CATALOGUE

# Solutions for Power, Control, Safety

2021
2022

POWER
SWITCHING

## When **energy** matters

socomec
Innovative Power Solutions

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




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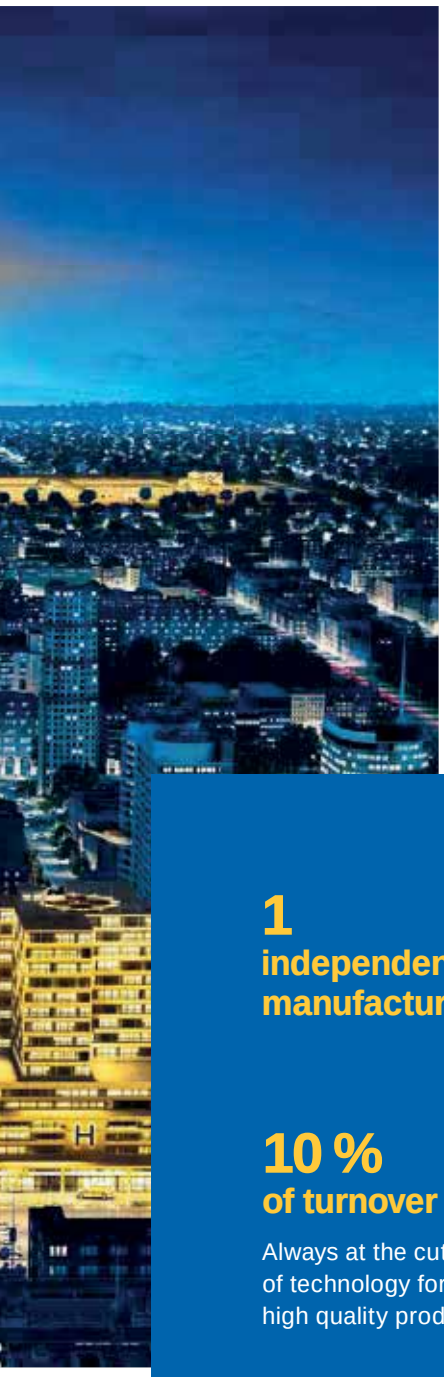


SYDV 514

**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:

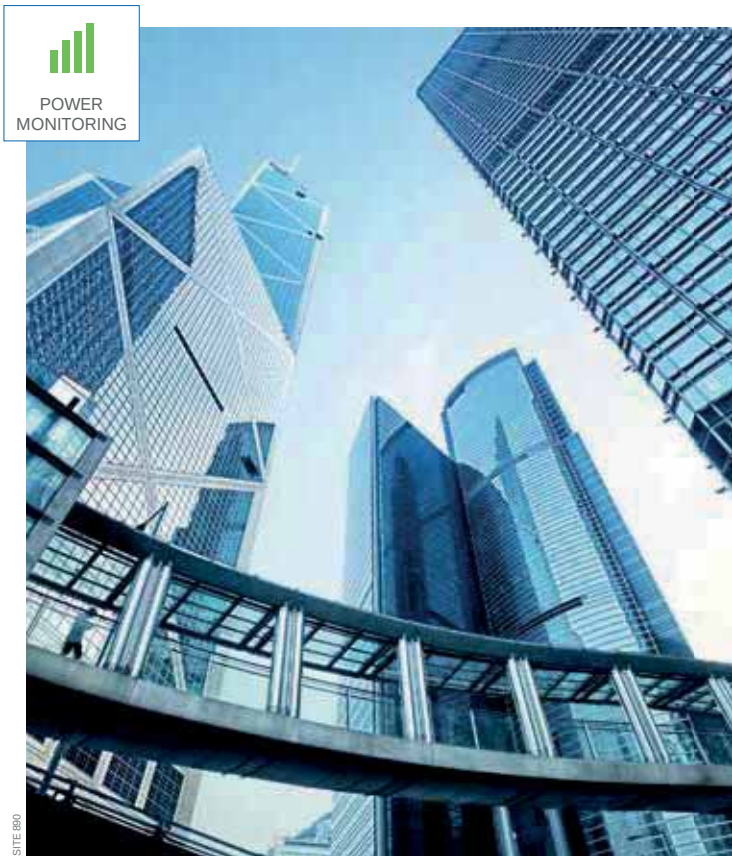
- isolation and on load breaking for the most demanding switching applications,
- continuity of the power supply to electrical facilities via manual remotely operated or automatic transfer switching equipment,
- protection of persons and assets via fusebased and other specialist solutions.

## 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.


APPL 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

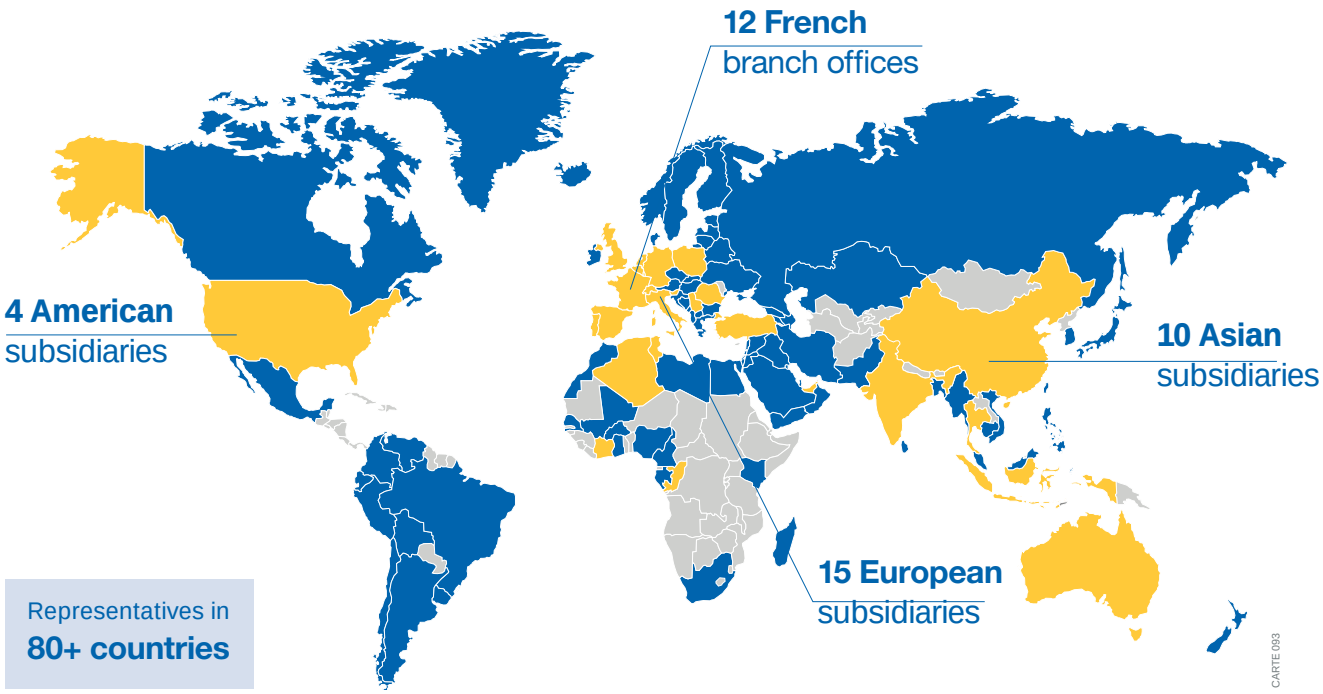
In case of any anomaly, an automatic notification is sent to a local call centre for proactive online troubleshooting.

## 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.




### 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)

# Socomec in India

## State of the art facility to meet local demands

Founded in 1990, SOCOMEC India is a wholly owned subsidiary of Socomec France. An ISO certified company presence across 14 locations, having a skilled and dedicated workforce over 275 people.

CORPO 425 A

### A flexible manufacturing structure

Socomec India a state of the art manufacturing facility spread in 2100 square meter for the production of load break switches and manual changeover switches ranging from 63 to 3200 A. It also manufactures Uninterruptible Power Supply (UPS 100 to 200 kVA). The plant equipped with advanced manufacturing technology has embraced lean manufacturing principles by implementing a system of continuous improvements. Our objective is to provide high levels of product quality to meet our valuable customer demands at affordable cost.

### Solutions to meet every need

Thanks to our substantial R&D resources, our product range is continuously evolving based on our contact with clients.

Our solutions have been approved by the most demanding users. It caters to the application such as Critical Building, Building, Industrial, OEM, Infrastructure & Renewable energy, etc.

### The expert touch

Certified quality products, continuous dialogue to understand customer requirements, maximum flexibility and dedication right by your side. Our experience at your service.

### Our specialists at your disposal

Trusting us with your project means you benefit from pre- and after-sales technical support. Socomec has well qualified and trained sales, service and project management team deployed across the country. Since the team is involved in sales and after sales support, the customer requirements are well understood and suitable solutions are provided. Our qualified and dedicated maintenance engineers and technicians in India assure the peace of mind of our customers.

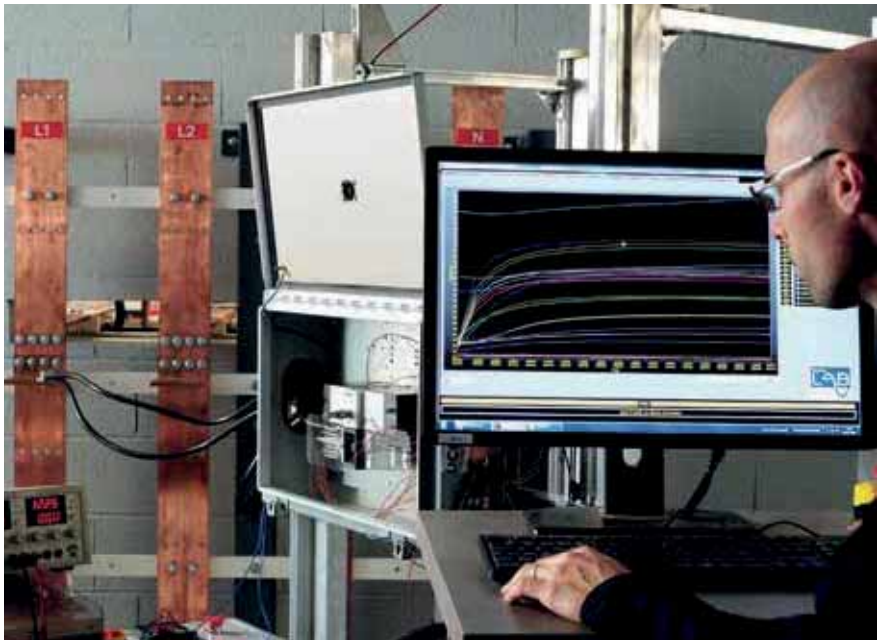
REGAR 103 B

SOCOMEC is fully compliant with ISO 9001 certification discerned by TÜV NORD for the quality of its manufacturing and sale of low voltage, switchgears, UPS and spares.

# 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

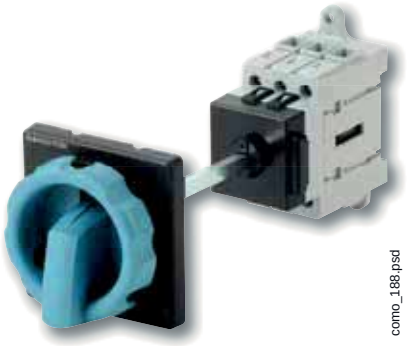
With its world-class testing facilities, the Tesla Lab can perform all of the tests required by IEC/EN 61439 standards for switchgear assemblies

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…).

# COMO

## Load break switches
from 30 to 63 A



como_188.psd

*COMO*
*external operation*

COMO_185_A

*COMO*
*direct operation*

### The solution for

> Industrial control systems

### Strong points

> Easy mounting
> Compact
> Safety

### Conformity to standards

> IEC 60947-3

> UL 60947-4-1(1)

*(1) New UL standard replaces UL508*

### Local safety enclosures

> The COMO is fitted within a polycarbonate enclosure and can be used, for example, for on load breaking of a motor (HP rated).

## Function

**COMO** are compact and modular load break switches. They make and break under all types of load conditions and provide safe isolation for any low voltage circuit, especially for machine control circuits.

## General characteristics

- 2 stable positions (I, 0)
- Double break per phase
- Positive contact indication
- Contact point technology
- Padlocking in 0 position
- IP20 devices and accessories

## Advantages

**Easy mounting**

Three mounting possibilities are available for optimum integration and time saving:

- DIN rail or back plate mounting,
- Door mounting,
- “Quick Fix” mounting to save time when integrating in high quantities.

**Compact**

Thanks to its compact design panel space is greatly reduced.

**Safety**

- Direct access to connection terminals for adequate tightening
- Lockable rotary operating mechanism



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# References

## DIN rail/back plate mounting

| Rating (A) IEC | Rating (A) UL | Type | Switch | 4th pole | External handle K1 type IP65 - 4/4X blue/black no defeater | External handle K1 type IP65 - 4/4X red/yellow no defeater | Extension shaft | Aux contact NO+NC | Neutral pole | Earth pole | Terminal shrouds |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 A | 30 A | for direct operation | 2111 **3003** | 2111 **1003** | - | - | - | 2113 **4000** | 2111 **1056** | 2111 **1076** | 1 P (top and bottom) 2113 **5001**<br>3 P (top and bottom) 2113 **5003** |
| | | for external operation | 2111 **3103** | | with guide shaft 2113 **1112**<br>with cross coupling 2113 **1212** | with guide shaft 2113 **1113**<br>with cross coupling 2113 **1213** | 200 mm 2113 **2200**<br>320 mm 2113 **2320** | | | | |
| 63 A | 50 A | for direct operation | 2111 **3005** | 2111 **1005** | - | - | - | | | | |
| | | for external operation | 2111 **3105** | | with guide shaft 2113 **1112**<br>with cross coupling 2113 **1212** | with guide shaft 2113 **1113**<br>with cross coupling 2113 **1213** | 200 mm 2113 **2200**<br>320 mm 2113 **2320** | | | | |

## Door mounting

| Rating (A) IEC | Rating (A) UL | Type | Switch | 4th pole | External handle K1 type IP65 - 4/4X blue/black no defeater | External handle K1 type IP65 red/yellow no defeater | Aux contact NO+NC | Neutral pole | Earth pole | Terminal shrouds |
|---|---|---|---|---|---|---|---|---|---|---|
| 32 A | 30 A | with screws | 2111 **3203** | 2111 **1203** | 2113 **1322** | 2113 **1323** | 2113 **4200** | 2111 **1256** | 2111 **1276** | 1 P (top and bottom) 2113 **5001**<br>3 P (top and bottom) 2113 **5003** |
| | | quick fix | 2111 **3303** | | 2113 **1332** | 2113 **1333** | | | | |
| 63 A | 50 A | with screws | 2111 **3205** | 2111 **1205** | 2113 **1322** | 2113 **1323** | | | | |
| | | quick fix | 2111 **3305** | | 2113 **1332** | 2113 **1333** | | | | |

# Accessories

## External operation handle

### DIN-rail or back plate mounting

| Rating (A) IEC | Rating (A) UL | Handle type | With guide shaft or cross coupling | Handle colour | External IP (1) | Nema degree of protection | Reference |
|---|---|---|---|---|---|---|---|
| 32 … 63 | 30 … 50 | K1 | guide shaft | black/blue | IP65 | 4, 4X | 2113 **1112** |
| | | | | red/yellow | | | 2113 **1113** |
| | | | compensation | black/blue | | | 2113 **1212** |
| | | | | red/yellow | | | 2113 **1213** |

*(1) IP: Degree of protection according to standard IEC 60529.*


como_198_a.eps


como_201_a.eps

### Door mounting

| Rating (A) IEC | Rating (A) UL | Handle type | Door mounting type | Handle colour | External IP (1) | Nema degree of protection | Reference |
|---|---|---|---|---|---|---|---|
| 32 … 63 | 30 … 50 | K1 | 4 screws | black/blue | IP65 | 4, 4X | 2113 **1322** |
| | | | | red/yellow | | | 2113 **1323** |
| | | | quick fix | black/blue | | | 2113 **1332** |
| | | | | red/yellow | | | 2113 **1333** |

*(1) IP: Degree of protection according to standard IEC 60529.*


como_199_a.eps

## Shaft for external handle

**Use**

Shaft extensions are for external front operation. The shaft is clipped directly into the COMO without using a screw.

**Shafts**

7.9 in (200 mm), 12.6 in (320 mm), (custom length, for high qty).

| Rating (A) IEC | Rating (A) UL | Handle type | Length (in) | Length (mm) | Reference |
|---|---|---|---|---|---|
| 32 … 63 | 30 … 50 | K1 | 7.9 | 200 | 2113 **2200** |
| | | | 12.6 | 320 | 2113 **2320** |


como_202.psd

## Additional pole

### Use

Installation of this switched pole converts a 3 pole COMO into a 4 pole load break switches, 3 pole + neutral or 3 pole + earth.

The 4th pole can be mounted without tools on the right or left side of the device.

Max 2 addtionnal modules, 1 switching module and 1 unswitched module.

### Switched fourth pole module

| Rating (A) IEC | Rating (A) UL | Type of mounting | Type | Reference |
|---|---|---|---|---|
| 32 | 30 | back mounting | switched | 2111 **1003** |
| | | door mounting | | 2111 **1203** |
| 63 | 50 | back mounting | | 2111 **1005** |
| | | door mounting | | 2111 **1205** |


### Solid neutral pole

| Rating (A) IEC | Rating (A) UL | Type of mounting | Type | Reference |
|---|---|---|---|---|
| 32 ... 63 | 30 ... 50 | back mounting | unswitched | 2111 **1056** |
| | | door mounting | | 2111 **1256** |


### Ground module

| Rating (A) IEC | Rating (A) UL | Type of mounting | Type | Reference |
|---|---|---|---|---|
| 32 ... 63 | 30 ... 50 | back mounting | unswitched | 2111 **1076** |
| | | door mounting | | 2111 **1276** |


## Auxiliairy contacts

### Use

There are two types of auxiliary contact, one for back plate mounting and one for door mounting. NO+NC auxiliary contacts per device (1 on each side of the device).

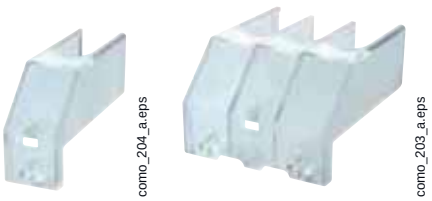
| Rating (A) IEC | Rating (A) UL | Type of mounting | Contact(s) | Contact type | Reference |
|---|---|---|---|---|---|
| 32 ... 63 | 30 ... 50 | back mounting | 1 contact | NO+NC | 2113 **4000** |
| | | door mounting | | | 2113 **4200** |


## Terminal shrouds

### Use

Top and bottom protection against direct contact with terminal or connection parts.
Available in 1 or 3 pole version. Top and bottom pair.

| Rating (A) IEC | Rating (A) UL | Type of mounting | No. of poles | Position | Pack (unit) | Reference |
|---|---|---|---|---|---|---|
| 32 ... 63 | 30 ... 50 | back/door mounting | 1 P | top and bottom | 2 | 2113 **5001** |
| | | | 3 P | | 2 | 2113 **5003** |



# Characteristics

## Characteristics according to IEC 60947-3

| **Rated current $I_n$** | **32 A** | **63 A** |
|---|---|---|
| **Thermal current at 40°C (A)** | **32** | **63** |
| **Thermal current at 50°C (A)** | **32** | **63** |
| **Thermal current at 60°C (A)** | **26** | **50** |
| Rated insulation voltage $U_i$ (V) | 690 | 690 |
| Rated impulse withstand voltage $U_{imp}$ (kV) | 6 | 6 |
| Operational power in AC-23A (kW) | | |
| 400 VAC without pre-break AC | 11.5 | 22 |
| Operational power in AC-3 (kW) | | |
| 400 VAC without pre-break AC | 9.5 | 18.5 |
| Fuse protected Power in AC3 (kW) | | |
| Prospective short-circuit current (kA rms) | 6 | 6 |
| Associated fuse rating (A) | 32 | 63 |
| Short-circuit capacity (without protection) | | |
| Rated short-time withstand current $I_{cw}$ 1s (A rms) | 640 | 1000 |
| Connection | | |
| Miminum Cu cable cross-section ($mm_2$) | 2 | 2 |
| Maximum Cu cable cross-section ($mm_2$) | 16 | 16 |
| Maximum tightenning torque (Nm) | 3 | 3 |
| Mechanical characteristics | | |
| Durability (number of operating cycles) | 100 000 | 100 000 |
| Operating torque (Nm) | 1.27 | 1.27 |

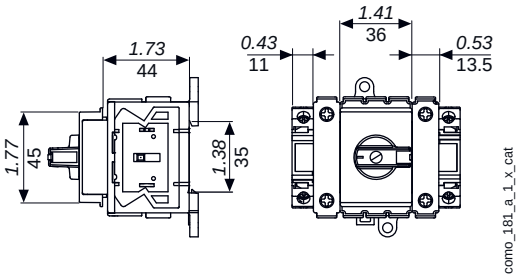
## Characteristics according to UL 60947-4-1 (replaces UL508)

| **General use rating (A)** | **30 A** | **50 A** |
|---|---|---|
| Short circuit rating at 600 VAC (kA) | 5 | |
| Branch circuit fuse type | RK5 | |
| Max fuse rating (A) | 50 | |
| Max horsepower rating / Max motor FLA current | | |
| 120 VAC / 1 phase | 2 / 24 | 3 / 34 |
| 120 VAC / 3 phase | 3 / 19.2 | 5 / 30.4 |
| 240 VAC / 1 phase | 3 / 17 | 10 / 50 |
| 240 VAC / 3 phase | 10 / 28 | 10 / 28 |
| 480 VAC / 3 phase | 20 / 27 | 25 / 34 |
| 600 VAC / 3 phase | 22 / 27 | 30 / 32 |
| Connection terminals | | |
| Solid - 1 wire (AWG) | #14 - #6 | |
| Solid - 2 wires (AWG) | 2 x (#14 - #6) | |
| Auxiliary contacts | | |
| Electrical characteristics | A300 | |
| Mechanical characteristics | | |
| Durability (number of operating cycles) | 100 000 | |
| Operating torque (lbs.in / Nm) | 11.24 / 1.27 | |

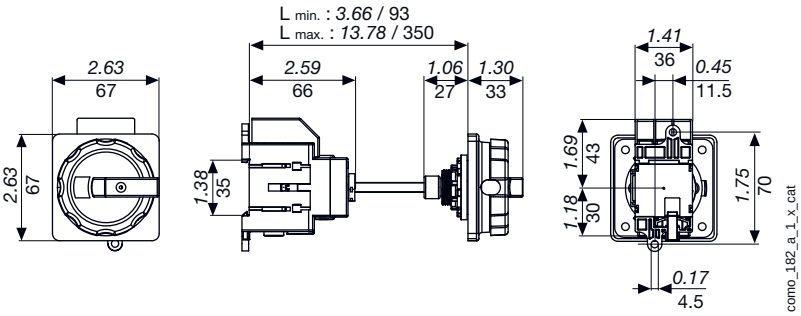
# Dimensions (in/mm)

## Back mounting

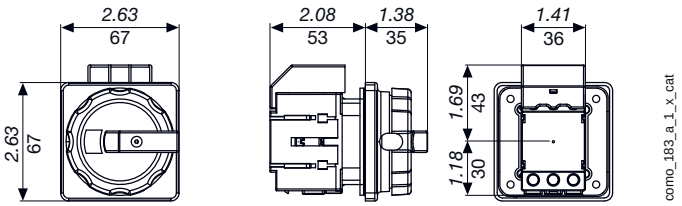
**Direct operation**



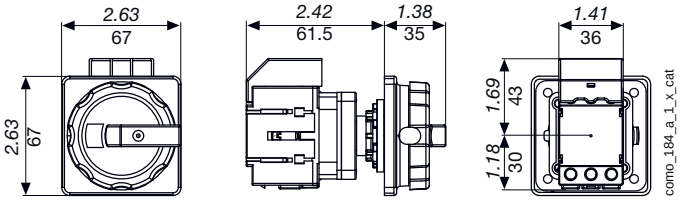

**External operation**




## Door mounting



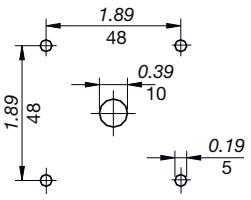

## Door mounting quick fix



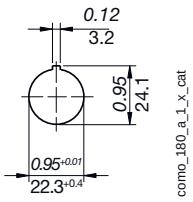

# External handles dimensions (in/mm)

## K1 type

**Standard handle**




**Quick fix handle**



# *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.


sircm_173.psd

Changeover switches **I - 0 - II**

### SIRCO MV

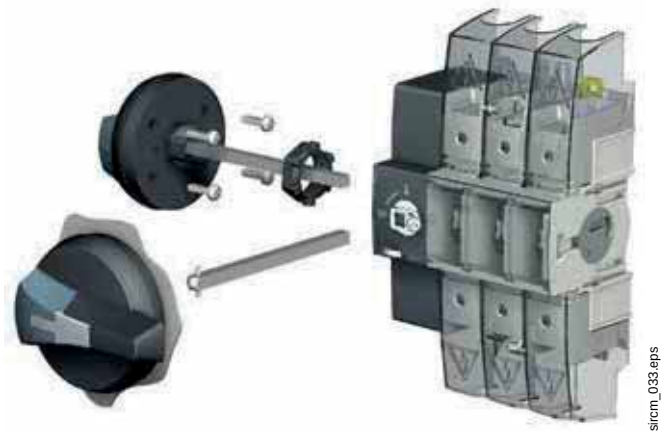
- 3 operations are available:


sircm_032.psd

**Direct** front operation


sircm_034.eps

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<br>Blue<br>2299 **5012**<br>Red<br>2299 **5013** | S00 type<br>I -0<br>Black IP55<br>1471 **1111**(4)<br>Black IP65<br>1473 **1111**(4)<br>Red/Yellow IP65<br>1474 **1111**(4) | S00 type<br>I -0<br>Black IP65<br>147A **5111**<br>Red/Yellow IP65<br>147B **5111** | S00 type<br>I - 0 - II<br>Black IP65<br>1473 **1113**(4)<br>I - I+II - II<br>Black IP65<br>1473 **1114**(4) | 3/4 P<br>≤ 125 A<br>6/8 P & COS<br>≤ 80 A<br>S0, S00 type<br>150 mm<br>1407 **0515**<br>200 mm<br>1407 **0520**<br>320 mm<br>1407 **0532**<br>6/8 P & COS<br>100 ... 125 A<br>S00 type<br>150 mm<br>1409 **0615**<br>200 mm<br>1409 **0620**<br>320 mm<br>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<br>Blue<br>2299 **5032** | S0 type<br>I -0<br>Black IP55<br>1481 **1111**(4)<br>Black IP65<br>1483 **1111**(4)<br>Red/Yellow IP65<br>1484 **1111**(4) | S0 type<br>I -0<br>Black IP65<br>148A **5111**<br>Red/Yellow IP65<br>148B **5111** | S00 type<br>I - 0 - II<br>Black IP65<br>1473 **0113**<br>I - I+II - II<br>Black IP65<br>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<br>1 module NO + NC 2299 **0001**<br>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.

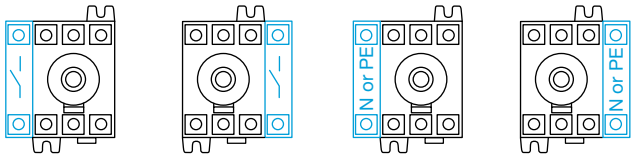

4th pole — Protective earth module — Neutral pole

### 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.

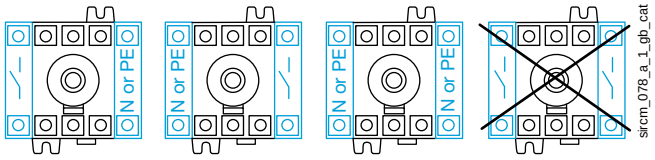



### Protective earth module

| 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.

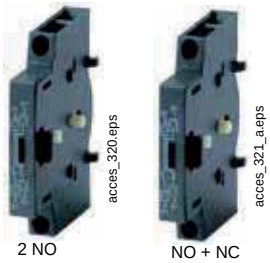
Max 4 auxiliary contacts (2 modules).

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** |

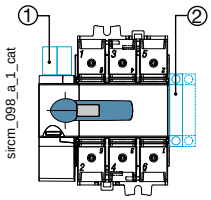
### For SIRCO MV

| 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

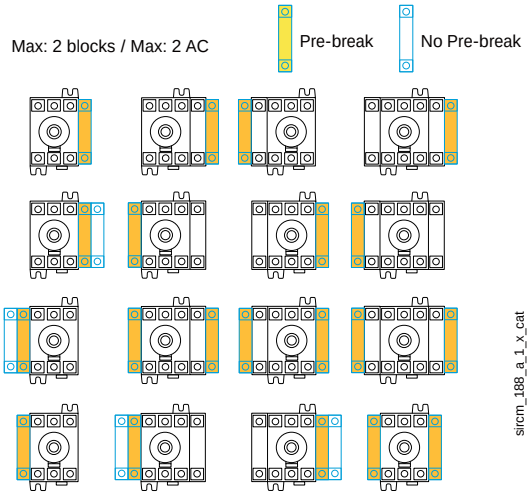
| Rating (A) | Number of AC | Type of AC | Reference |
|---|---|---|---|
| 100 ... 160 | 1 AC | NO | 3999 **0701** |
| 100 ... 160 | 1 AC | NC | 3999 **0702** |

### 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** |

## Door mounting kit(1)

**Use**

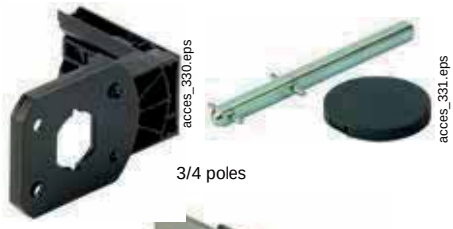
This kit enables a direct mounting of the switch on the door panel, on the right or left side of the panel.

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.



3/4 poles

6/8 pole

**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**

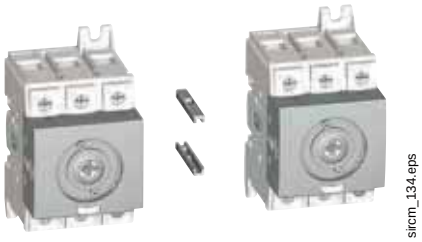
| Rating (A) / Frame size | Pack | Reference |
|---|---|---|
| 16 ... 125 / M1 ... M3 | 20 pieces | 2299 **9409** |

## 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.



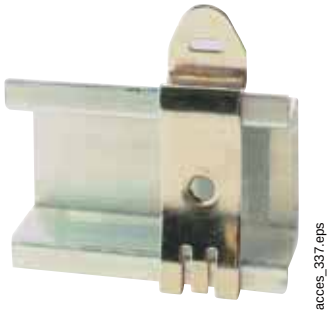

**For SIRCO M**

| 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

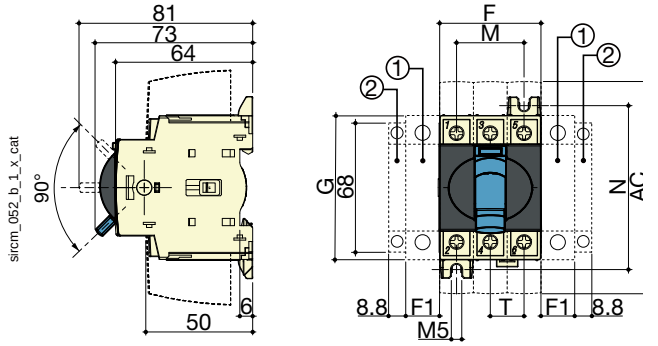
| | | SIRCO MV - from 100 to 160 A | | |
|---|---|---|---|---|
| **Thermal current $I_{th}$ (40 °C)** | | **100 A** | **125 A** | **160 A** |
| Rated insulation voltage $U_i$ (V) | | 800 | 800 | 800 |
| Rated impulse withstand voltage $U_{imp}$ (kV) | | 8 | 8 | 8 |
| Rated operational currents $I_e$ (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

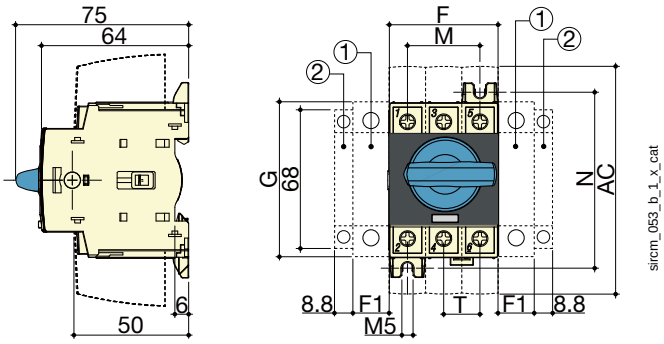
### Toggle operation




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.**

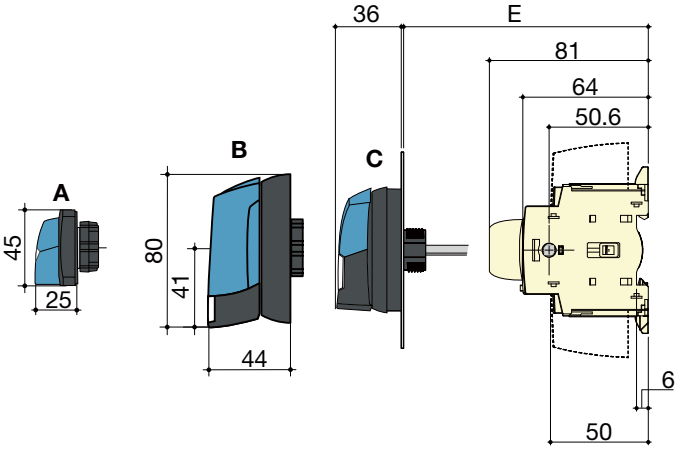
### Direct operation with handle




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.**

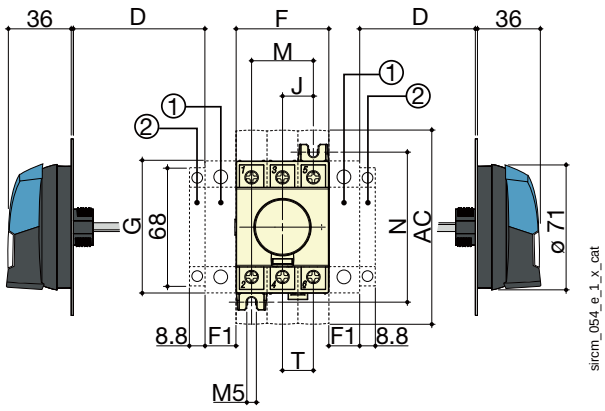
### External front operation




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

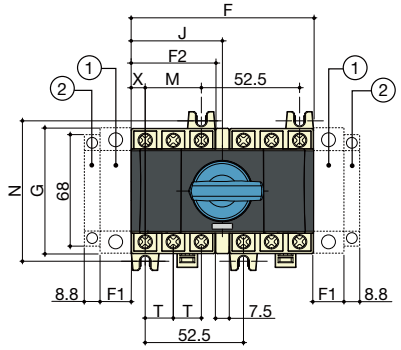



A. S000 Handle
B. S01 Handle
C. S00 Handle.

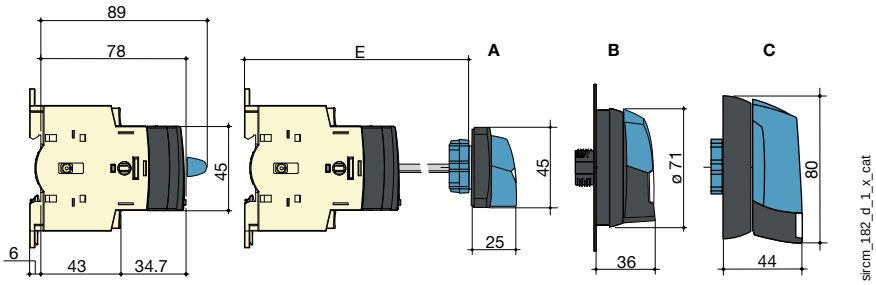
| Rating (A) / Frame size | Overall dimensions | | | | Terminal shrouds | Switch body | | | | Switch mounting | | Connection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D min | D max | E min | E max | AC | F | F1 | G | J | M | N | T |
| 16 … 40 / M1 | 30 | 235 | 100 | 372 | 110 | 45 | 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.

