 type Black I P65 4199 **7146**	200 mm 2799 **3015** 320 mm 2799 **3018**(1) 450 mm 2799 **3019**	2x 4109 **3080**			3 P 1509 **3080** 4 P 1509 **4080**
	4 P	46AC **9080**				2x 4109 **4080**			
1250 A / B6	3 P	46AC **7120**				2x 4109 **3120**			
	4 P	46AC **9120**				2x 4109 **4120**			
1600 A / B7	3 P	46AC **7160**				2x 4109 **3160**			1509 **3160**
	4 P	46AC **9160**				2x 4109 **4160**			1509 **4160**

(1) Standard.
(2) 2 contacts supplied: one for position I and one for position II.
(3) To fully shroud the front and rear at the top and bottom, order quantity 6 or 4 if using bridging bars).
(4) To shroud front switch top and bottom, order quantity 2.
(5) Double lever handle.

Operating principle

SIRCOVER Bypass I-I+II-II



Warning: Please note that in I+II position there is an overlapping.
In case of UPS, make sure it is working on static bypass mode before operating.

Accessories

Direct operation handle

SIRCOVER I-0-II and I-I+II-II				
Rating (A)	**Frame size**	**Handle colour**	**Handle type**	**Reference**
125 ... 630	B3 ... B5	Blue	J2	1122 **1111**
125 ... 630	B3 ... B5	Red	J2	1123 **1111**
800 ... 1600	B6 ... B7	Blue	J3	1132 **1111**
2000 ... 3200	B8	Black	S5	2799 **7042**(1)

SIRCOVER Bypass				
Rating (A)	**Frame size**	**Handle colour**	**Handle type**	**Reference**
125 ... 200	B3	Blue	J2	1122 **1111**
250 ... 630	B4 ... B5	Blue	J3	1132 **1111**
800 ... 1600	B6 ... B7	Blue	J4	1142 **1111**(1)

(1) Double lever handle.

J2 type handle *J3 type handle* *J4 type handle*

External operation handle

Use

Door interlocked external front operation handles include an escutcheon, are padlockable and must be utilised with an extension shaft.

SIRCOVER I-0-II and I-I+II-II					
Rating (A)	**Frame size**	**Switching type**	**External IP**(1)	**Handle type**	**Reference**
125 ... 630	B3 ... B5	I - 0 - II	IP55	S2	1421 **2113**
125 ... 630	B3 ... B5	I - 0 - II	IP65	S2	1423 **2113**
125 ... 630	B3 ... B5	I - I+II - II	IP65	S2	1423 **2114**
800 ... 1600	B6 ... B7	I - 0 - II	IP65	S4	1443 **3113**(2)
800 ... 1600	B6 ... B7	I - I+II - II	IP65	S4	1443 **3114**(2)
2000 ... 3200	B8	I - 0 - II	IP65	S5	1453 **8113**(2)

(1) IP: protection index according to IEC 60529.
(2) Double lever handle.

SIRCOVER Bypass					
Rating (A)	**Frame size**	**Switching type**	**External IP**(1)	**Handle type**	**Reference**
125 ... 200	B3	I - 0 - II	IP55	S2	1421 **2113**
125 ... 200	B3	I - 0 - II	IP65	S2	1423 **2113**
250 ... 630	B4 ... B5	I - 0 - II	IP65	S3	1433 **3113**
800 ... 1600	B6 ... B7	I - 0 - II	IP65	V2	4199 **7146**

(1) IP: protection index according to IEC 60529.

S2 type handle *S3 type handle* *S4 type handle* *S5 type handle*

Alternative S type handle cover colours

Use

For single lever handles S2, S3 and for double lever handle S4.

Other colours available: consult us.

Colour	To be ordered in multiples of	Handle type	Reference
Light grey	50	S2, S3	1401 **0001**
Dark grey	50	S2, S3	1401 **0011**
Light grey	50	S4	1401 **0031**
Dark grey	50	S4	1401 **0041**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S type handle adapter

Use

Enables S type handles to be fitted in place of existing older style SOCOMEC handles. Adapter can also be utilised as a spacer to increase the distance between the panel door and the handle lever.

Dimensions

Add 12 mm to the handle depth.

Colour	To be ordered in multiples of	External IP(1)	Reference
Black	1	IP65	1493 **0000**

(1) IP: protection index according to IEC 60529.


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Shaft guide for external operation

Use

For use with S type handles, to guide the shaft extension into the external handle.

This accessory enables the handle to engage the extension shaft with a misalignment of up to 15 mm.

Recommended for a shaft length over 320 mm.

Designation	Reference
Shaft guide	1429 **0000**


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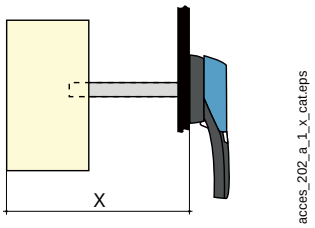
Accessories (continued)

Shaft for external operation

Use

Standard lengths:
- 200 mm,
- 320 mm,
- 450 mm.

Other lengths available: consult us.



SIRCOVER I-0-II and I-I+II-II				
Rating (A)	**Frame size**	**Length (mm)**	**Side X (mm)**	**Reference**
125 ... 400	B3 ... B4	200	210 ... 310	1400 **1020**
125 ... 400	B3 ... B4	320	210 ... 430	1400 **1032**
500 ... 630	B5	200	280 ... 390	1400 **1020**
500 ... 630	B5	320	280 ... 510	1400 **1032**
800 ... 1600	B6 ... B7	200	425 ... 577	1401 **1520**
800 ... 1600	B6 ... B7	320	425 ... 697	1401 **1532**
2000 ... 3200	B8	200	653 ... 803	2799 **3015**
2000 ... 3200	B8	320	653 ... 923	2799 **3018**
2000 ... 3200	B8	450	653 ... 1053	2799 **3019**

SIRCOVER Bypass				
Rating (A)	**Frame size**	**Length (mm)**	**Side X (mm)**	**Reference**
125 ... 200	B3	200	320 ... 450	1400 **1020**
125 ... 200	B3	320	320 ... 570	1400 **1032**
250 ... 400	B4	200	298 ... 420	1401 **1520**
250 ... 400	B4	320	298 ... 540	1401 **1532**
630	B5	200	417 ... 539	1401 **1520**
630	B5	320	417 ... 659	1401 **1532**
800 ... 1600	B6 ... B7	200	550 ... 680	2799 **3015**
800 ... 1600	B6 ... B7	320	550 ... 800	2799 **3018**
800 ... 1600	B6 ... B7	450	550 ... 930	2799 **3019**

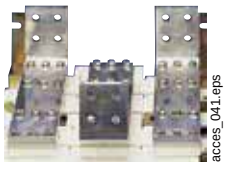
Bridging bars

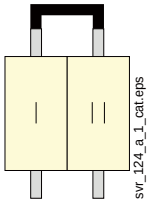
Use

For creating a common connection between switches I & II, on the top or bottom side of the SIRCOVER, to enable, for example, the load to be fed from either incoming source (I or II).

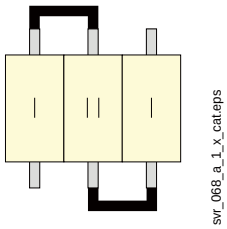
For SIRCOVER Bypass, two sets of bridging bars are required (3/6 pole or 4/8 pole switch).

SIRCOVER I-0-II and SIRCOVER I-I+II-II





SIRCOVER Bypass



Rating (A)	Frame size	No. of poles	Diameter (mm)	Reference
125 ... 200	B3	3 P	20 x 2.5	4109 **3019**
125 ... 200	B3	4 P	20 x 2.5	4109 **4019**
250	B4	3 P	25 x 2.5	4109 **3025**
250	B4	4 P	25 x 2.5	4109 **4025**
315 ... 400	B4	3 P	32 x 5	4109 **3039**
315 ... 400	B4	4 P	32 x 5	4109 **4039**
500	B5	3 P	32 x 5	4109 **3050**
500	B5	4 P	32 x 5	4109 **4050**
630	B5	3 P	50 x 5	4109 **3063**
630	B5	4 P	50 x 5	4109 **4063**
800 ... 1000	B6	3 P	50 x 6	4109 **3080**
800 ... 1000	B6	4 P	50 x 6	4109 **4080**
1250	B6	3 P	60 x 8	4109 **3120**
1250	B6	4 P	60 x 8	4109 **4120**
1600	B7	3 P	90 x 10	4109 **3160**
1600	B7	4 P	90 x 10	4109 **4160**

Copper bar connection pieces

Use

For ratings 2000 to 3200 A.

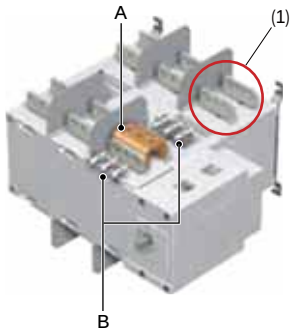
Enables:

- Flat connection: the connection pieces provide a link between the two power terminals of the same pole (Fig. 1).
- Edgewise connection: the connection pieces provide a link between the two power terminals of the same pole and an edgewise bar connection terminal.
- Top or bottom bridging between two poles (Fig. 3).

Once installed, the power terminal is connection ready.

For 3200 A rating, connection pieces (part A) are supplied as standard. Bolt sets must be ordered separately.

Fig. 1



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(1) Single pole connection: 1 pole (top or bottom) comprises two power terminals which are to be linked with the copper connection kit.

Connection: the quantities given in the below table refer to the number of pieces required per pole, top or bottom.

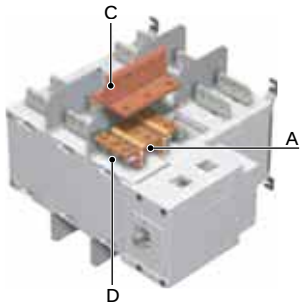
Bridging connection: the quantities given refer to the number of pieces required to complete a single bridging connection between two poles.

	Reference	2000 – 2500 A			3200 A		
		Fig. 1	Fig. 2	Fig. 3	Fig. 1	Fig. 2	Fig. 3
		Connection		Bridging connection I - II	Connection		Bridging connection I - II
		Flat	Edgewise		Flat	Edgewise	
Connection - part A	2619 **1200**	1	1	2(2)	included	included	included
Bolt kit 35 mm - part B	2699 **1201**	1(1)		2(2)	1(1)		2(2)
Bolt kit 45 mm - part B	2699 **1200**	1(1)			1(1)		
T + Bolt kit - part C	2629 **1200**		1	1		1	1
Bracket + Bolt kit - part D	2639 **1200**		1			1	
Bar + Bolt kit - part E	4109 **0320**			1			1

(1) Choose the bolt length according to the thickness of the bars being connected; if bar thickness is greater than 20 mm, 45 mm bolts are required.

(2) For bridging connections, quantity 2 pieces are required for creating the link between the two power terminals of the same pole for switch bodies I and II.

Fig. 2



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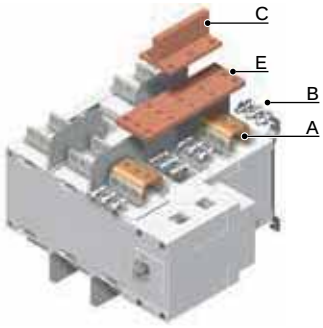
The quantities of the applicable pieces then need to be multiplied by the number of connection points (power terminals) in order to determine the total quantity required of each part.

Example: for a 4 pole 2500 A SIRCOVER with upstream edgewise connection (Fig. 2) and downstream bridging (Fig. 3), the following quantities will be required:

Fig. 3



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Part	Upstream edgewise quantity	Downstream bridging quantity	Total quantity
A	8	8	16
B	0	8	8
C	8	4	12
D	8	0	8
E	0	4	4

Auxiliary contact

Use

Pre-breaking and signalling of positions I and II: 1 to 2 NO/NC auxiliary contacts in each position.

Low level AC: consult us.

Connection to the control circuit

By 6.35 mm fast-on terminal.

Electrical characteristics

30,000 operations.

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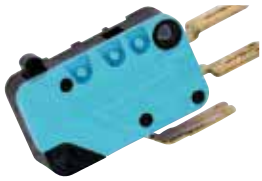

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Characteristics

Rating (A)	Frame size	Nominal current (A)	Operating current I_e (A) 250 VAC AC-13	400 VAC AC-13	24 VDC DC-13	48 VDC DC-13
125 ... 3200	B3... B8	16	12	8	14	6

NO/NC changeover contact			
Rating (A)	**Frame size**	**Contact(s)**	**Reference**
125 ... 1600	B3 ... B7	1st / 2nd	4109 **0021**
2000 ... 3200	B8	1st / 2nd	included

Accessories (continued)

Terminal shrouds

Use
Protection against direct contact with terminals or connecting parts.

Advantage
Perforations allow remote thermographic inspection without the need to remove the shrouds.

Rating (A)	Frame size	No. of poles	Position	Reference
125 ... 200	B3	3 P	top / bottom / front (I) / rear (II)	2694 **3014**(1)(2)
125 ... 200	B3	4 P	top / bottom / front (I) / rear (II)	2694 **4014**(1)(2)
250 ... 400	B4	3 P	top / bottom / front (I) / rear (II)	2694 **3021**(1)(2)
250 ... 400	B4	4 P	top / bottom / front (I) / rear (II)	2694 **4021**(1)(2)
500 ... 630	B5	3 P	top / bottom / front (I) / rear (II)	2694 **3051**(1)(2)
500 ... 630	B5	4 P	top / bottom / front (I) / rear (II)	2694 **4051**(1)(2)

(1) For complete shrouding at front, rear, top and bottom, order 4 x for a SIRCOVER and 6 x for a SIRCOVER Bypass; if equipped with bridging bars order 3 x for a SIRCOVER and 4 x for a SIRCOVER Bypass.
(2) For top and bottom shrouding for the front only, order 2 x for a SIRCOVER and a SIRCOVER Bypass.

Terminal screens

Use
Upstream and downstream protection against direct contact with terminals or connection parts. For upstream and downstream protection, order quantity 1.

Rating (A)	Frame size	No. of poles	Position	Reference
125 ... 200	B3	3 P	top / bottom	1509 **3012**
125 ... 200	B3	4 P	top / bottom	1509 **4012**
250 ... 400	B4	3 P	top / bottom	1509 **3025**
250 ... 400	B4	4 P	top / bottom	1509 **4025**
500 ... 630	B5	3 P	top / bottom	1509 **3063**
500 ... 630	B5	4 P	top / bottom	1509 **4063**
800 ... 1250	B6	3 P	top / bottom	1509 **3080**
800 ... 1250	B6	4 P	top / bottom	1509 **4080**
1600	B7	3 P	top / bottom	1509 **3160**
1600	B7	4 P	top / bottom	1509 **4160**
2000 ... 3200	B8	3 / 4 P	top / bottom	included

Inter-phase barrier

Use
Safe isolation between the terminals, essential for use at 690 VAC or in a polluted or dusty atmosphere.

Rating (A)	Frame size	No. of poles	Reference
125 ... 200	B3	3 P	2998 **0033**
125 ... 200	B3	4 P	2998 **0034**
250 ... 400	B4	3 P	2998 **0023**
250 ... 400	B4	4 P	2998 **0024**
500 ... 630	B5	3 P	2998 **0013**
500 ... 630	B5	4 P	2998 **0014**
800 ... 3200	B6 ... B8	3/4 P	included

Key handle interlocking system

Padlocking in position I, 0 or II

SIRCOVER Rating (A) /Frame size	SIRCOVER Bypass Rating (A) / Frame size	Operation	Figure	Reference
125 … 630 / B3 ... B5	125 … 200 / B3	external	1	1423 **2813**

Locking using RONIS EL11AP lock in position 0 (not included)

SIRCOVER Rating (A) / Frame size	SIRCOVER Bypass Rating (A) / Frame size	Operation	Figure	Reference
125 … 630 / B3 … B5	125 … 200 / B3	direct	2	4109 **1006**(1)
	250 … 630 / B4 ... B5	direct	3	consult us
800 … 1600 / B6 … B7	800 … 1600 / B6 ... B7	direct	3	4109 **1004**(2)
2000 … 3200 / B8		direct	3	4109 **2007**(2)
125 … 630 / B3 … B5	125 … 630 / B3 … B5	external	4	1499 **7701**(2)
2000 … 3200 / B8	800 … 1600 / B6 … B7	external	4	2799 **7002**(2)

(1) Specific handle included.
(2) This locking facility can be configured by the user in the 3 positions.

Locking using RONIS EL11AP lock in position I, 0, II (not included)

SIRCOVER Rating (A) / Frame size	SIRCOVER Bypass Rating (A) / Frame size	Operation	Figure	Reference
125 … 630 / B3 … B5	125 … 200 / B3	direct	2	4109 **1002**(1)
	250 … 630 / B4 … B5	direct	3	consult us
800 … 1600 / B6 … B7	800 … 1600 / B6 … B7	direct	3	4109 **1004**(2)
2000 … 3200 / B8		direct	3	4109 **2007**(2)
125 … 630 / B3 … B5	125 … 630 / B3 … B5	external	4	1499 **7701**(2)
2000 … 3200	800 … 1600 / B6 … B7	external	4	2799 **7002**(2)

(1) Specific handle included.
(2) This locking facility can be configured by the user in the 3 positions.

Locking using 230 VAC undervoltage coil in position 0 (factory fitted)

SIRCOVER Rating (A) / Frame size	SIRCOVER Bypass Rating (A) Frame size	Operation	Figure	Reference
800 … 3200 / B6 … B8	800 … 1600 / B6 … B7	direct	3	consult us

Locking using Type K CASTELL lock (not supplied)

SIRCOVER Rating (A) / Frame size	SIRCOVER Bypass Rating (A) / Frame size	Operation	Figure	Reference
125 … 1600 / B3 … B7	125 … 630 / B3 … B5	external	4	1499 **7702**
2000 … 3200 / B8	800 … 1600 / B6 … B7	external	4	2799 **7003**

Use

- Padlocked (padlock not included). This device is factory mounted in the direct or external operation handle and allows the use of up to 3 padlocks.
- Locking:
  - using lock (not supplied),
  - using undervoltage coil.
- The interlocking positions are either determined as standard or configured by the user by removing the pre-form tabs.
- Padlocking and locking can be combined.