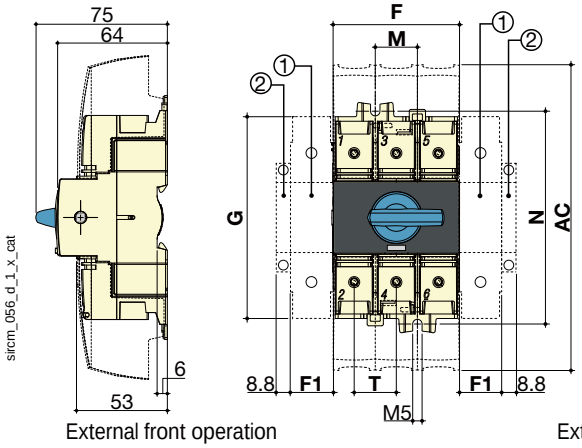
**Note: max 2 additional blocks.**

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

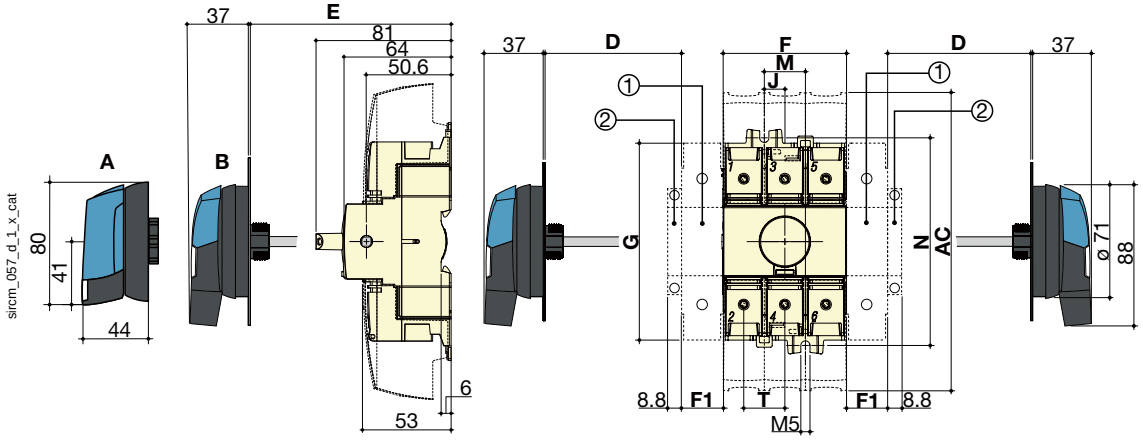



1. Location for: 1 switched fourth pole module (1 per device max.) **or** 1 unswitched neutral pole **or** 1 protective earth module **or** 1 auxiliary contact.
2. Position for 1 auxiliary contact module only.

**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.**

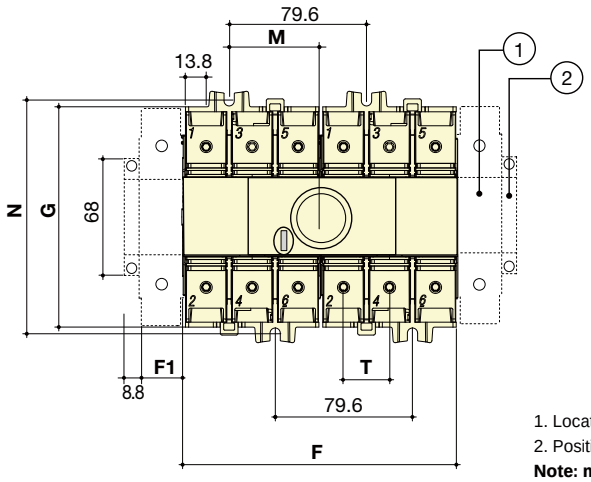
A. S01 handle
B. S00 handle

| 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 |

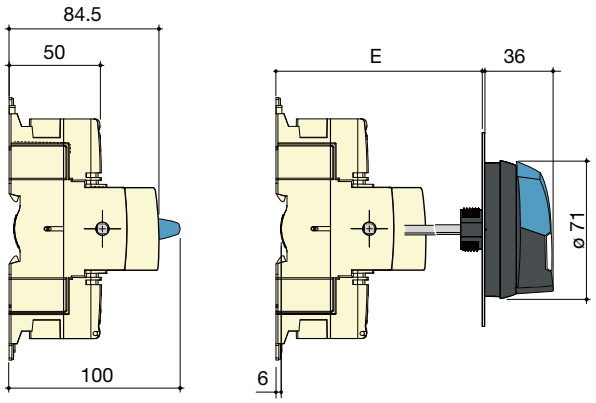
# Dimensions (continued)

## 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.

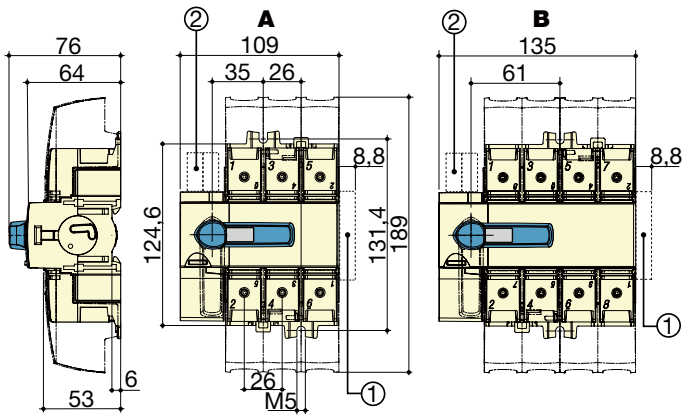
**Note: max 2 additional blocks.**

sircm_183_e_1_x_cat

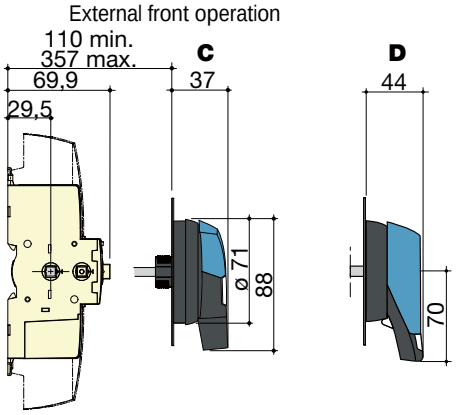
| Rating (A) / Frame size | Overall dimensions | | Switch body | | | Switch mounting | | Connection |
|---|---|---|---|---|---|---|---|---|
| | E min | E max | F | F1 | G | M | N | T |
| 100 … 125 / M3 | 105 | 372 | 159 | 26 | 124.5 | 52.8 | 131.5 | 26 |

## SIRCO MV 100 to 160 A

Direct front operation




External front operation



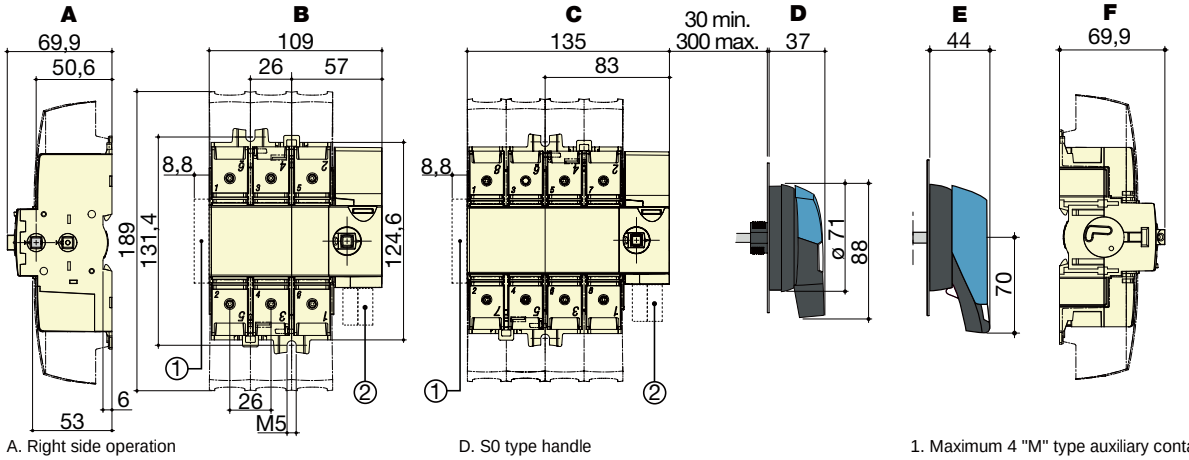

A. 3 poles
B. 4 poles

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

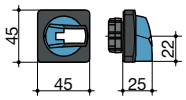
1. Maximum 4 "M" type auxiliary contacts
2. Maximum 2 "U" type auxiliary contacts

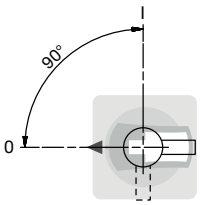
sircm_059_d_1_x_cat

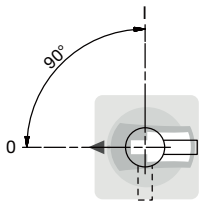
# Dimensions for external handles

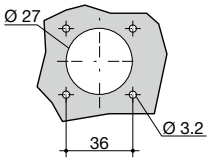
## SIRCO M1 and M2

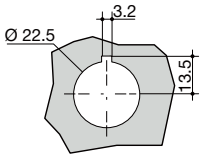
| Handle type | Front operation<br>Direction of operation | Side operation<br>Direction of operation | Door drilling |
|---|---|---|---|
| **S000 type**<br>Load break switches | | **Right side operation** | With 4 fixing screws / With fixing nut |



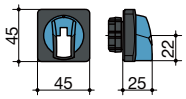



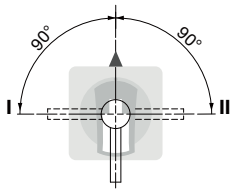



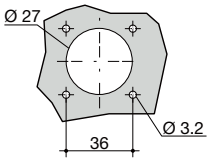



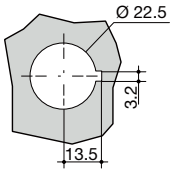

poign_016_a_1_gb_cat

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



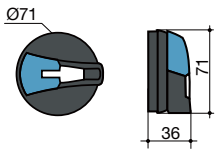



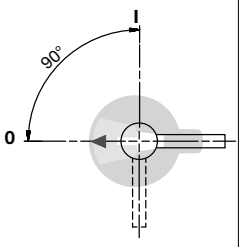



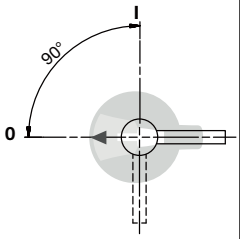



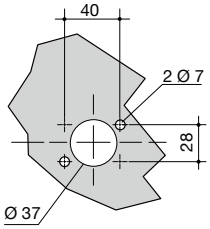

poign_017_b_1_gb_cat

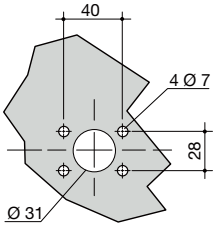
| Handle type | Front operation<br>Direction of operation | Side operation<br>Direction of operation | Door drilling |
|---|---|---|---|
| **S00 type**<br>Load break switches | | **Right side operation** | IP55 with 2 fixing clips / IP65 with 4 fixing screws |
| | | **Left side operation** | With fixing nut |

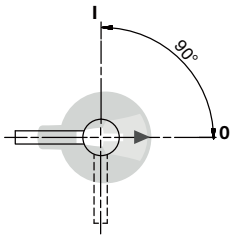


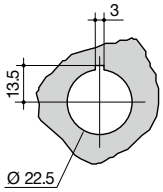



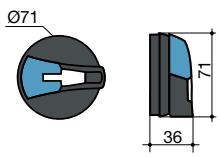



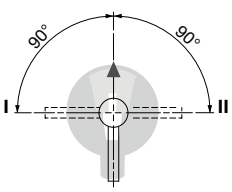



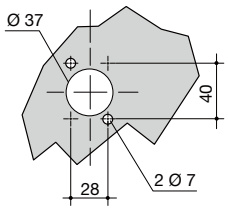



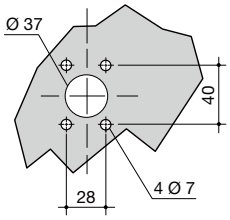

poign_024_a_1_gb_cat

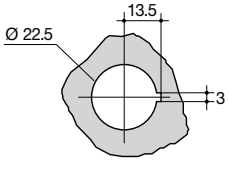
| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S00 type**<br>Transfer switches<br>I-0-II and I - I+II - II | **0**<br>or<br>**I+II** | IP55 with 2 fixing clips / IP65 with 4 fixing screws / With fixing nut |



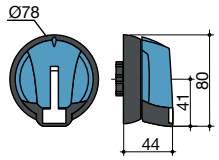
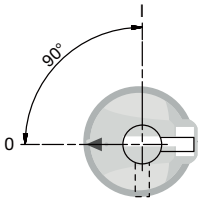
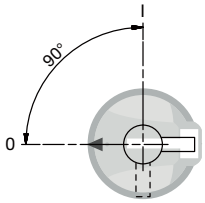
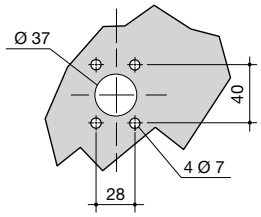



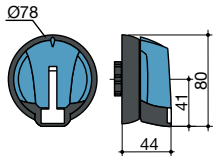
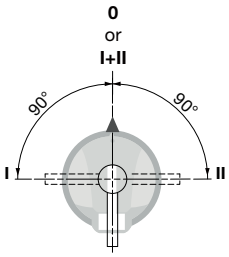
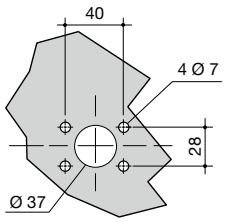

poign_025_b_1_gb_cat

# Dimensions for external handles

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

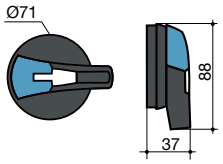
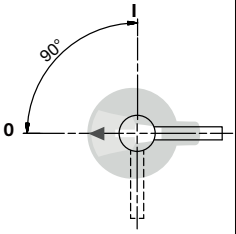
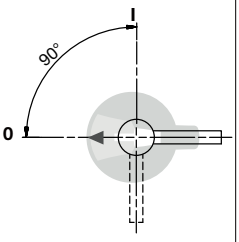
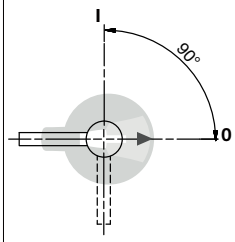
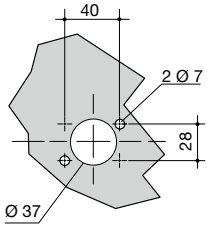
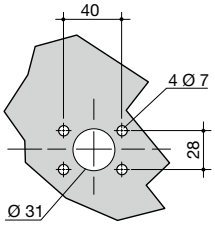
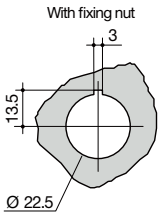
| Handle type | Front operation<br>Direction of operation | Side operation<br>Direction of operation | Door drilling |
|---|---|---|---|
| **S01 type**<br>Load break switches<br>  |  | **Right side operation**<br>  | IP65 with 4 fixing screws<br>  |

poign_018_a_1_gb_cat

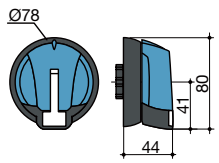
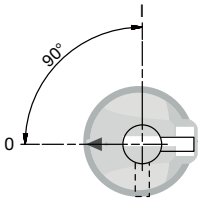
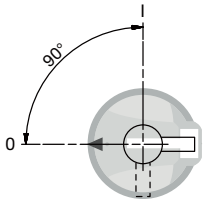
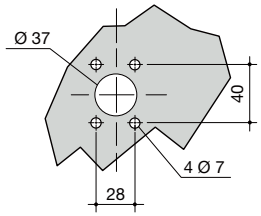
| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S01 type**<br>Transfer switches<br>I-0-II and I - I+II - II<br>  |  | IP65 with 4 fixing screws<br>  |

poign_019_b_1_gb_cat

## SIRCO M3

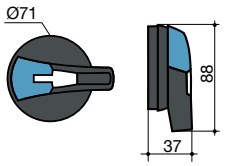
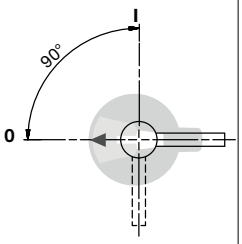
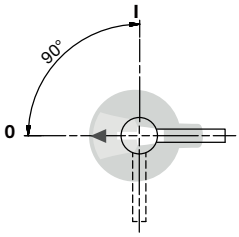
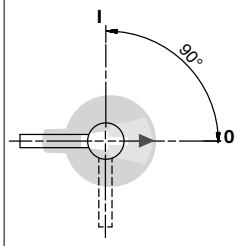
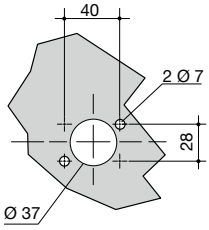
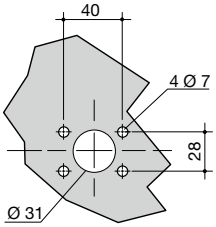
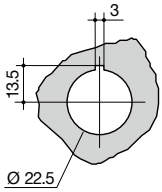
| Handle type | Front operation<br>Direction of operation | Side operation<br>Direction of operation | Door drilling |
|---|---|---|---|
| **S0 type**<br>Load break switches<br>  |  | **Right side operation**<br>  <br>**Left side operation**<br>  | IP55 with 2 fixing clips<br>  <br>IP65 with 4 fixing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

poign_026_a_1_gb_cat

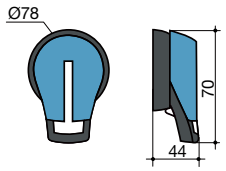
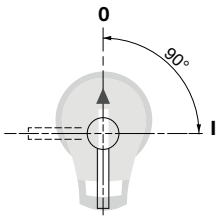
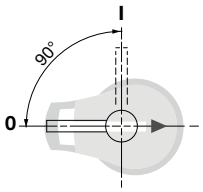
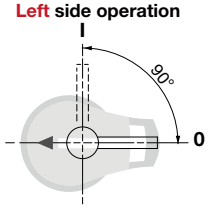
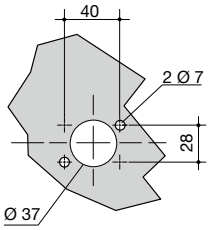
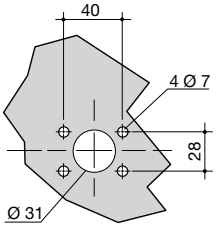
| Handle type | Front operation<br>Direction of operation | Side operation<br>Direction of operation | Door drilling |
|---|---|---|---|
| **S01 type**<br>Load break switches<br>  |  | **Right side operation**<br>  | IP65 with 4 fixing screws<br>  |

poign_018_a_1_gb_cat

## SIRCO MV

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

poign_026_a_1_gb_cat

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

poign_027_a_1_gb_cat



# SIRCO

## Load break and isolation switches for power distribution from 63 to 5000 A

sirco_469.eps

*SIRCO*
*4 P 400 A with direct handle*

sirco_471.eps

*SIRCO*
*4 P 400 A with external handle*

### Function

**SIRCO** are manually operated load break and isolation switches. They make and break under load conditions and provide safe isolation. SIRCO are designed for 415 VAC electrical circuits.

### 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).

### 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. It provides an 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 both high mechanical and thermal resistance.

**Simplicity**

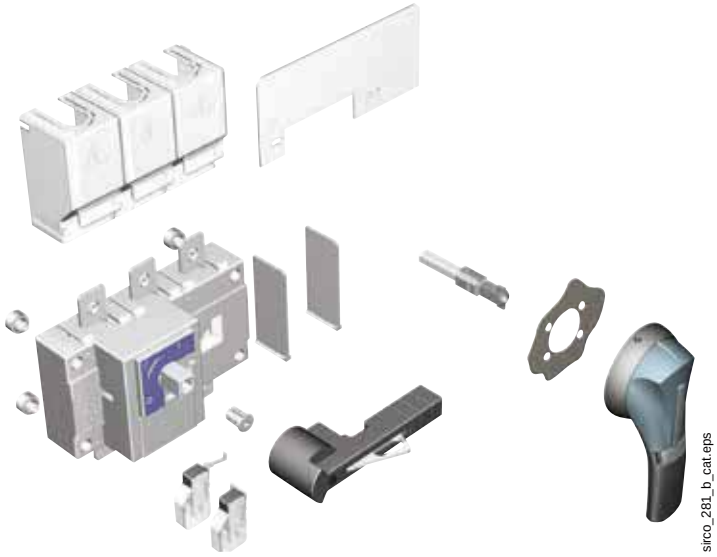
The SIRCO range is available as a kit with direct or external handles or as a bare switch product. It includes a wide choice of common accessories that enable:

- Simple installation.
- Reduced stock management and storage costs.

**Easy to install**

The design of external contacts enables an easy connection thanks to:

- Low profile,
- Wide terminals,
- Spreader accessories which facilitate connections with larger cables, up to 1250 A.



sirco_281_b_cat.eps

### 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

> IS/IEC 60947-3

### Enclosed switch solution

> Suitable for envionments subject to mechanical risk and dust hazards
> Isolation and padlocking
> Top and bottom extension boxes available
> Colour: STR RAL 7035
> Cable gland plates: top/ bottom
> Steel, thickness 1.2 to 2.0 mm
> Coating: epoxy polyester powder
> 4 wall mounting brackets provided
> Door: solid with hinges
> Metal cam lock

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# References - SIRCO kit and enclosed solutions

## 3 & 4 poles

| Rating (A) / Frame size | No. of poles | Kit 1 with direct handle(1) | Kit 2 with external handle(2) | Enclosed solutions | | |
|---|---|---|---|---|---|---|
| | | | | Enclosure size | Enclosed switch | Top or bottom(4) extension box |
| 63 A / B2 | 4 P | 26K1 **4006A**(3) | 26K2 **4006A** (3) | Size 1 | 26E1 **4006A** | 26E1 **0001A** |
| 100 A / B2 | 4 P | 26K1 **4010A** (3) | 26K2 **4010A** (3) | | 26E1 **4010A** | |
| 125 A / B2 | 4 P | 26K1 **4011A** (3) | 26K2 **4011A** (3) | | 26E1 **4011A** | |
| 125 A / B3 | 3 P | 26K1 **3012A** | 26K2 **3012A** | Size 2 | 26E1 **3012A** | 26E1 **0002A** |
| | 4 P | 26K1 **4012A** | 26K2 **4012A** | | 26E1 **4012A** | |
| 160 A / B3 | 3 P | 26K1 **3016A** | 26K2 **3016A** | | 26E1 **3016A** | |
| | 4 P | 26K1 **4016A** | 26K2 **4016A** | | 26E1 **4016A** | |
| 200 A / B3 | 3 P | 26K1 **3019A** | 26K2 **3019A** | | 26E1 **3019A** | |
| | 4 P | 26K1 **4019A** | 26K2 **4019A** | | 26E1 **4019A** | |
| 250 A / B4 | 3 P | 26K1 **3025A** | 26K2 **3025A** | Size 3 | 26E1 **3025A** | 26E1 **0003A** |
| | 4 P | 26K1 **4025A** | 26K2 **4025A** | | 26E1 **4025A** | |
| 315 A / B4 | 3 P | 26K1 **3030A** | 26K2 **3030A** | | 26E1 **3030A** | |
| | 4 P | 26K1 **4030A** | 26K2 **4030A** | | 26E1 **4030A** | |
| CD 400 A / B4 | 3 P | 26K1 **3039A** | 26K2 **3039A** | | 26E1 **3039A** | |
| | 4 P | 26K1 **4039A** | 26K2 **4039A** | | 26E1 **4039A** | |
| 400 A / B5 | 3 P | 26K1 **3040A** | 26K2 **3040A** | Size 4 | 26E1 **3040A** | 26E1 **0004A** |
| | 4 P | 26K1 **4040A** | 26K2 **4040A** | | 26E1 **4040A** | |
| 500 A / B5 | 3 P | 26K1 **3050A** | 26K2 **3050A** | Size 5 | 26E1 **3050A** | |
| | 4 P | 26K1 **4050A** | 26K2 **4050A** | | 26E1 **4050A** | |
| 630 A / B5 | 3 P | 26K1 **3063A** | 26K2 **3063A** | | 26E1 **3063A** | |
| | 4 P | 26K1 **4063A** | 26K2 **4063A** | | 26E1 **4063A** | |
| CD 800 A / B5 | 3 P | 26K1 **3079A** | 26K2 **3079A** | | 26K1 **3079A** | |
| | 4 P | 26K1 **4079A** | 26K2 **4079A** | | 26K1 **4079A** | |
| 800 A / B6 | 3 P | 26K1 **3080A** | 26K2 **3080A** | Size 6 | 26E1 **3080A** | 26E1 **0006A** |
| | 4 P | 26K1 **4080A** | 26K2 **4080A** | | 26E1 **4080A** | |
| 1000 A / B6 | 3 P | 26K1 **3100A** | 26K2 **3100A** | | 26E1 **3100A** | |
| | 4 P | 26K1 **4100A** | 26K2 **4100A** | | 26E1 **4100A** | |
| CD 1250 A / B6 | 3 P | 26K1 **3124A** | 26K2 **3124A** | | 26K1 **3124A** | |
| | 4 P | 26K1 **4124A** | 26K2 **4124A** | | 26K1 **4124A** | |
| 1250 A / B7 | 3 P | 26K1 **3125A** | 26K2 **3125A** | Size 7 | 26E1 **3125A** | 26E1 **0007A** |
| | 4 P | 26K1 **4125A** | 26K2 **4125A** | | 26E1 **4125A** | |
| 1600 A / B7 | 3 P | 26K1 **3160A** | 26K2 **3160A** | | 26E1 **3160A** | |
| | 4 P | 26K1 **4160A** | 26K2 **4160A** | | 26E1 **4160A** | |
| 1800 A / B7 | 3 P | 26K1 **3180A** | 26K2 **3180A** | | | |
| | 4 P | 26K1 **4180A** | 26K2 **4180A** | | | |
| 2000 A / B8 | 3 P | 26K1 **3200A** | 26K2 **3200A** | | | |
| | 4 P | 26K1 **4200A** | 26K2 **4200A** | | | |
| 2500 A / B8 | 3 P | 26K1 **3250A** | 26K2 **3250A** | | | |
| | 4 P | 26K1 **4250A** | 26K2 **4250A** | | | |
| 3200 A / B8 | 3 P | 26K1 **3320A** | 26K2 **3320A** | | | |
| | 4 P | 26K1 **4320A** | 26K2 **4320A** | | | |

*Also available in specific frame, for frequent motor load switching (AC-23A).*
*(1) Kit 1 includes: Switch body + direct handle + interphase barriers.*
*(2) Kit 2 includes Switch body + external handle + 200 mm shaft + interphase barriers.*
*(3) Without interphase barriers.*
*(4) Optional extension boxes may be attached to the Top or/and Bottom of the enclosured transfer switch.*

## Also available

> For ratings of 4000 and 5000 A, consult us.

# Accessories (continued)

## Auxiliary contact

**Use**

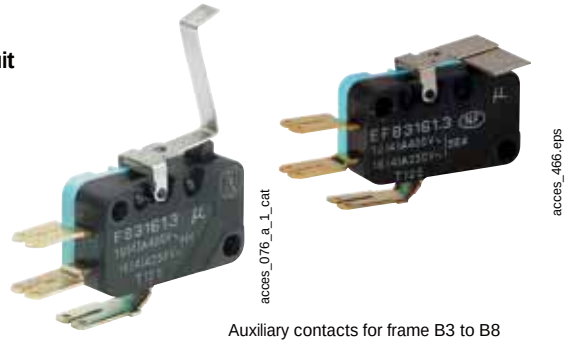
Pre-break and signalling of positions 0 and I:
- 1 to 2 NO/NC auxiliary contacts.

**Characteristics**

IP2 with front operation.

**Connection to the control circuit**

By 6.35 mm fast-on terminals.




Auxiliary contacts for frame B3 to B8

### NO/NC contact

| Rating (A) / Frame size | AC position | Reference |
|---|---|---|
| 63 ... 125 / B2 | 1st | 2609 **1020A** |
| 63 ... 125 / B2 | 2nd | 2609 **2020A** |
| 125 ... 3200 / B3 ... B8 | 1st | 2699 **0031A** |
| 125 ... 3200 / B3 ... B8 | 2nd | 2699 **0032A** |

### Characteristics

| Rating (A) / Frame size | Contact type | Rated current (A) | Operating current $I_e$ (A) 230 VAC AC-12 | 230 VAC AC-13/15 | 400 VAC AC-12 | 400 VAC AC-13/15 | 24 VDC DC-12 | 24 VDC DC-13 | 24 VDC DC-14 | 48 VDC DC-12 | 48 VDC DC-13 | 48 VDC DC-14 | Electrical endurance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63 ... 125 / B2 | NO/NC | 16 | 16 (EN61058-1) | - | - | - | - | - | - | - | - | - | 10 000 |
| 125 ... 3200 / B3 ... B8 | NO/NC | 16 | 16 | 4 | 12 | 3 | 2.5 | 2.5 | 1 | 2.5 | 1.2 | 0.2 | 30 000 |

## Terminal shrouds

**Use**

Provides top or bottom protection against direct contact with terminals or live parts. Each reference includes 1 shroud for top or bottom use.