Fig. 1

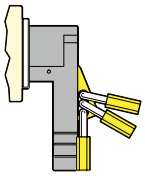

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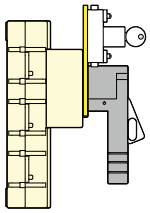
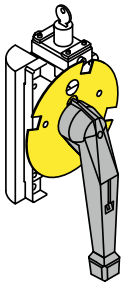
Fig. 2



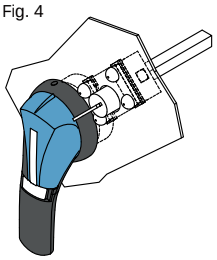
acces_001_a_1_x_cat

Fig. 3



acces_132_a_1_x_cat

Fig. 4



acces_158_a_1_x_cat

Other specific accessories

bd_03_04_01

- Customised protection screens (for specific dimensions or high ambient temperatures).
- Connection accessories.
- Low level auxiliary contacts.

Characteristics according to IEC 60947-3 and IEC 60947-6-1

125 to 630 A

Thermal current I^{th} at 40°C		**125 A**	**160 A**	**200 A**	**250 A**	**315 A**	**400 A**	**500 A**	**630 A**
Frame size		**B3**	**B3**	**B3**	**B4**	**B4**	**B4**	**B5**	**B5**
Rated insulation voltage U_i (V)		800	800	800	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)		8	8	8	12	12	12	12	12
Rated operational currents I_e (A) according to IEC 60947-6-1									
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-31 B	125	160	200	250	315	400	500	630
415 VAC	AC-32 B				200	315	400	500	500
415 VAC	AC-33 B				200	200	200	400	400
Rated operational currents I_e (A) according to IEC 60947-3									
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-23 A / AC-23 B	125/125	160/160	200/200	200/200	315/315	400/400	500/500	500/630
500 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
500 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	200/250	200/315	200/400	500/500	500/500
500 VAC	AC-23 A / AC-23 B	80/80	80/80	80/80	200/200	200/200	200/200	400/400	400/400
690 VAC (3)	AC-21 A / AC-21 B	125/125	160/160	200/200	200/200	200/200	200/200	500/500	500/500
690 VAC (3)	AC-22 A / AC-22 B	125/125	125/125	125/125	160/160	160/160	160/160	400/400	400/400
690 VAC (3)	AC-23 A / AC-23 B	63/80	63/80	63/80	125/125	125/125	125/125	400/400	400/400
220 VDC	DC-21 A / DC-21 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC	DC-22 A / DC-22 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC (2)	DC-21 A / DC-21 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC (2)	DC-22 A / DC-22 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC (2)	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
Operation power in AC-23 (kW) (4)									
At 415 VAC without AC pre-break		58/58	75/75	100/100	100/100	145/145	190/190	235/235	235/280
At 690 VAC without AC pre-break		50/62	50/62	50/62	90/90	90/90	90/90	310/310	310/310
Reactive power (kvar) (4)									
At 415 VAC (kvar)		60/60	75/75	100/100	125/125	150/150	200/200	250/250	250/300
Fuse protected short-circuit withstand as per IEC 60947-3 (kA rms prospective)									
Prospective short-circuit current with gG DIN fuses at 415 VAC (kA rms)		100	100	50	50	50	50	50	50
Prospective short-circuit current with gG DIN fuses at 690 VAC (kA rms)					50	50	50	50	50
Associated fuse rating (A)		125	160	200	250	315	400	500	630
Short-circuit withstand without protection as per IEC 60947-3									
Rated short-time withstand current 0.3s I_{cw} at 415 VAC (kA rms)		12	12	12	15 (5)	15 (5)	15 (5)	17 (5)	17 (5)
Rated short-time withstand current 1s I_{cw} at 415 VAC (kA rms)		7	7	7	8 (5)	8 (5)	8 (5)	11 (5)	10 (5)
Rated peak withstand current at 415 VAC (kA peak)		20	20	20	30	30	30	45	45
Connection									
Minimum Cu cable cross-section as per IEC 60947-1 (mm²)		35	35	50	95	120	185	2 x 95	2 x 120
Recommended Cu busbar cross-section (mm²)								2 x 32 x 5	2 x 40 x 5
Maximum Cu cable cross-section (mm²)		50	95	120	150	240	240	2 x 185	2 x 300
Maximum Cu busbar width (mm)		25	25	25	32	32	32	50	50
Min./max. tightening torque (Nm)		9/13	9/13	9/13	20/26	20/26	20/26	20/26	20/26
Mechanical specifications									
Durability (number of operating cycles)		10,000	10,000	10,000	8 ,000	8,000	8,000	5,000	5,000
Weight 3 P (kg)		2.9	2.9	2.9	3.8	3.9	3.9	8.6	9.1
Weight 4 P (kg)		4.1	4.1	4.1	4.6	4.9	4.9	10.4	11.1

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".
4-pole device with 2 poles in series by polarity.
(3) Interphase barriers must be installed on the products.
(4) The power value is given for information only, the current values vary from one manufacturer to another.
(5) Values given at 690 VAC.

800 to 3200 A

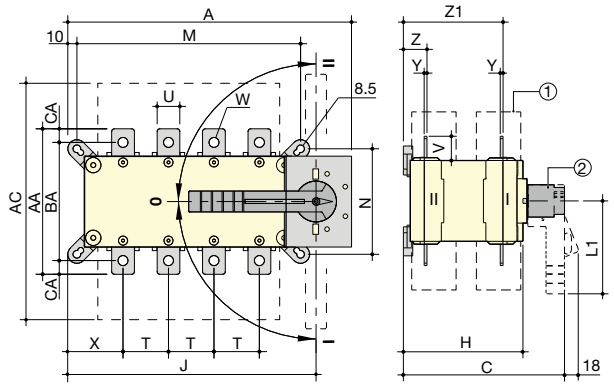
Thermal current I^{th} at 40°C		**800 A**	**1000 A**	**1250 A**	**1600 A**	**2000 A**	**2500 A**	**3200 A**
Frame size		**B6**	**B6**	**B6**	**B7**	**B8**	**B8**	**B8**
Rated insulation voltage U_i (V)		1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV)		12	12	12	12	12	12	12
Rated operational currents I_e (A) according to IEC 60947-6-1								
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-31 B	800	1000	1250	1600	2000	2500	3200
415 VAC	AC-32 B	800	1000	1250	1250	2000	2000	2000
415 VAC	AC-33 B	800	1000	1000	1000	1250	1250	1250
Rated operational currents I_e (A) according to IEC 60947-3								
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
415 VAC	AC-22 A / AC-22 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
415 VAC	AC-23 A / AC-23 B	800/800	1000/1000	1250/1250	1250/1250	-/1600	-/1600	-/1600
500 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2000	-/2000
500 VAC	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1600/1600			
500 VAC	AC-23 A / AC-23 B	630/630	630/630	800/800	1000/1000			
690 VAC (3)	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2000	-/2000
690 VAC (3)	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1000/1000			
690 VAC (3)	AC-23 A / AC-23 B	630/630	630/630	800/800	800/800			
220 VDC	DC-21 A / DC-21 B	800/800	1000/1000	1250/1250	1250/1250			
220 VDC	DC-22 A / DC-22 B	800/800	1000/1000	1250/1250	1250/1250			
220 VDC	DC-23 A / DC-23 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC (2)	DC-21 A / DC-21 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC (2)	DC-22 A / DC-22 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC (2)	DC-23 A / DC-23 B	800/800	1000/1000	1250/1250	1250/1250			
Operation power in AC-23 (kW) (4)								
At 415 VAC without AC pre-break		375/375	450/450	560/560	560/560	-/710	-/710	-/710
At 690 VAC without AC pre-break		475/475	475/475	620/620	620/620			
Reactive power (kvar) (4)								
At 415 VAC (kvar)		400/400	500/500	650/650	650/650	-/850	-/850	-/850
Fuse protected short-circuit withstand as per IEC 60947-3 (kA rms prospective)								
Prospective short-circuit current with gG DIN fuses at 415 VAC (kA rms)		50	50	100	100			
Prospective short-circuit current with gG DIN fuses at 690 VAC (kA rms)		50	50	50				
Associated fuse rating (A)		800	1000	1250	2x800			
Short-circuit withstand without protection as per IEC 60947-3								
Rated short-time withstand current 0.3s I_{cw} at 415 VAC (kA rms)		64	64	64	78	78	78	78
Rated short-time withstand current 1s I_{cw} at 415 VAC (kA rms)		35	35	35	50	50	50	50
Rated peak withstand current at 415 VAC (kA peak)		55	55	80	110	120	120	120
Connection								
Minimum Cu cable cross-section as per IEC 60947-1 (mm^2)		2 x 185						
Recommended Cu busbar cross-section (mm^2)		2 x 50 x 5	2 x 63 x 5	2 x 60 x7	2 x 100 x 5	3 x 100 x 5	2 x 100 x 10	3 x 10 x 100
Maximum Cu cable cross-section (mm^2)		4 x 185	4 x 185	4 x 185	6 x 185			
Maximum Cu busbar width (mm)		63	63	63	100	100	100	100
Min./max. tightening torque (Nm)		20/26	20/26	20/26	40/45	40/45	40/45	40/45
Mechanical specifications								
Durability (number of operating cycles)		4,000	4,000	4,000	3,000	3,000	3,000	3,000
Weight 3 P (kg)		20.5	21.0	21.6	25.7	42.0	42.0	52.3
Weight 4 P (kg)		24.8	25.6	26.2	32.0	52.9	52.9	66.6

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".
4-pole device with 2 poles in series by polarity.
(3) Interphase barriers must be installed on the products.
(4) The power value is given for information only, the current values vary from one manufacturer to another.
(5) Values given at 690 VAC.

Dimensions

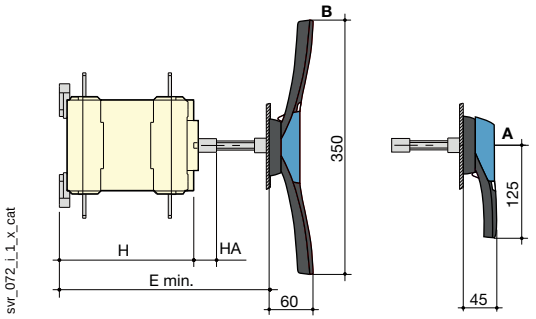
SIRCOVER 125 to 1600 A / B3 to B7

Direct front operation



A. S2 type handle for external operation: 125 to 630 A
B. S4 type handle for external operation: 800 to 1600 A

External front operation

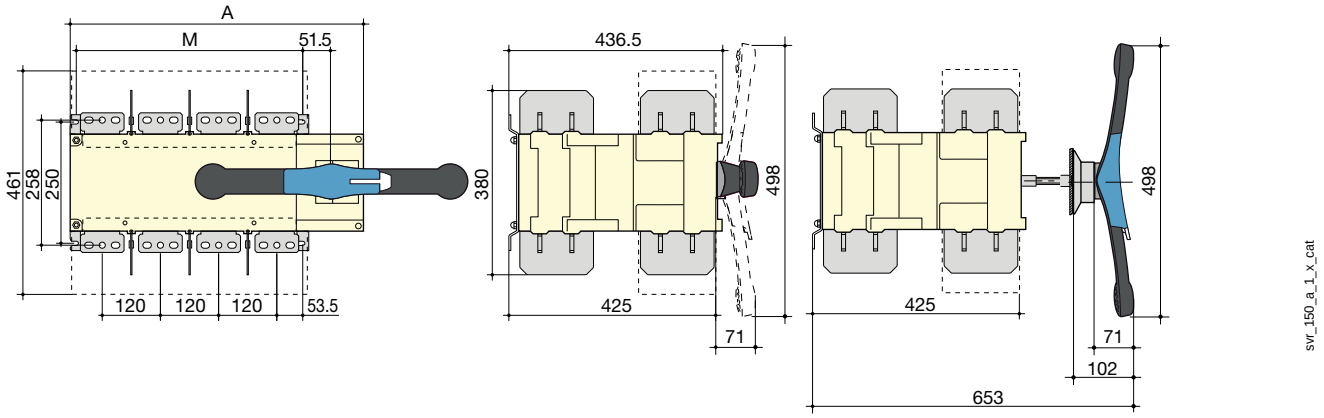


1. Terminal shrouds
2. Direct operation handle:
- 125 to 630 A: L1 = 140 mm,
- 800 to 1600 A: L1 = 210 mm.

Rating (A)/ Frame size	Overall dimensions A 3p.	A 4p.	C	E min	Terminal shrouds AC	Switch body H	HA	J 3p.	J 4p.	Switch mounting M 3p.	M 4p.	N	Connection T	U	V	W	X 3p.	X 4p.	Y	Z	Z1	AA	BA	AC
125 / B3	221	251	218	208 ... 436	235	148	25	182	212	156	186	101	36	20	25	8.5	56	50	3.5	28	124	135	115	10
160 / B3	221	251	218	208 ... 436	235	148	25	182	212	156	186	101	36	20	25	8.5	56	50	3.5	28	124	135	115	10
200 / B3	221	251	218	208 ... 436	235	148	25	182	212	156	186	101	36	20	25	8.5	56	50	3.5	28	124	135	115	10
250 / B4	262	312	218	208 ... 436	280	148	25	223	273	196	246	116	50	25	30	11	61	61	3.5	30	124	160	130	15
315 / B4	262	312	218	208 ... 436	280	148	25	223	273	196	246	116	50	35	35	11	61	61	3.5	30	124	170	140	15
400 / B4	262	312	218	208 ... 436	280	148	25	223	273	196	246	116	50	35	35	11	61	61	3.5	30	124	170	140	15
500 / B5	319	379	295	285 ... 513	401	225	25	272	332	246	306	176	65	32	37	13	70.5	65.5	5	43	180	235	205	15
630 / B5	319	379	295	285 ... 513	400	225	25	272	332	246	306	176	65	45	50	13	70.5	65.5	5	43	180	260	220	20
800 / B6	386	466	375	425 ... 577	459	298	29	306.5	386.5	255	336	250	80	50	60.5	15	48	48	7	66.5	253.5	321		26.5
1000 / B6	386	466	375	425 ... 577	459	298	29	306.5	386.5	255	336	250	80	50	60.5	15	48	48	7	66.5	253.5	321		26.5
1250 / B6	386	466	375	425 ... 577	459	298	29	306.5	386.5	255	336	250	80	60	65	16x11	48	48	7	66.5	255.5	330		29.5
1600/B7	478	598	375	425 ... 577	461	298	29	388.5	518.5	347	467	250	120	90	43.5	12.5x5	54	54	8	66.5	255.5	288		15

SIRCOVER 2000 to 3200 A / B8

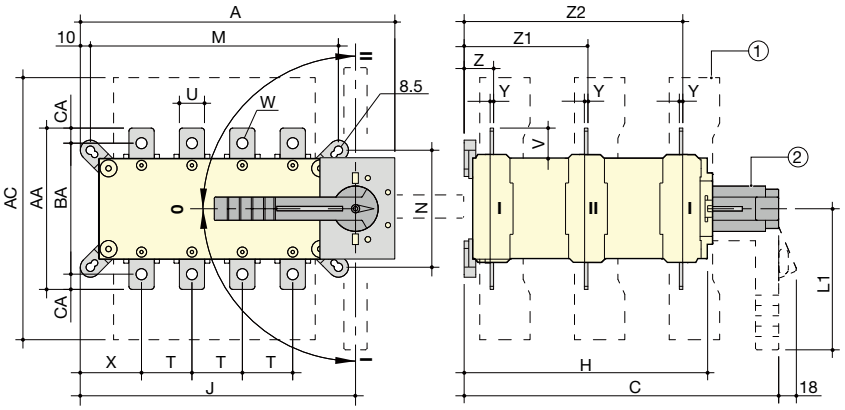
Direct front operation



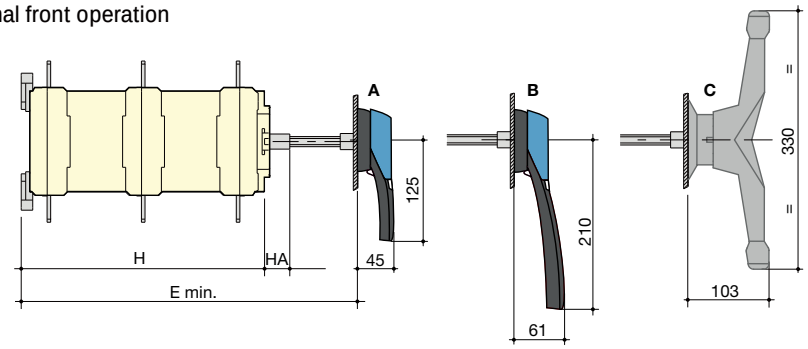
Rating (A) / Frame size	Overall dimensions A 3p.	A 4p.	Switch mounting M 3p.	M 4p.
2000 ... 3200 / B8	478	598	347	467

SIRCOVER Bypass 125 to 1600 A / B3 to B7

Direct front operation



External front operation



svr_070_i_1_x_cat

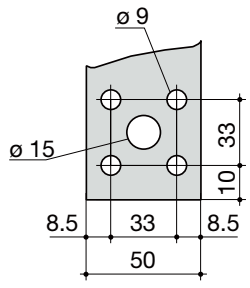
A. S2 type handle for external operation: 125 to 200 A
B. S3 type handle for external operation: 250 to 630 A
C. External double lever handle: 800 to 1600 A

1. Terminal shrouds
2. Direct operation handle:
- 125 to 200 A: L1 = 140 mm,
- 250 to 630 A: L1 = 210 mm,
- 800 to 1600 A: L1 = diameter 330 mm.

Rating (A) / Frame size	Overall dimensions				Terminal shrouds	Switch body				Switch mounting			Connection											
	A 3+6p.	A 4+8p.	C	E min	AC	H	HA	J 3+6p.	J 4+8p.	M 3+6p.	M 4+8p.	N	T	U	V	W	X 3+6p.	X 4+8p.	Y	Z	Z1	Z2	AA	BA	AC
125 / B3	221	251	313	320	235	243	25	182	212	156	186	101	36	20	25	8.5	56	50	3.5	28	124	219	135	115	10
160 / B3	221	251	313	320	235	243	25	182	212	156	186	101	36	20	25	8.5	56	50	3.5	28	124	219	135	115	10
200 / B3	221	251	313	320	235	243	25	182	212	156	186	101	36	20	25	8.5	56	50	3.5	28	124	219	135	115	10
250 / B4	262	312	313	298	280	243	25	223	273	196	246	116	50	25	30	11	61	61	3.5	30	124	219	160	130	10
400 / B4	262	312	313	298	280	243	25	223	273	196	246	116	50	35	35	11	61	61	3.5	30	124	219	170	140	15
630 / B5	319	379	432	417	400	362	25	272	332	246	306	176	65	45	50	13	70.5	65.5	5	43	180	317	260	220	20
800 / B6	386	466	560	550	459	479	29	306.5	386.5	255	335	250	80	50	60.5	15	48	48	7	66.5	253.5	439.5	321		26.5
1250 / B6	386	466	560	550	459	479	29	306.5	386.5	255	335	250	80	60	65	16x11	48	48	7	66.5	253.5	439.5	320		29.25
1600/B7	478	598	560	550	461	479	29	388.5	518.5	347	467	250	120	90	43.5	12.5x5	54	54	8	66.5	253.5	439.5	288		15

Connection terminals

SIRCOVER and SIRCOVER Bypass 800 A / B6



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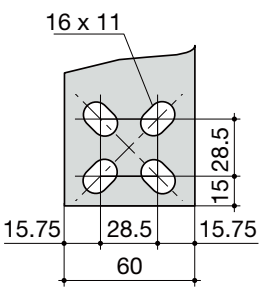
SIRCOVER and SIRCOVER Bypass 1250 A / B6



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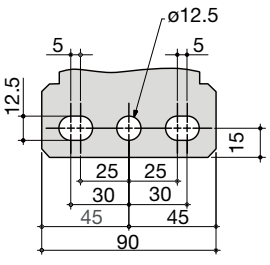
SIRCOVER 1600 to 3200 A / B7 to B8 SIRCOVER Bypass 1600 A / B7

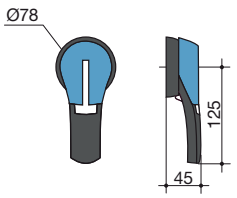


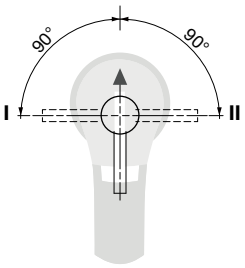
svr_098_a_1_x_cat

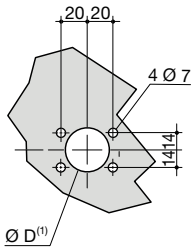
Dimensions for external handles

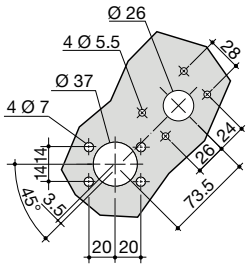
SIRCOVER 125 to 630 A / B3 to B5

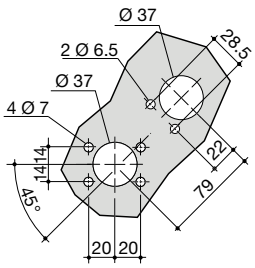
Handle type	Front operation Direction of operation	Door drilling
S2 type	**0** or **I+II**	With lock RONIS EL11AP With lock CASTELL K











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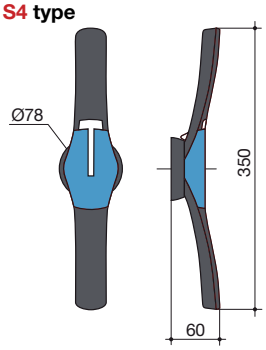
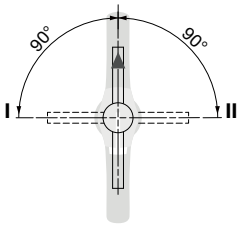
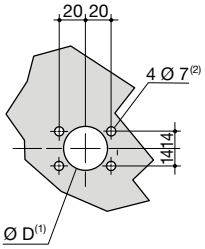
(1) Ø31 to Ø37: rear screw mounting,
Ø37: front clip mounting.

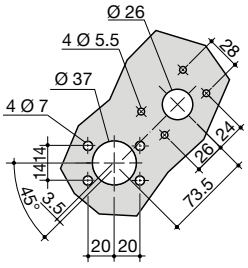
SIRCOVER 800 to 1600 A / B6 to B7

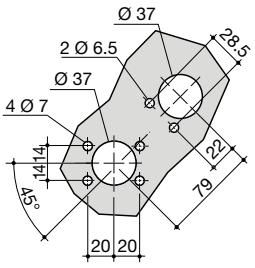
Handle type	Front operation Direction of operation	Door drilling
S4 type	**0** or **I+II**	With lock RONIS EL11AP With lock CASTELL K









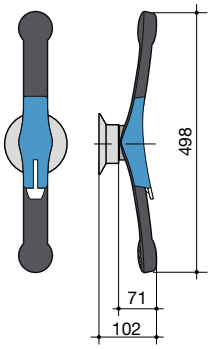


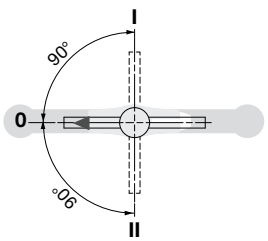
poign_031_a_1_gb_cat

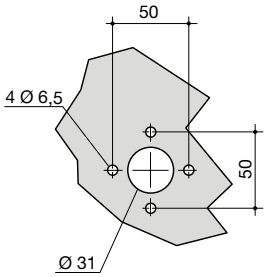
(1) Ø31 to Ø37: rear screw mounting,
Ø37: front clip mounting.
(2) Ø6 to Ø7: clip mounting

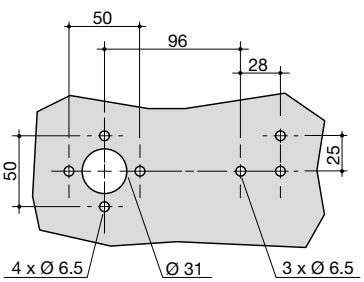
SIRCOVER 2000 to 3200 A / B8

Handle type	Front operation Direction of operation	Door drilling
S5 type with V Escutcheon		With lock CASTELL K









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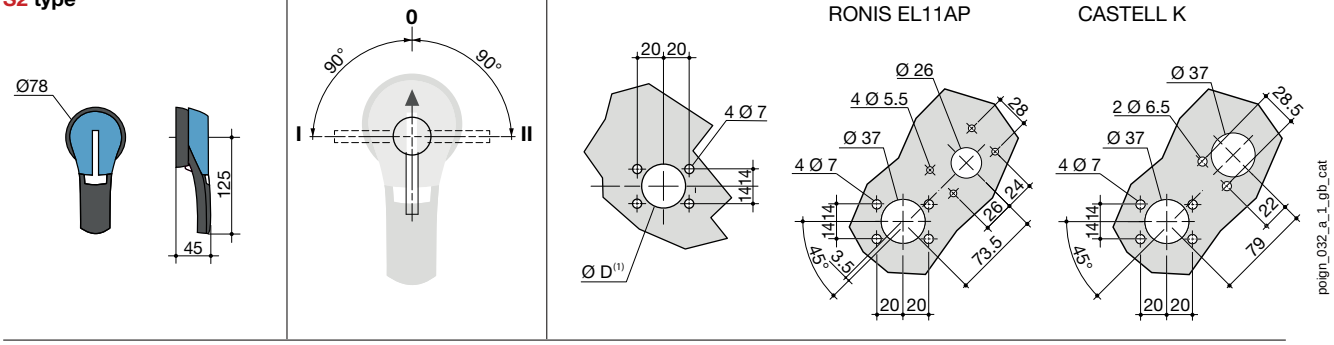
SIRCOVER Bypass 125 to 200 A / B3

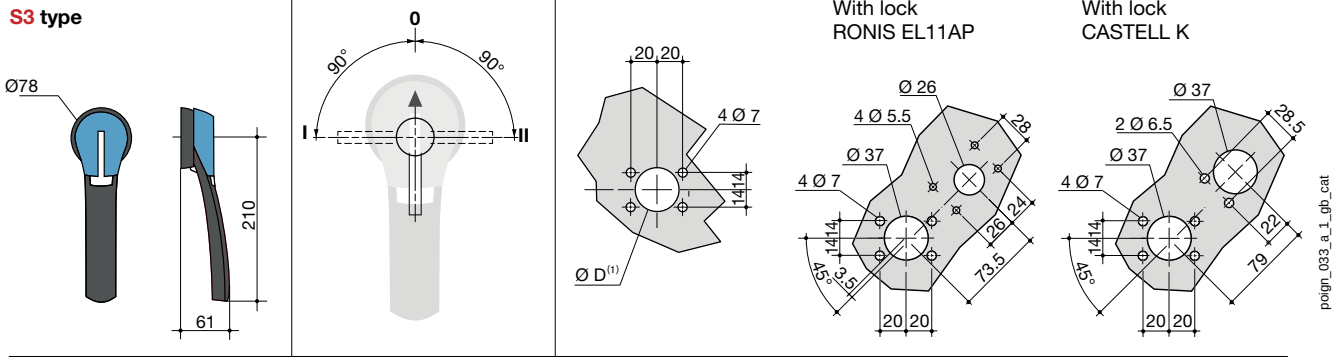
Handle type	Front operation Direction of operation	Door drilling
S2 type		With lock RONIS EL11AP With lock CASTELL K



(1) Ø31 to Ø37: rear screw mounting, Ø37: front clip mounting.

SIRCOVER Bypass 250 to 630 A / B4 to B5

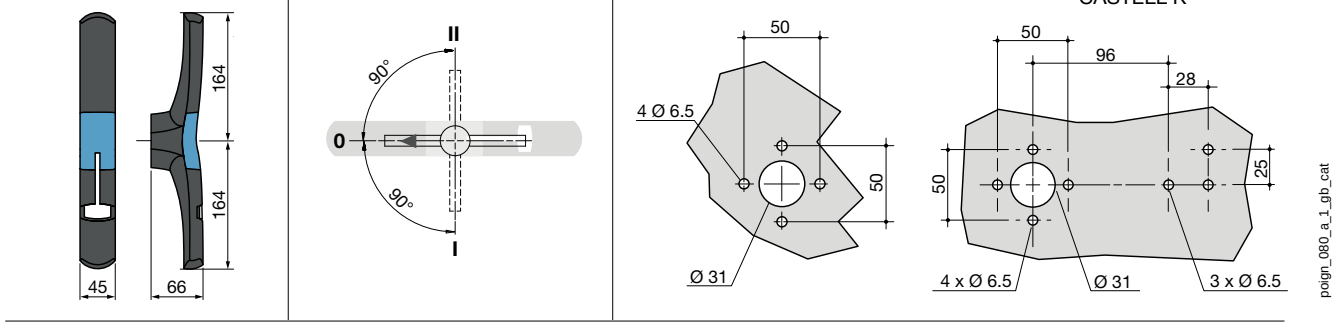
Handle type	Front operation Direction of operation	Door drilling
S3 type		With lock RONIS EL11AP With lock CASTELL K



(1) Ø31 to Ø37: rear screw mounting, Ø37: front clip mounting.

SIRCOVER Bypass 800 to 1600 A / B6 to B7

Handle type	Front operation Direction of operation	Door drilling
J4 type		With lock CASTELL K



The *ATyS M* range: safe and reliable solutions

A complete range of automatic and remotely operated transfer switches from 40 to 160 A

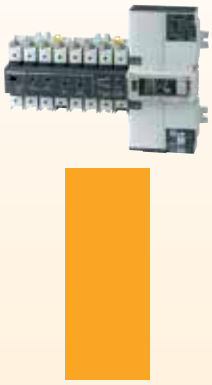
RTSE (Remotely operated)	**ATSE** (Automatic)		

ATyS d M
Motorised Transfer Switching Equipment

Dual power supply

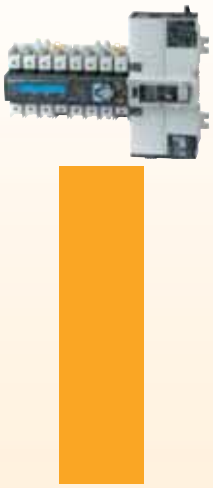
ATyS t M
Automatic Transfer Switching Equipment

Automatic controller to manage mains/ mains applications



ATyS g M
Automatic Transfer Switching Equipment

Automatic controller to manage mains/ genset applications



ATyS p M
Automatic Transfer Switching Equipment

Mains/mains and mains/genset Tripping function, programmable parameters and communication

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The *ATyS M* range: safe and reliable solutions

The advantages

Secure operation

- Electrical and mechanical interlocking for optimum safety.
- Positive break indication with two mechanical switch position indicators for clear and secure use.
- Padlocking in the 0 position enables the lockout function on each product.
- Padlocking in 3 positions can also be configured prior to installation.
- Permanent indication of product availability thanks to the Watchdog relay, which constantly monitors the product operating conditions (ATyS g M and ATyS p M).

High performance

- On-load making and isolation for using a single product with any load type, including inductive loads (AC-33).
- Immunity to control voltage fluctuations thanks to stable positions and power supply only required during switching.
- Excellent dynamic withstand for improved safety when closing on a short-circuit.
- Extremely low electrical blackout time (ATyS d M < 90ms) guaranteed thanks to the electromagnetic actuator technology used with rotary self-cleaning contacts.

A fully compact solution

- All-in-one solution, with minimum risk of incorrect mounting or wiring.
- Highly reliable thanks to the compliance with IEC 60947-6-1, the standard governing transfer switching equipment.
- Simplified ordering process: a single reference for the complete solution.

Intuitive use

- Manual emergency control:
  The product can be operated **quickly and safely** using an emergency handle.
- Simple selection of operating mode (Auto/Manual) using an integrated selector.

Rapid commissioning

- **ATyS d M**: No configuration required.
- **ATyS t M and ATyS g M**: Configuration in just a few minutes using a screwdriver.
- **ATyS p M**: Simplified configuration (EASY CONFIG software and LCD screen on the device).

Easy to install

- Two switching devices mounted side-by-side for easy access to cabling with installation in a standard 18 module enclosure (product has a very low depth).
- Quick and easy mounting on a DIN rail or back plate.
- Simplified wiring thanks to the cage clamp terminals and dedicated bridging bars that allows a common outgoing connection whilst retaining the cage terminal connections.

Performance

IEC 60947-6-1 / GB 14048-11

> AC 32B - up to 160 A
> AC 33B - up to 125 A
> AC 33iB - up to 160 A
Class PC switch technology

IEC 60947-3

> AC 23B - up to 160 A

Enclosed ATyS M

See "Enclosed transfer switches" pages.

Expert Services

> Study, definition, advice, implementation, maintenance and training…
> Our Expert Services team offers customised support to make your project a success.

ATyS d M

Remotely operated Transfer Switching Equipment
from 40 to 160 A

ATyS d M
I-0-II 4P

The solution for

- Applications with a normal/ emergency external controller
- Building Management System (BMS)

Strong points

- Secure
- Superior electrical performance
- High-speed transfer
- Immune to voltage fluctuations

Conformity to standards

- IEC 60947-6-1
- IEC 60947-3
- GB/T 14048.11

Approvals and certifications

Function

ATyS d M devices are 2 pole or 4 pole transfer switches that are remotely controlled using volt-free contacts from an external controller. They are modular products with positive break indication. They are intended for use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Advantages

Secure
ATyS M have both electrical and mechanical interlocks for optimum security. They also feature a positive break indicator, confirming switch position with dual mechanical indicators for increased safety.

Superior electrical performance
ATyS M devices are compliant with IEC 60947-6-1, the standard governing transfer switches. Their AC-33B properties of up to 125 A mean you can use the same product for resistive and inductive loads.

High-speed transfer
ATyS d M devices are based on a coil solution with rotating contacts, therefore ensuring an extremely short black-out duration (< 90ms).

Immune to voltage fluctuations
The power supply of the ATyS d M is only active during transfer. As the product is based on stable positions, it is not affected by network voltage fluctuations.

Operating modes

Easy selection of AUT/MAN mode

Manual emergency operation

Padlocking facility

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What you need to know

Electrical control

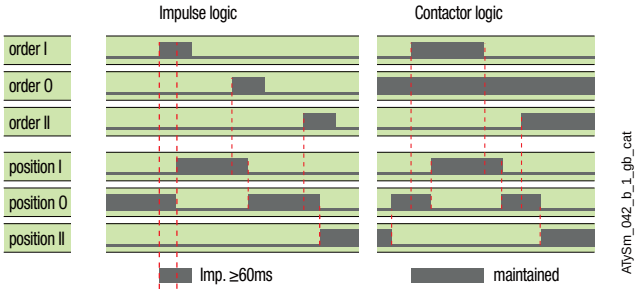
The positions are controlled by dry contacts on any external automated system (e.g. ATyS C30).
These positions are stable even in case of loss of input supply.

Single-phase interface *Three-phase interface*

Control logic

Two types of control logic are offered:

- Pulse logic
  - A switching command of at least 60 ms is necessary to initiate operation.
  - Commands I and II have priority over command 0.
  - The first command received (I or II) has priority as long as it remains present.
- Contactor logic
  - Command 0 must be maintained.
  - If command I or II disappears, the device returns to position 0, so long as the power supply is available.

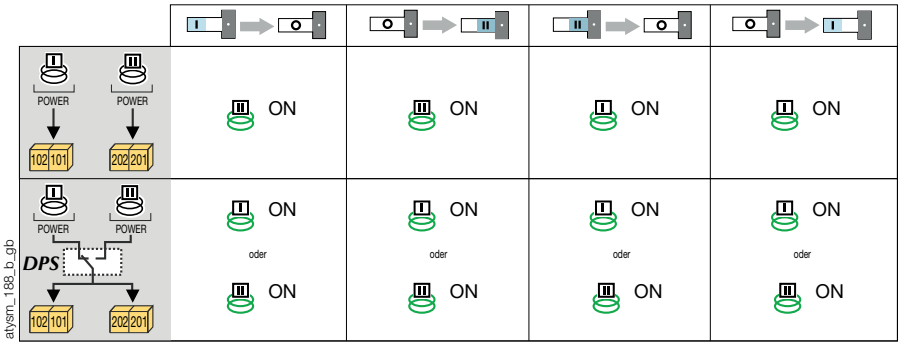


Power supply

The ATyS d M is equipped with two independent 230 VAC power inputs (176-288 VAC), 50/60 Hz (45/65 Hz).
These two supplies can be connected individually; one to switch I and the other to switch II:

- Power supply 101-102 must be available to reach position I
- Power supply 201-202 must be available to reach position II.

The use of a dual power supply (DPS) or an external supply module secures the command of the 3 positions irrespective of the power supply source.
In this case, both the supply inputs must be connected in parallel.