**Advantage**

Perforations allow remote thermographic inspection without the need to remove the shrouds. The terminal shrouds also provide phase separation.

| Rating (A) / Frame size | No. of poles | Position | Reference |
|---|---|---|---|
| 63 ... 125 / B2 | 4 P | Top or bottom | 2994 **4008A** |
| 125 ... 200 / B3 | 3 P | Top or bottom | 2694 **3014A** |
| 125 ... 200 / B3 | 4 P | Top or bottom | 2694 **4014A** |
| 200 ... 400 / B4 | 3 P | Top or bottom | 2694 **3021A** |
| 200 ... 400 / B4 | 4 P | Top or bottom | 2694 **4021A** |
| 315 ... 630 / B5 | 3 P | Top or bottom | 2694 **3051A** |
| 315 ... 630 / B5 | 4 P | Top or bottom | 2694 **4051A** |

## Terminal screens

### Use

Top or bottom protection from direct contact with terminals or connection parts.
In case of use with spreaders, use the wide screens.

| Rating (A) /Frame size | No. of poles | Position | Type | Reference |
|---|---|---|---|---|
| 125… 200 / B3 | 3 P | Top or bottom | Standard | 2698 **3012A** |
| | 4 P | | | 2698 **4012A** |
| | 3 P | Top | Wide | 2698 **3013A** |
| | 3 P | Bottom | | 2698 **8013A** |
| | 4 P | Top or bottom | | 2698 **4013A** |
| 200 … 400 / B4 | 3 P | Top or bottom | Standard | 2698 **3020A** |
| | 4 P | | | 2698 **4020A** |
| | 3 P | Top | Wide | 2698 **3021A** |
| | 3 P | Bottom | | 2698 **8021A** |
| | 4 P | Top or bottom | | 2698 **4021A** |
| 315 … 630 / B5 | 3 P | Top or bottom | Standard | 2698 **3050A** |
| | 4 P | | | 2698 **4050A** |
| | 3 P | Top | Wide | 2698 **3051A** |
| | 3 P | Bottom | | 2698 **8051A** |
| | 4 P | Top or bottom | | 2698 **4051A** |
| 800 … 1000 / B6 | 3 P | Top or bottom | Standard | 2698 **3080A** |
| | 4 P | | | 2698 **4080A** |
| | 3 P | Top | Wide | 2698 **3081A** |
| | 3 P | Bottom | | 2698 **8081A** |
| | 4 P | Top or bottom | | 2698 **4081A** |
| 1250 …. 1800 / B7 | 3 P | Top or bottom | Standard | 2698 **3120A** |
| | 4 P | | | 2698 **4120A** |
| 2000 … 3200 / B8 | 3 P | Top or bottom | Standard | 2698 **3200A** |
| | 4 P | | | 2698 **4200A** |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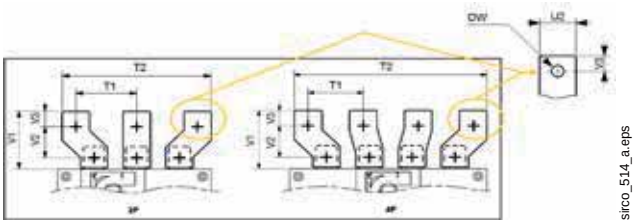
## Spreaders

### Use

They widden the terminals and increase the pitch of the products, therefore enabling wider connections.

| Rating (A) / Frame size | No. of poles | Reference |
|---|---|---|
| 125 … 200 / B3 | 3 P | 4106 **3016A** |
| | 4 P | 4106 **4016A** |
| 200 … 250 / B4 | 3 P | 4106 **3025A** |
| | 4 P | 4106 **4025A** |
| 315 … 400 / B4 | 3 P | 4106 **3040A** |
| | 4 P | 4106 **4040A** |
| 315 … 500 / B5 | 3 P | 4106 **3050A** |
| | 4 P | 4106 **4050A** |
| 630 … 630 A / B5 | 3 P | 4106 **3063A** |
| | 4 P | 4106 **4063A** |



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| Frame | SIRCO rating (A) | Part Nr. Spreaders 3P | Part Nr. Spreaders 4P | U2 | W | T1 3P | T1 4P | T2 3P | T2 4P | V1 | V2 | V3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B3 | 125 A,160 A, 200 A | 4106 3016A | 4106 4016A | 25 | 8,5 | 49,5 | 45 | 124 | 160 | 59,3 | 28,8 | 14,5 |
| B4a | 250 A | 4106 3025A | 4106 4025A | 32 | 12,5 | 71,2 | 64 | 174,4 | 224,4 | 78 | 41 | 20 |
| B4b | 315 A, 400 A / B4 | 4106 3040A | 4106 4040A | 40 | 12,5 | 83 | 72 | 206 | 256 | 98 | 52,7 | 25 |
| B5a | 400 A, 500 A | 4106 3050A | 4106 4050A | 49,5 | 12,5 | 81,7 | 76 | 213 | 278 | 111 | 68,5 | 20 |
| B5b | 630 A, 800 A CD | 4106 3063A | 4106 4063A | 51,5 | 12,5 | 89 | 81 | 230 | 295 | 119,8 | 63,3 | 26,5 |


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# Characteristics according to IEC 60947-3

## 63 to 400 A

| **Thermal current $I_{th}$ at 40°C** | | **63 A** | **100 A** | **125 A** | **125 A** | **160 A** | **200 A** | **200 A** | **315 A** | **CD 400 A** | **400 A** | **500 A** | **630 A** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Frame size** | | **B2** | **B2** | **B2** | **B3** | **B3** | **B3** | **B4** | **B4** | **B4** | **B5** | **B5** | **B5** |
| Rated insulation voltage $U_i$ (V) | | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 1000 | 1000 | 1000 |
| Rated impulse withstand voltage $U_{imp}$ (kV) | | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 8 | 8 | 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]** | **A/B[1]** | **A/B[1]** |
| 415 VAC | AC-20 A / AC-20 B | 63/63 | 100/100 | 125/125 | 125/125 | 160/160 | 200/200 | 200/200 | 315/315 | 400/400 | 400/400 | 500/500 | 630/630 |
| 415 VAC | AC-21 A / AC-21 B | 63/63 | 100/100 | 100/125 | 125/125 | 160/160 | 200/200 | 200/200 | 315/315 | 400/400 | 400/400 | 500/500 | 630/630 |
| 415 VAC | AC-22 A / AC-22 B | 63/63 | 100/100 | 100/125 | 125/125 | 160/160 | 200/200 | 200/200 | 315/315 | 400/400 | 400/400 | 500/500 | 630/630 |
| 415 VAC | AC-23 A / AC-23 B | -/63 | -/63 | -/63 | 125/125 | 160/160 | 160/160 | 200/200 | 250/250 | 250/250 | 400/400 | 500/500 | 500/500 |
| 220 VDC | DC-20 A / DC-20 B | | | | 125/125 | 160/160 | 160/160 | 200/200 | 200/200 | 400/400 | 400/400 | 500/500 | 630/630 |
| 220 VDC [2] | DC-21 A / DC-21 B | | | | 125/125 | 160/160 | 160/160 | 200/200 | 200/200 | 250/250 | 400/400 | 500/500 | 630/630 |
| 220 VDC [2] | DC-22 A / DC-22 B | | | | 125/125 | 160/160 | 160/160 | 200/200 | 200/200 | 250/250 | 400/400 | 500/500 | 630/630 |
| 220 VDC [2] | DC-23 A / DC-23 B | | | | 125/125 | 160/160 | 160/160 | 200/200 | 200/200 | 200/200 | 400/400 | 500/500 | 630/630 |
| 500 VDC | DC-20 A / DC-20 B | | | | 125/125 | 160/160 | 160/160 | 200/200 | 200/200 | 400/400 | 400/400 | 500/500 | 630/630 |
| 500 VDC [2] | DC-21 A / DC-21 B | | | | 125/125 | 125/125 | 125/125 | 160/200 | 160/200 | 200/200 | 400/400 | 400/400 | 500/500 |
| 500 VDC [2] | DC-22 A / DC-22 B | | | | 125/125 | 125/125 | 125/125 | 160/160 | 160/160 | 160/160 | 200/200 | 315/400 | 500/500 |
| 500 VDC [2] | DC-23 B | | | | 125 | 125 | 125 | 160 | 160 | 160 | 400 | 400 | 500 |
| Operational power in AC-23 (kW) [3] | | | | | | | | | | | | | |
| At 415 VAC without AC pre-break | | 30 | 30 | 30 | 63 | 80 | 80 | 100 | 115 | 115 | 190 | 235 | 235 |
| Reactive power in AC-23 (kvar) | | | | | | | | | | | | | |
| At 415 VAC (kvar) | | 30 | 30 | 30 | 60 | 75 | 75 | 100 | 125 | 125 | 200 | 250 | 250 |
| gG DIN fuse protected short-circuit withstand at 415 VAC | | | | | | | | | | | | | |
| Prospective short-circuit current (kA rms) | | 50 | 25 | 15 | 100 | 100 | 50 | 80 | 50 | 50 | 100 | 100 | 70 |
| Associated fuse rating (A) | | 63 | 100 | 125 | 125 | 160 | 200 | 200 | 315 | 400 | 400 | 500 | 630 |
| Short-circuit withstand without protection as per IEC 60947-3 [4] | | | | | | | | | | | | | |
| Rated short-time withstand current 0.3s $I_{cw}$ (kA rms) | | 3.5 | 3.5 | 3.5 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| Rated short-time withstand current 1s $I_{cw}$ (kA rms) | | 2.5 | 2.5 | 2.5 | 7 | 7 | 7 | 8 | 8 | 8 | 11 | 11 | 11 |
| Rated peak withstand current in $I_{cc}$ at 415 VAC (kA peak) | | 12 | 12 | 12 | 20 | 20 | 20 | 30 | 30 | 30 | 45 | 45 | 45 |
| Connection | | | | | | | | | | | | | |
| Minimum Cu cable cross-section ($mm^2$) | | 10 | 10 | 10 | 35 | 35 | 50 | 50 | 120 | 185 | 185 | 2x95 | 2x120 |
| Maximum Cu cable cross-section ($mm^2$) | | 50 | 50 | 50 | 50 | 95 | 95 | 95 | 240 | 240 | 240 | 2x300 | 2x300 |
| Recommended Al cable cross-section ($mm^2$) | | 35 | 50 | 50 | 70 | 95 | 150 | 150 | 240 | 300 | 300 | 2x32x5 | 2x40x5 |
| Recommended Al busbar cross-section ($mm^2$) | | | | | 20x8 | 20x8 | 25x10 | 25x10 | 2x25x10 | 2x25x10 | 40x12 | 50x12 | 2x50x10 |
| Maximum busbar width (mm) | | | | | 25 | 25 | 25 | 32 | 32 | 32 | 40 | 50 | 50 |
| Maximum busbar width with spreaders (mm) | | | | | 25 | 25 | 25 | 25 | 40 | 40 | 40 | 50 | 60 |
| Tightening torque min/max (Nm) | | 1.2/3 | 1.2/3 | 1.2/3 | 9/- | 9/- | 9/- | 20/- | 20/- | 20/- | 20/- | 20/- | 20/- |
| Mechanical characteristics | | | | | | | | | | | | | |
| Durability (number of operating cyles) | | 25000 | 25000 | 25000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 5000 | 5000 | 5000 |
| Operating effort (Nm) | | 3.5 | 3.5 | 3.5 | 6.5 | 6.5 | 6.5 | 10 | 10 | 10 | 14.5 | 14.5 | 14.5 |
| Weight of a 3 pole device with no accessories (k) | | | | | 1 | 1 | 1 | 2 | 2 | 2 | 3.5 | 3.5 | 3.5 |
| Weight of a 4 pole device with no accessories (k) | | 0.86 | 0.86 | 0.86 | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 | 4 | 4 | 4 |

*(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) The power value is given for information only, the current values vary from one manufacturer to another.*
*(4) For coordination with specific circuit-breaker references, higher short-circuit current values are available. Please consult us.*

## 500 to 800 A

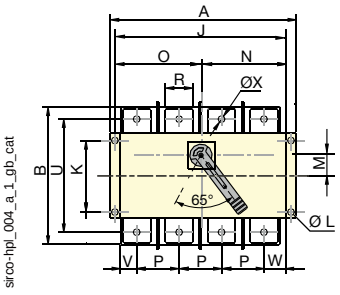
| **Thermal current $I_{th}$ at 40°C** | | **CD 800 A** | **800 A** | **1000 A** | **CD 1250 A** | **1250 A** | **1600 A** | **1800 A** | **2000 A** | **2500 A** | **3200 A** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Frame size** | | **B5** | **B6** | **B6** | **B6** | **B7** | **B7** | **B7** | **B8** | **B8** | **B8** |
| 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 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1600/1600 | 1800/1800 | 2000/2000 | 2500/2500 | 3200/3200 |
| 415 VAC | AC-21 A / AC-21 B | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1600/1600 | 1600/1800 | 2000/2000 | 2500/2500 | 3200/3200 |
| 415 VAC | AC-22 A / AC-22 B | 630/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1600/1600 | 1600/1600 | 2000/2000 | 2500/2500 | 2500/3200 |
| 415 VAC | AC-23 A / AC-23 B | 500/630 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 | 1600/1600 | 1600/1600 | 1600/1600 |
| 220 VDC | DC-20 A / DC-20 B | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1600/1600 | 1800/1800 | 2000/2000 | 2500/2500 | 3200/3200 |
| 220 VDC (2) | DC-21 A / DC-21 B | 630/630 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1250/1600 | 1250/1600 | 2000/2000 | 2000/2500 | 2000/2500 |
| 220 VDC (2) | DC-22 A / DC-22 B | 500/500 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1600 | 1250/1600 | 1250/1600 |
| 220 VDC (2) | DC-23 A / DC-23 B | 500/500 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 |
| 500 VDC | DC-20 A / DC-20 B | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1600/1600 | 1800/1800 | 2000/2000 | 2500/2500 | 3200/3200 |
| 500 VDC (2) | DC-21 A / DC-21 B | 500/500 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1250/1600 | 1250/1600 | 1250/1250 | 1250/1250 | 1250/1250 |
| 500 VDC (2) | DC-22 A / DC-22 B | 500/500 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 | 1250/1250 |
| 500 VDC (2) | DC-23 B | 500 | 800 | 1000 | 1000 | 1250 | 1250 | 1250 | 1000 | 1000 | 1000 |
| Operational power in AC-23 (kW) (3) | | | | | | | | | | | |
| At 415 VAC without AC pre-break | | 235 | 375 | 450 | 450 | 560 | 560 | 560 | 710 | 710 | 710 |
| Reactive power in AC-23 (kvar) | | | | | | | | | | | |
| At 415 VAC (kvar) | | 250 | 400 | 500 | 500 | 650 | 650 | 650 | 850 | 850 | 850 |
| gG DIN fuse protected short-circuit withstand at 415 VAC | | | | | | | | | | | |
| Prospective short-circuit current (kA rms) | | 70 | 50 | 100 | 12 | 100 | 100 | 100 | 100 | 100 | |
| Associated fuse rating (A) | | 800 | 800 | 1000 | 1250 | 1250 | 2x800 | 2x800 | 2x1000 | 2x1250 | |
| Short-circuit withstand without protection as per IEC 60947-3 (4) | | | | | | | | | | | |
| Rated short-time withstand current 0.3s $I_{cw}$ (kA rms) | | 15 | 50 | 65 | 65 | 100 | 100 | 100 | 100 | 100 | 100 |
| Rated short-time withstand current 1s $I_{cw}$ (kA rms) | | 11 | 35 | 35 | 35 | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated peak withstand current in $I_{cc}$ at 415 VAC (kA peak) | | 45 | 55 | 80 | 80 | 110 | 110 | 110 | 120 | 120 | 120 |
| Connection | | | | | | | | | | | |
| Minimum Cu cable cross-section (mm²) | | 2x120 | 2x185 | | | | | | | | |
| Maximum Cu cable cross-section (mm²) | | 2x300 | 2x300 | 4x185 | 4x185 | 4x185 | 6x185 | 6x185 | | | |
| Recommended Cu busbar cross-section (mm²) | | 2x40x5 | 2x50x5 | 2x63x5 | 2x63x5 | 2x80x5 | 2x100x5 | 3x100x5 | 3x100x5 | 2x100x10 | 3x100x10 |
| Recommended Al busbar cross-section (mm²) | | 2x50x10 | 2x50x10 | 2x60x10 | 2x60x10 | 2x75x10 | 2x100x10 | 3x80x10 | 3x80x10 | 3x100x10 | 4x100x10 |
| Maximum busbar width (mm) | | 50 | 63 | 63 | 63 | 100 | 100 | 100 | 100 | 100 | 100 |
| Maximum busbar width with spreaders (mm) | | 60 | | | | | | | | | |
| Tightening torque min/max (Nm) | | 20/- | 40/45 | 40/45 | 40/45 | 40/45 | 40/45 | 40/45 | 40/45 | 40/- | 40/- |
| Mechanical characteristics | | | | | | | | | | | |
| Durability (number of operating cyles) | | 5000 | 3000 | 3000 | 3000 | 4000 | 4000 | 4000 | 3000 | 3000 | 3000 |
| Operating effort (Nm) | | 14.5 | 37 | 37 | 37 | 56 | 56 | 56 | 75 | 75 | 75 |
| Weight of a 3 pole device with no accessories (k) | | 3.5 | 8 | 8 | 8 | 12 | 12 | 12 | 22 | 22 | 22 |
| Weight of a 4 pole device with no accessories (k) | | 4 | 10 | 10 | 10 | 15 | 15 | 15 | 25 | 25 | 25 |

*(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) The power value is given for information only, the current values vary from one manufacturer to another.*
*(4) For coordination with specific circuit-breaker references, higher short-circuit current values are available. Please consult us.*

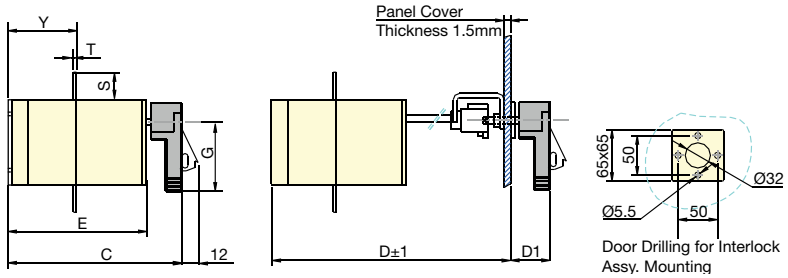
# Dimensions

## 63 to 125 A / B2

**Direct front operation**



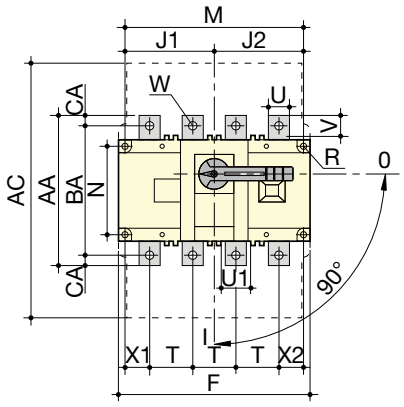

**External front operation**

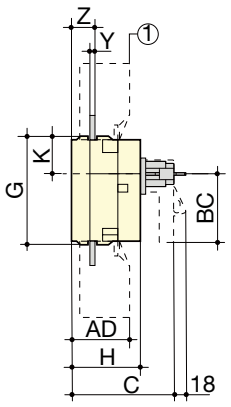



| Rating (A) / Frame size | Overall dimensions | | | | | | | Fixing of Sw. | | | | | | Connection terminal | | | | | | | | | Sw. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | D1 | E | G | J | K | L | M | N | O | P | R | S | T | U | V | W | ØX | Y | Open Ex. (kg) |
| 63 … 125 / B2 | 152.5 | 106 | 109 | 130 | 46.5 | 70 | 62 | 138.5 | 53 | 6.5 | 12 | 68 | 68 | 26.5 | 14 | 17 | 2 | 91 | 8 | 17 | 6.5 | 53 | 0.86 |

## 125 to CD 800 A / B3 to B5

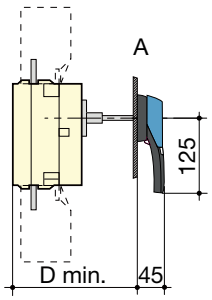
Direct front operation




1. Terminal shrouds

External front operation



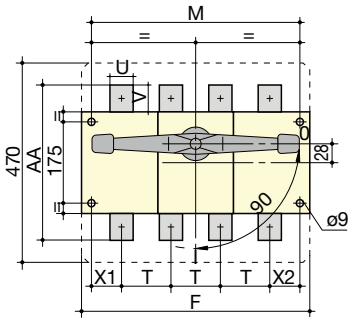

A. S2 type handle

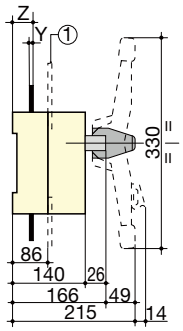
sirco_198_1_1_x_cat

| Rating (A) / Frame size | Overall dimensions | | Standard Terminal shrouds | | Switch body | | | | | | | | | Switch mounting | | | | Connection | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 … 200 / B3 | 115 | 125 | 235 | 50 | 140 | 170 | 93 | 68 | 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 | | | 280 | 60 | 180 | 230 | 108 | 78.5 | 55 | 105 | 105 | 34 | 115 | 160 | 210 | 80 | 5.5 | 50 | 25 | 32.5 | 30 | 11 | 33 | 33 | 27 | 3.5 | 22.5 | 160 | 140 | 15 |
| 315 … 400 / B4 | | | | | | | | | | | | | | | | | | | 35 | | 35 | | | | | | | 170 | | |
| 315 … 500 / B5 | 160 | 165 | 401 | 89 | 230 | 290 | 170 | 111 | 75 | 135 | 135 | 55 | 115 | 210 | 270 | 140 | 7 | 65 | 32 | 45.5 | 37.5 | 11 | 42.5 | 37.5 | 37.5 | 5 | 36 | 235 | 205 | 15 |
| 630… CD 800 / B5 | | | | | | | | | | | | | | | | | | | 45 | | 50 | 13 | | | | | | 260 | 220 | 20 |

## 800 to 1800 A - B6 - B7

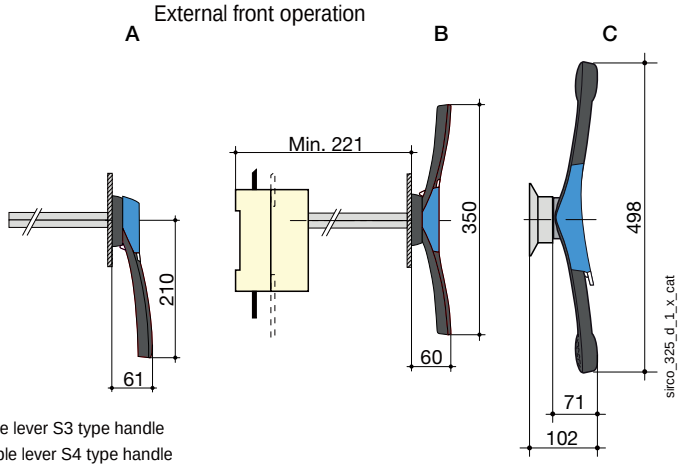
Direct front operation




1. Standard terminal screens

External front operation

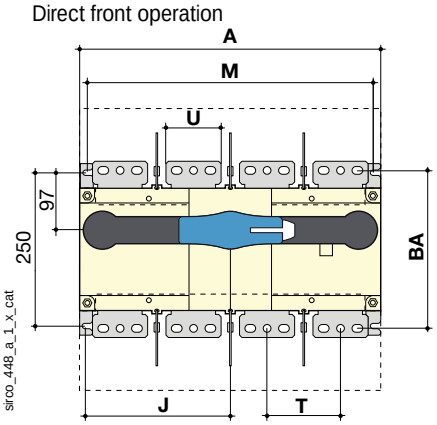


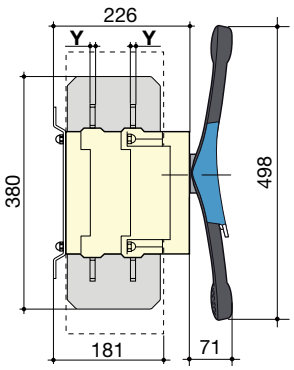

A. Single lever S3 type handle
B. Double lever S4 type handle
C. Double lever S5 type handle

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

## 2000 to 3200 A - B8

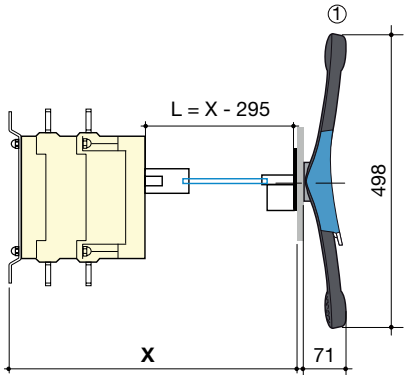
Direct front operation




1. Double lever S5 type handle

External front operation

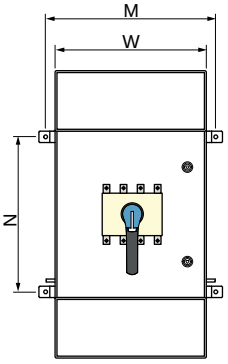


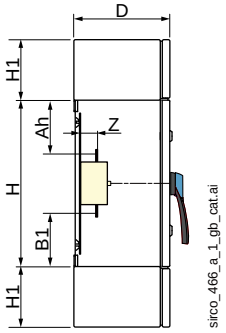

| Rating (A) / Frame size | Overall dimensions | | Switch body | | Switch mounting | | Connection | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | A 3p. | A 4p. | J 3p. | J 4p. | M 3p. | M 4p. | T | U | Y | BA |
| 2000 … 3200 / B8 | 372 | 492 | 173.5 | 233.5 | 347 | 367 | 120 | 90 | 8 | 258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

## Enclosed dimensions

| Rating (A) / Enclosure size | H x W x D (mm) | M (mm) | N (mm) | Z (mm) | Ah (mm) | B1 (mm) | H1 (mm) |
|---|---|---|---|---|---|---|---|
| 63 … 125 / size 1 | 200 x 250 x 150 | 300 | 160 | 52.8 | 65.25 | 65.25 | 100 |
| 125 … 200 / size 2 | 350 x 350 x 200 | 400 | 310 | 33 | 78.5 | 78.5 | 150 |
| 200 … 400 / size 3 | 450 x 400 x 200 | 450 | 410 | 44 | 146 | 146 | 150 |
| 315 … 400 / size 4 | 500 x 500 x 250 | 550 | 460 | 60.3 | 115 | 115 | 200 |
| 500 … 630 / size 5 | 600 x 500 x 250 | 550 | 560 | 51.3 | 165 | 165 | 200 |
| 800 … 1000 / size 6 | 700 x 700 x 300 | 750 | 660 | 47 | 165 | 165 | 250 |
| 1250 … 1600 / size 7 | 800 x 750 x 300 | 800 | 760 | 47.5 | 215 | 215 | 300 |

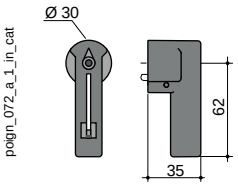
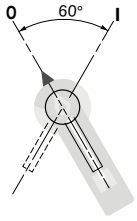
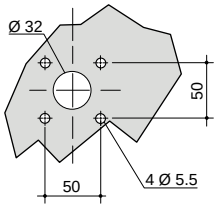
*Drawings as shown include the optional top and bottom extension boxes (W x H1).*



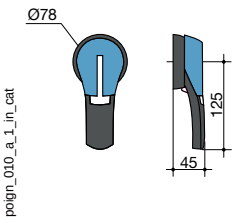
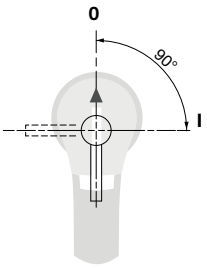
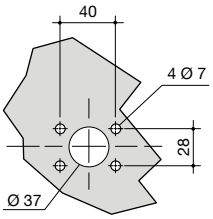



# Dimensions for external handles

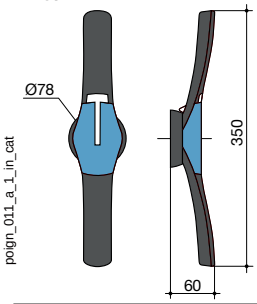
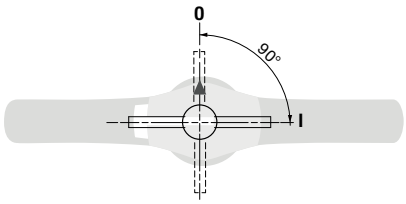
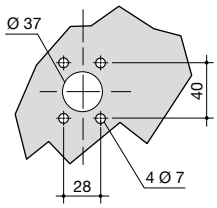
## For use with frame B2

| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **SH0 type**<br>  |  |  |

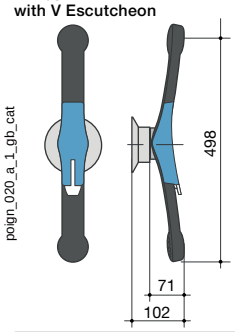
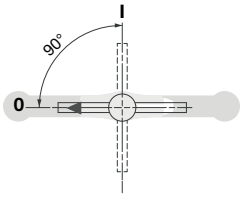
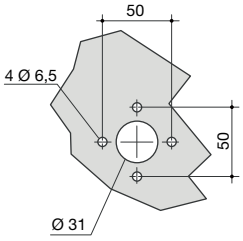
## For use with frames B3 - B4 - B5

| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S2 type**<br>  |  |  |

## For use with frames B6 - B7

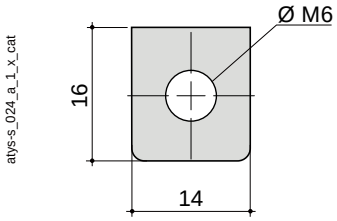
| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S4 type**<br>  |  |  |

## For use with frames B7 - B8

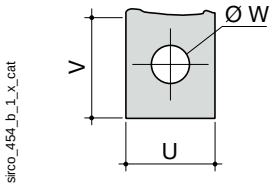
| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S5 type**<br>with V Escutcheon<br>  |  |  |

# Connection terminal dimensions

## 63 to 125 A / B2

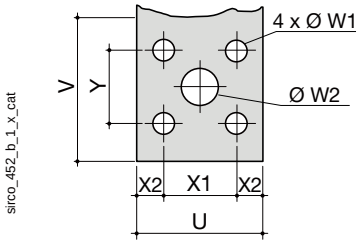



## 125 to 630 A / B3 - B5



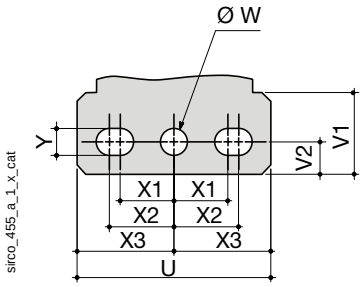

| Rating (A) / Frame size | U | V | W |
|---|---|---|---|
| 125 … 200 / B3 | 20 | 25 | 9 |
| 200 … 400 / B4 | 25 | 21.5 | 11 |
| 315 … 400 / B5 | 32 | 29 | |
| 500 / B5 | | | 13 |
| 630 / B6 | 45 | 41.5 | |

## 800 to 1000 A / B6




| Rating (A) / Frame size | U | V | W1 | W2 | X1 | X2 | Y |
|---|---|---|---|---|---|---|---|
| 800 … 1000 / B6 | 50 | 60.5 | 9 | 16 | 28.5 | 11 | 33 |

## 1250 to 3200 A / B7 - B8




| Rating (A) / Frame size | U | V1 | V2 | W | X1 | X2 | X3 | Y |
|---|---|---|---|---|---|---|---|---|
| 1250 … 3200 / B7 - B8 | 90 | 35.8 | 15 | 12.5 | 25 | 30 | 45 | 12.5 |

# SIRCOVER

## Manually operated transfer switching equipment
from 63 to 3200 A

svr_244.eps

SIRCOVER

svr_214_a

SIRCOVER Bypass

## Function

**SIRCOVER** products are manually operated transfer switches with positive break indication.
There are 2 ranges in the series:

- **SIRCOVER** for open transition switching (I-0-II) available in 4 poles.

For applications where both sources are synchronised and there is to be no interruption to the load supply during transfer.

- **SIRCOVER Bypass**. This combination of three interlocked load break switches provides 3+6 or 4+8 poles for bypass applications.

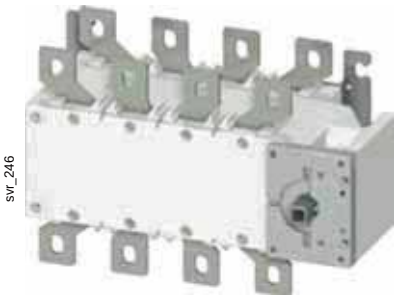
They provide on-load transfer between two sources for any low voltage power circuit, as well as safety isolation by double breaking per pole. Other applications include source inversion (e.g. to change the direction of a motor) or grounding/earthing.

## Advantages

**High electrical performance**
SIRCOVER is capable of switching all types of loads, without the need for a pre-breaking switch at the upstream. It is also compatible with motor and mixed loads up to utilisation category AC-33 at 415 VAC.

**Easy to connect**
Wider spearhead terminals for better clearance (up to B5 frame) enables easy termination of Aluminium cables / Busbars.

svr_246



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

**On-load and isolation 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.

**High level of safety**
SIRCOVER is based on a reliable switching mechanism that is fully independent on the user operating speed that includes a fail-safe mechanical interlock for all 3 positions (for I-0-II versions). Moreover they provide I-0-II position indicators directly on the handle and mechanism.