References

ATyS d M

Rating (A)	No. of poles	ATyS d M	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contact block
40 A	2 P	9323 **2004**	2 P 1309 **2006** 4 P 1309 **4006**	2 pieces 1399 **4006**	2 pieces 2294 **4016**(1)	1st unit included 2nd unit Separate common points 1309 **1001**(2) Linked common points 1309 1011(2)
	4 P	9323 **4004**				
63 A	2 P	9323 **2006**				
	4 P	9323 **4006**				
80 A	2 P	9323 **2008**				
	4 P	9323 **4008**				
100 A	2 P	9323 **2010**				
	4 P	9323 **4010**				
125 A	2 P	9323 **2012**				
	4 P	9323 **4012**				
160 A	2 P	9323 **2016**	1309 **2016**			
	4 P	9323 **4016**	1309 **4016**			

(1) For the three-phase version, for complete upstream and downstream protection, please order 2x; for the single-phase version please order the part just 1x.
(2) 1 NO/NC contact block for positions I, 0 and II.

ATyS t M - ATyS g M

Automatic Transfer Switching Equipment

from 40 to 160 A

ATyS g M
I-0-II 2P

ATyS t M
I-0-II 4P

atys-tm_001_b_1_cat

The solution for

- High-rise buildings
- Data centers
- Healthcare buildings

Strong points

- Fast commissioning
- ATyS d M with an integrated controller for dedicated mains/mains or mains/genset functions
- Secure programming

Conformity to standards

- IEC 60947-6-1
- IEC 60947-3
- GB/T 14048.11

Approvals and certifications(1)

(1) Product references on request.

Function

ATyS t M and ATyS g M are modular automatic transfer switches with positive break indication. ATyS t M are 4 pole (three-phase) devices and ATyS g M are 2 or 4 pole (single or three-phase) devices.

They have all the functions of the ATyS d M together with an integrated controller, giving them automatic features dedicated to mains/mains (ATyS t M) and mains/genset (ATyS g M) applications. They are intended for use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Advantages

Quick start

ATyS t M and g M transfer switches offer significant time saving during commissioning (the process takes 2 to 3 minutes). Thanks to the design that allows commissioning through just one potentiometer (4 on the ATyS g M) and four DIP switches, a screwdriver is all that is required to configure the parameters.

ATyS g M: dedicated to mains/genset applications

In addition to its single-phase and three-phase voltage & frequency monitoring for both incoming sources, the product's integrated controller also features functions that are specific to mains/genset applications (genset control, test on load, etc.).

ATyS t M: dedicated to three-phase mains/mains applications

The ATyS t M integrated controller has been designed to provide all the functions necessary for these applications (operation with or without priority, preferred source selection) together with the monitoring of the voltage and frequency of both sources for three-phase networks.

Secure programming

To ensure that the correct configuration is maintained an optional sealable cover can be fitted in order to avoid any unintentional modifications to the programming.

What you need to know

The ATyS t M and ATyS g M are automatic transfer switching equipment that include a fully integrated ATS controller. These products are self powered from incoming supplies: 230 VAC (176-288 VAC), 50/60 Hz (45/65Hz).

References

ATyS t M

Rating (A)	No. of poles	Network (VAC)	ATyS t M	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contact block	Sealable cover
40 A	4 P	230/400	9344 **4004**	4 P 1309 **4006**	2 pieces 1399 **4006**	2 pieces 2294 **4016**(1)	1 unit Separate common points 1309 **1001**(2) Linked common points 1309 **1011**(2)	1359 **0000**
63 A	4 P	230/400	9344 **4006**					
80 A	4 P	230/400	9344 **4008**					
100 A	4 P	230/400	9344 **4010**					
125 A	4 P	230/400	9344 **4012**					
160 A	4 P	230/400	9344 **4016**	1309 **4016**				

(1) For complete upstream and downstream protection please order quantity 2.
(2) 1 NO/NC contact block for positions I, 0 and II.

ATyS g M

Rating (A)	No. of poles	Network (VAC)(3)	ATyS g M	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contact block	Sealable cover
40 A	2 P	230	9353 **2004**	2 P 1309 **2006** 4 P 1309 **4006**	2 pieces 1399 **4006**	2 pieces 2294 **4016**(1)	1 unit Separate common points 1309 **1001**(2) Linked common points 1309 **1011**(2)	2 P 1359 **2000** 4 P 1359 **0000**
	4 P	230/400	9354 **4004**					
63 A	2 P	230	9353 **2006**					
	4 P	230/400	9354 **4006**					
80 A	2 P	230	9353 **2008**					
	4 P	230/400	9354 **4008**					
100 A	2 P	230	9353 **2010**					
	4 P	230/400	9354 **4010**					
125 A	2 P	230	9353 **2012**					
	4 P	230/400	9354 **4012**					
160 A	2 P	230	9353 **2016**	1309 **2016**				
	4 P	230/400	9354 **4016**	1309 **4016**				

(1) 4 pole version - for complete upstream and downstream protection please order quantity 2; for 2 pole version order quantity 1.
(2) 1 NO/NC contact block for positions I, 0 and II.
(3) For 127/230VAC networks, please contact your supplier.

ATyS p M

Automatic Transfer Switching Equipment

from 40 to 160 A

ATyS p M
I-0-II 4P

The solution for

- High-rise buildings
- Data centres
- Healthcare buildings
- Banks and insurance companies
- Transport (airports, tunnels, etc.)

Strong points

- Flexible programming
- Trip function
- Communication and configuration
- Remote control interface

Conformity to standards

- IEC 60947-6-1
- IEC 60947-3
- GB/T 14048.11

Approvals and certifications

Function

ATyS p M are single-phase or three-phase modular automatic transfer switches with positive break indication.

Functions include ATyS t M and ATyS g M capability, with additional programmable parameters and a tripping function. A product model with communication is available. They are intended for use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Advantages

Flexible programming

ATyS p M time delays and inputs/outputs are completely configurable, hence enabling the easy monitoring of specific applications (load shedding, test…) and the definition of an operating cycle specifically adapted to your application.

Trip function

ATyS p M features a function for returning to the 0 position in case of the loss of both power supply sources (tripping). This protects the load from issues due to source instability.

Communication and configuration

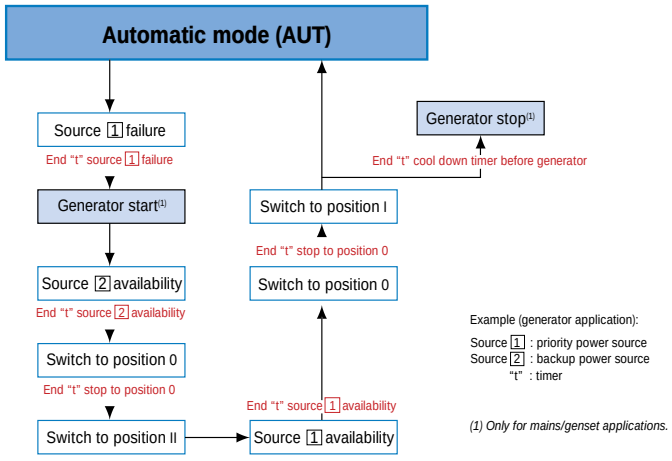
A specific version of ATyS p M is available with integrated Modbus communication. This gives acces to most product data (status, voltages, frequencies…). A user friendly configuration software is also available free (Easyconfig) to configure, view and save all the parameters in the ATyS p M.

Remote control interface

Specifically designed for installations where the product is enclosed, the remote interface displays product status on the front panel (D10) or displays and controls with access to programming (D20).

What you need to know

The ATyS p M are automatic transfer switching equipment that include a fully integrated ATS controller. These products are self powered from incoming supplies: 230 VAC (160-305 VAC), 50/60 Hz (45/65Hz). Automatic products are all equipped with a sequence logic. Here is an example of the sequence logic in case of loss and return of the preferred source.



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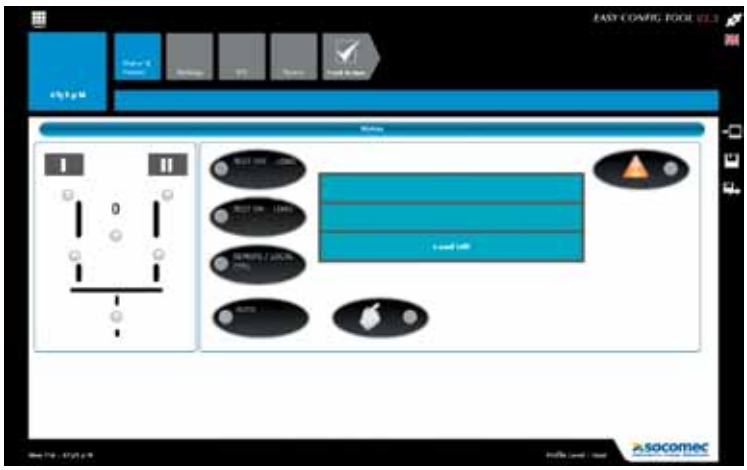
Easyconfig

Easyconfig software is the ideal solution to save time and simplify complex configuration.

You can configure the following parameters:

- application type,
- voltage and frequency thresholds,
- timers,
- inputs/outputs…



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ATyS p M

Rating (A)	No. of poles	Network (VAC) (3)	ATyS p M	ATyS p M + com	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contact block	Remote interface
40 A	4 P	230/400	9364 **4004**	9384 **4004**	4 P 1309 **4006**	2 pieces 1399 **4006**	2 pieces 2294 **4016**(1)	1 piece Separate common points 1309 **1001**(2) Linked common points 1309 **1011**(2)	D10 9599 **2010** D20 9599 **2020**
63 A	4 P	230/400	9364 **4006**	9384 **4006**					
80 A	4 P	230/400	9364 **4008**	9384 **4008**					
100 A	4 P	230/400	9364 **4010**	9384 **4010**					
125 A	4 P	230/400	9364 **4012**	9384 **4012**					
160 A	4 P	230/400	9364 **4016**	9384 **4016**	1309 **4016**				

(1) For complete upstream and downstream protection please order quantity 2.
(2) 1 NO/NC contact block for positions I, 0 and II.
(3) For 127/230VAC networks, please contact us.

ATyS M range

ATyS d M, ATyS t M, ATyS g M, ATyS p M

from 40 to 160 A

Accessories

Bridging bars

Use

Used to bridge the outgoing common connection between switch I and switch II. The bridging bar does not reduce the connection capacity of the cage terminals.

Rating (A)	No. of poles	Reference
40 ... 125	2 P	1309 **2006**
160	2 P	1309 **2016**
40 ... 125	4 P	1309 **4006**
160	4 P	1309 **4016**

Voltage sensing and power supply tap

Use

It allows connection of 2 x ≤ 1.5 mm² voltage sensing or power cables.

The single-pole voltage sensing tap can be mounted in any of the terminals (incoming) without reducing their connecting capacity.

Rating (A)	Pack	Reference
40 ... 160	2 pieces	1399 **4006**

Terminal shrouds

Use

Protection against direct contact with terminals or connecting parts.

Advantages of the terminal shrouds

Perforations allow remote thermographic inspection without the need to remove the shrouds. Possibility of sealing.

Mounting

For complete upstream and downstream protection of 4 pole products, please order quantity 2; for 2 pole products please order quantity 1.

Rating (A)	Position	Reference
40 ... 160	top / bottom	2294 **4016**(1)

(1) Reference composed of 2 pieces.

Auxiliary contact

Use

A maximum of two auxiliary contact blocks can be fitted to each product. Each auxiliary contact block integrates 3 NO/NC auxiliary contacts (I, 0, II).

The ATyS d M is delivered as standard with 1 block with separate common points.

Characteristics:

250 VAC / 5 A maximum.

24 VDC / 2 A maximum.

Rating (A)	Type	Reference
40 ... 160	Separate common points	1309 **1001**
40 ... 160	Linked common points	1309 **1011**

Sealable cover

Use

Prevents access to the ATyS t M and ATyS g M configuration panels.

Rating (A)	No. of poles	Reference
40 ... 160	2 P	1359 **2000**
40 ... 160	4 P	1359 **0000**

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Polycarbonate enclosure

Use

Dedicated to the installation of a three-phase ATyS M, it enables easy integration of a compact transfer switch solution.

Rating (A)	H x W x D (mm)	Reference
40 ... 160	385 x 385 x 193	1309 **9006**

Extension unit

Use

Combined with the polycarbonate enclosure, the extension unit provides additional space in order to connect 70 mm² cables to the ATyS M with ease.

Rating (A)	Reference
40 ... 160	1309 **9007**

Residential enclosure

Use

Dedicated to the implementation of a single-phase ATyS M, the plastic enclosure provides a compact IP41 transfer switch solution with easy integration.

Rating (A)	H x W x D (mm)	Reference
40 ... 160	410 x 305 x 150	1309 **9056**

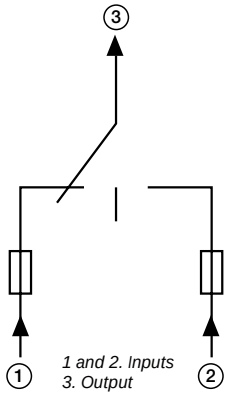
Double power supply - DPS

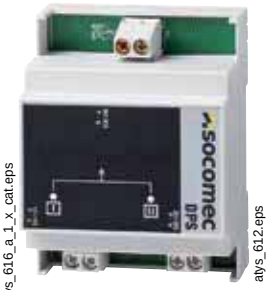
Use

Allows an ATyS d M to be supplied by two 230 VAC 50/60 Hz networks.

Input

- The input is considered as “active” from 200 VAC.
- Maximum voltage: 288 VAC.
- Internal protection: each input is fuse protected (3.15 A).
- Connection on terminals: max. 6 mm².
- Modular product: the width of 4 modules.





Description of accessories	Reference
DPS	1599 **4001**

Input 1	Input 2	Output
230 VAC	0 VAC	230 VAC (input 1)
0 VAC	230 VAC	230 VAC (input 2)
230 VAC	230 VAC	230 VAC (input 1)
0 VAC	0 VAC	0 VAC

Accessories (continued)

Auto-transformer

Use

For use with ATyS M in 400 VAC three-phase applications that have no distributed neutral.

The ATyS M includes integrated sensing and power supply circuits, therefore a neutral connection is required for 400 VAC three-phase applications. When no neutral connection is available this autotransformer (400/230 VAC, 400 VA) provides the 230 VAC required for the ATyS to function.

Rating (A)	Reference
40 ... 160	1599 **4121**

Remote interfaces for ATyS p M

Use

To remotely display source availability and position indication on the front of a panel when the ATyS M is enclosed.

The remote interface is powered directly from the ATyS M via the RJ45 connection cable.

Maximum cable length: 3 m.

D10

To display source availability and position indication on the front panel of an enclosure.

Protection degree: IP21.

D20

In addition to the functions of the D10, the D20 displays measurements and enables control and configuration from the front of the display panel.

Protection degree: IP21.

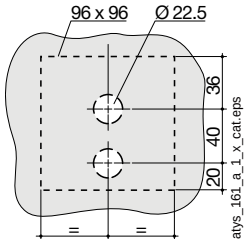
Door mounting

2 holes Ø 22.5.

ATyS M connection via RJ45 cable, not isolated.

Cable not provided.

RJ45 to connect to ATyS p M



Drillings

Description of accessories	Reference
D10	9599 **2010**
D20	9599 **2020**

Connecting cable for remote interfaces

Use

To connect between a remote interface (type D10 or D20) and a control product (ATyS p M).

Characteristics:

RJ45 8 wire straight-through, non isolated cable. Length 3 m.

Type	Length	Reference
RJ45 cable	3 m	1599 **2009**

Cage-terminal interface

Use

The power connection terminals allow conversion of the cage clamp terminals into bolt-on type connection terminals, enabling connection of up to two 35 mm² cables or one 70 mm² cable. Compatible with aluminium terminals. Each power connection terminal is provided with separation screens.

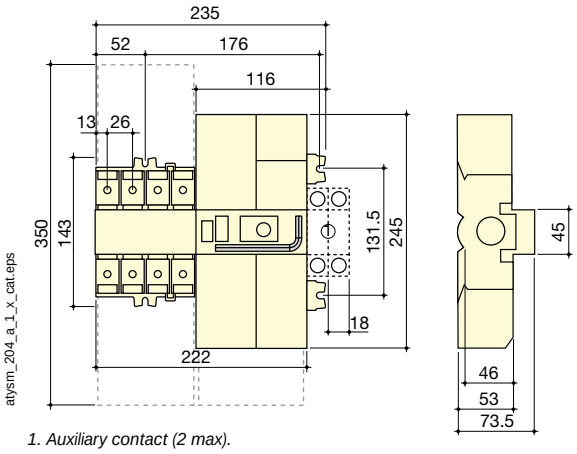
Rating (A)	Reference
40 ... 160	1399 **4017**(1)

(1) For complete conversion, order quantity 3.

Dimensions

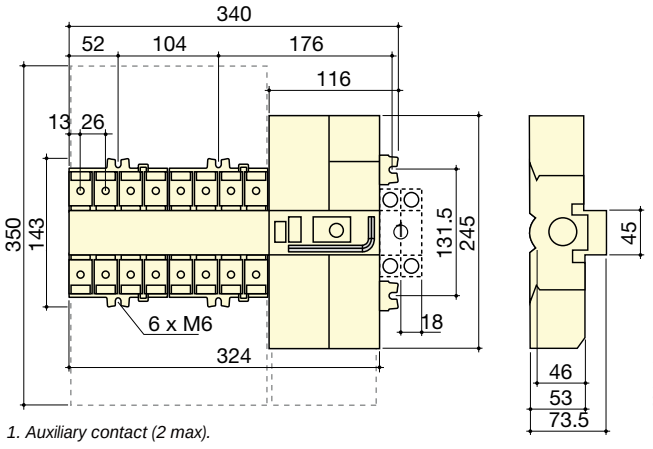
ATyS M 40 to 160 A

Single-phase ATyS M



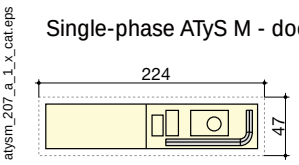
1. Auxiliary contact (2 max).

Three-phase ATyS M

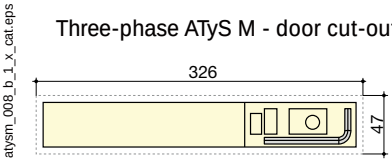


1. Auxiliary contact (2 max).

Single-phase ATyS M - door cut-out

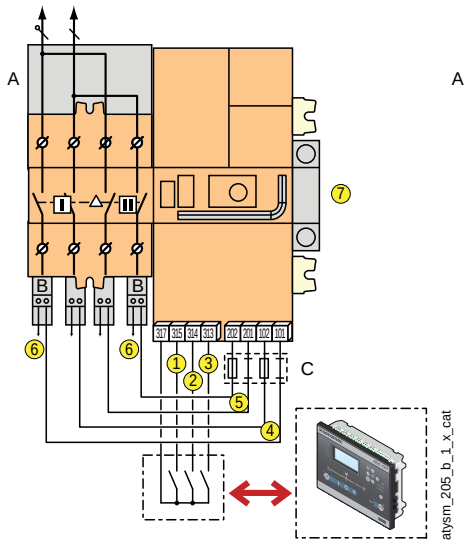


Three-phase ATyS M - door cut-out

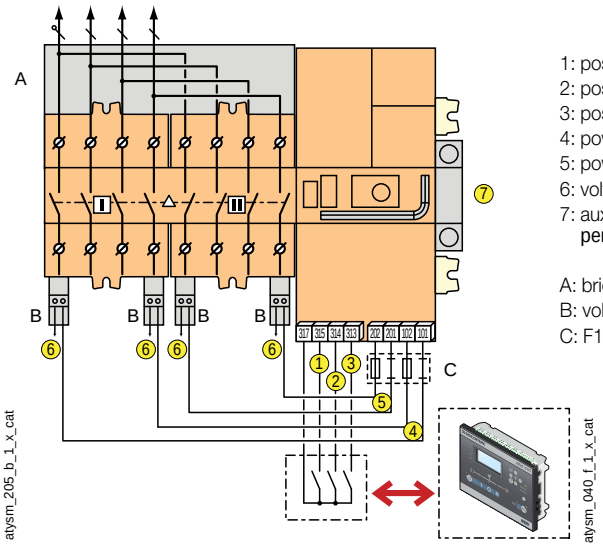


Terminals and connections

Single-phase ATyS d M



Three-phase ATyS d M

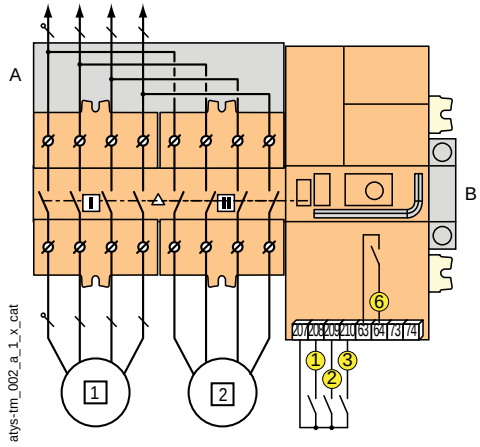


1: position I control
2: position II control
3: position 0 control C
4: power supply I (230 VAC)
5: power supply II (230 VAC)
6: voltage tap
7: auxiliary contact block - 1 NO/NC per position I, 0, II (factory fitted)

A: bridging bar (accessory)
B: voltage sensing tap (accessory)
C: F1 / F2 = fuse 10 A gG

Terminals and connections (continued)

Three-phase ATyS t M

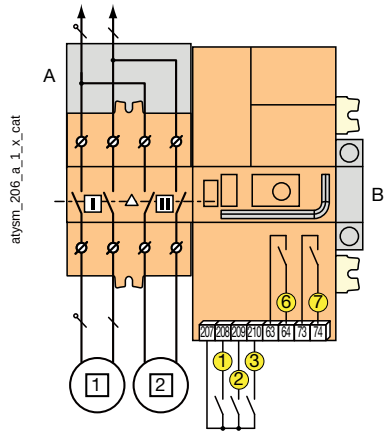


1 primary source (network)
2 backup source (network)

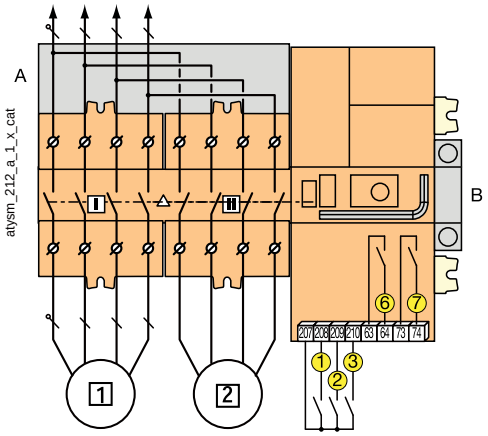
1: position 0 control
2: preferred source selection
3: automatic mode inhibition
6: availability S1 or S2

A: bridging bar (accessory)
B: auxiliary contact block - 1 NO/NC per position I, 0, II (accessory)

Single-phase ATyS g M



Three-phase ATyS g M

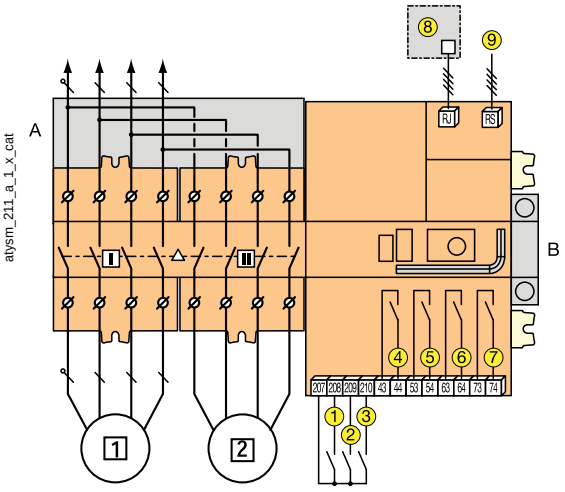


1 primary source
2 backup source

1: manual retransfer /priority change
2: test on load
3: automatic mode inhibition
6: relay for product availability
7: genset start / stop control

A: bridging bar (accessory)
B: auxiliary contact block - 1 NO/NC per position I, 0, II (accessory)

Three-phase ATyS p M



1 primary source
2 backup source

1 - 2 - 3: programmable inputs
4 - 5 - 6: programmable outputs
7: genset start / stop control
8: RJ45 for connecting a D10/D20 remote interface.
9: RS485 for communication on versions with COM.

A: bridging bar (accessory)
B: auxiliary contact block - 1 NO/NC per position I, 0, II (accessory)

Characteristics according to IEC 60947-3 and IEC 60947-6-1

40 to 160 A

Thermal current I_{th} at 40°C		**40 A**	**63 A**	**80 A**	**100 A**	**125 A**	**160 A**
Rated insulation voltage U_i (V) (power circuit)		800	800	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV) (power circuit)		6	6	6	6	6	6
Rated insulation voltage U_i (V) (control circuit)		300	300	300	300	300	300
Rated impulse withstand voltage U_{imp} (kV) (control circuit) - ATyS d M		4	4	4	4	4	4
Rated impulse withstand voltage U_{imp} (kV) (control circuit) - ATyS t M, g M and p M		2.5	2.5	2.5	2.5	2.5	2.5
Rated operational currents I_e (A) according to IEC 60947-6-1							
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-31 A / AC-31 B	40/40	63/63	80/80	100/100	100/125	100/160
415 VAC	AC-32 A / AC-32 B	40/40	63/63	80/80	100/100	100/125	100/160
415 VAC	AC-33 A / AC-33 B	-/40	-/63	-/80	-/100	-/125	-/125
Rated operational currents I_e (A) according to IEC 60947-3							
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-20 A / AC-20 B	40/40	63/63	80/80	100/100	125/125	160/160
415 VAC	AC-21 A / AC-21 B	40/40	63/63	80/80	100/100	125/125	160/160
415 VAC	AC-22 A / AC-22 B	40/40	63/63	80/80	100/100	125/125	160/160
415 VAC	AC-23 A / AC-23 B	40/40	63/63	80/80	100/100	125/125	125/160
690 VAC	AC-21 A / AC-21 B	40/40	63/63	80/80	100/100	125/125	160/160
690 VAC	AC-22 A / AC-22 B	40/40	63/63	80/80	80/80	100/125	100/125
690 VAC	AC-23 A / AC-23 B	40/40	63/63	63/63	80/80	80/80	80/80
Current rated as conditional short-circuit with fuse gG DIN							
Conditional short-circuit current (kA rms)		50	50	50	50	50	40
Associated fuse rating (A)		40	63	80	100	125	160
Current rated as conditional short-circuit with any brand of circuit breaker that ensures tripping in less than 0.3s (4)							
Current rated as short-time withstand Icw 0.3s (kA rms)		7	7	7	7	7	7
Short-circuit operation (switch only)							
Current rated as short-time withstand I_{cw} 1s (kA rms)(2)		4	4	4	4	4	4
Rated peak withstand current (kA peak)(2)		17	17	17	17	17	17
Connection							
Minimum connection cross-section (mm^2)		10	10	10	10	10	10
Maximum Cu cable cross-section (mm^2)		70	70	70	70	70	70
Tightening torque (Nm)		5	5	5	5	5	5
Switching time(5)							
I - 0 or II - 0, following a command (ms)		45	45	45	45	45	45
Transfer time I - II or II - I, following a command (ms)		180	180	180	180	180	180
I-0 or II-0, after outage (s)		1.2	1.2	1.2	1.2	1.2	1.2
I-II or II-I transfer time, after outage (s)		1.4	1.4	1.4	1.4	1.4	1.4
Contact transfer time (“black-out”) I-II min. (ms) (3)		150	150	150	150	150	150
Power supply							
Min./max. auxiliary power supply (VAC) (ATyS d M, t M and g M)		176/288	176/288	176/288	176/288	176/288	176/288
Min./max. auxiliary power supply (VAC) (ATyS p M)		160/305	160/305	160/305	160/305	160/305	160/305
Control supply power demand							
Rated power (VA)		6	6	6	6	6	6
Max. intensity at 230 VAC (A) - ATyS d M, t M and g M		30	30	30	30	30	30
Max. intensity at 230 VAC (A) - ATyS p M		20	20	20	20	20	20
Mechanical specifications							
Durability (number of operating cycles)		10,000	10,000	10,000	10,000	10,000	10,000
Weight of single-phase models - non-packaged (kg)		2.8	2.8	2.8	2.8	2.8	2.8
Weight of single-phase models - including packaging (kg)		3.5	3.5	3.5	3.5	3.5	3.5
Weight of three-phase models - non-packaged (kg)		3.5	3.5	3.5	3.5	3.5	3.5
Weight of three-phase models - including packaging (kg)		4.2	4.2	4.2	4.2	4.2	4.2

(1) Category with index A = frequent operation / Category with index B = infrequent operation.
(2) For a rated operational voltage U_e = 400 VAC.
(3) 5% tolerance.
(4) Value for coordination with any circuit breaker that ensures tripping in less than 0.3s. For coordination with specific circuit-breaker references, higher short-circuit current values are available. Please contact us.
(5) At rated voltage - excluding time delays, where applicable.

The *ATyS S* range: a robust solution

A range of transfer switches from 40 to 125 A

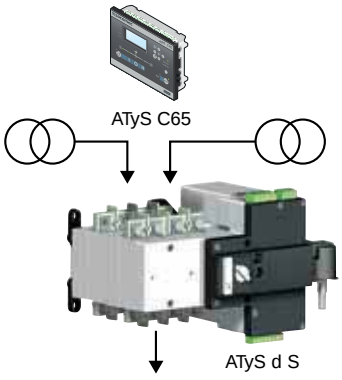
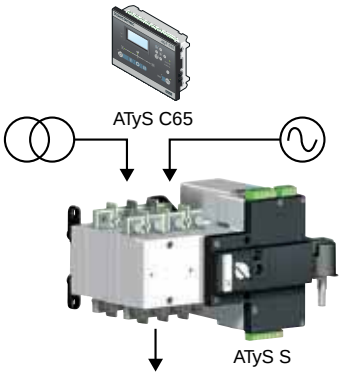
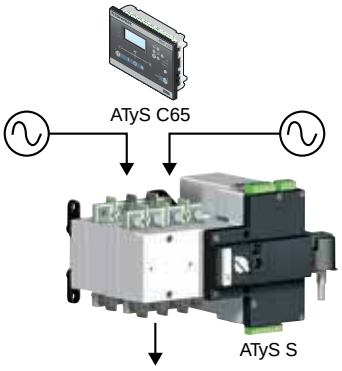
RTSE
(Remotely operated)

ATyS S
Motorised Transfer Switching Equipment

ATyS d S
Motorised Transfer Switching Equipment

Motorised Transfer Switching Equipment + Dual power supply

Three application types

Mains/Mains	Mains/Genset	Genset/Genset
		

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The *ATyS S* range: a robust solution

The advantages

Safe and reliable

- An extended lifetime thanks to a switching principle based on stable positions.
- Positive break indication.
- Mechanical position interlocking.
- Stable power supply to the loads because the ATyS S does not require power supply for the position to be maintained.
- Various power supply voltages are available: 12 or 24/48 VDC and 230 VAC or 2 x 230 VAC.

Easy to use

- Manual emergency control:
  The product can be controlled quickly and safely using an emergency handle (motor installed or removed).
- Simple selection of the operating mode (Auto/Manual/Padlocked) using an integrated selector.

Total integration

- Integrated and tested solution: components factory assembled and wired.
- Reliable product: compliance with IEC 60947-6-1, the standard governing transfer switches.

Easy maintenance

- Self-cleaning sliding contacts.
- Easy replacement of the motor unit, even during on load operation.

Cost-saving

- Low power consumption thanks to a switching principle based on stable positions: power is only required during transfer.
- Easy and fast installation: only four fixing points, three connectors and the power cables to connect.
- Shorter bridging bars that are consequently more economical than any other solution on the market.

Compact design

> Combining two switches mounted back-to-back and being only 197 mm wide, the ATyS S offers significant space saving when compared with a side-by-side solution.

Enclosed ATyS S

See "Enclosed transfer switches" pages.

Expert Services

> Study, definition, advice, implementation, maintenance and training…
> Our Expert Services team offers customised support to make your project a success.

ATyS S - ATyS d S

Remotely operated Transfer Switching Equipment

from 40 to 125 A

ats-s_018.psd

Function

ATyS S products are 4 pole remotely operated transfer switches with positive break indication.
They enable the on-load transfer of two three-phase supplies via remote volt-free contacts, from either an external automatic controller, using pulse logic, or a switch.
They are intended for use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Advantages

Extensive power supply range

The ATyS S is available in four supply versions, each with a broad range (+/-30%).
The four versions are:

- 12 VDC power supply.
- 24/48 VDC power supply.
- 230 VAC single power supply.
- 2 x 230 VAC dual power supply.

Safety and reliability

ATyS S products use stable position technology, ensuring constant pressure on the contacts and preventing premature faults. In addition, they do not require a power supply to maintain position, thus protecting their loads from voltage fluctuations.

Easy integration

ATyS S products can be easily installed inside enclosures. Their design, and in particular their compact size, enables integration within most 200 mm deep enclosures.

Simplified maintenance

Maintenance can be carried out easily under load, with manual operation still available.
The control and motorisation section can be replaced simply by removing 4 screws, with no work required on the installation cabling.

ATyS d S: Dual power supply

In addition to the functions offered by the ATyS S, the ATyS d S incorporates supply redundancy without the need for additional wiring. This is obtained by integrating a double supply (2 independent supplies) directly within the product.

The solution for

- Genset < 90 kVA
- Heating systems
- Climate control
- Ventilation systems
- Telecommunications

Strong points

- Extensive power supply range
- Safety and reliability
- Easy integration
- Simplified maintenance
- ATyS d S: Dual power supply

Conformity to standards

- IEC 60947-6-1
- IEC 60947-3
- GB/T 14048-11

Approvals and certifications

Enclosed ATyS S

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See "Enclosed transfer switches".

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References

ATyS S

Rating (A)	No. of poles	Power supply	ATyS S	Bridging bars	Terminal shrouds	Voltage tap	Terminal retainer	DIN rail
40 A	4 P	24/48 VDC	9506 **4004**	4 P 9509 **4013**	Source side 2 pieces 9594 **4012** Load side 2 pieces 9594 **9012**		2 pieces 9599 **4003**	4 modules 9599 **4002**
	4 P	12 VDC	9505 **4004**					
	4 P	230 VAC	9503 **4004**			9599 **4001**		
63 A	4 P	24/48 VDC	9506 **4006**					
	4 P	12 VDC	9505 **4006**					
	4 P	230 VAC	9503 **4006**			9599 **4001**		
80 A	4 P	24/48 VDC	9506 **4008**					
	4 P	12 VDC	9505 **4008**					
	4 P	230 VAC	9503 **4008**			9599 **4001**		
100 A	4 P	24/48 VDC	9506 **4010**					
	4 P	12 VDC	9505 **4010**					
	4 P	230 VAC	9503 **4010**			9599 **4001**		
125 A	4 P	24/48 VDC	9506 **4012**					
	4 P	12 VDC	9505 **4012**					
	4 P	230 VAC	9503 **4012**			9599 **4001**		

ATyS d S

Rating (A)	No. of poles	Power supply	ATyS d S	Bridging bars	Terminal shrouds	Voltage tap	Terminal retainer	DIN rail
40 A	4 P	2 x 230 VAC	9513 **4004**	4 P 9509 **4013**	Source side 2 pieces 9594 **4012** Load side 2 pieces 9594 **9012**	9599 **4001**	2 pieces 9599 **4003**	4 modules 9599 **4002**
63 A	4 P	2 x 230 VAC	9513 **4006**					
80 A	4 P	2 x 230 VAC	9513 **4008**					
100 A	4 P	2 x 230 VAC	9513 **4010**					
125 A	4 P	2 x 230 VAC	9513 **4012**					

Accessories

Bridging bars

Use

For bridging power terminals on the top or bottom side of the switch.

Rating (A)	No. of poles	Reference
40 ... 125	4 P	9509 **4013**

Voltage tap

Use

Enables the required power supply for ATyS S 230 VAC and ATyS d S products to be tapped directly from the product's incoming power terminals. Can also be utilised in applications without neutral, to provide 400 VAC to the autotransformer.

Rating (A)	Reference
40 ... 125	9599 **4001**

Terminal retainer

Use

These clips have a dual function: - to prevent direct access to the power supply and control terminals and
- to secure these connector terminals.

Rating (A)	Pack	Reference
40 ... 125	2 pièces	9599 **4003**

Accessories (continued)

Terminal shrouds

Use

IP2X protection against direct contact with terminals or connecting parts.

Terminal shrouds for the source side		
Rating (A)	**Pack**	**Reference**
40 ... 125	2 pièces	9594 **4012**

Terminal shrouds for the load side		
Rating (A)	**Pack**	**Reference**
40 ... 125	2 pièces	9594 **9012**


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atys-s_023.eps

Autotransformer 400/230 VAC

Use

For applications without neutral, this autotransformer provides the 230 VAC required to power these ATyS products.