### The solution for
- Manufacturing
- Power distribution

### Strong points
- High electrical performance
- Easy to connect
- Stable positions
- On-load and isolation switching
- High level of safety

### Conformity to standards
- IEC 60947-6-1
- IS/IEC 60947-3

### Approvals and certifications

### Enclosed solutions
- Adapted to harsh mechanical risk and dust hazards
- Isolation and padlocking
- Top and bottom extension boxes available
- Colour: STR RAL 7035
- Cable gland plates: top & bottom
- Steel, thickness 1.2 to 2.0 mm
- Coating: epoxy polyester powder
- 4 wall mounting brackets provided
- Door: solid with hinges
- Metal cam lock



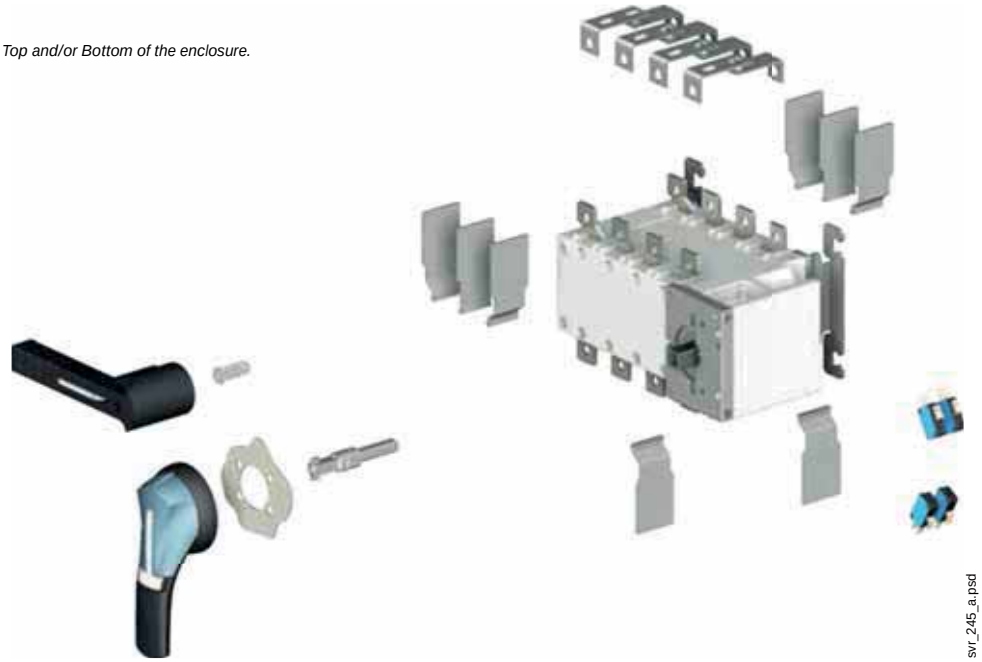
socomec
Innovative Power Solutions

# References - SIRCOVER kit and enclosed solutions

## SIRCOVER I-0-II

| Rating (A) / Frame size | No. of poles | Kit 1 with direct handle(1) | Kit 2 with external handle(2) | Enclosed solutions | | |
|---|---|---|---|---|---|---|
| | | | | Enclosure size | Enclosed switch | Top or bottom extension box (5) |
| 63 A / B2 | 4 P | 41K1 **4006A**(3) | 41K2 **4006A**(3) | Size 1 | 41E1 **4006A** | 41E1 **0001A** |
| 100 A / B2 | 4 P | 41K1 **4010A**(3) | 41K2 **4010A**(3) | | 41E1 **4010A** | |
| CD 125 A / B2 | 4 P | 41K1 **4011A**(3) | 41K2 **4011A**(3) | | 41E1 **4011A** | |
| 125 A / B3 | 4 P | 41G1 **4013A** | 41G2 **4013A** | Size 2 | 41E1 **4013A** | 41E1 **0002A** |
| 160 A / B3 | 4 P | 41G1 **4016A** | 41G2 **4016A** | | 41E1 **4016A** | |
| 200 A / B3 | 4 P | 41G1 **4020A** | 41G2 **4020A** | | 41E1 **4020A** | |
| 250 A / B4 | 4 P | 41G1 **4025A** | 41G2 **4025A** | Size 3 | 41E1 **4025A** | 41E1 **0003A** |
| 315 A / B4 | 4 P | 41G1 **4031A** | 41G2 **4031A** | | 41E1 **4031A** | |
| 400 A / B4 | 4 P | 41G1 **4040A** | 41G2 **4040A** | Size 4 | 41E1 **4040A** | 41E1 **0004A** |
| 630 A / B5 | 4 P | 41G1 **4063A** | 41G2 **4063A** | Size 5 | 41E1 **4063A** | 41E1 **0005A** |
| CD 800 A / B5 | 4 P | 41G1 **4079A** | 41G2 **4079A** | | | |
| 800 A / B6 | 4 P | 41K1 **4080A** | 41K2 **4080A** | Size 6 | 41E1 **4080A** | 41E1 **0006A** |
| 1000 A / B6 | 4 P | 41K1 **4100A** | 41K2 **4100A** | | 41E1 **4100A** | |
| 1250 A / B6 | 4 P | 41K1 **4120A** | 41K2 **4120A** | Size 7 | 41E1 **4120A** | 41E1 **0007A** |
| 1600 A / B7 | 4 P | 41K1 **4160A** | 41K2 **4160A** | | 41E1 **4160A** | |
| 2000 A / B8 | 4 P | 41K1 **4200A**(4) | 41K2 **4200A**(4) | Size 8 | 41E1 **4200A** | 41E1 **0008A** |
| 2500 A / B8 | 4 P | 41K1 **4250A**(4) | 41K2 **4250A**(4) | | 41E1 **4250A** | |
| 3200 A / B8 | 4 P | 41K1 **4320A**(4) | 41K2 **4320A**(4) | | 41E1 **4320A** | |

*For 3 pole switch, please consult us.*
*(1) Kit 1 includes: Switch body + direct handle + interphase barriers + bridging bars.*
*(2) Kit 2 includes Switch body + external handle + 200 mm shaft + interphase barriers + bridging bars.*
*(3) Without interphase barriers.*
*(4) Without bridging bars.*
*(5) Optional extension boxes may be attached to the Top and/or Bottom of the enclosure.*



svr_245_a.psd

# Also available(1)

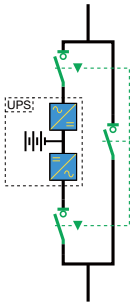
## SIRCOVER I-I+II-II

From 125 to 1600 A: with these manual changeover switches you can transfer a normal source to a backup source without any interruption. All you have to do is ensure that both sources are synchronised.

*(1) For any request on these ranges please consult us.*

## SIRCOVER Bypass

From 125 to 1600 A: with these manual changeover switches you can isolate then switch a backup power supply, such as a UPS, using 3 interlocking load break switches assembled into one very compact device.
There are two bypass models, one with open transition switching and the other with contact overlapping.

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## References (continued)

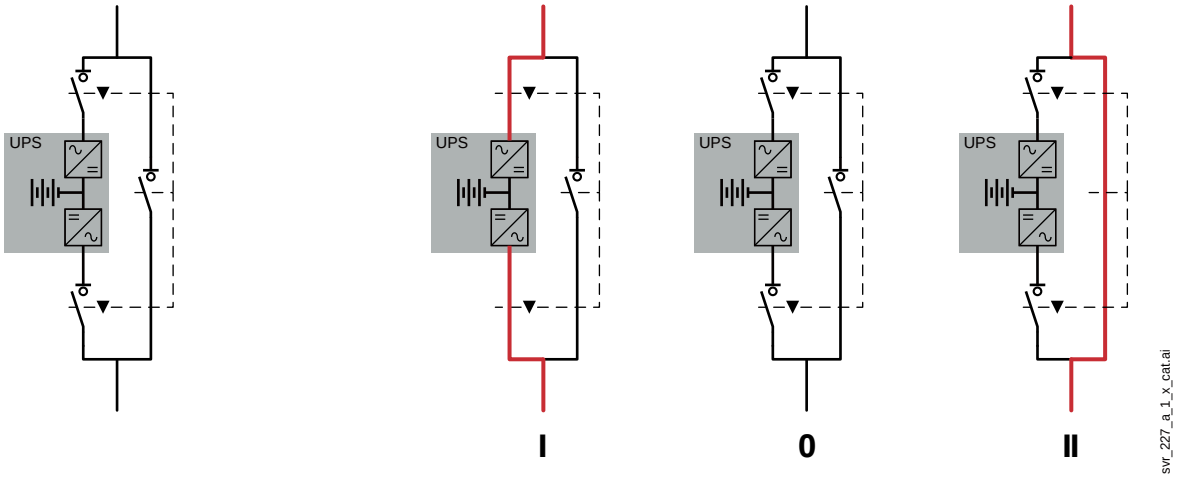
### SIRCOVER Bypass I-0-II

| Rating (A) / Frame size | No. of poles | KIT 2 (1) | Auxiliary contact | Terminal shrouds | Terminal screens |
|---|---|---|---|---|---|
| 125 A / B3 | 4 P | 41K2 **9013A** | 1st/2nd NO/NC contact 4109 **0021** (2) | 2694 **4014** (3)(4) | 1509 **4012** |
| 160 A / B3 | 4 P | 41K2 **9016A** | | | |
| 200 A / B3 | 4 P | 41K2 **9019A** | | | |
| 250 A / B4 | 4 P | 41K2 **9025A** | | 2694 **4021** (3)(4) | 1509 **4025** |
| 400 A / B4 | 4 P | 41K2 **9039A** | | | |
| 500 A / B5 | 4 P | 41K2 **9050A** | | 2694 **4051** (3)(4) | 1509 **4063** |
| 630 A / B5 | 4 P | 41K2 **9063A** | | | |
| 800 A / B6 | 4 P | 41K2 **9080A** | | | 1509 **4080** |
| 1250 A / B6 | 4 P | 41K2 **9120A** | | | |
| 1600 A / B7 | 4 P | 41K2 **9160A** | | | 1509 **4160** |

*For 3 pole switch, please consult us.*
*(1) KIT 2 includes, Switch + External handle + shaft + Bridging bars & interphase barriers.*
*(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.*

## Operating principle

**SIRCOVER Bypass I-0-II**



# Accessories

## Handle

| Rating | Frames | Direct Handle | External Handle |
|---|---|---|---|
| 63 ... CD125A | B2 | 4299 **0002A** | - |
| 125 ... 200A | B3 | 4199 **5012A** | 1421 **2113A** |
| 315 ... 400A | B4 | 4199 **5012A** | 1421 **2113A** |
| 500 ... CD 800A | B5 | 4199 **5012A** | 1421 **2113A** |
| 800 ... 1250A | B6 | 2799 **7052A** | 1443 **3113A** |
| 1600 | B7 | 2799 **7052A** | 1443 **3113A** |
| 2000 ... 3200A | B8 | 2799 **7012A** | 1453 **8113A** |


## Shaft for external operation

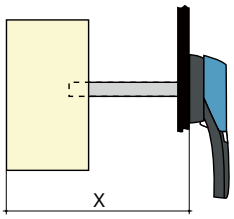
**Use**

Standard lengths:
- 200 mm,
- 320 mm.

Other lengths available: consult us.


**SIRCOVER I-0-II**

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




**SIRCOVER Bypass**

| Rating (A) | Frame size | Length (mm) | Side X (mm) | Reference |
|---|---|---|---|---|
| 125 ... 200 | B3 | 200 | 320 ... 450 | 1400 **1020A** |
| 125 ... 200 | B3 | 320 | 320 ... 570 | 1400 **1032A** |
| 250 ... 400 | B4 | 200 | 298 ... 420 | 1401 **1520A** |
| 250 ... 400 | B4 | 320 | 298 ... 540 | 1401 **1532A** |
| 500 ... 630 | B5 | 200 | 417 ... 539 | 1401 **1520A** |
| 500 ... 630 | B5 | 320 | 417 ... 659 | 1401 **1532A** |
| 800 ... 1600 | B6 ... B7 | 200 | 550 ... 680 | 2799 **3015A** |
| 800 ... 1600 | B6 ... B7 | 320 | 550 ... 800 | 2799 **3018A** |
| 800 ... 1600 | B6 ... B7 | 450 | 550 ... 930 | 2799 **3019A** |

## Auxiliary contact

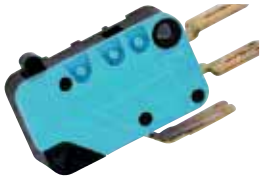
**Use**

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.


**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 | Electrical endurance |
|---|---|---|---|---|---|---|---|
| 63 ... 125 | B2 | 16 | 16 (EN 61058-1) | - | - | - | 10 000 |
| 125 ... 3200 | B3 ... B8 | 16 | 12 | 8 | 14 | 6 | 30 000 |

**NO/NC changeover contact**

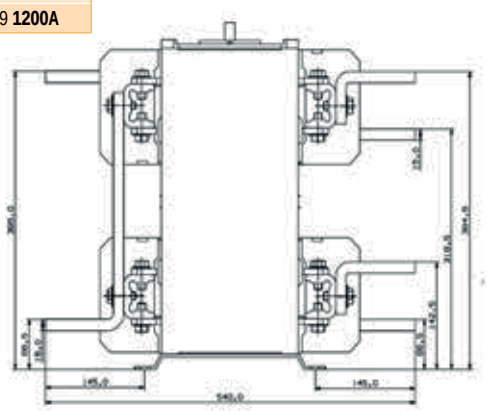
| Rating (A) | Frame size | Contact(s) | Reference |
|---|---|---|---|
| 63 ... 125 | B2 | 1st / 2nd | 4209 **1030A** |
| 125 ... 1600 | B3 ... B7 | 1st / 2nd | 4109 **0021A** |
| 2000 ... 3200 | B8 | 1st / 2nd | included |

# Accessories (continued)

## Bridging bars kit

### For ratings 2000 to 2500 A

| S.No | Description | Req. Qty / Switch | Reference |
|---|---|---|---|
| 1 | Bridging bar B3/4 P line side | 1 | 2619 **4251A** |
| 2 | Bridging bar B8/4 P load side | 1 | 4109 **4250A** |
| 3 | U bridge 1 P connector B8 CU | 16 | 2619 **1200A** |

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### For ratings 3200 A

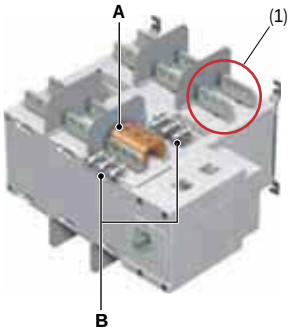
Enables:

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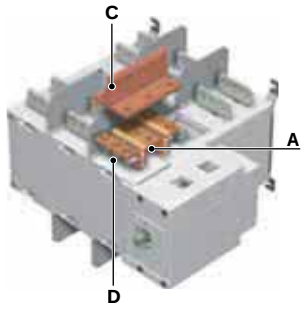
*(1) Single pole connection: 1 pole (top or bottom) comprises two power terminals which are to be linked with the copper connection kit.*

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

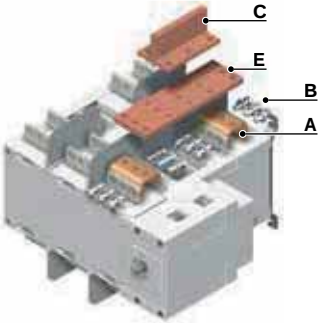
Fig. 2




acces_457_a_1_x_cat

*(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. 3




acces_230_c_1_x_cat

### The Below items are required to order for one SIRCOVER Switch (3200A)

| Part | Total quantity | Reference |
|---|---|---|
| Bolt kit 45 mm - part B | 16 | 2699 **1200** |
| T + Bolt kit - part C | 12 | 2629 **1200** |
| Bracket + Bolt kit - part D | 8 | 2639 **1200** |
| Bar + Bolt kit - part E | 4 | 4109 **0320** |

## Terminal screens

| Rating (A) / Frame size | No. of poles | Position | Type of screens | Reference |
|---|---|---|---|---|
| 800 ... 1250 / B6 | 3 P | | Standard | 1509 **3080A** |
| | 4 P | | | 1509 **4080A** |
| | 3 P | | Wide | 1509 **3081A** |
| | 4 P | | | 1509 **4081A** |
| 1600 / B7 | 3 P | | Standard | 1509 **3160A** |
| | 4 P | | | 1509 **4160A** |
| 2000 ... 3200 / B8 | 3 P | | | Included |
| | 4 P | | | |

**Use**

Upstream and downstream protection against direct contact with terminals or connection parts. In case of use of spreaders, use the wide screens.

For upstream and downstream protection, order quantity one.

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## Retrofit solutions

**Use**

The new retrofit kit is designed to replace our Legacy product COS with new Sircover range.

This kit includes:
- Interlock bracket
- Interlock assembly
- Label for door
- Offset coupler
- Coupler shaft
- Associated screws

| Old changeover switch | Retrofit Solutions | |
|---|---|---|
| Reference | Switch Reference | Kit Reference |
| GC01 **254POI** | 41G1 **4013A** | 41RT **4020A** |
| GC01 **604POI** | 41G1 **4016A** | 41RT **4020A** |
| GC02 **004POI** | 41G1 **4020A** | 41RT **4020A** |
| GC02 **504POI** | 41G1 **4025A** | 41RT **4031A** |
| GC03 **204POI** | 41G1 **4031A** | 41RT **4031A** |
| GC06 **304POI** | 41G1 **4063A** | 41RT **4061A** |

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

## 63 to 400 A

| **Thermal current $I^{th}$ at 40°C** | | **63 A** | **100 A** | **CD 125 A** | **125 A** | **160 A** | **200 A** | **250 A** | **315 A** | **400 A** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frame size** | | **B2** | **B2** | **B2** | **B3** | **B3** | **B3** | **B4** | **B4** | **B4** |
| Rated insulation voltage $U_i$ (V) | | 800 | 800 | 800 | 800 | 800 | 800 | 1000 | 1000 | 1000 |
| Rated impulse withstand voltage $U_{imp}$ (kV) | | 6 | 6 | 6 | 8 | 8 | 8 | 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)** | **A/B(1)** |
| 415 VAC | AC-31 B | 63 | 100 | 125 | 125 | 160 | 200 | 250 | 315 | 400 |
| 415 VAC | AC-32 B | 63 | 80 | 80 | | | | 200 | 315 | 400 |
| 415 VAC | AC-33 B | | | | | | | 200 | 200 | 200 |
| 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)** | **A/B(1)** |
| 415 VAC | AC-21 A / AC-21 B | 63/63 | 100/100 | 100/125 | 125/125 | 160/160 | 200/200 | 250/250 | 315/315 | 400/400 |
| 415 VAC | AC-22 A / AC-22 B | 63/63 | 100/100 | 100/125 | 125/125 | 160/160 | 200/200 | 250/250 | 315/315 | 400/400 |
| 415 VAC | AC-23 A / AC-23 B | -/63 | -/63 | -/63 | 125/125 | 125/125 | 125/125 | 200/200 | 315/315 | 400/400 |
| 500 VAC | AC-21 A / AC-21 B | | | | 125/125 | 160/160 | 200/200 | 250/250 | 315/315 | 400/400 |
| 500 VAC | AC-22 A / AC-22 B | | | | 125/125 | 160/160 | 200/200 | 200/250 | 200/315 | 200/400 |
| 500 VAC | AC-23 A / AC-23 B | | | | 80/80 | 80/80 | 80/80 | 200/200 | 200/200 | 200/200 |
| 690 VAC (3) | AC-21 A / AC-21 B | | | | 125/125 | 160/160 | 200/200 | 200/200 | 200/200 | 200/200 |
| 690 VAC (3) | AC-22 A / AC-22 B | | | | 125/125 | 125/125 | 125/125 | 160/160 | 160/160 | 160/160 |
| 690 VAC (3) | AC-23 A / AC-23 B | | | | 63/80 | 63/80 | 63/80 | 125/125 | 125/125 | 125/125 |
| 220 VDC | DC-21 A / DC-21 B | | | | 125/125 | 160/160 | 200/200 | 250/250 | 250/250 | 250/250 |
| 220 VDC | DC-22 A / DC-22 B | | | | 125/125 | 160/160 | 200/200 | 250/250 | 250/250 | 250/250 |
| 220 VDC | DC-23 A / DC-23 B | | | | 125/125 | 125/125 | 125/125 | 200/200 | 200/200 | 200/200 |
| 440 VDC (2) | DC-21 A / DC-21 B | | | | 125/125 | 125/125 | 125/125 | 200/200 | 200/200 | 200/200 |
| 440 VDC (2) | DC-22 A / DC-22 B | | | | 125/125 | 125/125 | 125/125 | 200/200 | 200/200 | 200/200 |
| 440 VDC (2) | DC-23 A / DC-23 B | | | | 125/125 | 125/125 | 125/125 | 200/200 | 200/200 | 200/200 |
| Operation power in AC-23 (kW) (4) | | | | | | | | | | |
| At 415 VAC without AC pre-break | | 30 | 30 | 30 | 58 | 75 | 100 | 100 | 145 | 190 |
| At 690 VAC without AC pre-break | | | | | 50/62 | 50/62 | 50/62 | 90/90 | 90/90 | 90/90 |
| Reactive power (kvar) (4) | | | | | | | | | | |
| At 415 VAC (kvar) | | 30 | 30 | 30 | 60 | 75 | 100 | 125 | 150 | 200 |
| 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 | 25 | 15 | 100 | 100 | 50 | 50 | 50 | 50 |
| Prospective short-circuit current with gG DIN fuses at 690 VAC (kA rms) | | | | | | | | 50 | 50 | 50 |
| Associated fuse rating (A) | | 63 | 100 | 125 | 125 | 160 | 200 | 250 | 315 | 400 |
| Short-circuit withstand without protection as per IEC 60947-3 | | | | | | | | | | |
| Rated short-time withstand current 0.3s $I_{cw}$ at 415 VAC (kA rms) | | 3.5 | 3.5 | 3.5 | 12 | 12 | 12 | 15 (5) | 15 (5) | 15 (5) |
| Rated short-time withstand current 1s $I_{cw}$ at 415 VAC (kA rms) | | 2.5 | 2.5 | 2.5 | 7 | 7 | 7 | 8 (5) | 8 (5) | 8 (5) |
| Rated peak withstand current at 415 VAC (kA peak) | | 15 | 15 | 15 | 20 | 20 | 20 | 30 | 30 | 30 |
| Short-circuit withstand without protection as per IEC 60947-6-1 | | | | | | | | | | |
| Rated short-time withstand current 30 ms $I_{cw}$ at 415 VAC (kA rms) | | 5 | 5 | 5 | 10 | 10 | 10 | 10 | 10 | 10 |
| Connection | | | | | | | | | | |
| Minimum Cu cable cross-section (mm²) | | 10 | 10 | 10 | 35 | 35 | 50 | 95 | 120 | 185 |
| Recommended Al cable cross-section (mm²) | | 35 | 50 | 50 | 70 | 95 | 150 | 185 | 240 | 300 |
| Recommended Al busbar cross-section (mm²) | | | | | 20x8 | 20x8 | 25x10 | 25x10 | 40x10 | 40x12 |
| Maximum Cu cable cross-section (mm²) | | 50 | 50 | 50 | 50/70 | 95 | 120/150 | 150/185 | 240 | 240/300 |
| Maximum busbar width (mm) | | | | | 25 | 25 | 25 | 40 | 40 | 50 |
| Tightening torque min/max (Nm) | | 1.2/3 | 1.2/3 | 1.2/3 | 9/13 | 9/13 | 9/13 | 20/26 | 20/26 | 20/26 |
| Mechanical characteristics | | | | | | | | | | |
| Durability (number of operating cyles) | | 25000 | 25000 | 25000 | 10000 | 10000 | 10000 | 8000 | 8000 | 5000 |
| Weight of a 3 pole device with no accessories (k) | | | | | 2.9 | 2.9 | 2.9 | 3.8 | 3.9 | 3.9 |
| Weight of a 4 pole device with no accessories (k) | | | | | 4.1 | 4.1 | 4.1 | 4.6 | 4.6 | 4.6 |

*(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.*

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

## 500 to 3200 A

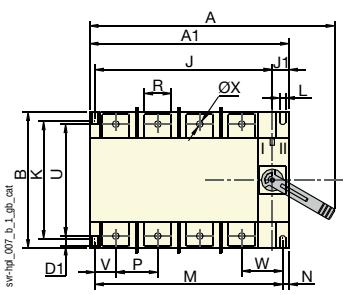
| **Thermal current $I^{th}$ at 40°C** | | **630 A** | **CD 800** | **800 A** | **1000 A** | **1250 A** | **1600 A** | **2000 A** | **2500 A** | **3200 A** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frame size** | | **B5** | **B5** | **B6** | **B6** | **B6** | **B7** | **B8** | **B8** | **B8** |
| Rated insulation voltage $U_i$ (V) | | 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 |
| 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)** | **A/B(1)** |
| 415 VAC | AC-31 B | 630 | 800 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 |
| 415 VAC | AC-32 B | 500 | 500 | 800 | 1000 | 1250 | 1250 | 2000 | 2000 | 2000 |
| 415 VAC | AC-33 B | 400 | 400 | 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)** | **A/B(1)** | **A/B(1)** |
| 415 VAC | AC-21 A / AC-21 B | 630/630 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2500 | -/3200 |
| 415 VAC | AC-22 A / AC-22 B | 630/630 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2500 | -/3200 |
| 415 VAC | AC-23 A / AC-23 B | 500/630 | 500/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | -/1600 | -/1600 | -/1600 |
| 500 VAC | AC-21 A / AC-21 B | 630/630 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2000 | -/2000 |
| 500 VAC | AC-22 A / AC-22 B | 500/500 | 500/500 | 630/630 | 800/800 | 1000/1000 | 1600/1600 | | | |
| 500 VAC | AC-23 A / AC-23 B | 400/400 | 400/400 | 630/630 | 630/630 | 800/800 | 1000/1000 | | | |
| 690 VAC (3) | AC-21 A / AC-21 B | 500/500 | 500/500 | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2000 | -/2000 |
| 690 VAC (3) | AC-22 A / AC-22 B | 400/400 | 400/400 | 630/630 | 800/800 | 1000/1000 | 1000/1000 | | | |
| 690 VAC (3) | AC-23 A / AC-23 B | 400/400 | 400/400 | 630/630 | 630/630 | 800/800 | 800/800 | | | |
| 220 VDC | DC-21 A / DC-21 B | 630/630 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 220 VDC | DC-22 A / DC-22 B | 630/630 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 220 VDC | DC-23 A / DC-23 B | 630/630 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 440 VDC (2) | DC-21 A / DC-21 B | 630/630 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 440 VDC (2) | DC-22 A / DC-22 B | 630/630 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 440 VDC (2) | DC-23 A / DC-23 B | 630/630 | 800/800 | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| Operation power in AC-23 (kW) (4) | | | | | | | | | | |
| At 415 VAC without AC pre-break | | 235/280 | 235/280 | 375/375 | 450/450 | 560/560 | 560/560 | -/710 | -/710 | -/710 |
| At 690 VAC without AC pre-break | | 310/310 | 310/310 | 475/475 | 475/475 | 620/620 | 620/620 | | | |
| Reactive power (kvar) (4) | | | | | | | | | | |
| At 415 VAC (kvar) | | 250/300 | | 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 | 50 | 100 | 100 | | | |
| Prospective short-circuit current with gG DIN fuses at 690 VAC (kA rms) | | 50 | | 50 | 50 | 50 | | | | |
| Associated fuse rating (A) | | 630 | | 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) | | 17 (5) | | 64 | 64 | 64 | 78 | 78 | 78 | 78 |
| Rated short-time withstand current 1s $I_{cw}$ at 415 VAC (kA rms) | | 10 (5) | | 35 | 35 | 35 | 50 | 50 | 50 | 50 |
| Rated peak withstand current at 415 VAC (kA peak) | | 45 | | 55 | 55 | 80 | 110 | 120 | 120 | 120 |
| Short-circuit withstand without protection as per IEC 60947-6-1 | | | | | | | | | | |
| Rated short-time withstand current 60 ms $I_{cw}$ at 415 VAC (kA rms) | | 12.6 | | 20 | 20 | 25 | 32 | 50 | 50 | 50 |
| Connection | | | | | | | | | | |
| Minimum Cu cable cross-section (mm²) | | 2x120 | | 2x185 | | | | | | |
| Recommended Cu busbar cross-section (mm²) | | 2x300 | | 2x50x5 | 2x63x5 | 2x60x7 | 2x100x5 | 3x100x5 | 2x100x10 | 3x100x10 |
| Recommended Al busbar cross-section (mm²) | | 2x50x10 | | 2x50x10 | 2x60x10 | 2x75x10 | 2x100x10 | 3x80x10 | 3x100x10 | 4x100x10 |
| Maximum Cu cable cross-section (mm²) | | 2x300 | | 2x300 | 4x185 | 4x185 | 6x185 | | | |
| Maximum busbar width (mm) | | 60 | | 63 | 63 | 63 | 63 | 100 | 100 | 100 |
| Tightening torque min/max (Nm) | | 20/26 | | 20/26 | 20/26 | 20/26 | 40/45 | 40/45 | 40/45 | 40/45 |
| Mechanical characteristics | | | | | | | | | | |
| Durability (number of operating cyles) | | 5000 | | 4000 | 4000 | 4000 | 3000 | 3000 | 3000 | 3000 |
| Weight of a 3 pole device with no accessories (k) | | 9.1 | | 20.5 | 21 | 21.6 | 25.7 | 42 | 42 | 52.3 |
| Weight of a 4 pole device with no accessories (k) | | 11.1 | | 24.8 | 25.6 | 25.6 | 32 | 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.*

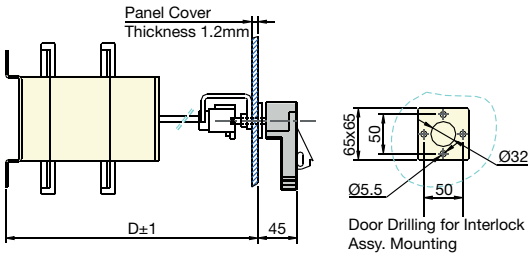
## Dimensions

### 63 to 125 A / B2

**Direct front operation**

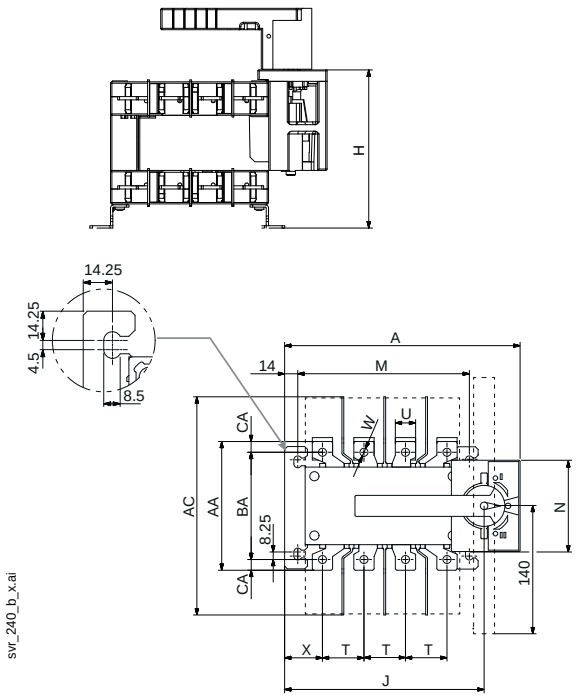



**External front operation**

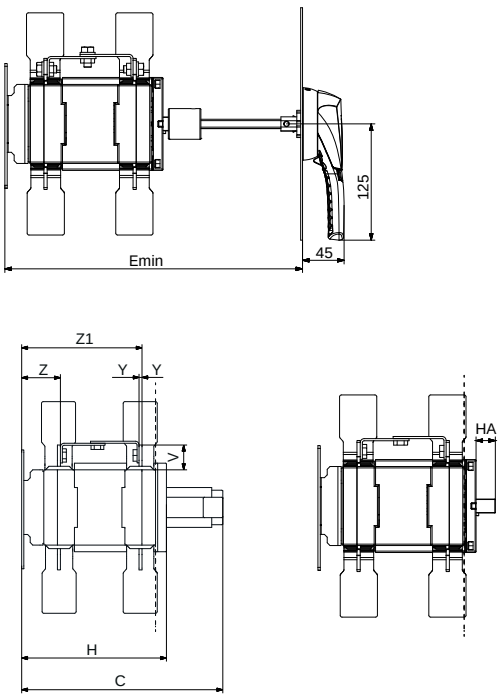



| Rating (A)/ Frame size | Dimensions | | | | | | | | | Fixing of Sw. | | | | | Connection terminal | | | | | | | | | | Sw. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | A1 | B | C | D | D1 | E | G | J | J1 | K | L | M | N | P | R | S | T | U | V | W | ØX | Y | Y1 | Open Ex. (kg) |
| 4 x 63 ... 125 / B2 | 181 | 141.5 | 111 | 168.5 | 192 | 44 | 127 | 62 | 116 | 18 | 95 | 6.5 | 127 | 6.25 | 27 | 14 | 16 | 2.6 | 91 | 11 | 35 | 6.5 | 45 | 101 | 2 |

**Direct front operation**



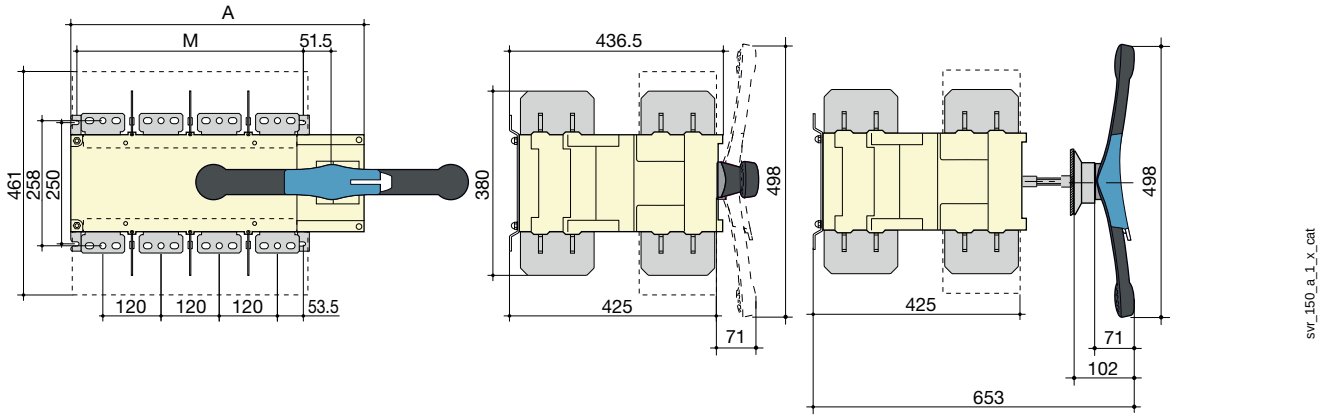

**External front operation**




| Rating | Overall dimension | | Terminal shrounds/ phase barrier | Switch body | | | Switch mounting | | Connection | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Frame size | A | C | AC | H | HA | J | M | N | T | U | V (V1) | W | X | Y | Z | Z1 | AA | BA | CA | Emin |
| 125 / B3 | 255 | 236 | 239 | 170 | 22 | 216 | 186 | 101 | 45 | 22 | 28 | 9 | 41 | 3.5 | 45.5 | 141.4 | 141 | 117.5 | 11.75 | 257.5 |
| 160 / B3 | 255 | 236 | 239 | 170 | 22 | 216 | 186 | 101 | 48 | 25 | 35 | 9 | 36.5 | 3.5 | 45.5 | 141.4 | 155 | 124 | 15.5 | 257.5 |
| 200 / B3 | 255 | 236 | 239 | 170 | 22 | 216 | 186 | 101 | 48 | 25 | 35 | 9 | 36.5 | 3.5 | 45.5 | 141.4 | 155 | 124 | 15.5 | 257.5 |
| 250 / B4 | 316 | 237 | 356 | 170.5 | 22 | 277 | 246 | 116 | 64 | 32 | 46 | 11 | 44 | 3.5 | 47 | 141 | 192 | 152 | 20 | 258 |
| 315 / B4 | 316 | 237 | 356 | 170.5 | 22 | 277 | 246 | 116 | 64 | 32 | 46 | 11 | 44 | 3.5 | 47 | 141 | 192 | 152 | 20 | 258 |
| 400 / B4 | 316 | 237 | 356 | 170.5 | 22 | 277 | 246 | 116 | 65 | 40 | 56.5 | 11 | 42.5 | 3.5 | 47 | 141 | 213 | 170 | 21.5 | 258 |
| 500 / B5 | 383 | 314 | 421 | 248 | 22 | 336 | 306 | 176 | 81 | 55 | 55 | 12.7 | 46 | 4.8 | 61 | 198 | 270 | 230 | 20 | 335.5 |
| 630...CD 800 / B5 | 383 | 314 | 421 | 248 | 22 | 336 | 306 | 176 | 81 | 55 | 55 | 12.7 | 46 | 4.8 | 61 | 198 | 270 | 230 | 20 | 335.5 |
| 800 / B6 | 466 | 375 | 459 | 303 | 24 | 399 | 336 | 250 | 80 | 50 | 60.5 | 15 | 48 | 7 | 67.5 | 253.5 | 321 | | 26.5 | 425 ... 577 |
| 1000 / B6 | 466 | 375 | 459 | 303 | 24 | 399 | 336 | 250 | 80 | 50 | 60.5 | 15 | 48 | 7 | 67.5 | 253.5 | 321 | | 26.5 | 425 ... 577 |
| 1250 / B6 | 466 | 375 | 459 | 303 | 24 | 399 | 336 | 250 | 80 | 60 | 65 | 16x11 | 48 | 7 | 67.5 | 255.5 | 330 | | 29.5 | 425 ... 577 |
| 1600 / B7 | 598 | 375 | 461 | 303 | 24 | 531 | 467 | 250 | 120 | 90 | 43.5 | 12.5x5 | 54 | 8 | 67.5 | 255.5 | 288 | | 15 | 425 ... 577 |

## 2000 to 3200 A / B8

**Direct front operation**

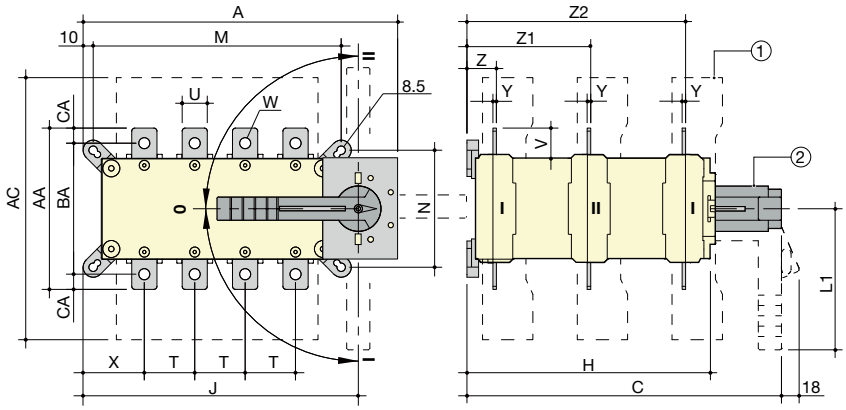



| Rating (A) / Frame size | Overall dimensions A 3p. | Overall dimensions A 4p. | Switch mounting M 3p. | Switch mounting M 4p. |
|---|---|---|---|---|
| 2000 ... 3200 / B8 | 478 | 598 | 347 | 467 |

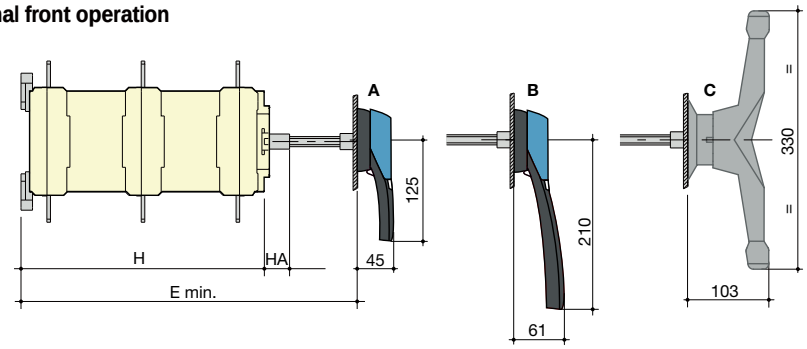
# Dimensions (continued)

## 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*

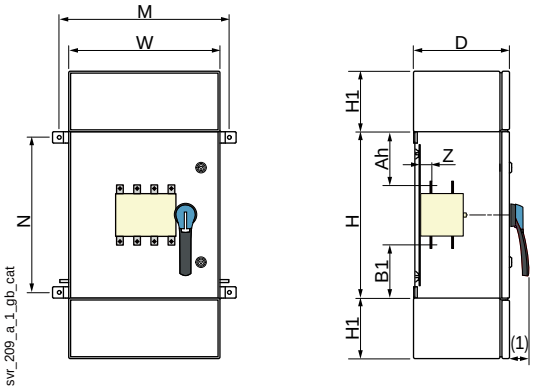
*1. Terminal shrouds*
*2. Direct operation handle:*
*- 125 to 200 A: L1 = 140 mm,*
*- 250 to 630 A: L1 = 210 mm,*
*- 800 to 1600 A: L1 = diameter 330 mm.*

| Rating (A) / Frame size | Overall dimensions | | | Terminal shrouds | Switch body | | | Switch mounting | | Connection | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A 4+8p. | C | E min | AC | H | HA | J 4+8p. | M 4+8p. | N | T | U | V | W | X 4+8p. | Y | Z | Z1 | Z2 | AA | BA | AC |
| 125 / B3 | 251 | 313 | 320 | 235 | 243 | 25 | 212 | 186 | 101 | 36 | 20 | 25 | 8.5 | 50 | 3.5 | 28 | 124 | 219 | 135 | 115 | 10 |
| 160 / B3 | 251 | 313 | 320 | 235 | 243 | 25 | 212 | 186 | 101 | 36 | 20 | 25 | 8.5 | 50 | 3.5 | 28 | 124 | 219 | 135 | 115 | 10 |
| 200 / B3 | 251 | 313 | 320 | 235 | 243 | 25 | 212 | 186 | 101 | 36 | 20 | 25 | 8.5 | 50 | 3.5 | 28 | 124 | 219 | 135 | 115 | 10 |
| 250 / B4 | 312 | 313 | 298 | 280 | 243 | 25 | 273 | 246 | 116 | 50 | 25 | 30 | 11 | 61 | 3.5 | 30 | 124 | 219 | 160 | 130 | 10 |
| 400 / B4 | 312 | 313 | 298 | 280 | 243 | 25 | 273 | 246 | 116 | 50 | 35 | 35 | 11 | 61 | 3.5 | 30 | 124 | 219 | 170 | 140 | 15 |
| 500 / B5 | 379 | 432 | 417 | 401 | 362 | 25 | 332 | 306 | 176 | 65 | 32 | 37 | 13 | 65.5 | 5 | 43 | 180 | 317 | 235 | 205 | 15 |
| 630 / B5 | 379 | 432 | 417 | 400 | 362 | 25 | 332 | 306 | 176 | 65 | 45 | 50 | 13 | 65.5 | 5 | 43 | 180 | 317 | 260 | 220 | 20 |
| 800 / B6 | 466 | 560 | 550 | 459 | 479 | 29 | 386.5 | 335 | 250 | 80 | 50 | 60.5 | 15 | 48 | 7 | 66.5 | 253.5 | 439.5 | 321 | | 26.5 |
| 1250 / B6 | 466 | 560 | 550 | 459 | 479 | 29 | 386.5 | 335 | 250 | 80 | 60 | 65 | 16x11 | 48 | 7 | 66.5 | 253.5 | 439.5 | 320 | | 29.25 |
| 1600/B7 | 598 | 560 | 550 | 461 | 479 | 29 | 518.5 | 467 | 250 | 120 | 90 | 43.5 | 12.5x5 | 54 | 8 | 66.5 | 253.5 | 439.5 | 288 | | 15 |

## Enclosed Sircover Dimensions

| Rating (A) / Enclosure size | H x W x D (mm) | M (mm) | N (mm) | Z (mm) | Ah (mm) | B1 (mm) | H1 (mm) |
|---|---|---|---|---|---|---|---|
| 63 / Size 1 | 250 x 300 x 205 | 350 | 210 | 44.5 | 87.75 | 87.75 | 100 |
| 125 … 200 / Size 2 | 350 x 350 x 250 | 400 | 310 | 45.4 | 115 | 115 | 150 |
| 250 … 315 / Size 3 | 450 x 400 x 250 | 450 | 410 | 46.8 | 160 | 160 | 150 |
| 400 / Size 4 | 600 x 400 x 300 | 450 | 560 | 46.8 | 230 | 230 | 150 |
| 500 … 630 / Size 5 | 600 x 500 x 330 | 550 | 560 | 61 | 190 | 190 | 200 |
| 800 … 1000 / Size 6 | 700 x 700 x 500 | 750 | 660 | 136.5 | 215 | 215 | 250 |
| 1250 … 1600 / Size 7 | 800 x 750 x 500 | 800 | 760 | 162 | 265 | 265 | 300 |
| 2000 … 3200 / Size 8 | 1000 x 830 x 600 | 880 | 960 | - | 370 | 370 | 300 |

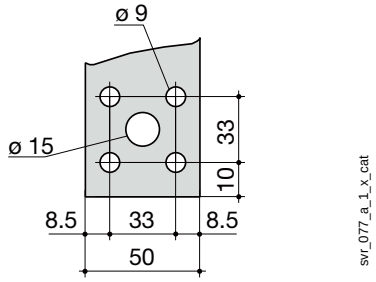
*Drawings as shown include the optional top and bottom extension boxes (WxH1).*



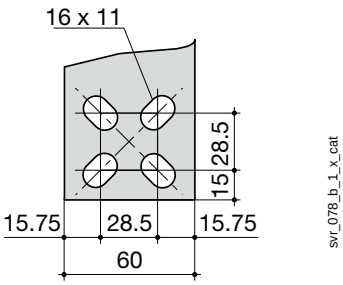

(1) 125 … 630 A: 58 mm
800 … 1 600 A: 74 mm.

## Connection terminals

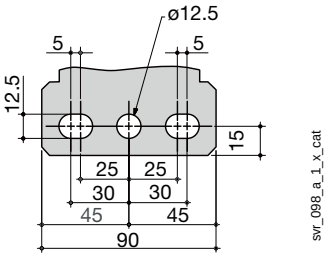
### 800 to 1000 A / B6




### 1250 A / B6



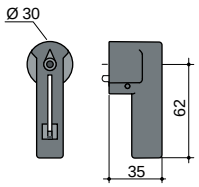

### 1600 to 3200 A / B7 to B8

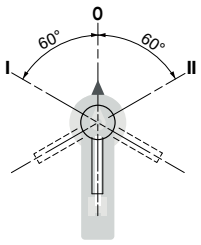


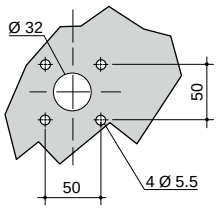
# Dimensions for external handles

## 63 to 125 A / B2

| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **SH0** type | | |



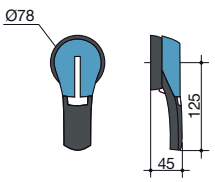



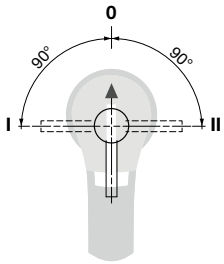



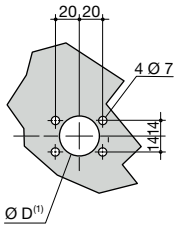

poign_030_a_1_gb_cat

## 125 to 630 A / B3 to B5

| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S2** type | | |



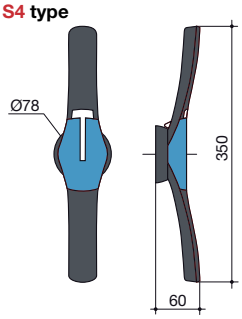



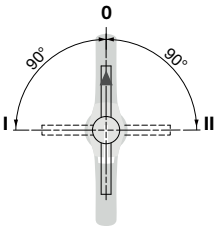



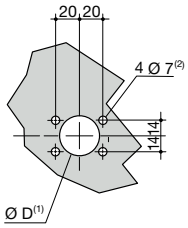

poign_030_a_1_gb_cat

## 800 to 1600 A / B6 to B7

| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S4** type | | |



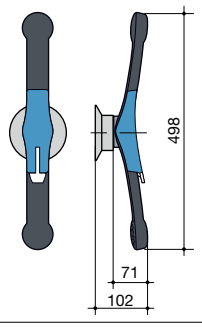



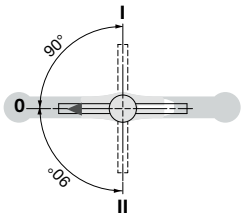



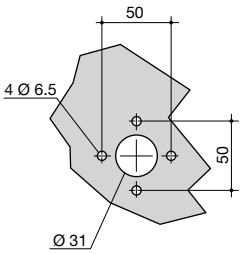

poign_031_a_1_gb_cat

## 2000 to 3200 A / B8

| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S5** type<br>with V Escutcheon | | |



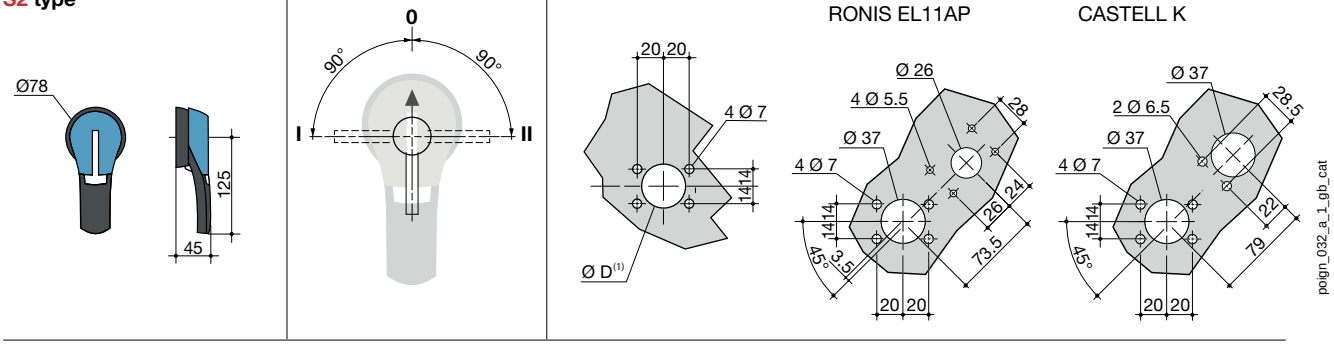

poign_023_a_1_gb_cat

*(1) Ø 31 to Ø 37: rear screw mounting, Ø 37 : front clip mounting.*

*(2) Ø 6 to Ø 7: clip mounting.*

## SIRCOVER Bypass 125 to 200 A / B3

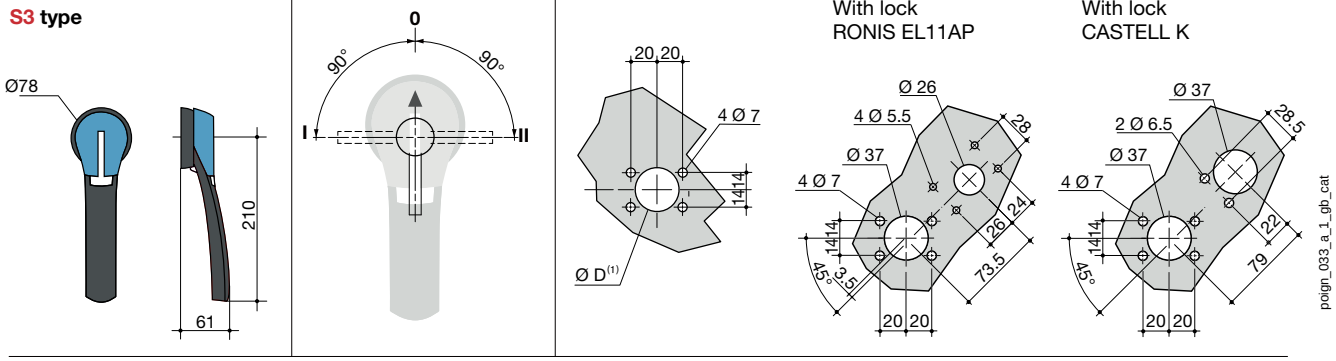
| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S2 type** | | With lock RONIS EL11AP / With lock CASTELL K |




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

## SIRCOVER Bypass 250 to 630 A / B4 to B5

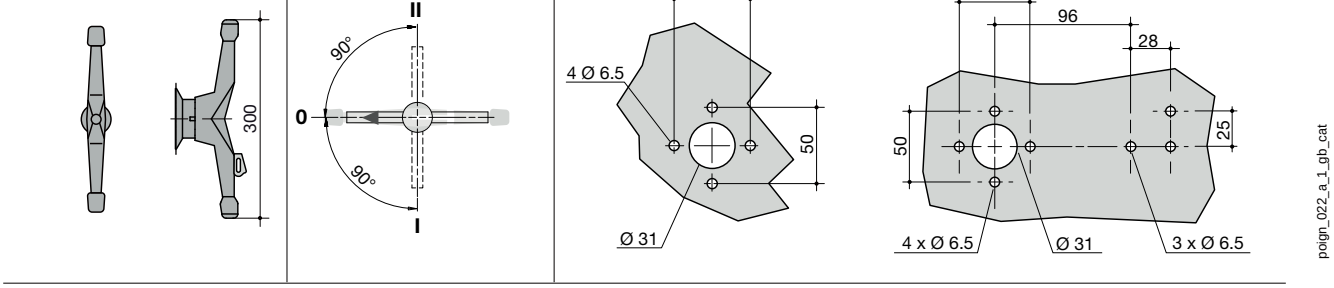
| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **S3 type** | | With lock RONIS EL11AP / With lock CASTELL K |




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

## SIRCOVER Bypass 800 to 1600 A / B6 to B7

| Handle type | Front operation<br>Direction of operation | Door drilling |
|---|---|---|
| **C 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

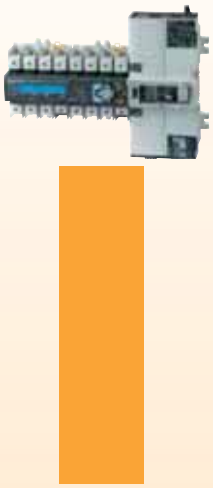
Dual power supply

***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



socomec
Innovative Power 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 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<br>1309 **4006** | 2 pieces<br>1399 **4006** | 2 pieces<br>2294 **4016**(1) | 1 unit<br>Separate common points<br>1309 **1001**(2)<br>Linked common points<br>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<br>1309 **2006**<br>4 P<br>1309 **4006** | 2 pieces<br>1399 **4006** | 2 pieces<br>2294 **4016**(1) | 1 unit<br>Separate common points<br>1309 **1001**(2)<br>Linked common points<br>1309 **1011**(2) | 2 P<br>1359 **2000**<br>4 P<br>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*

## 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).

### 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

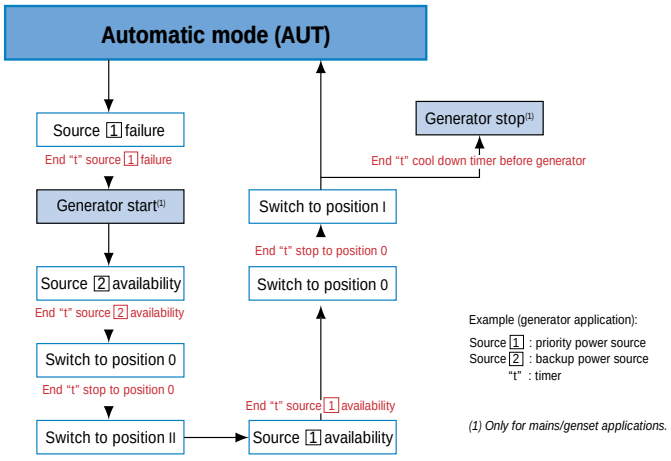
### Conformity to standards

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

### Approvals and certifications

## 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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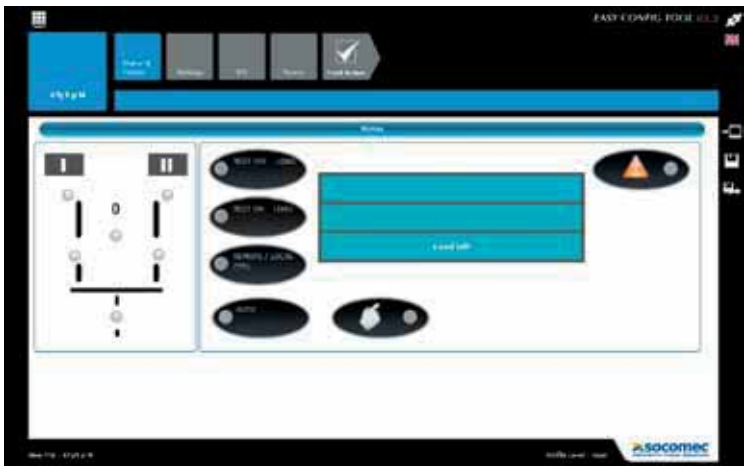
## Easyconfig

**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** |

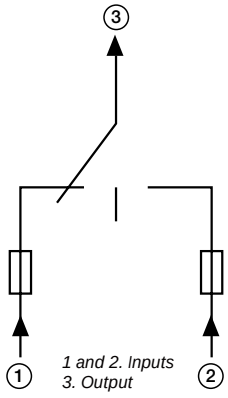
## Double power supply - DPS

**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**

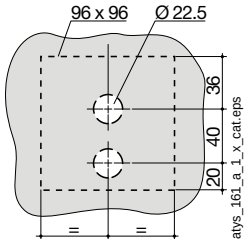
2 holes Ø 22.5.

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.

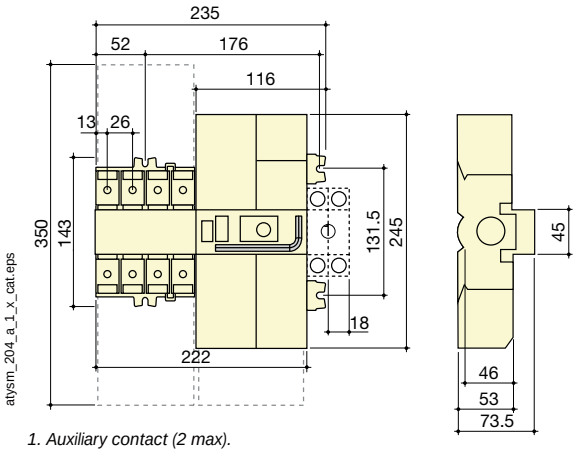

| Rating (A) | Reference |
|---|---|
| 40 ... 160 | 1399 **4017**(1) |

*(1) For complete conversion, order quantity 3.*

## Dimensions

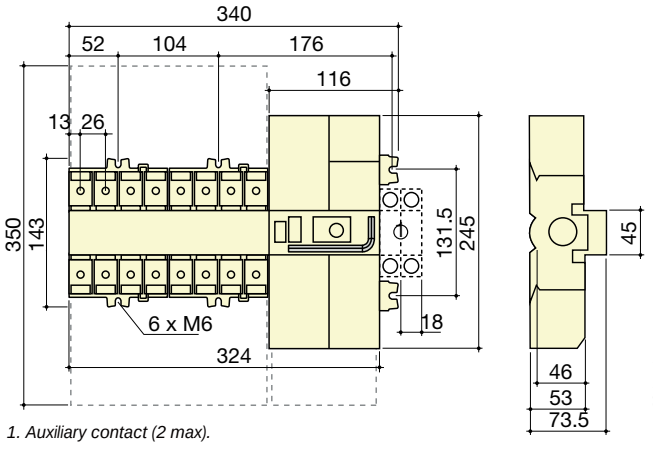
### ATyS M 40 to 160 A

**Single-phase ATyS M**



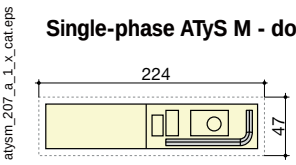

*1. Auxiliary contact (2 max).*

**Three-phase ATyS M**

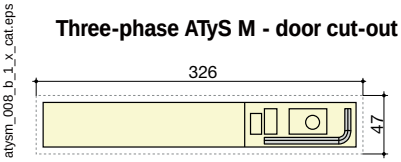



*1. Auxiliary contact (2 max).*

**Single-phase ATyS M - door cut-out**

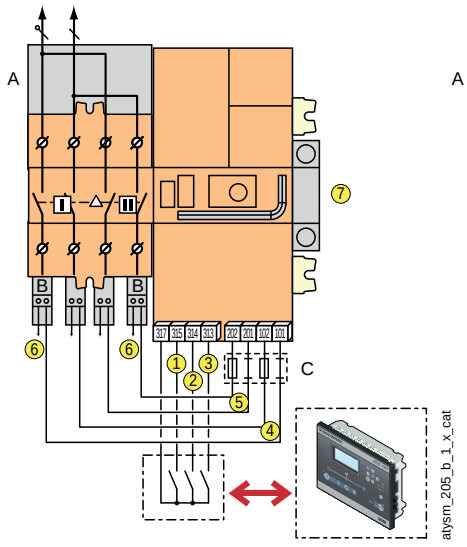



**Three-phase ATyS M - door cut-out**

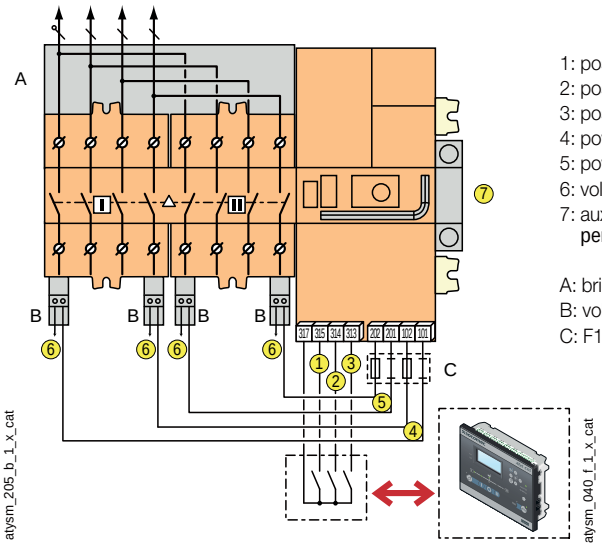



## Terminals and connections

### Single-phase ATyS d M




### Three-phase ATyS d M

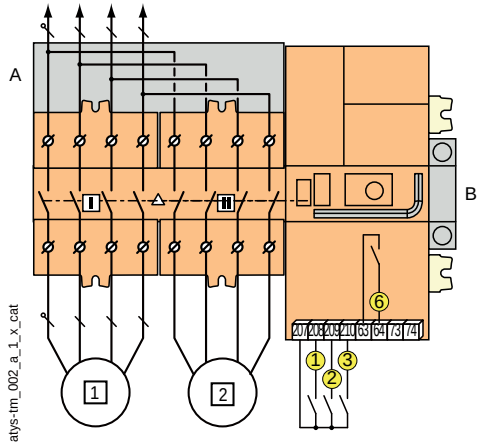



1: position I control
2: position II control
3: position 0 control C
4: power supply I (230 VAC)
5: power supply II (230 VAC)
6: voltage tap
7: auxiliary contact block - 1 NO/NC per position I, 0, II (factory fitted)

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

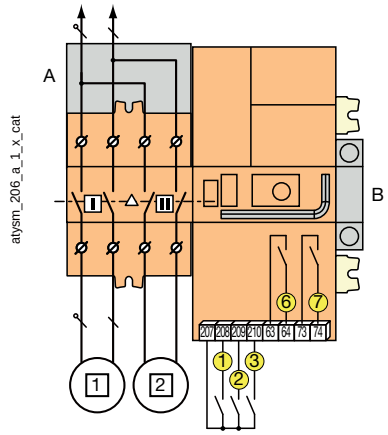



1 primary source (network)
2 backup source (network)

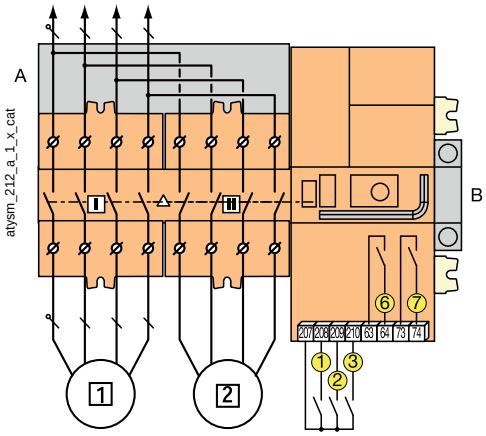
1: position 0 control
2: preferred source selection
3: automatic mode inhibition
6: availability S1 or S2

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

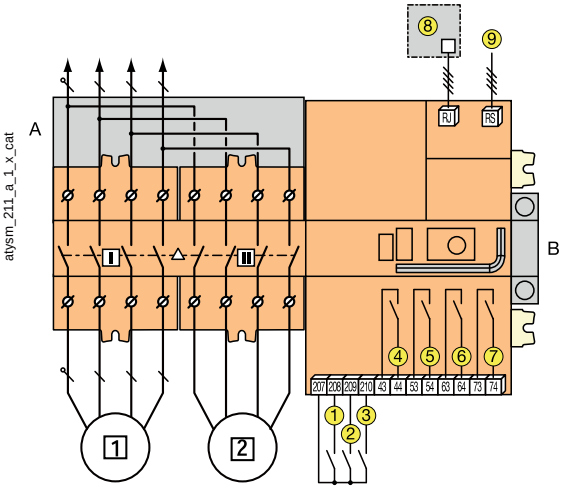



1 primary source
2 backup source

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

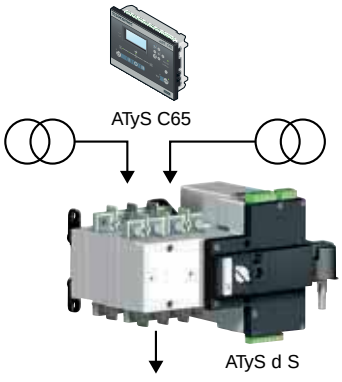
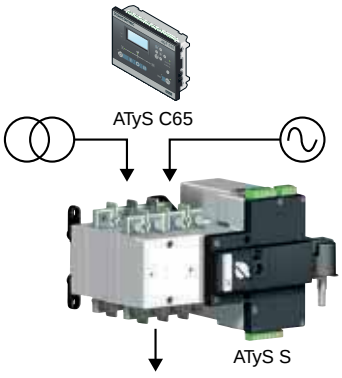
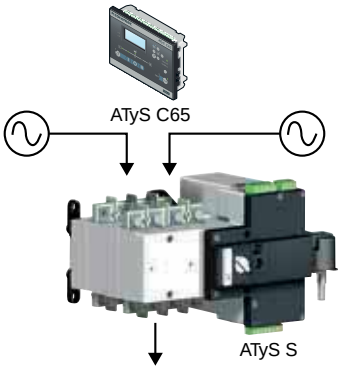
**RTSE**
(Remotely operated)

***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 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


## 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 aging. 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
> IS/IEC 60947-3
> GB 14048-11

### Approvals and certifications



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# References

## ATyS S - ATyS d S

| Rating (A) | No. of poles | Power supply | ATyS S - ATyS d S + bridging bars | Terminal shrouds | Voltage tap | Terminal retainer | DIN rail |
|---|---|---|---|---|---|---|---|
| 40 A | 4 P | 12 VDC | 9505 **4004SL** | Source side 2 pieces 9594 **4012A** Load side 2 pieces 9594 **9012A** | | 2 pieces 9599 **4003G** | 4 modules 9599 **4002G** |
| | 4 P | 230 VAC | 9503 **4004SL** | | 9599 **4001G** | | |
| | 4 P | 2 x 230 VAC | 9513 **4004SL** | | | | |
| 63 A | 4 P | 12 VDC | 9505 **4006SL** | | | | |
| | 4 P | 230 VAC | 9503 **4006SL** | | 9599 **4001G** | | |
| | 4 P | 2 x 230 VAC | 9513 **4006SL** | | | | |
| 80 A | 4 P | 12 VDC | 9505 **4008SL** | | | | |
| | 4 P | 230 VAC | 9503 **4006SL** | | 9599 **4001G** | | |
| | 4 P | 2 x 230 VAC | 9513 **4006SL** | | | | |
| 100 A | 4 P | 12 VDC | 9505 **4010SL** | | | | |
| | 4 P | 230 VAC | 9503 **4006SL** | | 9599**4001G** | | |
| | 4 P | 2 x 230 VAC | 9513 **4006SL** | | | | |
| 125 A | 4 P | 12 VDC | 9505 **4012SL** | | | | |
| | 4 P | 230 VAC | 9503 **4012SL** | | 9599 **4001G** | | |
| | 4 P | 2 x 230 VAC | 9513 **4012SL** | | | | |

# Accessories

## 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.

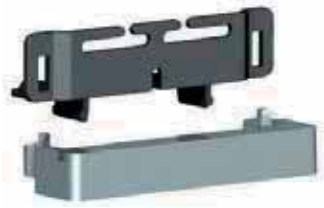
| Rating (A) | Reference |
|---|---|
| 40 ... 125 | 9599 **4001G** |


## 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 pieces | 9599 **4003G** |




## 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 pieces | 9594 **4012A** |

**Terminal shrouds for the load side**

| Rating (A) | Pack | Reference |
|---|---|---|
| 40 ... 125 | 2 pieces | 9594 **9012A** |



## 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 **4004G** |

# Accessories (continued)

## 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 **4002G** |

acces_417_a_1_cat

## 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 **5012G** |

poign_058_a_1_x_cat

## Connector kit

**Use**

This kit, which includes all of the ATyS S connectors, can be ordered to replace any lost or broken terminal connectors.

| Rating (A) | Reference |
|---|---|
| 40 ... 125 | 9509 **0002G** |

acces_416_a_1_cat

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

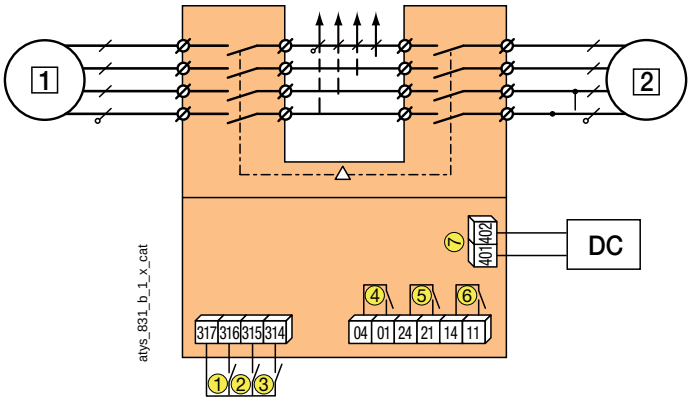
## 40 to 125 A

| **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) (operation circuit) | | 300 | 300 | 300 | 300 | 300 |
| Rated impulse withstand voltage $U_{imp}$ (kV) (operation 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 |
| 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 short-time withstand current 0.3s $I_{cw}$ (kA rms) (1) | | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 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 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 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.*

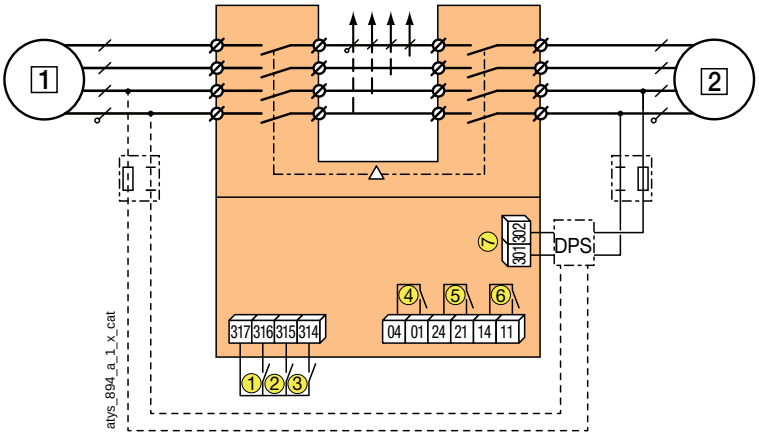
## Terminals and connections

### ATyS S DC version



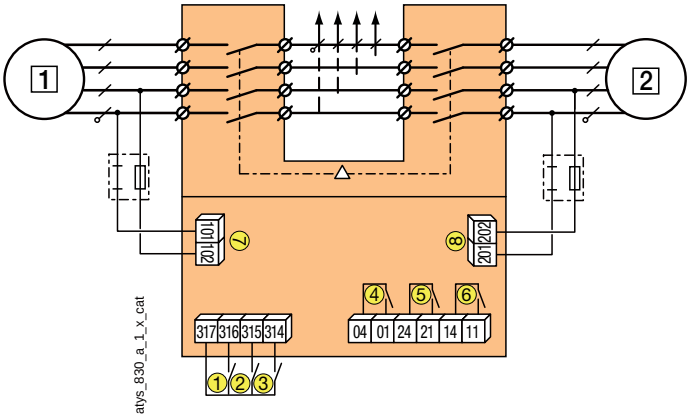

1 preferred source
2 alternate source
1: position 0 control
2: position I control
3: position II control
4: auxiliary contact, closed when the switch is in position 0
5: auxiliary contact, closed when the switch is in position II
6: auxiliary contact, closed when the switch is in position I
7: power supply :12 VDC (9-15 VDC).