Dimensions

75 x 80 x 72 mm

Rating (A)	Reference
40 ... 125	9599 **4004**

DIN rail

Use

This 4-module DIN rail can be installed directly on the front of the ATyS S and can be utilised, for example, for the installation of a surge protection device.

Rating (A)	Reference
40 ... 125	9599 **4002**


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Spares

Manual emergency operation handle

Use

This handle can be used on the product whether the motor unit is mounted or not.

Rating (A)	Reference
40 ... 125	9599 **5012**


poign_058.eps

Connector kit

Use

This kit, including all the connector types for the different products, can be ordered in case of loss or breaking of one connector.

Rating (A)	Reference
40 ... 125	9509 **0002**


acces_416.eps

Characteristics according to IEC 60947-3 and IEC 60947-6-1

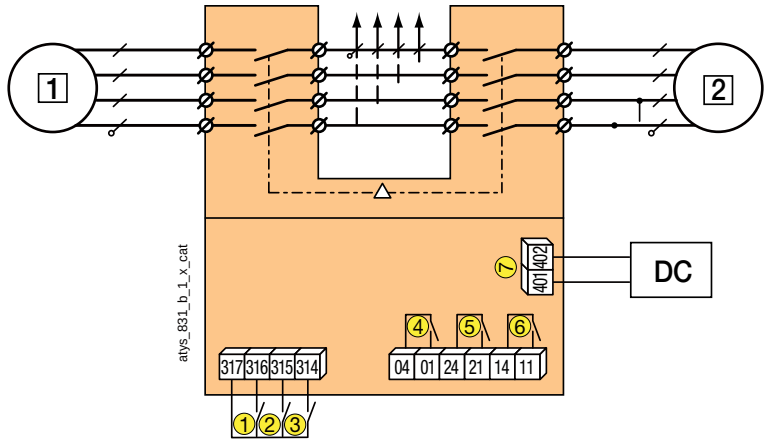
40 to 125 A

Thermal current I_{th} at 40°C		40 A	63 A	80 A	100 A	125 A
Rated insulation voltage U_i (V) (power circuit)		800	800	800	800	800
Rated impulse withstand voltage U_{imp} (kV) (power circuit)		6	6	6	6	6
Rated insulation voltage U_i (V) (control circuit)		300	300	300	300	300
Rated impulse withstand voltage U_{imp} (kV) (control circuit)		4	4	4	4	4
Rated operational currents I_e (A) according to IEC 60947-6-1						
Rated voltage	**Utilisation category**	**A/B**	**A/B**	**A/B**	**A/B**	**A/B**
415 VAC	AC-31 B	40	63	80	100	125
415 VAC	AC-32 B	40	63	80	80	80
Rated operational currents I_e (A) according to IEC 60947-3						
Rated voltage	**Utilisation category**	**A/B**	**A/B**	**A/B**	**A/B**	**A/B**
415 VAC	AC-20 A / AC-20 B	40/40	63/63	80/80	100/100	125/125
415 VAC	AC-21 A / AC-21 B	40/40	63/63	80/80	100/100	100/125
415 VAC	AC-22 A / AC-22 B	40/40	63/63	80/80	100/100	100/100
415 VAC	AC-23 A / AC-23 B	-/40	-/63	-/63	-/63	-/63
Fuse protected short-circuit withstand (kA rms prospective)						
Prospective short-circuit current (kA rms)		50	50	50	25	15
Associated fuse rating (A)		40	63	80	100	125
Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s[3]						
Rated short-time withstand current 0.3s I_{cw} (kA rms)		3.5	3.5	3.5	3.5	3.5
Short-circuit capacity as per IEC 60947-6-1						
Rated short-time withstand current 0.03 s. (kA)		5	5	5	5	-
Rated short-circuit making capacity I_{cm} (kA peak)		7.65	7.65	7.65	7.65	-
Short-circuit capacity as per IEC 60947-3 (without protection)						
Rated short-time withstand current 1 s. I_{cw} (kA rms)		2.5	2.5	2.5	2.5	2.5
Rated peak withstand current (kA peak)		12	12	12	12	12
Connection						
Maximum Cu cable cross-section (mm^2)		50	50	50	50	50
Tightening torque mini / maxi (Nm)		1.2/3	1.2/3	1.2/3	1.2/3	1.2/3
Switching time (Standard setting)						
I - 0 or II - 0 (ms)		500	500	500	500	500
I - II or II - I (ms)		1000	1000	1000	1000	1000
Duration of "electrical blackout" I - II (ms) minimum		500	500	500	500	500
Power supply						
Power supply 12 VDC min / max (VDC)		9/15	9/15	9/15	9/15	9/15
Power supply 24/48 VDC min / max (VDC)		17/62	17/62	17/62	17/62	17/62
Power supply 230 VAC min / max (VAC)		160/310	160/310	160/310	160/310	160/310
Control supply power demand						
Power supply 12 VDC inrush / nominal (VA)		200/40	200/40	200/40	200/40	200/40
Power supply 24/48 VDC inrush / nominal (VA)		200/40	200/40	200/40	200/40	200/40
Supply 230 VAC inrush / nominal (VA)		200/40	200/40	200/40	200/40	200/40
Mechanical characteristics						
Durability (number of operating cycles)		25 000	25 000	25 000	25 000	25 000
Weight ATyS S and ATyS d S 4 P (kg)		3	3	3	3	3

(1) Value for coordination with any circuit breaker that ensures tripping in less than 0.3s. For coordination with specific circuit-breaker references, higher short-circuit current values are available. Please consult us.

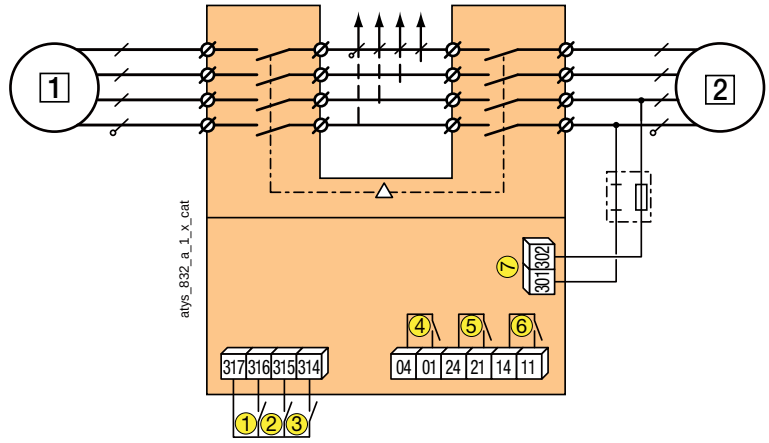
Terminals and connections

ATyS S DC version



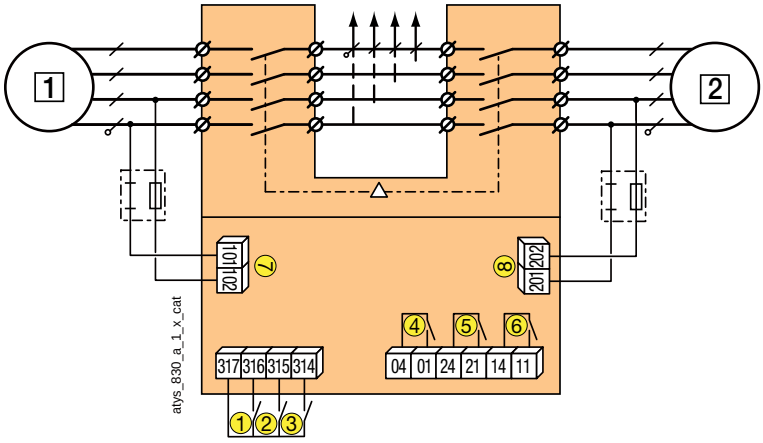
1 preferred source
2 alternate source
1: position 0 control
2: position I control
3: position II control
4: auxiliary contact, closed when the switch is in position 0
5: auxiliary contact, closed when the switch is in position II
6: auxiliary contact, closed when the switch is in position I
7: power supply 12 VDC (9-15 VDC) or 24 VDC / 48 VDC (17-62 VDC) depending on the version.

ATyS S: 230 VAC



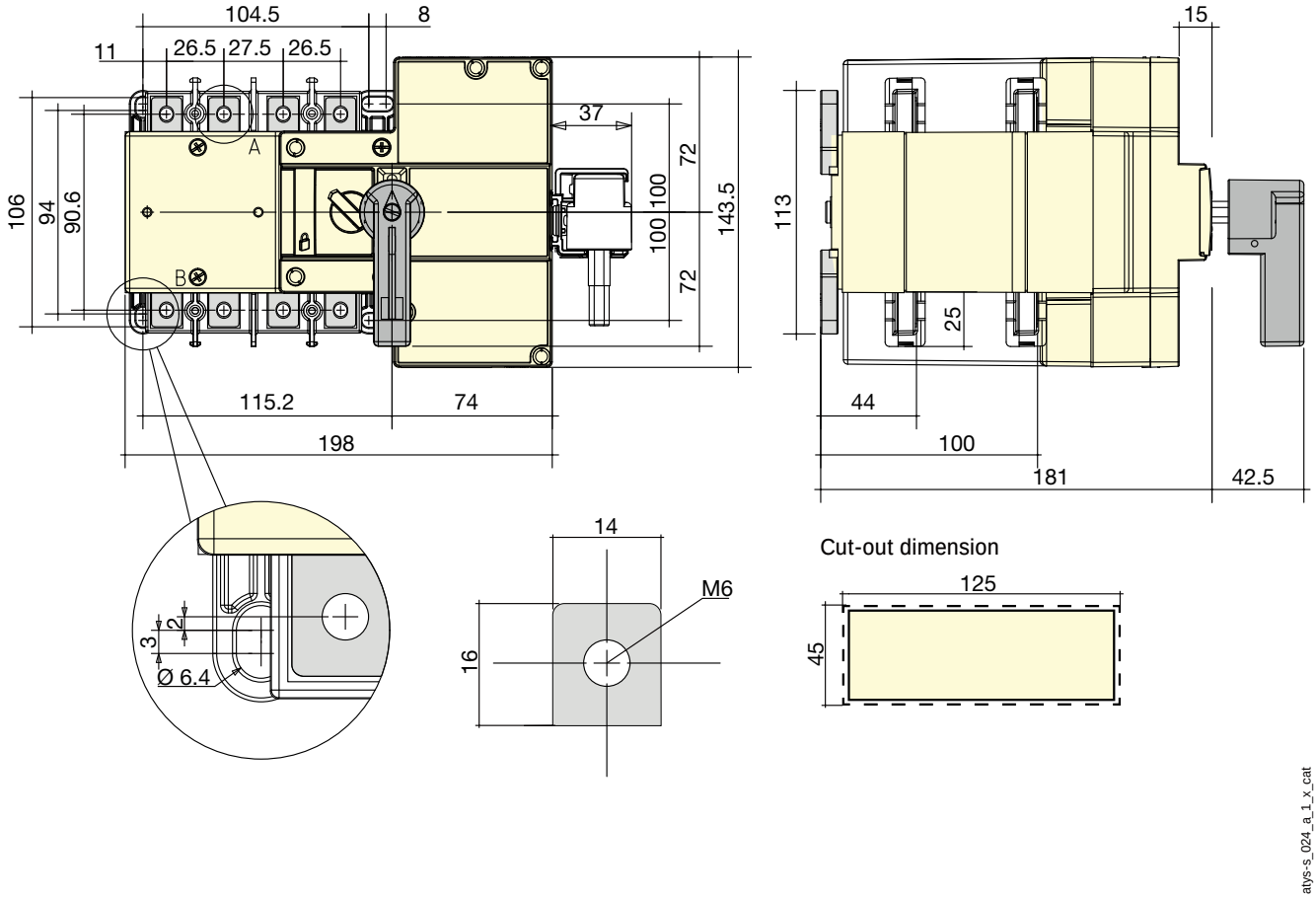
1 preferred source
2 alternate source
1: position 0 control
2: position I control
3: position II control
4: auxiliary contact, closed when the switch is in position 0
5: auxiliary contact, closed when the switch is in position II
6: auxiliary contact, closed when the switch is in position I
7: power supply kit: 230 VAC (160-310 VAC)

ATyS d S: 2 x 230 VAC

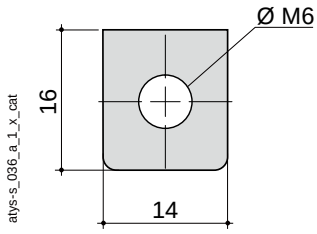


1 preferred source
2 alternate source
1: position 0 control
2: position I control
3: position II control
4: auxiliary contact, closed when the switch is in position 0
5: auxiliary contact, closed when the switch is in position II
6: auxiliary contact, closed when the switch is in position I
7: power supply kit I: 230 VAC (160-310 VAC)
8 : power supply kit II: 230 VAC (160-310 VAC)

Dimensions



Connection terminal



The *ATyS* range: intuitive, reliable and robust solutions

A complete range of automatic and remotely operated transfer switches from 125 to 3200 A

To meet the increasing demands of its users, the ATyS range is constantly evolving to offer new functions. Three product versions are available to find the right solution perfectly adapted to your application.

RTSE (Remotely operated)	**ATSE** (Automatic)	
		
ATyS r Motorised Transfer Switching Equipment	***ATyS g*** Automatic Transfer Switching Equipment	***ATyS p*** Automatic Transfer Switching Equipment
	Automatic controller to manage mains/ mains and mains/ genset applications RS485 communication option (monitoring)	Functions for energy management Communication options

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The *ATyS* range: intuitive, reliable and robust solutions

The advantages

Safe operation

- Permanent indication of product availability (Watchdog relay).
- Positive break indication.
- Mechanical position interlocking.
- Padlocked mode to secure maintenance operations (lockout).
- Secure access to the product configuration.

Intuitive use

- Manual emergency control:
  The product can be controlled quickly and safely using an emergency handle (motor installed or removed).
- User friendly selection of the operating mode (Auto/Manual) using an integrated selector.

Robust integrated solution

A single product with all the functions:

- Integrated and tested solution: components factory assembled and wired.
- Greater reliability: compliance with IEC 60947-6-1, the standard governing transfer switches.

Proven SOCOMEC technology:

- Combination of two "back-to-back" (load break switch) PC class switches.
- Switching based on stable positions guaranteeing constant pressure on the contacts at all times.
- SIRCO contact technology used in numerous products for over 40 years.

Rapid commissioning

- ATyS: no configuration required.
- ATyS g: configuration in just a few minutes using a screwdriver.
- ATyS p: simplified configuration (EASY CONFIG software and LCD display on the device).
- ATyS g, p: auto-configuration of the network parameters.

Easy maintenance

- Self-cleaning sliding contacts.
- Easy replacement of the motor and the electronic unit, even on-load.

Improved on load characteristics

IEC 60947-6-1/GB 14048-11

- AC 31B - up to 3200 A
- AC 32B - up to 2000 A
- AC 33B - up to 1250 A

IEC 60947-3

- AC 23B - up to 1250 A

Enclosed RTSE

See "Enclosed transfer switches".

Enclosed ATSE

See "Enclosed transfer switches".

Expert Services

> Study, definition, advice, implementation, maintenance and training…
> Our Expert Services team offers customised support to make your project a success.

ATyS r

Remotely operated Transfer Switching Equipment
from 125 to 3200 A

Function

ATyS r are 3 or 4 pole remotely operated motorised transfer switches with positive break indication.

They enable the on-load transfer of two three-phase power supplies via remote volt-free contacts, from either an external automatic controller, using pulse logic, or a switch.

They are intended for use in low voltage power systems where interruption of the load supply is acceptable during transfer.

Advantages

Watchdog relay to check product availability

ATyS r products are equipped with a Watchdog relay which constantly monitors your product, thereby securing the installation.

This relay informs in real time the user of the product's availability, i.e. whether it is operational and ready for source switching.

Integrated auxiliary contacts

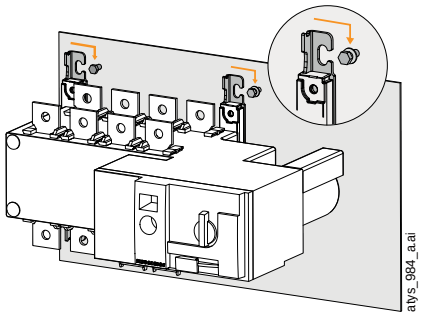
As part of the product monitoring function, the ATyS r enable the transmission of information relating to their position. This is possible thanks to the standard integration of an auxiliary contact for each position.

Extended power supply range

ATyS r products offer greater availability thanks to their extensive power supply range of 208 to 277 VAC ± 20%.

More robust

The updated design includes metal mounting legs across the entire ATyS range, improving the overall robustness of the switches.
It also allows an easier and trouble-free mounting of the switches on a back plate with preassembled screws.



The solution for

- Applications with an external ATS/AMF controller
- Building Management Systems (BMS)

Strong points

- Watchdog relay to check product availability
- Integrated auxiliary contacts
- Extended power supply range
- Robust design

Conformity to standards

- IEC 60947-6-1
- IEC 60947-3
- GB/T 14048.11

Approvals and certifications(1)

BUREAU VERITAS

(1) Product references on request.

External automatic controller

- The ATyS r are compatible with our ATyS C55 and ATyS C65 external controllers (for mains/mains and mains/genset applications) with integrated dual power supply offering power redundancy to the controller and the motor unit.

Enclosed RTSE

See "Enclosed transfer switches".