### 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: 230 VAC (160-310 VAC)

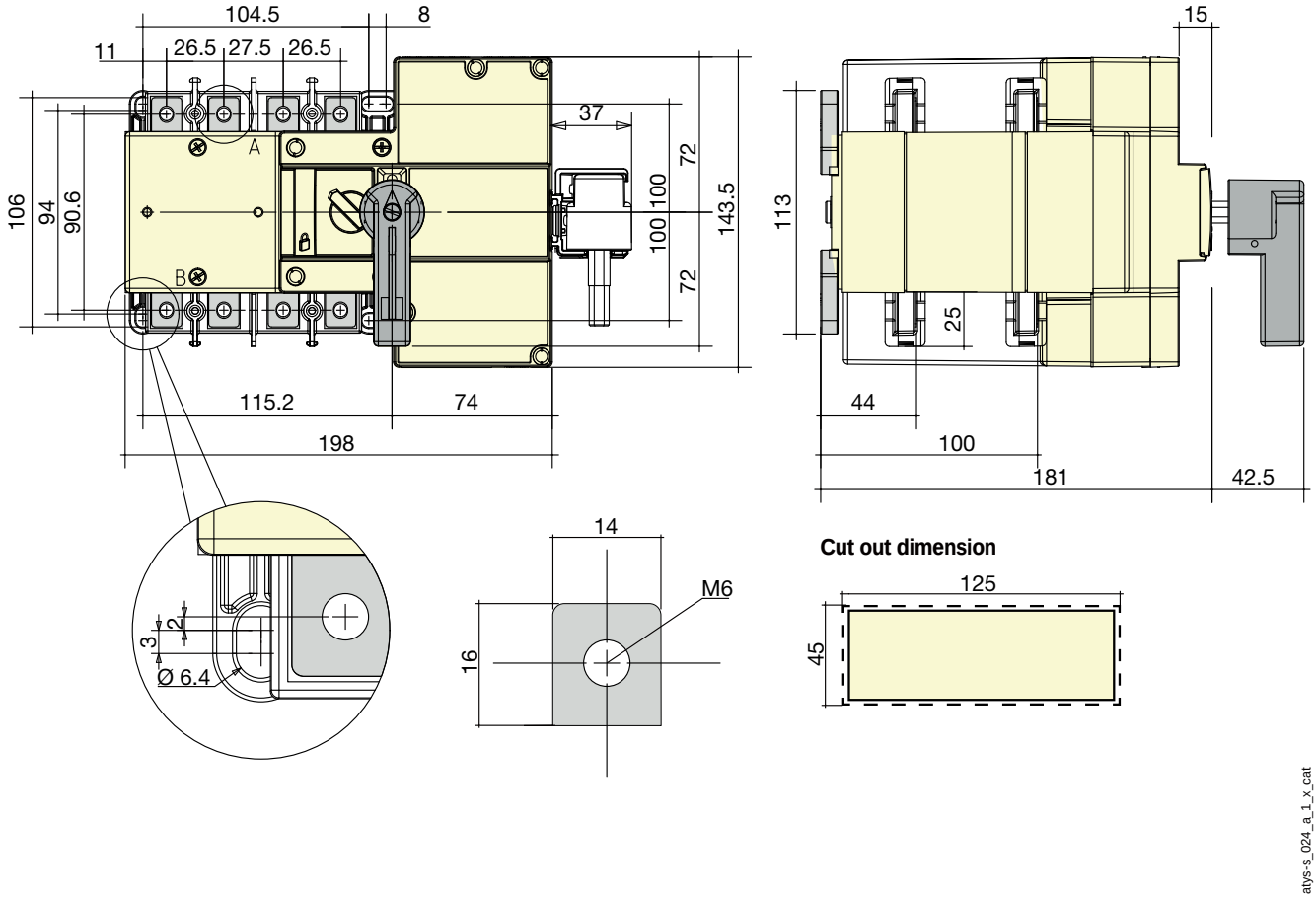
### ATyS d S: 2 x 230 VAC



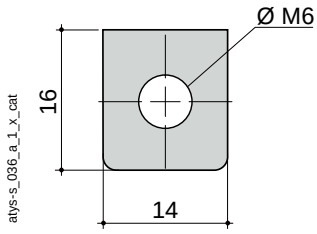

1 preferred source
2 alternate source
1: position 0 control
2: position I control
3: position II control
4: auxiliary contact, closed when the switch is in position 0
5: auxiliary contact, closed when the switch is in position II
6: auxiliary contact, closed when the switch is in position I
7: power supply I: 230 VAC (160-310 VAC)
8 : power supply II: 230 VAC (160-310 VAC)

*Includes a built-in dual power supply.*

## 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***<br>Motorised Transfer Switching Equipment | ***ATyS g***<br>Automatic Transfer Switching Equipment | ***ATyS p***<br>Automatic Transfer Switching Equipment |
| | Automatic controller to manage mains/ mains and mains/ genset applications<br><br>RS485 communication option (monitoring) | Functions for energy management<br><br>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%.

**Even 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 pre-assembled screws.

### ATyS A & ATyS C package

> Transfer switch packaged with wiring and a controller.
> Fully certified ATSE with a door mounted controller complying with IEC 60947-6-1.

### 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 C25 external controllers (for mains/mains and mains/genset applications) with integrated dual power supply offering power redundancy to the controller and the motor unit. ATyS r are also compatible with ATyS C55 and ATyS C65 controllers offering more features and functionality.

### Enclosed RTSE


*See "Enclosed transfer switches".*



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# References

## ATyS r

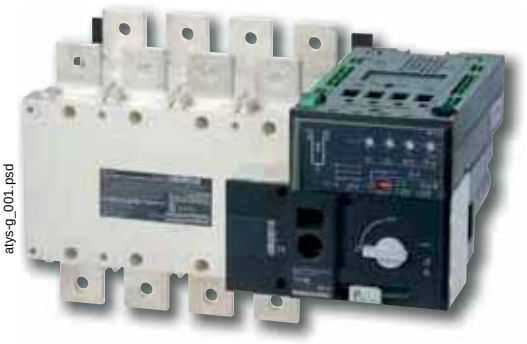
| Rating (A) / Frame size | No. of poles | ATyS r + Bridging bars | Auxiliary contacts | Terminal shrouds (2) | Terminal screens | Spreaders | Interphase barriers | Autotransformer 400/230VAC |
|---|---|---|---|---|---|---|---|---|
| 125 A / B3 | 4 P | 9523 **4012SL** | 1st/2nd NO/NC contact 1599 **0502G** | 2694 **4014A** | Standard 1509 **4012A** Wide 1509 **4013A** | 4106 **4016A** | 2998 **5038A** | 400/230 VAC 1599 **4064G** |
| 160 A / B3 | 4 P | 9523 **4016SL** | | | | | | |
| 200 A / B3 | 4 P | 9523 **4020SL** | | | | | | |
| 250 A / B4 | 4 P | 9523 **4025SL** | | 2694 **4021A** | Standard 1509 **4025A** Wide 1509 **4026A** | 4106 **4025A** | 2998 **5028A** | |
| 315A / B4 | 4 P | 9523 **4031SL** | | | | 4106 **4040A** | | |
| 400 A / B4 | 4 P | 9523 **4040SL** | | | | | | |
| 500 A / B5 | 4 P | 9523 **4050SL** | | 2694 **4051A** | Standard 1509 **4063A** Wide 1509 **4064A** | 4106 **4050A** | 2998 **5018A** | |
| 630 A / B5 | 4 P | 9523 **4063SL** | | | | 4106 **4063A** | | |
| 800 A / B6 | 4 P | 9523 **4080SL** | 1st/2nd NO/NC contact 1599 **0532G** | | Standard 1509 **4080A** Wide 1509 **4081A** | | included | |
| 1000 A / B6 | 4 P | 9523 **4100SL** | | | | | | |
| 1250 A / B6 | 4 P | 9523 **4120SL** | | | | | | |
| 1600 A / B7 | 4 P | 9523 **4160SL** | | | Standard 1509 **4160A** | | | |
| 2000 A / B8 | 4 P | 9523 **4200G**(1) | 1st and 2nd NO/NC contact included | | Standard 1509 **4200G** | | | |
| 2500 A / B8 | 4 P | 9523 **4250G**(1) | | | | | | |
| 3200 A / B8 | 4 P | 9523 **4320G**(1) | | | | | | |

*Also available in 3 poles.*
*(1) Without bridging bars, to get them see "Copper bar connection pieces"*
*(2) To shroud front switch top and bottom, order quantity 2.*

# 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 | Voltage sensing and power supply kit | Terminal shrouds(2) | Terminal screens | Auxiliary contact |
|---|---|---|---|---|---|---|
| 125 A / B3 | 4 P | 9553 **4012SLVR** | 1559 **4012** | 2694 **4014** | 1509 **4012** | 1599 **0502** |
| 160 A / B3 | 4 P | 9553 **4016SLVR** | | | | |
| 200 A / B3 | 4 P | 9553 **4020SLVR** | | | | |
| 250 A / B4 | 4 P | 9553 **4025SLVR** | 1559 **4025** | 2694 **4021** | 1509 **4025** | |
| 315 A / B4 | 4 P | 9553 **4031SLVR** | 1559 **4040** | | | |
| 400 A / B4 | 4 P | 9553 **4040SLVR** | | | | |
| 500 A / B5 | 4 P | 9553 **4050SLVR** | 1559 **4063** | 2694 **4051** | 1509 **4063** | |
| 630 A / B5 | 4 P | 9553 **4063SLVR** | | | | |
| 800 A / B6 | 4 P | 9553 **4080SLVR** | 1559 **4080** | - | 1509 **4080** | 1599 **0532** |
| 1000 A / B6 | 4 P | 9553 **4100SLVR** | | | | |
| 1250 A / B6 | 4 P | 9553 **4120SLVR** | 1559 **4120** | | | |
| 1600 A / B7 | 4 P | 9553 **4160SLVR** | 1559 **4160** | | 1509 **4160** | |
| 2000 A / B8 | 4 P | 9553 **4200G** | 1559 **4200** | | 1509 **4200** | included |
| 2500 A / B8 | 4 P | 9553 **4250G** | | | | |
| 3200 A / B8 | 4 P | 9553 **4320G** | | | | |

*(1) 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.*

# ATyS p

## Automatic transfer switching equipment

from 125 to 3200 A

atys-p_001_b

## 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
> IS/IEC 60947-3
> GB 14048.11

## 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

## 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 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 the 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.

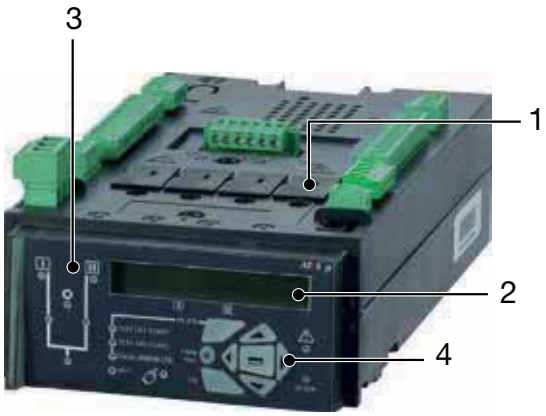
**Possibility to set periodic genset startup**

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.



socomec Innovative Power Solutions

## Front panel




atys-p_001x_a_1

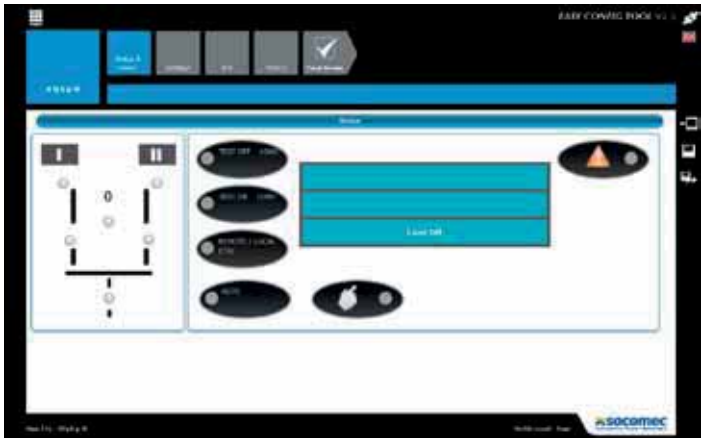
1. Slots for optional plug-in modules.
2. Backlit LCD display.
3. Source availability and position indication LEDs.
4. Pushbuttons for programming and mode selection.

## 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...

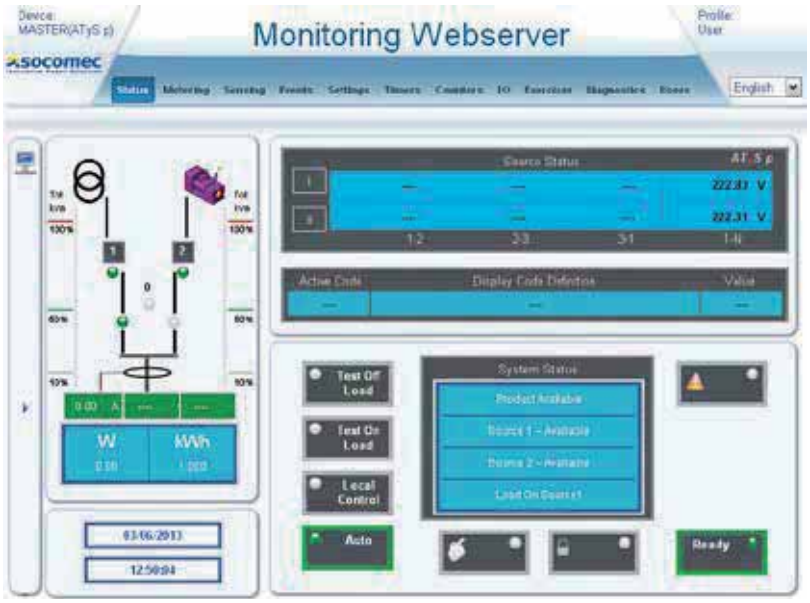


atys 849 b gb

### 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 | N° of poles | ATyS p + Bridging bars | Auxiliary contacts | Terminal shrouds[2] | Terminal screens | Spreaders | Interphase barriers | Optional modules |
|---|---|---|---|---|---|---|---|---|
| 125 A / B3 | 4 P | 9573 **4012SLVR** | 1st/2nd NO/NC contact 1599 **0502G** | 2694 **4014A** | Standard 1509 **4012A**<br>Wide 1509 **4013A** | 4106 **4016A** | 2998 **5038A** | Only for ATyS p RS485 4825 **0092G**<br>2In/2Out 1599 **2001G**<br>Ethernet 4825 **0203G**<br>Ethernet + RS485 4825 **0204G**<br>Analogue outputs 4825 **0093G**<br>Pulse outputs 4825 **0090G** |
| 160 A / B3 | 4 P | 9573 **4016SLVR** | | | | | | |
| 200 A / B3 | 4 P | 9573 **4020SLVR** | | | | | | |
| 250 A / B4 | 4 P | 9573 **4025SLVR** | | 2694 **4021A** | Standard 1509 **4025A**<br>Wide 1509 **4026A** | 4106 **4025A** | 2998 **5028A** | |
| 315 A / B4 | 4 P | 9573 **4031SLVR** | | | | 4106 **4040A** | | |
| 400 A / B4 | 4 P | 9573 **4040SLVR** | | | | | | |
| 500 A / B5 | 4 P | 9573 **4050SLVR** | | 2694 **4051A** | Standard 1509 **4063A**<br>Wide 1509 **4064A** | 4106 **4050A** | 2998 **5018A** | |
| 630 A / B5 | 4 P | 9573 **4063SLVR** | | | | 4106 **4063A** | | |

*Also available in 3 poles.*
*(1) Without bridging bars, to get them see "Copper bar connection pieces"*
*(2) To shroud front switch top and bottom, order quantity 2.*

## Technical information

> For reference including Voltage sensing and power supply kit, add "VR" at the end of the above reference, from 125 to 1600 A. And replace "G" by "VR" for 2000 to 3200 A

> Accessories:
> Characteristics:
> Terminals and connections:
> Dimensions:

## ATyS p

| Rating (A) / Frame size | N° of poles | ATyS p + Bridging bars | Auxiliary contacts | Terminal shrouds[2] | Terminal screens | Spreaders | Interphase barriers | Optional modules |
|---|---|---|---|---|---|---|---|---|
| 800 A / B6 | 4 P | 9573 **4080SLVR** | 1st/2nd NO/NC contact 1599 **0532G** | - | Standard 1509 **4080A**<br>Wide 1509 **4081A** | | included | Only for ATyS p<br>RS485 4825 **0092G**<br>2In/2Out 1599 **2001G**<br>Ethernet 4825 **0203G**<br>Ethernet + RS485 4825 **0204G**<br>Analogue outputs 4825 **0093G**<br>Pulse outputs 4825 **0090G** |
| 1000 A / B6 | 4 P | 9573 **4100SLVR** | | | | | | |
| 1250 A / B6 | 4 P | 9573 **4120SLVR** | | | | | | |
| 1600 A / B7 | 4 P | 9573 **4160SLVR** | | | Standard 1509 **4160A** | - | | |
| 2000 A / B8 | 4 P | 9573 **4200VR**[1] | 1st and 2nd NO/NC contact included | | Standard 1509 **4200G** | | | |
| 2500 A / B8 | 4 P | 9573 **4250VR**[1] | | | | | | |
| 3200 A / B8 | 4 P | 9573 **4320VR**[1] | | | | | | |

*Also available in 3 poles.*
*(1) Without bridging bars, to get them see "Copper bar connection pieces"*
*(2) To shroud front switch top and bottom, order quantity 2.*

# *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 |

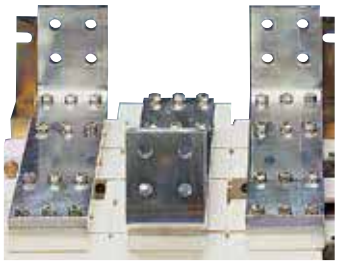
## Bridging bars

### 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.

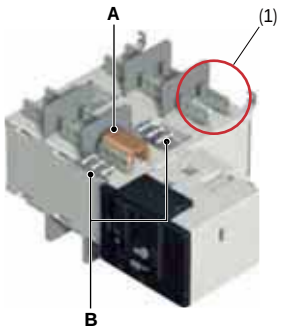
Enables:

- 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 **1200A** | 1 | 1 | 2(2) | included | included | included |
| Bolt kit 35 mm - part B | 2699 **1201A** | 1(1) | | 2(2) | 1(1) | | 2(2) |
| Bolt kit 45 mm - part B | 2699 **1200A** | 1(1) | | | 1(1) | | |
| T + Bolt kit - part C | 2629 **1200A** | | 1 | 1 | | 1 | 1 |
| Bracket + bolt kit - part D | 2639 **1200A** | | 1 | | | 1 | |
| Bar + bolt kit - part E | 4109 **0320A** | | | 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

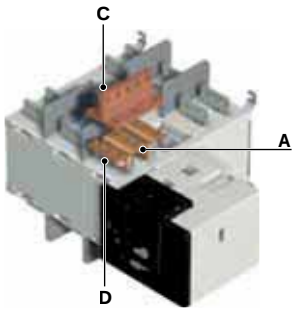
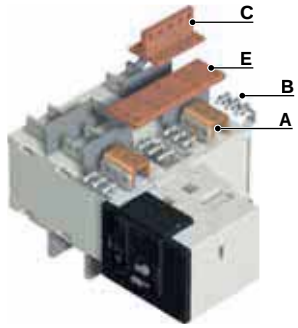



Fig. 3




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

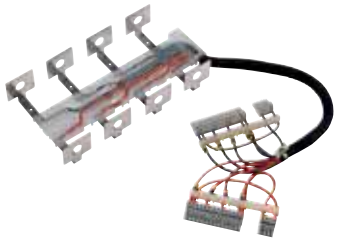
**Use**

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



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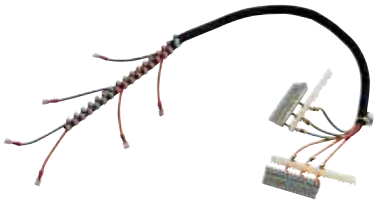
800 to 3200 A kit



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| 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**

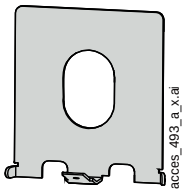
For use with ATyS, the voltage sensing tags allow voltage to be tapped directly off of ATyS power terminals to provide a supply to, for example, a control circuit or source presence indicator lamps.

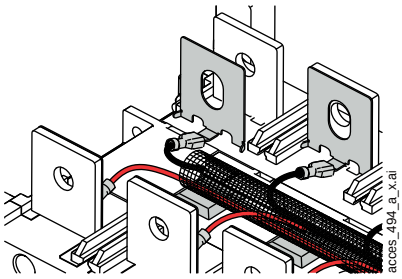
Voltage sensing tags are equipped with a Faston connector and can be mounted on the top or bottom side of the transfer switch.

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**

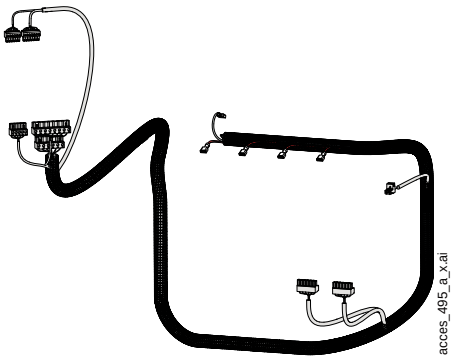
The ATyS C25 cable harness is a fast and reliable solution for connecting an ATyS r transfer switch to a C25 controller in order to create an Automatic Transfer Switch. It is equipped with Faston voltage tap-offs and provides a safe connection between the controller and changeover switch for:

- 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).

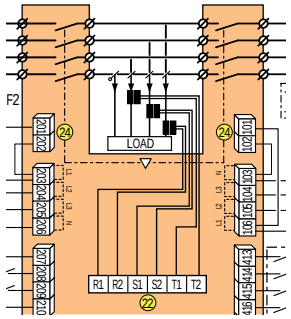
As standard, locking in position 0.
With the 3 position padlocking accessory: key interlocking in I, 0 & II.


| 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

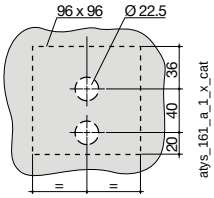
**Door mounting**

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** |

ats_869_a

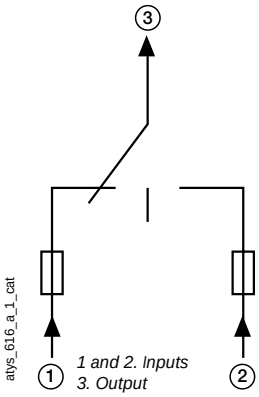
## Double power supply - DPS

### 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** |




ats_616_a_1_cat

ats_612_a_2_cat

ats-d_001.psd

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

## 125 to 630 A

| **Thermal current $I_{th}$ to 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) (power circuit) | | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Rated impulse withstand voltage $U_{imp}$ (kV) (power circuit) | | 8 | 8 | 8 | 12 | 12 | 12 | 12 | 12 |
| Rated insulation voltage $U_i$ (V) (control circuit) | | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Rated impulse withstand voltage $U_{imp}$ (kV) (control circuit) | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Rated operational currents $I_e$ (A) according to IEC 60947-6-1 | | | | | | | | | |
| **Rated voltage** | **Utilisation category** | | | | | | | | |
| 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 |
| Current rated as conditional short-circuit with fuse gG DIN, according to IEC 60947-3 | | | | | | | | | |
| Prospective fuse protected short-circuit withstand at 415 VAC(6) | | 100 | 100 | 50 | 50 | 50 | 50 | 50 | 50 |
| Prospective fuse protected short-circuit withstand 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 (4) | 15 (4) | 15 (4) | 17 (4) | 17 (4) |
| Rated short-time withstand current 1s $I_{cw}$ at 415 VAC (kA rms) | | 7 | 7 | 7 | 8 (4) | 8 (4) | 8 (4) | 11 (4) | 10 (4) |
| 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 ($mm^2$) | | 35 | 35 | 50 | 95 | 120 | 185 | 2 x 95 | 2 x 120 |
| Recommended Cu busbar cross-section ($mm^2$) | | | | | | | | 2 x 32 x 5 | 2 x 40 x 5 |
| Maximum Cu cable cross-section ($mm^2$) | | 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 | 40/45 | 40/45 |
| Switching time (rated voltage, after receiving command) | | | | | | | | | |
| Transfer time I-II or II-I (s) | | 0.85 | 0.85 | 0.85 | 0.9 | 0.9 | 0.9 | 0.95 | 0.95 |
| I-0 or II-0 (s) | | 0.55 | 0.55 | 0.55 | 0.5 | 0.5 | 0.5 | 0.55 | 0.55 |
| Contact transfer time ("black-out" I-II) minimum (s) | | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Power supply | | | | | | | | | |
| Min./max. auxiliary power supply (VAC) | | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 |
| Control supply power demand | | | | | | | | | |
| Inrush / nominal power (VA) - ATyS r | | 184/92 | 184/92 | 184/92 | 276/115 | 276/115 | 276/115 | 276/150 | 276/150 |
| Inrush / nominal power (VA) - ATyS g , p | | 206/114 | 206/114 | 206/114 | 298/137 | 298/137 | 298/137 | 298/172 | 298/172 |
| Mechanical specifications | | | | | | | | | |
| Durability (number of operating cycles) | | 10,000 | 10,000 | 10,000 | 8,000 | 8,000 | 8,000 | 5,000 | 5,000 |
| Weight ATyS r 3 P / 4 P (kg) | | 5.7/ 6.9 | 5.7/ 6.9 | 5.7/ 6.9 | 6.6/ 7.4 | 6.7/ 7.8 | 6.7/ 7.8 | 11.4/ 13.3 | 11.9/ 14.0 |
| Weight ATyS g, p 3 P / 4 P (kg) | | 6.8/ 8.0 | 6.8/ 8.0 | 6.8/ 8.0 | 7.7/ 8.5 | 7.8/ 8.9 | 7.8/ 8.9 | 12.5/ 14.4 | 13.0/ 15.1 |

*(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) Values given at 690 VAC.*

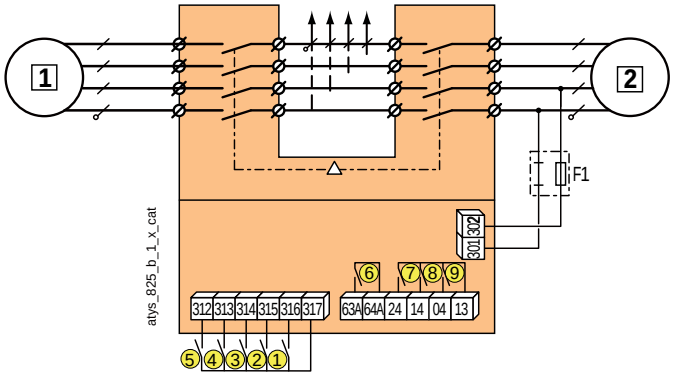
## 800 to 3200 A

| **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) (power circuit) | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Rated impulse withstand voltage $U_{imp}$ (kV) (power circuit) | | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Rated insulation voltage $U_i$ (V) (control circuit) | | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Rated impulse withstand voltage $U_{imp}$ (kV) (control circuit) | | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Rated operational currents $I_e$ (A) according to IEC 60947-6-1 | | | | | | | | |
| **Rated voltage** | **Utilisation category** | | | | | | | |
| 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 | | | |
| Current rated as conditional short-circuit with fuse gG DIN, according to IEC 60947-3 | | | | | | | | |
| Prospective fuse protected short-circuit withstand at 415 VAC(kA rms) | | 50 | 50 | 100 | 100 | | | |
| Prospective fuse protected short-circuit withstand 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 100 x 10 |
| 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) | | 9/13 | 9/13 | 20/26 | 40/45 | 40/45 | 40/45 | 40/45 |
| Switching time (rated voltage, after receiving command) | | | | | | | | |
| Transfer time I-II or II-I (s) | | 2.8 | 2.8 | 2.8 | 2.9 | 2.8 | 2.8 | 2.8 |
| I-0 or II-0 (s) | | 1.4 | 1.4 | 1.4 | 1.4 | 1.8 | 1.8 | 1.8 |
| Contact transfer time ("black-out" I-II) minimum (s) | | 1.4 | 1.4 | 1.4 | 1.5 | 1 | 1 | 1 |
| Power supply | | | | | | | | |
| Min./max. auxiliary power supply (VAC) | | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 |
| Control supply power demand | | | | | | | | |
| Inrush / nominal power (VA) - ATyS r, | | 460/184 | 460/184 | 460/184 | 460/230 | 812/322 | 812/322 | 812/322 |
| Inrush / nominal power (VA) - ATyS g , p | | 482/206 | 482/206 | 482/206 | 482/252 | 834/344 | 834/344 | 834/344 |
| Mechanical specifications | | | | | | | | |
| Durability (number of operating cycles) | | 4,000 | 4,000 | 4,000 | 3,000 | 3,000 | 3,000 | 3,000 |
| Weight ATyS r 3 P / 4 P (kg) | | 27.9/ 32.2 | 28.4/ 32.9 | 28.9/ 33.6 | 33.1/ 39.4 | 50.7/ 61.6 | 50.7/ 61.6 | 61.0/ 75.3 |
| Weight ATyS g, p 3 P / 4 P (kg) | | 29.0/ 33.3 | 29.5/ 34.0 | 30.0/ 34.7 | 34.2/ 40.5 | 51.8/ 62.7 | 51.8/ 62.7 | 62.1/ 76.4 |

*(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) Values given at 690 VAC.*

## Connections and terminals

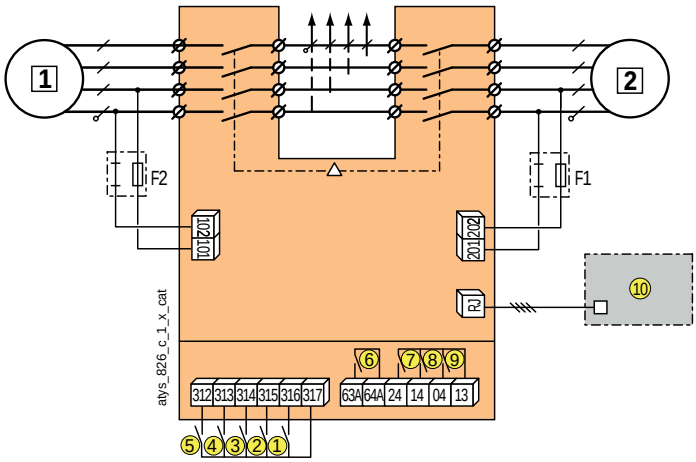
### ATyS r




1 primary source (network or genset)
2 backup source (mains network or genset)

1: position 0 control (contact or logic if closed)
2: position I control
3: position II control
4: primary control position 0
5: closing this contact allows position control commands
6: product availability relay
7: auxiliary contact - closed when the switch is in position II
8: auxiliary contact - closed when ther switch is in position I
9: auxiliary contact - closed when the switch is in position 0

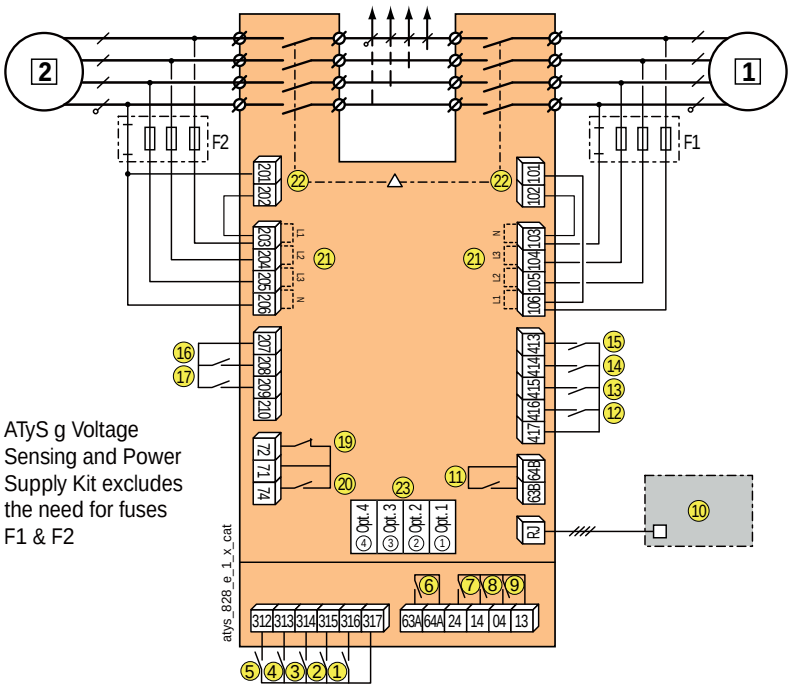
### ATyS r with ATyS DPS




1 primary source (mains network or genset)
2 backup source (mains network or genset)