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References

ATyS r

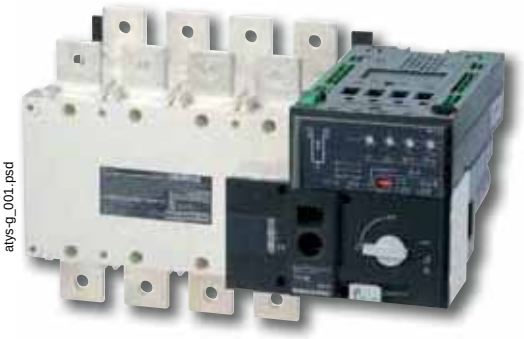
Rating (A) / Frame size	No. of poles	ATyS r	Bridging bars[4]	Terminal shrouds	Terminal screens	Auxiliary contact	3 position padlocking	Auto transformer
125 A / B3	3 P	9523 **3012**	4109 **0019**	3 P 2694 **3014**[2] 4 P 2694 **4014**[2]	3 P 1509 **3012** 4 P 1509 **4012**	1599 **0502**	9599 **0003**[3]	400/230 VAC 1599 **4064**
	4 P	9523 **4012**						
160 A / B3	3 P	9523 **3016**						
	4 P	9523 **4016**						
200 A / B3	3 P	9523 **3020**						
	4 P	9523 **4020**						
250 A / B4	3 P	9523 **3025**	4109 **0025**	3 P 2694 **3021**[2] 4 P 2694 **4021**[2]	3 P 1509 **3025** 4 P 1509 **4025**			
	4 P	9523 **4025**						
315 A / B4	3 P	9523 **3031**	4109 **0039**					
	4 P	9523 **4031**						
400 A / B4	3 P	9523 **3040**						
	4 P	9523 **4040**						
500 A / B5	3 P	9523 **3050**	4109 **0050**	3 P 2694 **3051**[2] 4 P 2694 **4051**[2]	3 P 1509 **3063** 4 P 1509 **4063**			
	4 P	9523 **4050**						
630 A / B5	3 P	9523 **3063**	4109 **0063**					
	4 P	9523 **4063**						
800 A / B6	3 P	9523 **3080**	4109 **0080**		3 P 1509 **3080** 4 P 1509 **4080**	1599 **0532**	9599 **0004**[3]	
	4 P	9523 **4080**						
1000 A / B6	3 P	9523 **3100**						
	4 P	9523 **4100**						
1250 A / B6	3 P	9523 **3120**	4109 **0120**					
	4 P	9523 **4120**						
1600 A / B7	3 P	9523 **3160**	4109 **0160**		3 P 1509 **3160** 4 P 1509 **4160**			
	4 P	9523 **4160**						
2000 A / B8	3 P	9523 **3200**	(1)		3 P 1509 **3200** 4 P 1509 **4200**	included		
	4 P	9523 **4200**						
2500 A / B8	3 P	9523 **3250**						
	4 P	9523 **4250**						
3200 A / B8	3 P	9523 **3320**						
	4 P	9523 **4320**						

(1) See "Copper bar connection pieces".
(2) For complete shrouding at front, rear, top and bottom, order quantity 4; if equipped with bridging bars order quantity 3. For top and bottom shrouding for the front only, order quantity 2.
(3) Factory mounting only.
(4) For a 3 pole device order quantity 3 bridging bars, for a 4 pole device order quantity 4.

ATyS g

Automatic Transfer Switching Equipment

from 125 to 3200 A



Function

ATyS g are 3 or 4 pole automatic transfer switches, with positive break indication. They incorporate all the functions offered by the ATyS r, as well as functions intended for mains/mains and mains/genset applications.

In automatic mode they enable the monitoring of, and the on-load changeover between, two power supply sources, in accordance with the parameters configured via potentiometers and DIP switches. Remote monitoring of the ATyS g is possible with the optional RS485 communication module.

They are intended for use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Advantages

Rapid commissioning

ATyS g switches offer significant time saving during commissioning (process takes 2 to 3 minutes). Owing to the design that allows commissioning through just four potentiometers and four DIP switches, a screwdriver is all that is required to configure the parameters.

For added simplicity, they also offer an autoconfiguration function which enables automatic adjustment of the rated voltage and frequency.

Specifically designed for mains/mains and mains/genset applications

The ATyS g's integrated controller has been designed to provide specific functions for these applications (genset startup, on-load or off-load tests...) together with the monitoring of the voltage and frequency of both sources for three-phase and single-phase networks.

The generator supply must be connected to switch II, located at the rear.

RS845 communication

An optional RS485 communication module (p/n 4825 0092) can be fitted to the AtyS g controller.

It allows remote monitoring of available power sources and their parameters, timers, as well as displaying the product's status and configuration.

Communication speed is up to 38400 bauds.

The solution for

> Mains/mains and mains/genset applications

Strong points

> Rapid commissioning
> ATS with integrated DPS and controller for functions dedicated to mains/mains or mains/genset applications

Conformity to standards

> IEC 60947-6-1
> IEC 60947-3
> GB/T 14048.11

Approvals and certifications(1)

BUREAU VERITAS

(1) Product references on request.

Enclosed RTSE

See "Enclosed transfer switches".

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References

ATyS g

Rating (A) / Frame size	No. of poles	ATyS g	Bridging bars[3]	Voltage sensing and power supply kit	Terminal shrouds	Terminal screens	Auxiliary contact
125 A / B3	3 P	9553 **3012**	4109 **0019**	3 P 1559 **3012** 4 P 1559 **4012**	3 P 2694 **3014**[2] 4 P 2694 **4014**[2]	3 P 1509 **3012** 4 P 1509 **4012**	1599 **0502**
	4 P	9553 **4012**					
160 A / B3	3 P	9553 **3016**					
	4 P	9553 **4016**					
200 A / B3	3 P	9553 **3020**					
	4 P	9553 **4020**					
250 A / B4	3 P	9553 **3025**	4109 **0025**	1559 **3025**	3 P 2694 **3021**[2] 4 P 2694 **4021**[2]	3 P 1509 **3025** 4 P 1509 **4025**	
	4 P	9553 **4025**		1559 **4025**			
315 A / B4	3 P	9553 **3031**	4109 **0039**	3 P 1559 **3040** 4 P 1559 **4040**			
	4 P	9553 **4031**					
400 A / B4	3 P	9553 **3040**					
	4 P	9553 **4040**					
500 A / B5	3 P	9553 **3050**	4109 **0050**	3 P 1559 **3063** 4 P 1559 **4063**	3 P 2694 **3051**[2] 4 P 2694 **4051**[2]	3 P 1509 **3063** 4 P 1509 **4063**	
	4 P	9553 **4050**					
630 A / B5	3 P	9553 **3063**	4109 **0063**				
	4 P	9553 **4063**					
800 A / B6	3 P	9553 **3080**	4109 **0080**	3 P 1559 **3080** 4 P 1559 **4080**		3 P 1509 **3080** 4 P 1509 **4080**	1599 **0532**
	4 P	9553 **4080**					
1000 A / B6	3 P	9553 **3100**					
	4 P	9553 **4100**					
1250 A / B6	3 P	9553 **3120**	4109 **0120**	1559 **3120**			
	4 P	9553 **4120**		1559 **4120**			
1600 A / B7	3 P	9553 **3160**	4109 **0160**	1559 **3160**		1509 **3160**	
	4 P	9553 **4160**		1559 **4160**		1509 **4160**	
2000 A / B8	3 P	9553 **3200**	(1)	3 P 1559 **3200** 4 P 1559 **4200**		3 P 1509 **3200** 4 P 1509 **4200**	included
	4 P	9553 **4200**					
2500 A / B8	3 P	9553 **3250**					
	4 P	9553 **4250**					
3200 A / B8	3 P	9553 **3320**					
	4 P	9553 **4320**					

(1) See "Copper bar connection pieces".
(2) For complete shrouding at front, rear, top and bottom, order quantity 4; if equipped with bridging bars order quantity 3. For top and bottom shrouding for the front only, order quantity 2.
(3) For a 3 pole device order quantity 3 bridging bars, for a 4 pole device order quantity 4.

ATyS p

Automatic Transfer Switching Equipment

from 125 to 3200 A

Function

ATyS p are 3 or 4 pole automatic transfer switches with positive break indication. They incorporate all the functions offered by the ATyS t and g, as well as functions designed for power management and functions communication.

In automatic mode they enable the monitoring of, and the on-load changeover between, two power supply sources, in accordance with the parameters configured through LCD display, or via communication.

They are intended for use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Advantages

Recording of events

ATyS p switches enable effective monitoring of your installation thanks to timestamped event recording.

Events can be retrieved and read via communication.

Optional communication modules

The ATyS p offers communication functions through the addition of optional modules, such as RS485 Modbus or Ethernet with embedded Webserver.

Configuration software

Software (Easyconfig) is available enabling the ATyS p parameters to be easily configured and the existing configuration to be saved and sent to other units.

Power measurements

ATyS p products are particularly suited to energy management and monitoring.

In addition to their integrated power and energy measurement functions (with a 2% accuracy level), programmable inputs/outputs can be utilised to control load shedding based on a load level or tariff.

Possibility to set periodic genset startup

ATyS p switches offer additional functions for maintenance. They include a programmable genset starting function which allows the starting dates and operating times to be configured.

The solution for

> Applications requiring power management and communication.

Strong points

> Optional communication modules
> Recording of events
> Configuration software
> Power measurements
> Possibility to set periodic genset startup

Conformity to standards

> IEC 60947-6-1
> IEC 60947-3
> GB/T 14048.11

Approvals and certifications(1)

BUREAU VERITAS

(1) Product references on request.

Webserver

The Webserver function comprises HTML pages embedded in the Ethernet communication module.

These pages can be accessed via an internet browser, simply by entering the IP address.

The webserver offers the following functionalities:

> Display of source status and switch position
> Display of the main measurements
> Extraction of the latest logged events
> Display of the product configuration

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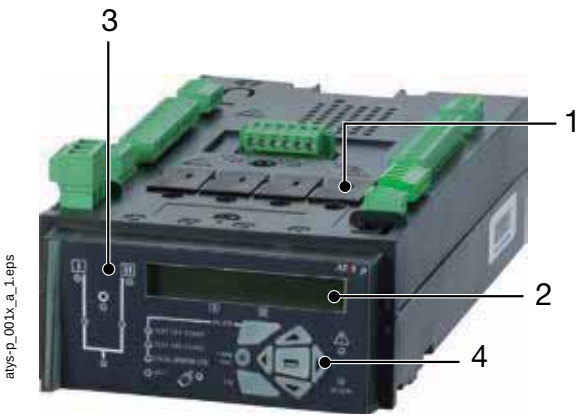
Front panel



atys-p_001x_a_1.eps

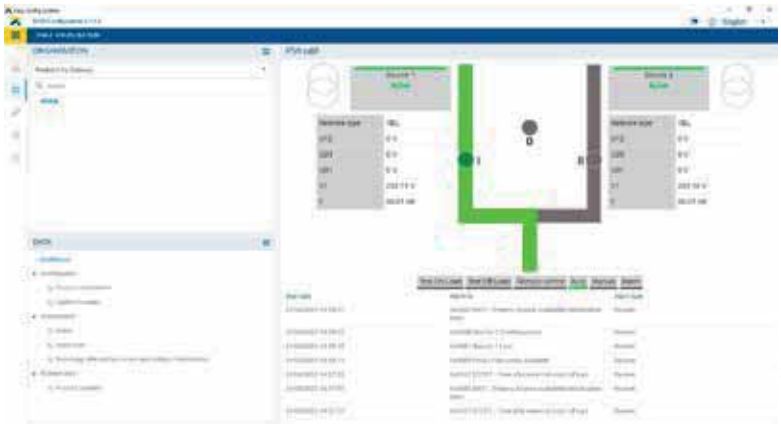
1. Slots for optional plug-in modules.
2. Backlit LCD display.
3. Source availability and position indication LEDs.
4. Parameter programming keypad.

Communication and configuration

Easyconfig

Easyconfig software is the ideal solution to save time and simplify complex configuration.

Allows configuration of the following parameters:
- application type,
- voltage/frequency thresholds,
- timers,
- inputs/outputs...

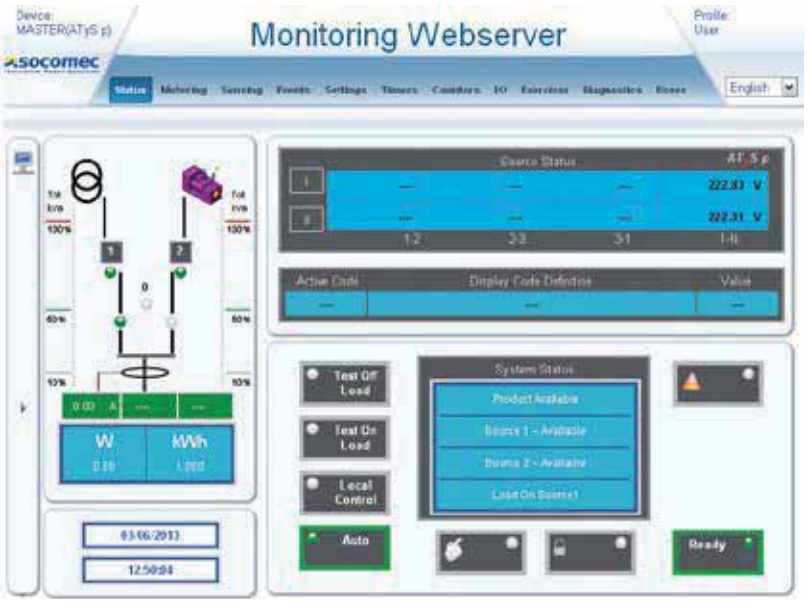


atys-p_064_a_en.eps

Webserver

Thanks to optional modules, ATyS p can communicate in Modbus and Ethernet protocols.
The Ethernet communication module includes the Webserver function for access to the ATyS p via an internet browser.

The Webserver function enables:
- display of source status and switch position,
- display of voltage measurements,
- display of parameters,
- access to the list of logged events.



atys 850 a

References

ATyS p

Rating (A) / Frame size	No. of poles	ATyS p	Bridging bars[3]	Voltage sensing and power supply kit	Terminal shrouds	Terminal screens	Optional modules	Auxiliary contact
125 A / B3	3 P	9573 **3012**	4109 **0019**	3 P 1559 **3012** 4 P 1559 **4012**	3 P 2694 **3014**[2] 4 P 2694 **4014**[2]	3 P 1509 **3012** 4 P 1509 **4012**	RS485 MODBUS communication 4825 **0092** 2 inputs / 2 outputs 1599 **2001** Ethernet communication 4825 **0203** Ethernet communication + RS485 MODBUS gateway 4825 **0204** Analogue outputs 4825 **0093** Pulse outputs 4825 **0090**	1599 **0502**
	4 P	9573 **4012**						
160 A / B3	3 P	9573 **3016**						
	4 P	9573 **4016**						
200 A / B3	3 P	9573 **3020**						
	4 P	9573 **4020**						
250 A / B4	3 P	9573 **3025**	4109 **0025**	1559 **3025**	3 P 2694 **3021**[2] 4 P 2694 **4021**[2]	3 P 1509 **3025** 4 P 1509 **4025**		
	4 P	9573 **4025**		1559 **4025**				
315 A / B4	3 P	9573 **3031**	4109 **0039**	3 P 1559 **3040** 4 P 1559 **4040**				
	4 P	9573 **4031**						
400 A / B4	3 P	9573 **3040**						
	4 P	9573 **4040**						
500 A / B5	3 P	9573 **3050**	4109 **0050**	3 P 1559 **3063** 4 P 1559 **4063**	3 P 2694 **3051**[2] 4 P 2694 **4051**[2]	3 P 1509 **3063** 4 P 1509 **4063**		
	4 P	9573 **4050**						
630 A / B5	3 P	9573 **3063**	4109 **0063**					
	4 P	9573 **4063**						
800 A / B6	3 P	9573 **3080**	4109 **0080**	3 P 1559 **3080** 4 P 1559 **4080**		3 P 1509 **3080** 4 P 1509 **4080**		1599 **0532**
	4 P	9573 **4080**						
1000 A / B6	3 P	9573 **3100**						
	4 P	9573 **4100**						
1250 A / B6	3 P	9573 **3120**	4109 **0120**	3 P 1559 **3120** 4 P 1559 **4120**				
	4 P	9573 **4120**						
1600 A / B7	3 P	9573 **3160**	4109 **0160**	3 P 1559 **3160** 4 P 1559 **4160**		1509 **3160**		
	4 P	9573 **4160**				1509 **4160**		
2000 A / B8	3 P	9573 **3200**	(1)	3 P 1559 **3200** 4 P 1559 **4200**		3 P 1509 **3200** 4 P 1509 **4200**		included
	4 P	9573 **4200**						
2500 A / B8	3 P	9573 **3250**						
	4 P	9573 **4250**						
3200 A / B8	3 P	9573 **3320**						
	4 P	9573 **4320**						

(1) See "Copper bar connection pieces".
(2) For complete shrouding at front, rear, top and bottom, order quantity 4; if equipped with bridging bars order quantity 3. For top and bottom shrouding for the front only, order quantity 2.
(3) For a 3 pole device order quantity 3 bridging bars, for a 4 pole device order quantity 4.

ATyS p

Rating (A) / Frame size	No. of poles	ATyS p	DC power supply	3 position padlocking	Key handle interlocking system	Door protective surround	Remote control interface
125 A / B3	3 P	9573 **3012**	12 VDC/230 VAC 1599 **5012** 24 VDC/230 VAC 1599 **5112** 48 VDC/230 VAC 1599 **5212**	9599 **0003**(1)	Using lock RONIS EL11AP in position 0 9599 **1006**(1)	1539 **0012**	D20 9599 **2020** + RJ45 cable connection 1599 **2009**
	4 P	9573 **4012**					
160 A / B3	3 P	9573 **3016**					
	4 P	9573 **4016**					
200 A / B3	3 P	9573 **3020**					
	4 P	9573 **4020**					
250 A / B4	3 P	9573 **3025**					
	4 P	9573 **4025**					
315 A / B4	3 P	9573 **3031**					
	4 P	9573 **4031**					
400 A / B4	3 P	9573 **3040**					
	4 P	9573 **4040**					
500 A / B5	3 P	9573 **3050**					
	4 P	9573 **4050**					
630 A / B5	3 P	9573 **3063**					
	4 P	9573 **4063**					
800 A / B6	3 P	9573 **3080**		9599 **0004**(1)	Using lock RONIS EL11AP in position 0 9599 **1004**(1)	1539 **0080**	
	4 P	9573 **4080**					
1000 A / B6	3 P	9573 **3100**					
	4 P	9573 **4100**					
1250 A / B6	3 P	9573 **3120**					
	4 P	9573 **4120**					
1600 A / B7	3 P	9573 **3160**					
	4 P	9573 **4160**					
2000 A / B8	3 P	9573 **3200**					
	4 P	9573 **4200**					
2500 A / B8	3 P	9573 **3250**					
	4 P	9573 **4250**					
3200 A / B8	3 P	9573 **3320**					
	4 P	9573 **4320**					

(1) Factory mounting only.

ATyS range

ATyS r, ATyS g, ATyS p

from 125 to 3200 A

Accessories

Terminal shrouds

Use

IP2X protection against direct contact with terminals or connecting parts.

Advantages

Perforations allow remote thermographic inspection without the need to remove the shrouds.