1: position 0 control (contact or logic if closed)
2: position I control
3: position II control
4: primary control position 0
5: closing this contact allows position control commands
6: product availability relay
7: auxiliary contact - closed when the switch is in position II
8: auxiliary contact - closed when the switch is in position I
9: auxiliary contact - closed when the switch is in position 0
10: D10 remote interface

## ATyS g



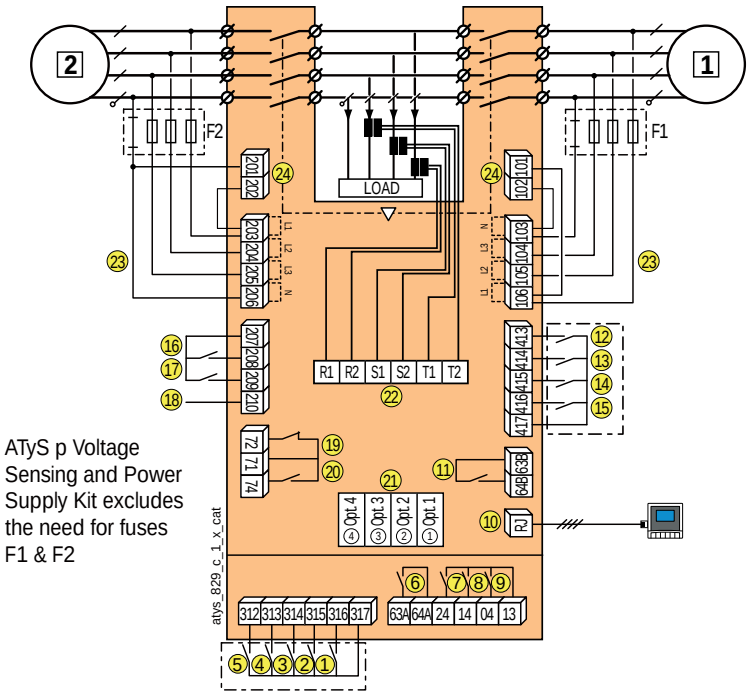

ATyS g Voltage Sensing and Power Supply Kit excludes the need for fuses F1 & F2

1 primary source (mains network)
2 backup source (genset or network)
1: position 0 control (contact or logic if closed)
2: position I control
3: position II control
4: primary control position 0
5: closing this contact allows position control commands
6: Motor unit availability relay
7: auxiliary contact - closed when the switch is in position II
8: auxiliary contact - closed when the switch is in position I
9: auxiliary contact - closed when the switch is in position 0
10: D10 remote interface
11: Electrical unit availability relay
12: automatic operation inhibited
13: confirm manual retransfer
14 : bypass for time delay 2AT
15 : M/G: priority test on load.
M/M: with or without priority.
16: remote test without load
17: M/G: test on load
M/M: preferred source selection
19-20: genset start and stop commands

| Order | 71/72 (19) | 71/74 (20) |
|---|---|---|
| Genset start-up | Closed contact | Open contact |
| Genset stop | Open contact | Closed contact |

21: voltage inputs
22: power inputs
23: 4 slots for optional RS485 communication module

## ATyS p




ATyS p Voltage Sensing and Power Supply Kit excludes the need for fuses F1 & F2

1 primary source (network or genset)
2 backup source (network or genset)
1: position 0 control (contact or logic if closed)
2: position I control
3: control position II
4: primary control position 0
5: closing this contact allows position control commands
6: Motor unit availability relay
7: auxiliary contact - closed when the switch is in position II
8: auxiliary contact - closed when the switch is in position I
9: auxiliary contact - closed when the switch is in position 0
10: D20 remote interface
11: Electrical unit availability relay
12-17: programmable inputs
18: auxiliary power supply for optional modules
19-20: genset start and stop commands

| Order | 71/72 (19) | 71/74 (20) |
|---|---|---|
| Genset start-up | Closed contact | Open contact |
| Genset stop | Open contact | Closed contact |

21 : 4 slots for optional modules
22: TI measurement connection
23 : voltage inputs
24 : power inputs

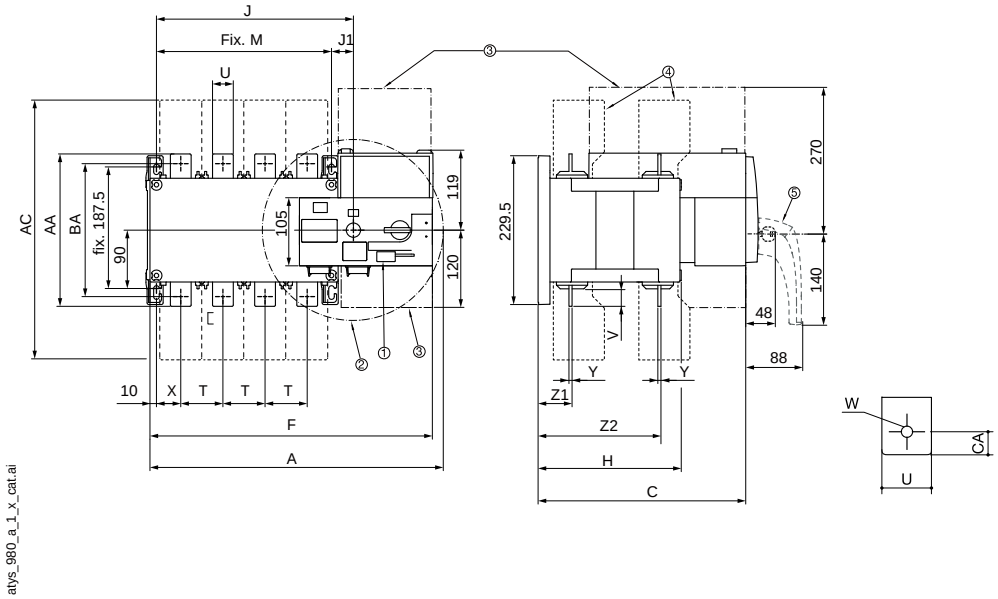
# *ATyS* range

***ATyS r, ATyS g, ATyS p***

from 125 to 3200 A

## Dimensions

### 125 to 630 A / B3 to B5

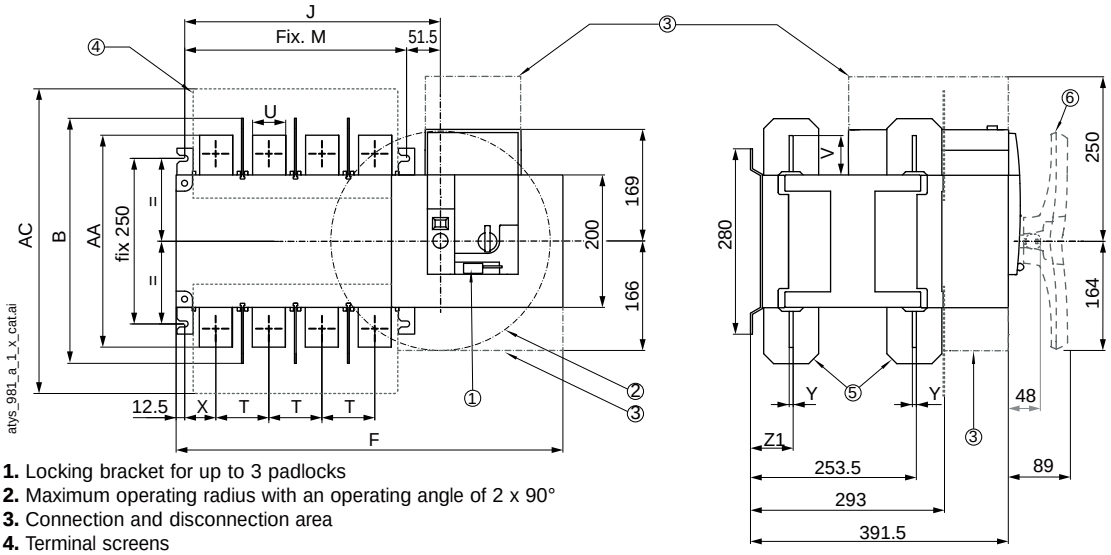



atys_980_a_1_x_cat.ai

1. Locking bracket for up to 3 padlocks
2. Maximum operating radius with an operating angle of 2 x 90°
3. Connection and disconnection area
4. Phase barriers
5. Emergency removable handle

| Rating (A) / Frame size | Overall dimensions | | Terminal shrouds | Switch body | | | | | | Switch mounting | | Connection | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A 4p. | C | AC | F 3p. | F 4p. | H | J 3p. | J 4p. | J1 | M 3p. | M 4p. | T | U | V | W | X 3p. | X 4p. | Y | Z1 | Z2 | AA | BA | CA |
| 125 / B3 | 334 | 244 | 233 | 286.5 | 317 | 151 | 154 | 184 | 34 | 120 | 250 | 36 | 20 | 25 | 9 | 28 | 22 | 3.5 | 38 | 134 | 135 | 115 | 10 |
| 160 / B3 | 334 | 244 | 233 | 286.5 | 317 | 151 | 154 | 184 | 34 | 120 | 250 | 36 | 20 | 25 | 9 | 28 | 22 | 3.5 | 38 | 134 | 135 | 115 | 10 |
| 200 / B3 | 334 | 244 | 233 | 286.5 | 317 | 151 | 154 | 184 | 34 | 120 | 250 | 36 | 20 | 25 | 9 | 28 | 22 | 3.5 | 38 | 134 | 135 | 115 | 10 |
| 250 / B4 | 395 | 244 | 288 | 328 | 378 | 152 | 195 | 245 | 35 | 160 | 210 | 50 | 25 | 30 | 11 | 33 | 33 | 3.5 | 39.5 | 133.5 | 160 | 130 | 15 |
| 315 / B4 | 395 | 244 | 288 | 328 | 378 | 152 | 195 | 245 | 35 | 160 | 210 | 50 | 35 | 35 | 11 | 33 | 33 | 3.5 | 39.5 | 133.5 | 160 | 130 | 15 |
| 400 / B4 | 395 | 244 | 288 | 328 | 378 | 152 | 195 | 245 | 35 | 160 | 210 | 50 | 35 | 35 | 11 | 33 | 33 | 3.5 | 39.5 | 133.5 | 170 | 140 | 15 |
| 500 / B5 | 454 | 402 | 402 | 377 | 437 | 221 | 244 | 304 | 34 | 210 | 270 | 65 | 32 | 50 | 14 | 42.5 | 37.5 | 5 | 53 | 190 | 260 | 220 | 20 |
| 630 / B5 | 454 | 402 | 402 | 377 | 437 | 221 | 244 | 304 | 34 | 210 | 270 | 65 | 45 | 50 | 13 | 42.5 | 37.5 | 5 | 53 | 190 | 260 | 220 | 20 |

### 800 to 1600 A / B6 to B7




atys_981_a_1_x_cat.ai

1. Locking bracket for up to 3 padlocks
2. Maximum operating radius with an operating angle of 2 x 90°
3. Connection and disconnection area
4. Terminal screens
5. Phase barriers
6. Emergency removable handle

| Rating (A) / Frame size | Overall dimensions | Terminal shrouds | Switch body | | | | Switch mounting | | Connection | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | AC | F 3p. | F 4p. | J 3p. | J 4p. | M 3p. | M 4p. | T | U | V | X | Y | Z1 | AA |
| 800 / B6 | 370 | 461 | 504 | 584 | 307 | 387 | 255 | 335 | 80 | 50 | 60.5 | 47.5 | 7 | 66.5 | 321 |
| 1000 / B6 | 370 | 461 | 504 | 584 | 307 | 387 | 255 | 335 | 80 | 50 | 60.5 | 47.5 | 7 | 66.5 | 321 |
| 1250 / B6 | 370 | 461 | 504 | 584 | 307 | 387 | 255 | 335 | 80 | 60 | 65 | 47.5 | 7 | 66.5 | 330 |
| 1600/B7 | 380 | 531 | 596 | 716 | 399 | 519 | 347 | 467 | 120 | 90 | 44 | 53 | 8 | 67.5 | 288 |



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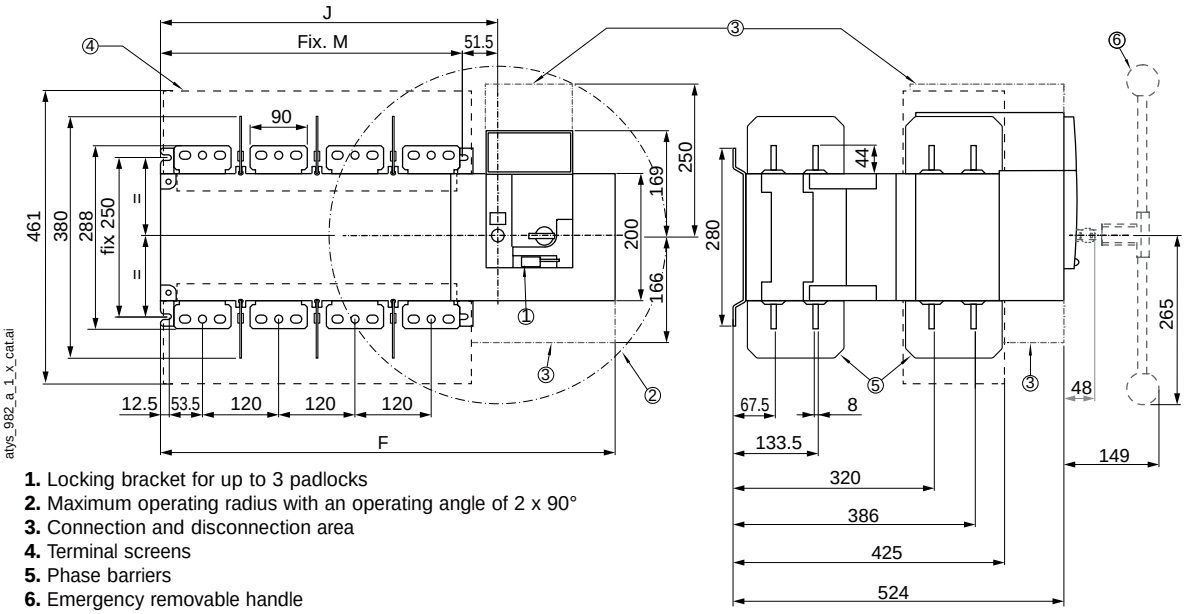
## 2000 to 3200 A / B8



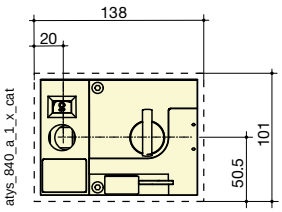

**1.** Locking bracket for up to 3 padlocks
**2.** Maximum operating radius with an operating angle of 2 x 90°
**3.** Connection and disconnection area
**4.** Terminal screens
**5.** Phase barriers
**6.** Emergency removable handle

| Rating (A) | Switch body | | | | Switch mounting | |
|---|---|---|---|---|---|---|
| | F 3p. | F 4p. | J 3p. | J 4p. | M 3p. | M 4p. |
| 2000 ... 3200 | 596 | 716 | 398.5 | 518.5 | 347 | 467 |

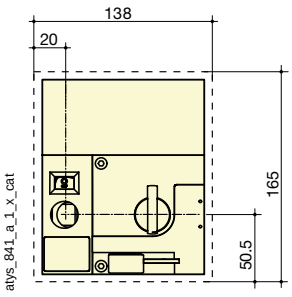
# Door cutout

## 125 to 630 A / B3 to B5

**ATyS r**

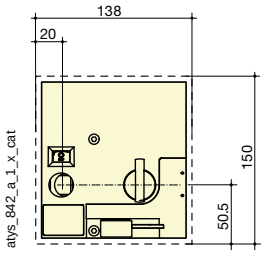



**ATyS g, p**

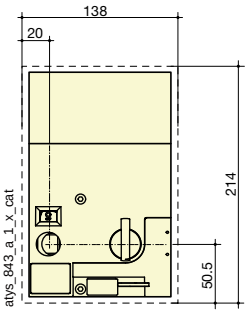



## 800 to 1600 A / B6 to B7

**ATyS r**

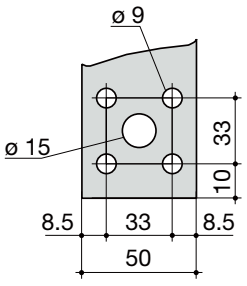



**ATyS g, p**

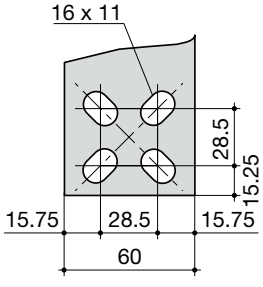



# Connection terminals

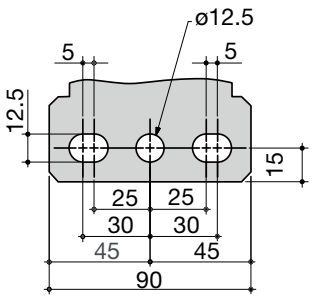
## 800 to 1000 A / B6




## 1250 A / B6




## 1600 to 3200 A / B7 to B8



# ATyS A - ATyS C

## Automatic Transfer Switching Equipment

from 125 to 3200 A with integrated ATS controller



new


### The solution for

- Mains/mains and Mains/Genset applications
- With RS485 communication (ATyS C) or basic ATS controller (ATyS A)

### Strong points

- Fully certified ATSE with door mounted controller
- ATS controller with integrated AC Double Power Supply and functions dedicated to mains/mains or mains/genset applications
- RS485 Communication with ATyS C

### Conformity to standards

- IEC 60947-6-1
- IEC 60947-3
- IEC 61010-2-201 (ATS controller)

## Function

**ATyS A** and **ATyS C** are 4 pole automatic transfer switches, with positive break indication.
They incorporate the functions intended for mains/mains applications 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 DIP switches.
They are intended for use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.
Remote monitoring of the ATyS C is possible through RS485 communication.

## Advantages

**Rapid commissioning**
Voltage tapping and cable harness are supplied in a single package with motorised transfer switch and ATS controller. ATyS A and C switches offer significant time saving during commissioning (process takes 2 to 3 minutes). Owing to the design that allows commissioning through eight DIP switches, a screwdriver is all that is required.

**ATyS C with RS845 communication**
An RS485 communication offers the remote monitoring possibilities of available power sources and their parameters & timers. Communication speed is up to 38400 bauds.

**Integrated design**
The integrated design of the TSE offers an easy door mounting possibility of the ATS controller with the help of wire harness. Whilst providing an IP4x protection degree it enables an acces to source availability and switch position visual information, as well as to the manual remote controls option.

**Watchdog relay to check product availability**
ATyS A and ATyS C products are equipped with a Watchdog relay which constantly monitors your product, thereby securing the installation. This relay informs in real time the product's availability to the user, i.e. whether it is operational and ready for source switching.

**Cable harness**
The cable harness is an easy way of powering ATyS A or ATyS C transfer switch systems. It's equipped with voltage tags and provides a reliable link between controller and changeover switch for:
- tracking power sources availability,
- monitoring changeover switch availability,
- an electrical interlock function,
- control and transfer between power sources.

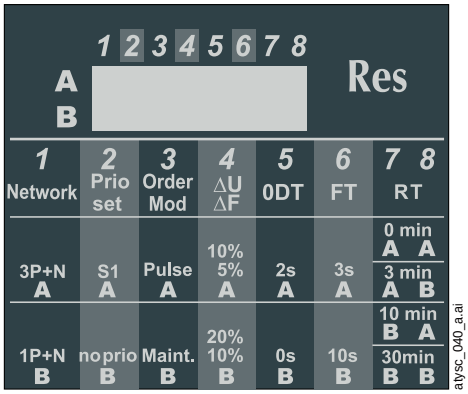
Cable harness length is approximately 2 meters.

## General characteristics

- Main/Main or Main/Genset networks.
- ATS with 3 stable positions : I - 0 - II.
- Built-in mechanical interlock.
- Emergency manual operation handle.
- Top or bottom incoming sources.
- ATS controller self-powered from sensing : 184 - 300 VAC.
- ATS controller optional 24 VDC aux power supply.
- Three-phase + Neutral or Single-phase + Neutral networks.
- Voltage sensing on all phases.
- Phase rotation checking.
- RS485 Modbus communication with ATyS C.
- Door or DIN rail mounted controller.

## Front panel of the controller


**1.** Controller status indication.
**2.** Configuration dip-switches.
**3.** Lamp test / Test on Load (3s).
**4.** Position orders (in Manual).
**5.** Auto/Manu mode selector.
**6.** Mimic panel.




**0DT:** Dead band timer
**FT:** Faillure timer
**RT:** Return timer
**Res:** Set/Reset button

DIP switches allow quick and easy configuration. It's not required to power the controller during configuration. After powering on it will read the latest DIP switches values.

# References

## ATyS A - ATyS C

| Rating (A) / Frame size | No. of poles | ATyS A | ATyS C with RS485 communication | Terminal shrouds | Terminal screens | Auxiliary contact |
|---|---|---|---|---|---|---|
| 125 A / B3 | 4 P | 9515 **4012 SL** | 9525 **4012 SL** | 2694 **4014**(2) | 1509 **4012** | 1599 **0502** |
| 160 A / B3 | 4 P | 9515 **4016 SL** | 9525 **4016 SL** | | | |
| 200 A / B3 | 4 P | 9515 **4020 SL** | 9525 **4020 SL** | | | |
| 250 A / B4 | 4 P | 9515 **4025 SL** | 9525 **4025 SL** | 2694 **4021**(2) | 1509 **4025** | |
| 315 A / B4 | 4 P | 9515 **4031 SL** | 9525 **4031 SL** | | | |
| 400 A / B4 | 4 P | 9515 **4040 SL** | 9525 **4040 SL** | | | |
| 500 A / B5 | 4 P | 9515 **4050 SL** | 9525 **4050 SL** | 2694 **4051**(2) | 1509 **4063** | |
| 630 A / B5 | 4 P | 9515 **4063 SL** | 9525 **4063 SL** | | | |
| 800 A / B6 | 4 P | 9515 **4080 SL** | 9525 **4080 SL** | | 1509 **4080** | 1599 **0532** |
| 1000 A / B6 | 4 P | 9515 **4100 SL** | 9525 **4100 SL** | | | |
| 1250 A / B6 | 4 P | 9515 **4120 SL** | 9525 **4120 SL** | | | |
| 1600 A / B7 | 4 P | 9515 **4160 SL** | 9525 **4160 SL** | | 1509 **3160** | |
| 2000 A / B8 | 4 P | 9515 **4200 G** | 9525 **4200 G** | | 1509 **4200** | included |
| 2500 A / B8 | 4 P | 9515 **4250 G** | 9525 **4250 G** | | | |
| 3200 A / B8 | 4P | 9515 **4320 G** | 9525 **4320 G** | | | |

*(1) Bridging bars are included upto 1600 A.*
*(2) To fully shroud front, rear, top and bottom 4 references required.*
*To shroud front switch top and bottom 2 references required.*

# 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 | 4 P | top / bottom / front (I) / rear (II) | 2694 **4014**(1)(2) |
| 250 ... 400 | B4 | 4 P | top / bottom / front (I) / rear (II) | 2694 **4021**(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.*

## 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 | 4 P | top / bottom | 1509 **4012** |
| 250 ... 400 | B4 | 4 P | top / bottom | 1509 **4025** |
| 500 ... 630 | B5 | 4 P | top / bottom | 1509 **4063** |
| 800 ... 1250 | B6 | 4 P | top / bottom | 1509 **4080** |
| 1600 | B7 | 4 P | top / bottom | 1509 **4160** |
| 2000 ... 3200 | B8 | 4 P | top / bottom | 1509 **4200** |

## Inter-phase barrier

**Use**

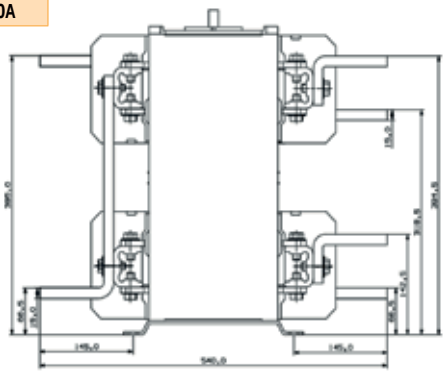
Safe isolation between the terminals, essential for use at 690 VAC or in a polluted or dusty atmosphere.

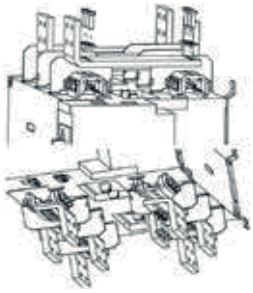
| Rating (A) | Frame size | No. of poles | Reference |
|---|---|---|---|
| 125 ... 200 | B3 | 4 P | 2998 **0034** |
| 250 ... 400 | B4 | 4 P | 2998 **0024** |
| 500 ... 630 | B5 | 4 P | 2998 **0014** |
| 800 ... 3200 | B6 ... B8 | 4 P | included |

## Bridging bars kit

### For ratings 2000 to 2500 A

| S.No | Description | Req. Qty / Switch | Reference |
|---|---|---|---|
| 1 | Bridging bar B3/4 P line side | 1 | 2619 **4251A** |
| 2 | Bridging bar B8/4 P load side | 1 | 4109 **4250A** |
| 3 | U bridge 1 P connector B8 CU | 16 | 2619 **1200A** |






### For ratings 3200 A

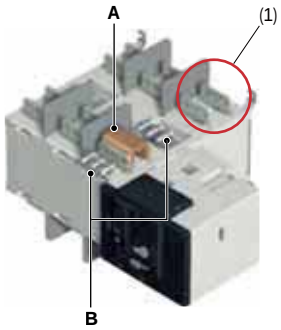
Enables:

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

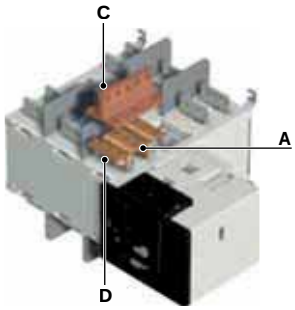


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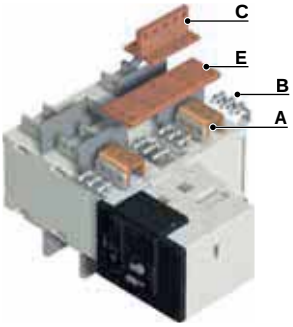
Fig. 3

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### The Below items are required to order for one SIRCOVER Switch (3200A)

| Part | Total quantity | Reference |
|---|---|---|
| Bolt kit 45 mm - part B | 16 | 2699 **1200** |
| T + Bolt kit - part C | 12 | 2629 **1200** |
| Bracket + Bolt kit - part D | 8 | 2639 **1200** |
| Bar + Bolt kit - part E | 4 | 4109 **0320** |

# 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** |

## 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

acces_396_a

If additional auxiliary contacts are required please consult us.

125 to 630 A

acces_397_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 |

## 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** |

# Characteristics of ATS controllers

## Characteristics

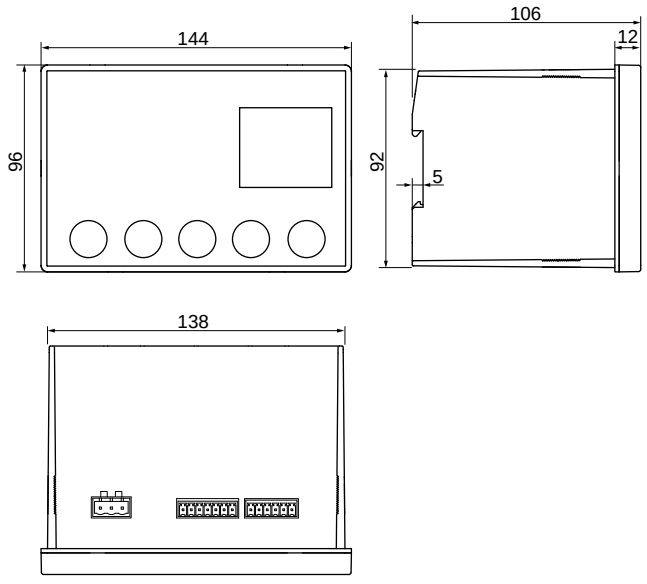
| Electrical characteristics | |
|---|---|
| AC operating limits | 184 (1) - 300 VAC |
| Optional DC supply | 24 VDC |
| Frequency limits | 45 - 65 Hz |
| Power consumption | < 10 W |
| Inputs | 5 - fixed (auto inhibit & 24 VDC fire input, position indication I-0-II) |
| Outputs | 4 - fixed (position control I-0-II & genset start) |
| Impulse withstand | 6/4 kV(2) |
| Overvoltage category | CAT 3 |

| Mechanical characteristics | |
|---|---|
| Weight | 845 gr |
| Door cutout | 138 x 93 mm |
| Operating temperature | -25 … +60°C |
| **Communications ATyS C** | |
| Interface type | RS485. 2 to 3 half duplex wires |
| Protocol | MODBUS RTU |
| Baudrate | 38400 |

*(1) 190 VAC in contactor mode.*
*(2) 6 kV tested between phases of a different source and 4 kV tested between phases of a the same source.*

# Dimensions of ATS controllers

## Dimensions (mm)



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

## 125 to 630 A

| **Thermal current $I_{th}$ to 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) (power circuit) | | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Rated impulse withstand voltage $U_{imp}$ (kV) (power circuit) | | 8 | 8 | 8 | 12 | 12 | 12 | 12 | 12 |
| Rated insulation voltage $U_i$ (V) (control circuit) | | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Rated impulse withstand voltage $U_{imp}$ (kV) (control circuit) | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 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 |
| Rated operational currents $I_e$ (A) according to IEC 60947-6-1 | | | | | | | | | |
| **Rated voltage** | **Utilisation category** | | | | | | | | |
| 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 |
| Current rated as conditional short-circuit with fuse gG DIN, according to IEC 60947-3 | | | | | | | | | |
| Prospective fuse protected short-circuit withstand at 415 VAC(6) | | 100 | 100 | 50 | 50 | 50 | 50 | 50 | 50 |
| Prospective fuse protected short-circuit withstand 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 (4) | 15 (4) | 15 (4) | 17 (4) | 17 (4) |
| Rated short-time withstand current 1s $I_{cw}$ at 415 VAC (kA rms) | | 7 | 7 | 7 | 8 (4) | 8 (4) | 8 (4) | 11 (4) | 10 (4) |
| Rated peak withstand current at 415 VAC (kA peak) | | 20 | 20 | 20 | 30 | 30 | 30 | 45 | 45 |
| Short-circuit withstand without protection as per IEC 60947-6-1 | | | | | | | | | |
| Rated short-time withstand current 30 ms $I_{cw}$ at 415 VAC (kA rms) | | 10 | 10 | 10 | 10 | 10 | 10 | | |
| Rated short-time withstand current 60 ms $I_{cw}$ at 415 VAC (kA rms) | | | | | | | | 10 | 12.6 |
| Connection | | | | | | | | | |
| Minimum Cu cable cross-section (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 | 40/45 | 40/45 |
| Switching time (rated voltage, after receiving command) | | | | | | | | | |
| Transfer time I-II or II-I (s) | | 0.85 | 0.85 | 0.85 | 0.9 | 0.9 | 0.9 | 0.95 | 0.95 |
| I-0 or II-0 (s) | | 0.55 | 0.55 | 0.55 | 0.5 | 0.5 | 0.5 | 0.55 | 0.55 |
| Contact transfer time ("black-out" I-II) minimum (s) | | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Power supply | | | | | | | | | |
| Min./max. power (VAC) | | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 |
| Control supply power demand | | | | | | | | | |
| Demand/rated power (VA) - ATyS | | 184/92 | 184/92 | 184/92 | 276/115 | 276/115 | 276/115 | 276/150 | 276/150 |
| Mechanical specifications | | | | | | | | | |
| Durability (number of operating cycles) | | 10,000 | 10,000 | 10,000 | 8,000 | 8,000 | 8,000 | 5,000 | 5,000 |
| Weight ATyS 4 P (kg) | | 6.9 | 6.9 | 6.9 | 7.4 | 7.8 | 7.8 | 13.3 | 14.0 |

*(1) Category with index A = frequent operation - Category with index B = infrequent operation.*
*(2) 4-pole device with 2 poles in series by polarity.*
*(3) Interphase barriers must be installed on the products.*
*(4) Values given at 690 VAC.*