Rating (A)	Frame size	No. of poles	Position	Reference
125 ... 200	B3	3 P	top / bottom / front (I) / rear (II)	2694 **3014**(1)(2)
125 ... 200	B3	4 P	top / bottom / front (I) / rear (II)	2694 **4014**(1)(2)
250 ... 400	B4	3 P	top / bottom / front (I) / rear (II)	2694 **3021**(1)(2)
250 ... 400	B4	4 P	top / bottom / front (I) / rear (II)	2694 **4021**(1)(2)
500 ... 630	B5	3 P	top / bottom / front (I) / rear (II)	2694 **3051**(1)(2)
500 ... 630	B5	4 P	top / bottom / front (I) / rear (II)	2694 **4051**(1)(2)

(1) For complete shrouding at front, rear, top and bottom, order quantity 4; if equipped with bridging bars order quantity 3.
(2) For top and bottom shrouding for the front only, order quantity 2.

acces_206_a_2_cat

Terminal screens

Use

Upstream and downstream protection against direct contact with terminals or connection parts.

For upstream and downstream protection, order quantity 1.

Rating (A)	Frame size	No. of poles	Position	Reference
125 ... 200	B3	3 P	top / bottom	1509 **3012**
125 ... 200	B3	4 P	top / bottom	1509 **4012**
250 ... 400	B4	3 P	top / bottom	1509 **3025**
250 ... 400	B4	4 P	top / bottom	1509 **4025**
500 ... 630	B5	3 P	top / bottom	1509 **3063**
500 ... 630	B5	4 P	top / bottom	1509 **4063**
800 ... 1250	B6	3 P	top / bottom	1509 **3080**
800 ... 1250	B6	4 P	top / bottom	1509 **4080**
1600	B7	3 P	top / bottom	1509 **3160**
1600	B7	4 P	top / bottom	1509 **4160**
2000 ... 3200	B8	3 P	top / bottom	1509 **3200**
2000 ... 3200	B8	4 P	top / bottom	1509 **4200**

acces_207_a_2_cat

Inter-phase barrier

Use

Safe isolation between the terminals, essential for use at 690 VAC or in a polluted or dusty atmosphere.

Rating (A)	Frame size	No. of poles	Reference
125 ... 200	B3	3 P	2998 **0033**
125 ... 200	B3	4 P	2998 **0034**
250 ... 400	B4	3 P	2998 **0023**
250 ... 400	B4	4 P	2998 **0024**
500 ... 630	B5	3 P	2998 **0013**
500 ... 630	B5	4 P	2998 **0014**
800 ... 3200	B6 ... B8	3/4 P	included

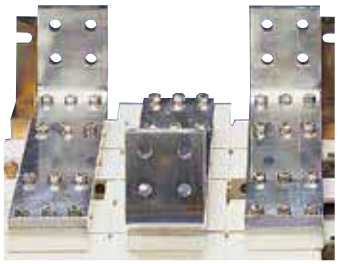
Bridging bars

Use

For bridging power terminals on the outgoing side of the switch.

Rating (A)	Frame size	Diameter (mm)	Reference (1)
125 ... 200	B3	20 x 2.5	4109 **0019**
250	B4	25 x 2.5	4109 **0025**
315 ... 400	B4	32 x 5	4109 **0039**
500	B5	32 x 5	4109 **0050**
630	B5	50 x 5	4109 **0063**
800 ... 1000	B6	50 x 6	4109 **0080**
1250	B6	60 x 8	4109 **0120**
1600	B7	90 x 10	4109 **0160**

(1) For a 3 pole device order quantity 3 bridging bars, for a 4 pole device order quantity 4.



Copper bar connection pieces

Use

For ratings 2000 to 3200 A.

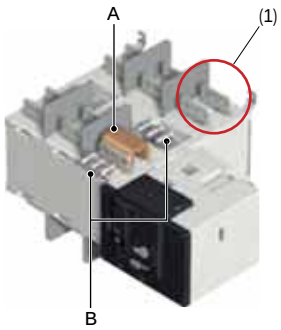
Enables:

- Flat connection: the connection pieces provide a link between the two power terminals of the same pole (Fig. 1).
- Edgewise connection: the connection pieces provide a link between the two power terminals of the same pole and an edgewise bar connection terminal.
- Top or bottom bridging between two poles (Fig. 3).

Once installed, the power terminal is connection ready.

For 3200 A rating, connection pieces (part A) are supplied as standard. Bolt sets must be ordered separately.

Fig. 1



(1) Single pole connection: 1 pole (top or bottom) comprises two power terminals which are to be linked with the copper connection kit.

Connection: the quantities given in the below table refer to the number of pieces required per pole, top or bottom.

Bridging connection: the quantities given refer to the number of pieces required to complete a single bridging connection between two poles.

	Reference	2000 – 2500 A			3200 A		
		Fig. 1	Fig. 2	Fig. 3	Fig. 1	Fig. 2	Fig. 3
		Connection		Bridging connection I - II	Connection		Bridging connection I - II
		Flat	Edgewise		Flat	Edgewise	
Connection - part A	2619 **1200**	1	1	2(2)	included	included	included
Bolt kit 35 mm - part B	2699 **1201**	1(1)		2(2)	1(1)		2(2)
Bolt kit 45 mm - part B	2699 **1200**	1(1)			1(1)		
T + Bolt kit - part C	2629 **1200**		1	1		1	1
Bracket + bolt kit - part D	2639 **1200**		1			1	
Bar + bolt kit - part E	4109 **0320**			1			1

(1) Choose the bolt length according to the thickness of the bars being connected; if bar thickness is greater than 20 mm, 45 mm bolts are required.

(2) For bridging connections, quantity 2 pieces are required for creating the link between the two power terminals of the same pole for switch bodies I and II.

Fig. 2

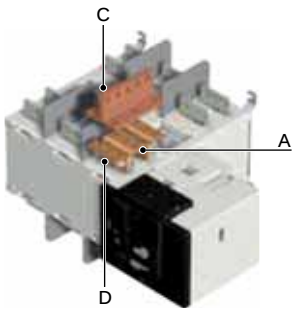
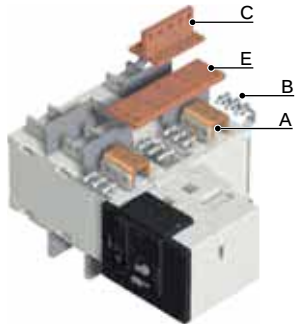


Fig. 3



The quantities of the applicable pieces then need to be multiplied by the number of connection points (power terminals) in order to determine the total quantity required of each part.

Example: For a 4 pole 2500 A SIRCOVER with upstream edgewise connection (Fig. 2) and downstream bridging (Fig. 3), the following quantities will be required:

Part	Upstream edgewise quantity	Downstream bridging quantity	Total quantity
A	8	8	16
B	0	8	8
C	8	4	12
D	8	0	8
E	0	4	4

Accessories (continued)

Autotransformer

Use

For applications without neutral, this autotransformer provides the 230 VAC required to power these ATyS products.

Rating (A)	Frame size	Reference
125 ... 3200	B3 ... B8	1599 **4064**

DC power supply

Use

Allows an ATyS to be supplied from a 12 or 24 VDC source. To be positioned as close as possible to the DC power supply source.

Rating (A)	Frame size	Operating voltage	Reference
125 ... 1600	B3 ... B7	12 VDC / 230 VAC	1599 **5012**
125 ... 1600	B3 ... B7	24 VDC / 230 VAC	1599 **5112**
125 ... 1600	B3 ... B7	48 VDC / 230 VAC	1599 **5212**

Voltage sensing and power supply kit

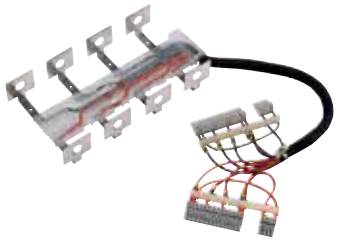
Use

For power supply and voltage measurement (4 wire, three-phase) for the ATyS g and p. Routing of the conductors is controlled, which means that no specific protective device is necessary for these connections.

The kit can be fitted on the top or bottom of the switch.

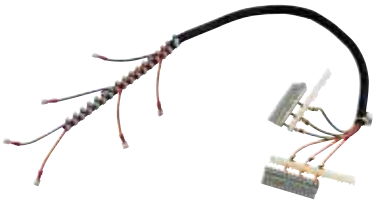
Note: the 3-pole version does not integrate the power supply.

125 to 630 A kit



atys_606_a_1_cat

800 to 3200 A kit



atys_603_a_2_cat

For ATyS g and ATyS p - 3 pole		
Rating (A)	**Frame size**	**Reference**
125 ... 200	B3	1559 **3012**
250	B4	1559 **3025**
315 ... 400	B4	1559 **3040**
500 ... 630	B5	1559 **3063**
800 ... 1000	B6	1559 **3080**
1250	B6	1559 **3120**
1600	B7	1559 **3160**
2000 ... 3200	B8	1559 **3200**

For ATyS g and ATyS p - 4 pole		
Rating (A)	**Frame size**	**Reference**
125 ... 200	B3	1559 **4012**
250	B4	1559 **4025**
315 ... 400	B4	1559 **4040**
500 ... 630	B5	1559 **4063**
800 ... 1000	B6	1559 **4080**
1250	B6	1559 **4120**
1600	B7	1559 **4160**
2000 ... 3200	B8	1559 **4200**

Voltage sensing tags

Use

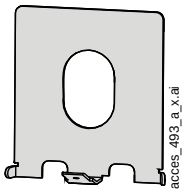
For use with ATyS r, g and p, the voltage sensing tags allow voltage to be tapped directly off of ATyS power terminals to provide a supply to, for example, a control circuit or source presence indicator lamps.

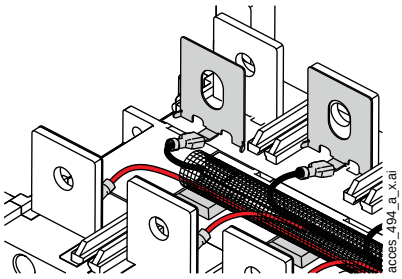
Voltage sensing tags are equipped with a Faston connector and can be mounted on the top or bottom side of the transfer switch.

With ATyS r, this accessory allows easy connection to an ATyS C25 controller via the ATyS C25 cable harness.

1 pack contains 8 voltage sensing tags.

Voltage sensing tags are integrated on ATyS ≥ 800A.





Rating (A)	Frame size	Reference
125 ... 200	B3	9599 **4020**
250 ... 400	B4	9599 **4040**
500 ... 630	B5	9599 **4063**

ATyS C25 cable harness

Use

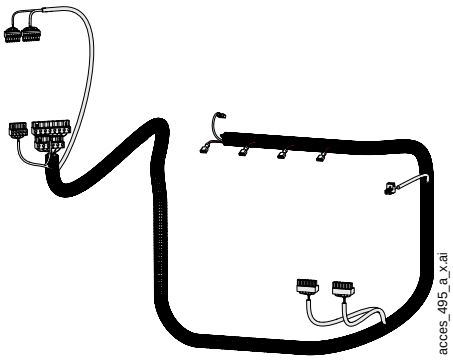
The ATyS C25 cable harness is a fast and reliable solution for connecting an ATyS r transfer switch to a C25 controller in order to create an Automatic Transfer Switch. It is equipped with Faston voltage tap-offs and provides a safe connection between the controller and changeover switch for:

- monitoring availability of the incoming power sources,
- monitoring changeover switch status,
- providing an electrical interlock function,
- automatic control and transfer between power sources.

Provides a DPS auxiliary supply to the ATyS r. Cable harness length is approximately 2 metres.

The cable harness is for use with 4 pole ATyS r only and requires neutral conductors to be on the right side of the transfer switch.

For ATyS r ≤630A it is necessary to order voltage sensing tags separately (required for voltage tap-off connections).



For ATyS r connection to a C25 controller		
Rating (A)	**Frame size**	**Reference**
125 ... 630	B3 ... B5	9529 **4063**
800 ... 3250	B6 ... B8	9529 **4080**

Accessories (continued)

Voltage relay

Use

The DS is a voltage relay for monitoring a single power supply.

If it detects a fault in the source, the fault relay contact closes.

Rating (A)	Reference
DS	192X **0056**

Door protective surround

Use

Door surround to provide a clean and safe finish to the panel's cut-out.

For ATyS

Rating (A)	Frame size	Reference
125 ... 630	B3 ... B5	1529 **0012**
800 ... 3200	B6 ... B8	1529 **0080**

For ATyS g and p

Rating (A)	Frame size	Reference
125 ... 630	B3 ... B5	1539 **0012**
800 ... 3200	B6 ... B8	1539 **0080**

Auxiliary contact

Use

Pre-break and signalling of positions I and II: each reference provides 1 NO/NC auxiliary contact for positions I and II. Possibility to install up to 2 auxiliary contacts for each position.

Low level AC: contact us. ATyS are supplied with 1 NO aux contact for all three positions as standard.

800 to 1600 A

If additional auxiliary contacts are required please consult us.

125 to 630 A

Rating (A)	Frame size	Nominal current (A)	Operating current I_e (A) 250 VAC AC-13	400 VAC AC-13	24 VDC DC-13	48 VDC DC-13
125 ... 3200	B3 ... B8	16	12	8	14	6

Rating (A)	Frame size	Type of mounting	Reference
125 ... 630	B3 ... B5	Customer fit	1599 **0502**
800 ... 1600	B6 ... B7	Customer fit	1599 **0532**
2000 ... 3200	B8	-	2 AC per position fitted as standard

3 position padlocking (I - 0 - II)

Use

Enables the product to be padlocked in positions 0, I and II (factory fitted).

Rating (A)	Frame size	Reference
125 ... 630	B3 ... B5	9599 **0003**
800 ... 3200	B6 ... B8	9599 **0004**

Key handle interlocking system

Use

With the product in manual mode, it enables locking in position 0 using a RONIS EL11AP lock (factory fitted).

As standard, locking in position 0.

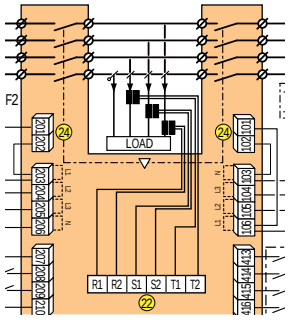
With the 3 position padlocking accessory: key interlocking in I, 0 & II.

Rating (A)	Frame size	Reference
125 ... 630	B3 ... B5	9599 **1006**
800 ... 3200	B6 ... B8	9599 **1004**

Current transformer

Use - for ATyS p only

Used with ATyS p units, these current transformers enable information to be obtained on the load current.



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trafo_025_a_2_cat

trafo_077_b_1_cat

Plug-in optional modules

Use - for ATyS g and ATyS p

Number of modules per device

ATyS g: Compatible with RS485 JBUS/MODBUS module only. One module maximum can be installed (can be fitted in any slot).

ATyS p: A maximum of four modules can be fitted. With Ethernet communication module installation, only 2 additional modules can be fitted.

atys_016_c_1_cat

diris_447_a_1_cat

RS485 JBUS / MODBUS® communication

- RS485 link with JBUS / MODBUS® protocol (speed up to 38400 bauds).

diris_449_a_1_cat

2 inputs - 2 outputs

- 2 inputs and 2 outputs (programmable) on each module.

diris_777_a_1_cat

Ethernet communication

- Ethernet link with MODBUS/TCP or JBUS/MODBUS RTU over TCP.
- Embedded Ethernet Webserver software.

diris_776_a_1_cat

Ethernet communication with RS485 JBUS/MODBUS gateway

- Ethernet link with MODBUS/TCP or JBUS/MODBUS RTU over TCP.
- Connect 1 to 247 RS485 JBUS/MODBUS slaves.
- Embedded Ethernet Webserver software.

diris_448_a_1_cat

Analogue outputs

- Allocate outputs to: 3I, In, 3V, 3U, F, ± ΣP, ± ΣQ, ΣS.

diris_445_a_1_cat

Pulse outputs

- 2 configurable pulse outputs (type, weight and duration) on ±kWh, ±kvarh and kVAh.

Description of accessories	Suitable for	Reference
RS485 MODBUS communication	ATyS g & p	4825 **0092**
2 inputs - 2 outputs	ATyS p	1599 **2001**
Ethernet communication (embedded Ethernet Webserver software)	ATyS p	4825 **0203**
Ethernet communication + RS485 JBUS/MODBUS gateway (embedded Ethernet Webserver software)	ATyS p	4825 **0204**
Analogue outputs	ATyS p	4825 **0093**
Pulse outputs	ATyS p	4825 **0090**

Accessories (continued)

Remote interfaces

Use

To remotely display source availability and position indication typically used on the front of a panel when the product is enclosed.

Interfaces are powered from the ATyS transfer switch via the RJ45 connection cable.

Maximum cable length: 3 m.

D10 - for ATyS g

To display source availability and position indication on the front panel of an enclosure.

Protection degree: IP21

D20 - for ATyS p

In addition to the functions of the D10, the D20 displays measurements and enables control and configuration from the front of a panel.

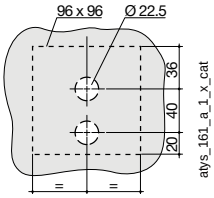
Protection degree: IP21

Door mounting

2 holes Ø 22.5.

ATyS transfer switch via RJ45 cable, not isolated. Cable available as an accessory.

RJ45 port to connect to ATyS.



Drilling

Description of accessories	Suitable for	Reference
D10	ATyS g	9599 **2010**
D20	ATyS p	9599 **2020**

Connecting cable for remote interfaces

Use

To connect between a remote interface (type D10 or D20) and a control product (ATyS g or p).

Characteristics

RJ45 8 straight-through, non insulated cables, length 3 m.

For ATyS g and p		
Type	**Length**	**Reference**
RJ45 cable	3 m	1599 **2009**

Sealable cover

Use - for ATyS g

Prevents access to the configuration of ATyS g devices (seals supplied).

Rating (A)	Frame size	Reference
125 … 3200	B3 … B8	9599 **0000**

Auto/Manual key selector

Use

Replaces the standard Auto/Manual selector knob with a key selector.

Rating (A)	Frame size	Reference
125 … 3200	B3 … B8	9599 **1007**

Double power supply - DPS

Use

Allows an ATyS r to be supplied by two 230 VAC, 50/60 Hz networks.

	ATyS DPS	Modular DPS
Voltage (VAC)		
Min	166	200
Max	332	288
Current (A)		
Max Output	15	3.15
Connection (mm²)		
Max	2.5	6

Description	Suitable for ATyS r	Reference
Modular DPS	125 … 1600 A	1599 **4001**
ATyS DPS	125 … 3200 A	9539 **2001**