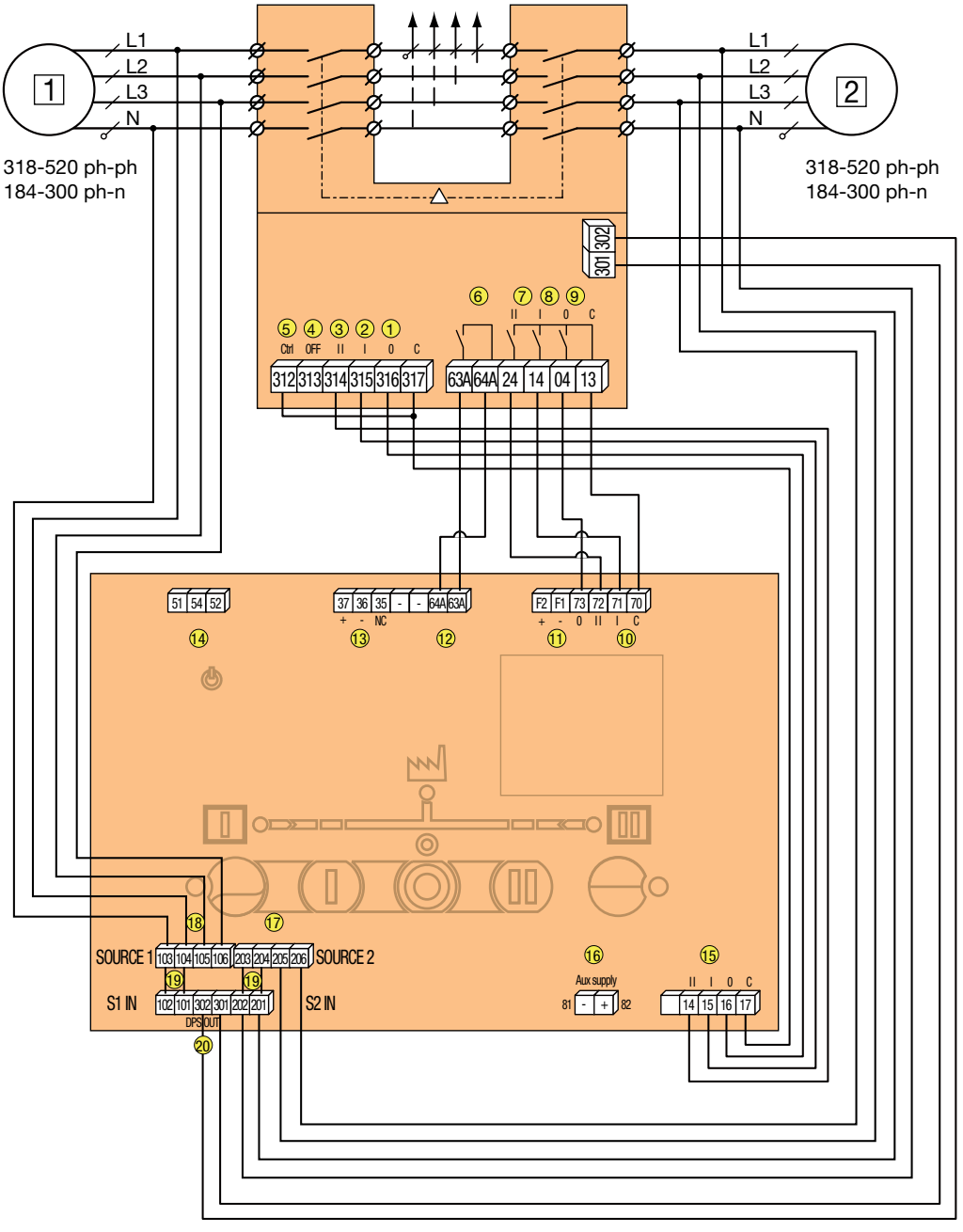
## 800 to 3200 A

| 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) (power circuit) | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Rated impulse withstand voltage $U_{imp}$ (kV) (power circuit) | | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Rated insulation voltage $U_i$ (V) (control circuit) | | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Rated impulse withstand voltage $U_{imp}$ (kV) (control circuit) | | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 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 | | | |
| Rated operational currents $I_e$ (A) according to IEC 60947-6-1 | | | | | | | | |
| **Rated voltage** | **Utilisation category** | | | | | | | |
| 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 |
| Current rated as conditional short-circuit with fuse gG DIN, according to IEC 60947-3 | | | | | | | | |
| Prospective fuse protected short-circuit withstand at 415 VAC(kA rms) | | 50 | 50 | 100 | 100 | | | |
| Prospective fuse protected short-circuit withstand 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 |
| Short-circuit withstand without protection as per IEC 60947-6-1 | | | | | | | | |
| Rated short-time withstand current 30 ms $I_{cw}$ at 415 VAC (kA rms) | | | | | | | | |
| Rated short-time withstand current 60 ms $I_{cw}$ at 415 VAC (kA rms) | | 20 | 20 | 25 | 32 | 50 | 50 | 50 |
| Connection | | | | | | | | |
| Minimum Cu cable cross-section (mm²) | | 2 x 185 | | | | | | |
| Recommended Cu busbar cross-section (mm²) | | 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 100 x 10 |
| Maximum Cu cable cross-section (mm²) | | 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) | | 9/13 | 9/13 | 20/26 | 40/45 | 40/45 | 40/45 | 40/45 |
| Switching time (rated voltage, after receiving command) | | | | | | | | |
| Transfer time I-II or II-I (s) | | 2.8 | 2.8 | 2.8 | 2.9 | 2.8 | 2.8 | 2.8 |
| I-0 or II-0 (s) | | 1.4 | 1.4 | 1.4 | 1.4 | 1.8 | 1.8 | 1.8 |
| Contact transfer time ("black-out" I-II) minimum (s) | | 1.4 | 1.4 | 1.4 | 1.5 | 1 | 1 | 1 |
| Power supply | | | | | | | | |
| Min./max. power (VAC) | | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 |
| Control supply power demand | | | | | | | | |
| Demand/rated power (VA) - ATyS | | 460/184 | 460/184 | 460/184 | 460/230 | 812/322 | 812/322 | 812/322 |
| Mechanical specifications | | | | | | | | |
| Durability (number of operating cycles) | | 4,000 | 4,000 | 4,000 | 3,000 | 3,000 | 3,000 | 3,000 |
| Weight ATyS 4 P (kg) | | 32.2 | 32.9 | 33.6 | 39.4 | 61.6 | 61.6 | 75.3 |

*(1) Category with index A = frequent operation - Category with index B = infrequent operation.*
*(2) 4-pole device with 2 poles in series by polarity.*
*(3) Interphase barriers must be installed on the products.*
*(4) Values given at 690 VAC.*

## Connections and terminals

### ATS controller connection with ATyS transfer switch




*Using a Socomec cable harness kit excludes the need for fuses

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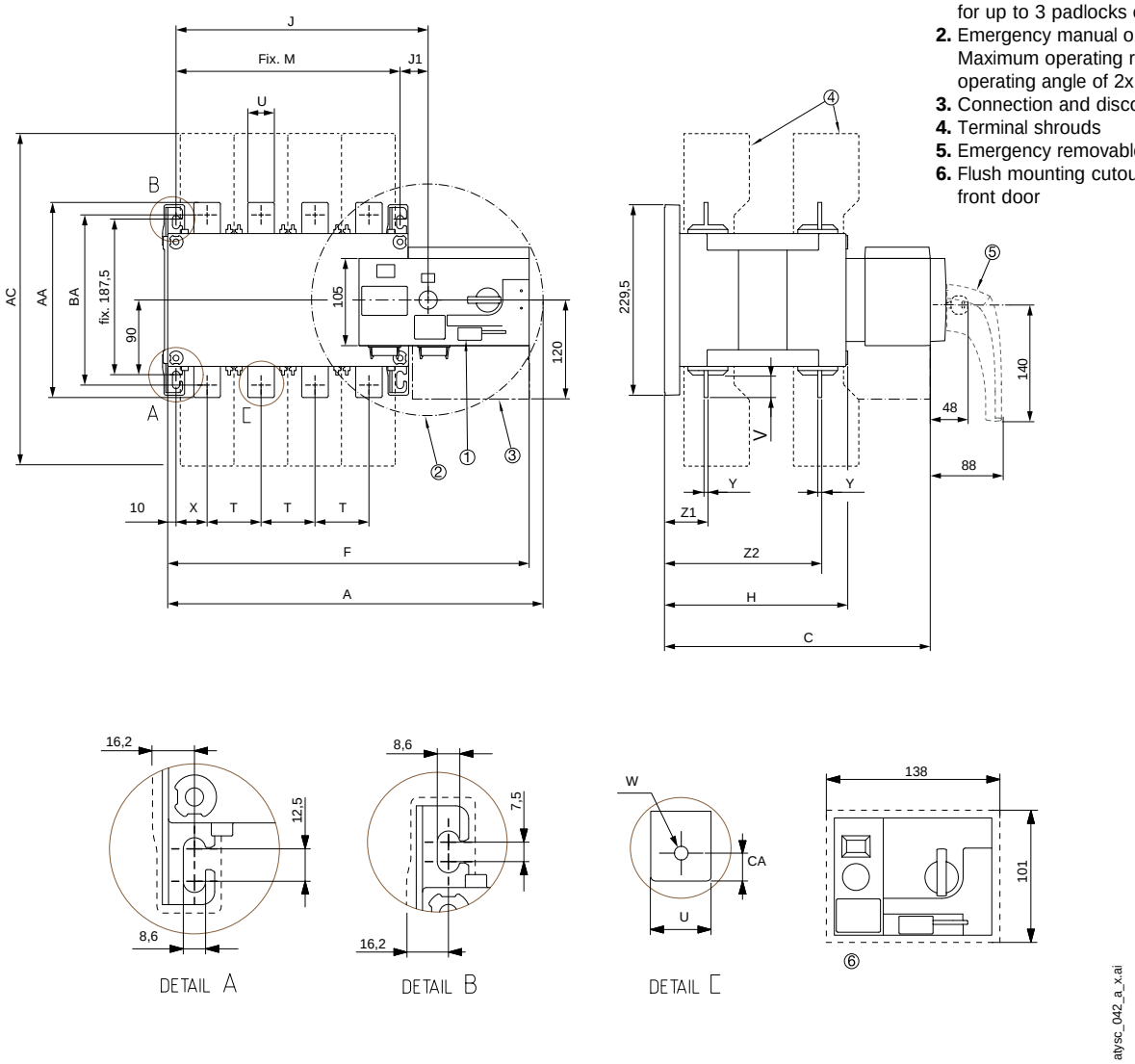
**1** primary source (network or genset)
**2** backup source (mains network or genset)

1 : position 0 control (contact or logic if closed)
2: position I control
3: position II control
4: primary control position 0
5: closing this contact allows position control commands
6: product availability relay
7: auxiliary contact - closed when the switch is in position II
8: auxiliary contact - closed when ther switch is in position I
9: auxiliary contact - closed when the switch is in position 0
10. Switch position inputs
11. 24 VDC fire input (forces 0 & inhibit)
12. Control inputs
13. ATyS C specific function : RS485 communication
14. Genset start NO/NC output
15. Control outputs to transfer device
16. 24 VDC aux power supply (for optional use)
17. Voltage sensing S2
18. Voltage sensing S1
19. DPS input (source 1 and 2)
20. DPS output to motor

# Dimensions

## 125 to 630 A / B3 to B5

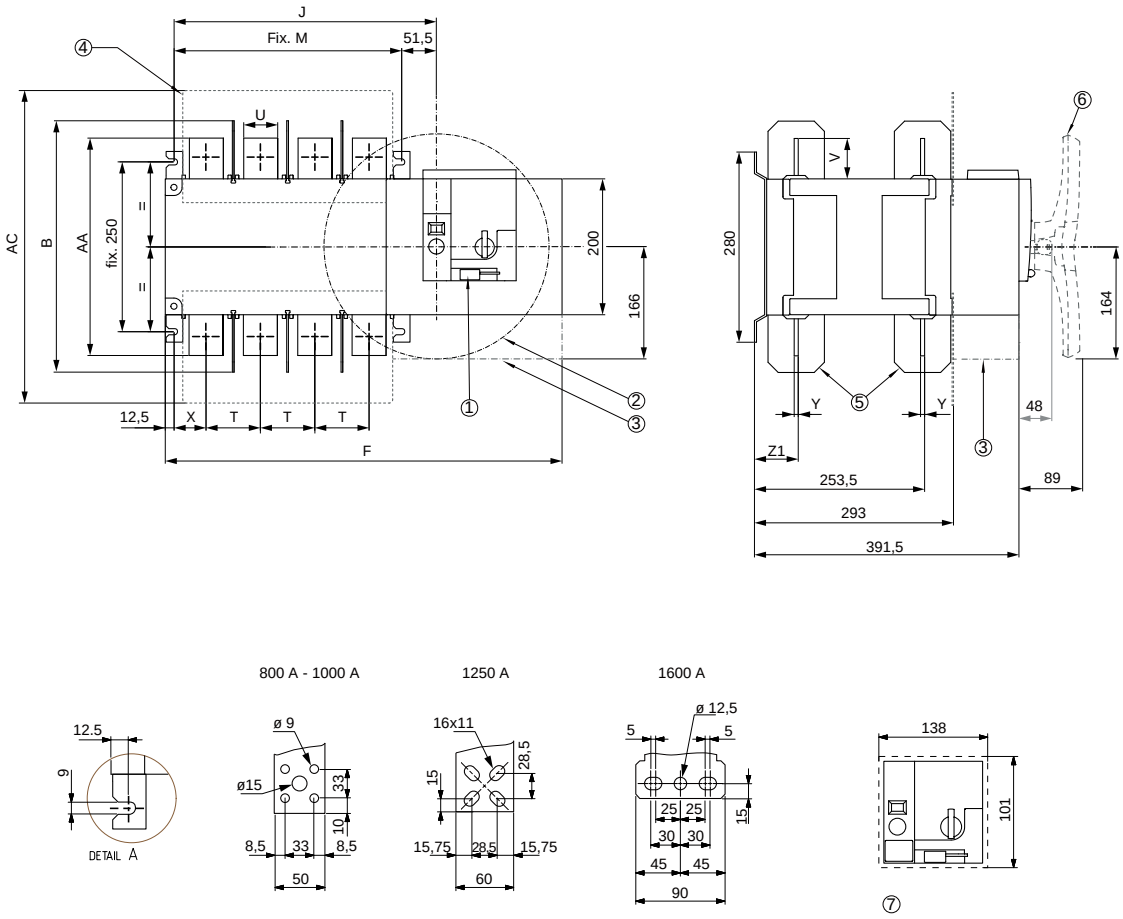
1. Padlocking Facility: Locking bracket for up to 3 padlocks of dia. 4 – 8mm
2. Emergency manual operation: Maximum operating radius with an operating angle of 2x 90°
3. Connection and disconnection area
4. Terminal shrouds
5. Emergency removable handle
6. Flush mounting cutout dimensions for front door




| | 125 A | 160 A | 200 A | 250 A | 315 A | 400 A | 500 A | 630 A |
|---|---|---|---|---|---|---|---|---|
| | 4 P | 4 P | 4 P | 4 P | 4 P | 4 P | 4 P | 4 P |
| A | 334 | 334 | 334 | 395 | 395 | 395 | 454 | 454 |
| AA | 135 | 135 | 135 | 160 | 170 | 170 | 260 | 260 |
| AC | 233 | 233 | 233 | 288 | 288 | 288 | 402 | 402 |
| BA | 115 | 115 | 115 | 130 | 140 | 140 | 220 | 220 |
| C | 244 | 244 | 244 | 244 | 244 | 244 | 321 | 321 |
| CA | 10 | 10 | 10 | 15 | 15 | 15 | 15 | 20 |
| F | 317 | 317 | 317 | 378 | 378 | 378 | 437 | 437 |
| H | 151 | 151 | 151 | 152 | 152 | 152 | 221 | 221 |
| J | 184 | 184 | 184 | 245 | 245 | 245 | 304 | 304 |
| J1 | 34 | 34 | 34 | 35 | 35 | 35 | 34 | 34 |
| M | 150 | 150 | 150 | 150 | 210 | 210 | 270 | 270 |
| T | 36 | 36 | 36 | 50 | 50 | 50 | 65 | 65 |
| U | 20 | 20 | 20 | 25 | 35 | 35 | 32 | 45 |
| V | 25 | 25 | 25 | 30 | 35 | 35 | 50 | 500 |
| W | 9 | 9 | 9 | 11 | 11 | 11 | 14 | 13 |
| X | 22 | 22 | 22 | 33 | 33 | 33 | 37,5 | 37,5 |
| Y | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 5 | 5 |
| Z1 | 38 | 38 | 38 | 39.5 | 39.5 | 39.5 | 53 | 53 |
| Z2 | 134 | 134 | 134 | 133.5 | 133.5 | 133.5 | 190 | 190 |

## Dimensions (continued)

### 800 to 1600 A / B6 to B7

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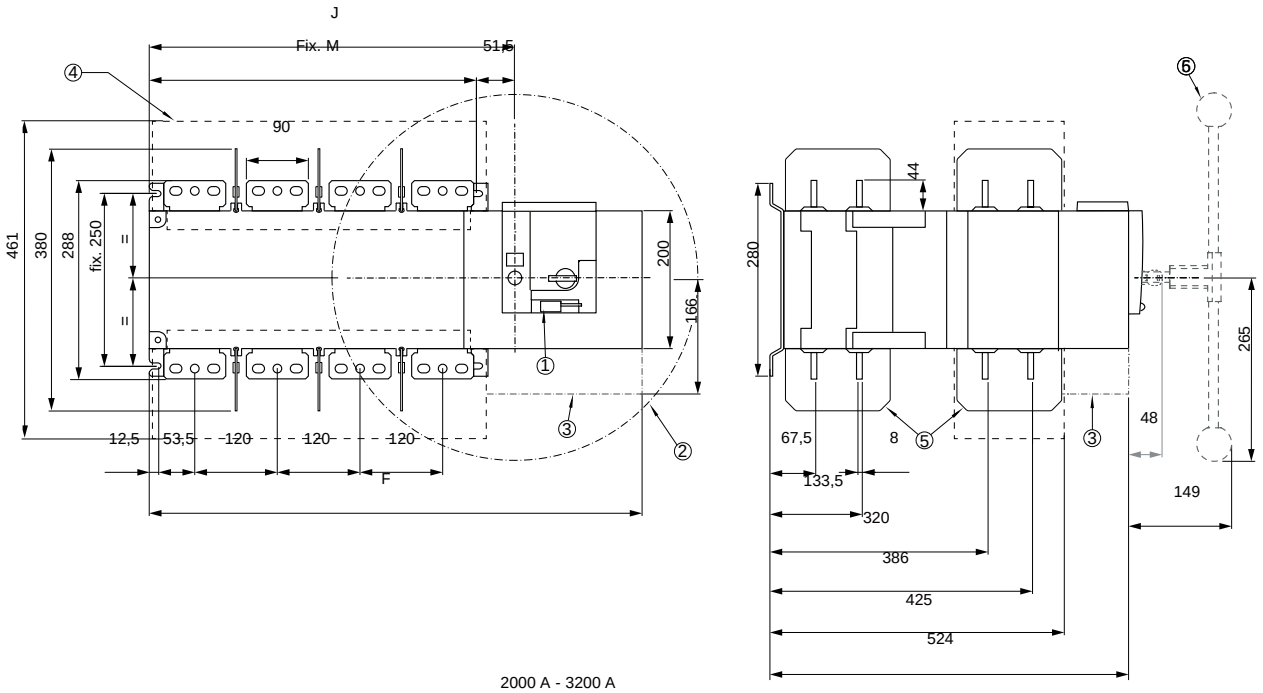
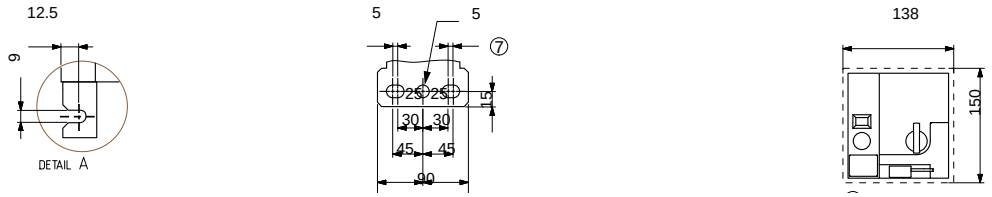
| | 800 A | 1000 A | 1250 A | 1600 A |
|---|---|---|---|---|
| | 4 P | 4 P | 4 P | 4 P |
| AA | 321 | 321 | 330 | 288 |
| AC | 461 | 461 | 461 | 531 |
| B | 370 | 370 | 370 | 380 |
| F | 584 | 584 | 584 | 716 |
| J | 387 | 387 | 387 | 519 |
| M | 335 | 335 | 335 | 467 |
| T | 80 | 80 | 80 | 120 |
| U | 50 | 50 | 60 | 90 |
| V | 60.5 | 60.5 | 65 | 44 |
| X | 47.5 | 47.5 | 47.5 | 53 |
| Y | 7 | 7 | 7 | 8 |
| Z1 | 66.5 | 66.5 | 66.5 | 67.5 |

1. Padlocking Facility: Locking bracket for up to 3 padlocks of dia. 4 – 8mm
2. Emergency manual operation: Maximum operating radius with an operating angle of 2x 90°
3. Connection and disconnection area
4. Terminal screen
5. Phase Barriers
6. Emergency removable handle
7. Flush mounting cutout dimensions for front door

## 2000 to 3200 A / B8




2000 A - 3200 A




| | 2000 A | 3200 A |
|---|---|---|
| | 4 P | 4 P |
| F | 716 | 716 |
| J | 518,5 | 518,5 |
| M | 467 | 467 |

**1.** Padlocking Facility: Locking bracket for up to 3 padlocks of dia. 4 – 8mm
**2.** Emergency manual operation: Maximum operating radius with an operating angle of 2x 90°
**3.** Connection and disconnection area
**4.** Terminal shields
**5.** Phase Barriers
**6.** Emergency removable handle
**7.** Frame B8, (Dual frame) factory fitted power terminal connections
**1.** Flush mounting cutout dimensions for front door

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# ATyS d H

## Remotely operated Transfer Switching Equipment
from 4000 to 6300 A

atys_865_a

### The solution for
- Data centre
- Telecommunications
- Industries

### Strong points
- Ready for installation in the enclosure of your choice
- High-performance switching
- Safe on-load transfer: I-0-II

### Conformity to standards
- IEC 60947-6-1

### Enclosed solution
- Please contact your SOCOMEC office

### External automatic controller
- The ATyS d H is an RTSE which is compatible with most building management systems. It may also be supplied as an ATSE by including an ATyS C55 / C65 controller with a door mounted external display.

## Function
The **ATyS d H** is a three-phase transfer switch, 3 and 4 poles, designed for low voltage high power applications that require high-performance and fast reliable switching. The open transition transfer is performed on-load in line with IEC 60947-6-1 standards (Class PC) with minimal power supply interruption to the load during transfer.
The ATyS d H is remote transfer switching equipment (RTSE) with an integrated dual power supply (DPS) that accepts remote orders through volt-free contacts.

## Advantages
**Ready for installation in the enclosure of your choice**
The ATyS d H has been designed to facilitate installation. It is composed of two switches that are mounted one above the other with easily accessible power connections located at the rear. Furthermore the ATyS d H does not need any external bridging bars as the load side is connected within the product. This enables to save time during installation.

**High-performance switching**
The ATyS d H offers high withstand short circuit current ratings of 143 kA $I_{cm}$ (making) and 65 kA for 0.1sec $I_{cw}$ (withstand).
Further to its high short circuit withstand, the ATyS d H performance in terms of load switching capacity is AC-33iB (6 x $I_n$ cos Ø 0.5) without derating.

**Safe on-load transfer: I-0-II**
The ATyS d H includes two mechanically interlocked switches to ensure fast switching whilst providing a neutral (Off - 0) position. This ensures that the main and alternative power supplies do not overlap.

## References

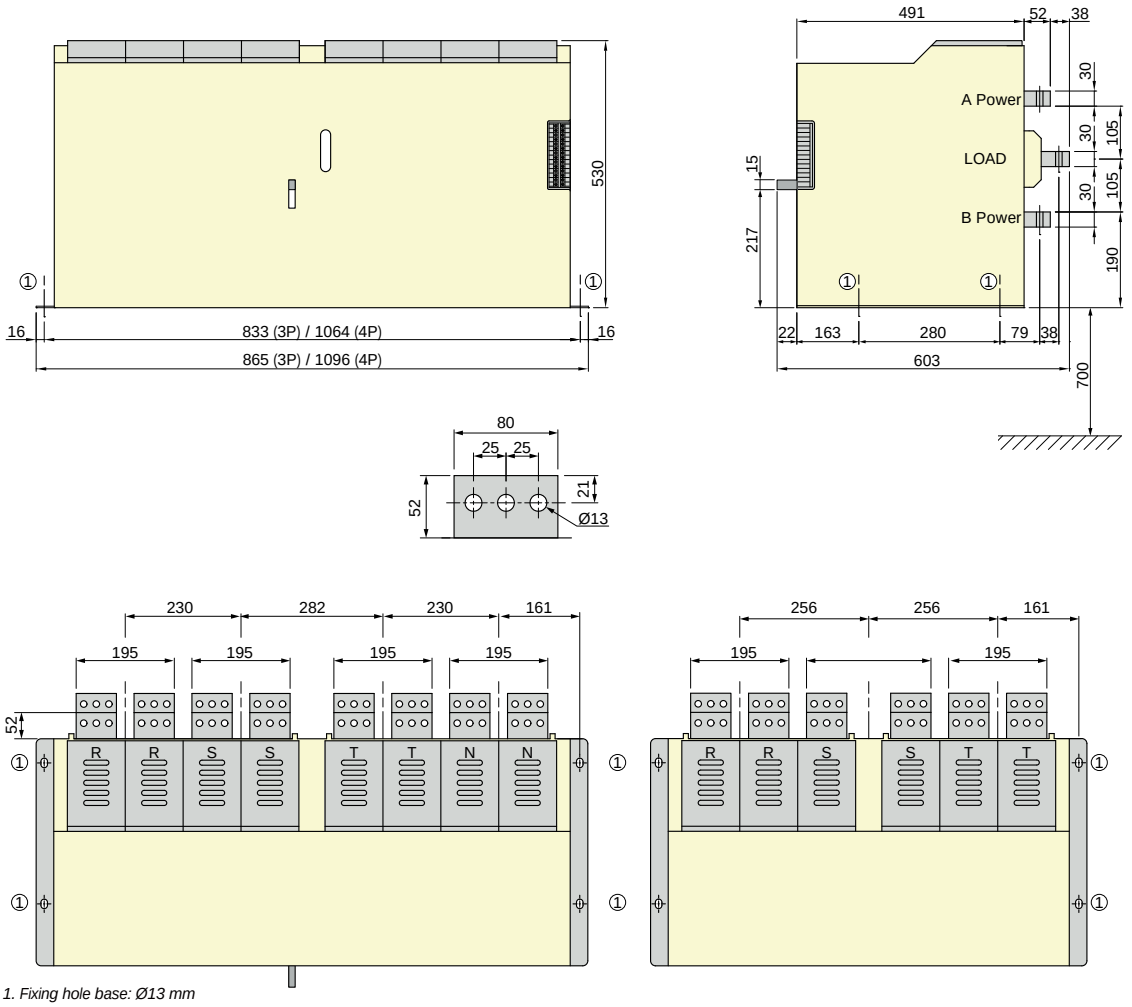
| Rating (A) | Number of poles | ATyS d H Reference | Control relay Reference |
|---|---|---|---|
| 4000 A | 3P | 9533 **3400** | ATyS C55 1600 **0055**<br>ATYS C65 1600 **0065** |
| | 4P | 9533 **4400** | |
| 5000 A | 3P | 9533 **3500** | |
| | 4P | 9533 **4500** | |
| 6300 A | 3P | 9533 **3630** | |
| | 4P | 9533 **4630** | |

## Characteristics according to IEC 60947-6-1

| **Thermal current $I_{th}$ at 40°C** | **4000 A** | **5000 A** | **6300 A** |
|---|---|---|---|
| Rated operating voltage $U_e$ (V) | | 660 | |
| Rated insulation voltage $U_i$ (V) | | 660 | |
| Rated impulse withstand voltage $U_{imp}$ (kV) | | 12 | |
| **Rated short-circuit withstand at 660 VAC** | | | |
| Rated short-time withstand current 0.1s $I_{cw}$ (kA rms) | | 65 | |
| Rated peak withstand current (kA peak) | | 143 | |
| Rated operational current $I_e$ (A), at 660 VAC - AC32B | 4000 | 5000 | 6300 |
| Rated operational current $I_e$ (A), at 660 VAC - AC33iB (6xIn cos Ø 0.5) | 4000 | 5000 | 6300 |
| **Connection** | | | |
| Rear connection with busbar | • | • | • |
| **Switching time** | | | |
| I to 0 (ms) | | ≤ 150 | |
| 0 to I and 0 to II (ms) | | ≤ 90 | |
| II to 0 (ms) | | ≤ 200 | |
| I-0-II / II-0-I (s) | | 1.2 | |
| Operating frequency | | 10 operations per hour | |
| **Power supply** | | | |
| VAC power supply (powered directly on terminals S1 and S2) | | 230 | |
| Main coil operating current (peak during transfers) | | 65 A(1) | |
| **Mechanical characteristics** | | | |
| Durability (number of operating cycles) | | 3000 | |
| Weight (kg) - Fixed 3/4P model | 200 / 250 | 200 / 250 | 200 / 250 |

*(1) Instantaneous value. For a complete operation, power should be available during 0.5 s.*

## Dimensions




*1. Fixing hole base: Ø13 mm*

# ATyS A15

## ATS Controller

entry-level functionalities

new


atysc_028.psd

ATyS A15

## Function

**ATyS A15** is an entry level ATSE controller without communications. It can be used to pilot a remotely operated transfer switch, such as ATyS r, ATyS S and ATyS d M, as well as contactors. ATyS A15 ensure the automatic or remotely controlled transfer from one source to another with fixed timers and thresholds.

## Advantages

**Flexible space saving**

The ATyS A15 controller can be mounted on either a DIN rail or to the panel door, offering flexibility and optimising space.

**Cost-effective**

The ATyS A15 has an integrated DPS, for supplying the motorisation of the switch, and can be door mounted, therefore there's no need for an external DPS or display, reducing installation time and costs.

**Fast commissioning & testing**

- 8 dip-switches allow very fast commissioning, even offline.
- All main functions such as remote position control, mode selection, lamp test and genset test on load are available on the front of the product allowing quick and easy operation.

## General characteristics

- Self-powered from sensing.
- Wide voltage range (184-300 VAC).
- 24 VDC aux power supply (for optional use).
- Main/Main or Main/Genset networks.
- Fixed I/O.
- Voltage sensing on all phases.
- Three-phase + Neutral & Single-phase + Neutral networks.
- Phase rotation checking.
- Door or DIN rail mounting.

### The solution for

> ATS panels
> Compact transfer enclosures
> Basic ATS controls

### Strong points

> Integrated AC Double Power Supply
> Compact solution
> Time saving configuration

### Conformity to standards

> IEC 61010-2-201
> IEC 60947-6-1
> GB/T 14048.11 Annex C

### ATyS A & ATyS C package

> Transfer switch packaged with wiring and a controller.
> Fully certified ATSE with a door mounted controller complying with IEC 60947-6-1.

## References

| Description | Reference |
|---|---|
| ATyS A15 – ATS controller | 1600 **0015** |



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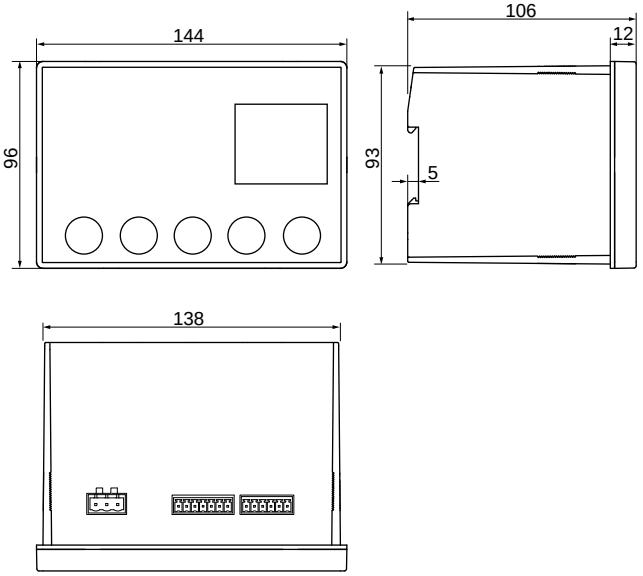
## Front panel


atysc_004_a.ai

1. Controller status indication.
2. Configuration dip-switches.
3. Lamp test / Test on Load (3s).
4. Position orders (in Manual).
5. Auto/Manu mode selector.
6. Mimic panel.

## Dimensions (mm)

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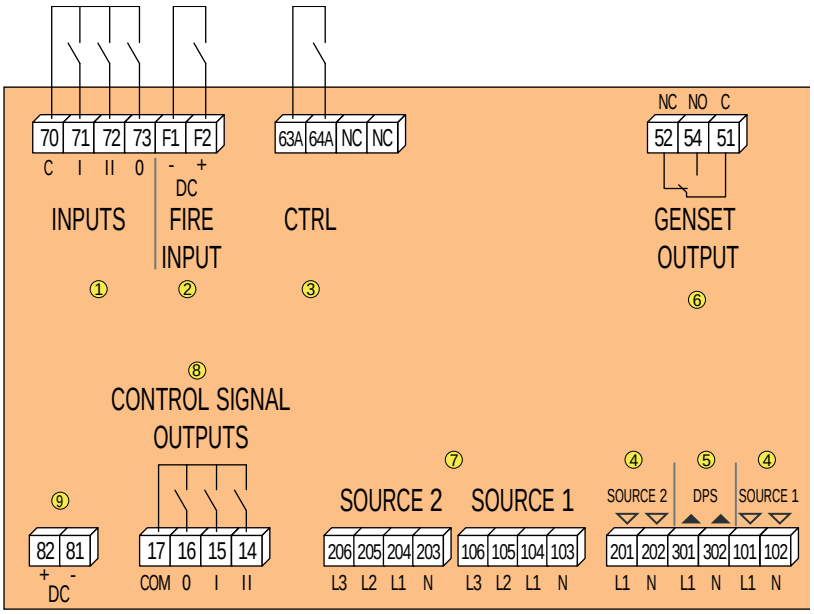
## Characteristics

| | |
|---|---|
| **Electrical characteristics** | |
| AC operating limits | 184 (1) - 300 VAC |
| Optional DC supply | 24 VDC |
| Frequency limits | 45 - 65 Hz |
| Power consumption | < 10 W |
| Inputs | 5 - fixed<br>(auto inhibit & 24 VDC fire input, position indication I-0-II) |
| Outputs | 4 - fixed (position control I-0-II & genset start) |
| Impulse withstand | 6/4 kV (2) |
| Overvoltage category | CAT 3 |
| **Mechanical characteristics** | |
| Weight | 830 gr |
| Door cutout | 138 x 93 mm |
| Operating temperature | -25 … +60ºC |

*(1) 190 VAC in maintained mode.*
*(2) 6 kV tested between phases of a different source and 4 kV tested between phases of a the same source.*

## Terminals




atysc_005_a_1_x_cat

**1.** Switch position inputs
**2.** 24 VDC fire input (forces 0 & inhibit)
**3.** Control inputs
**4.** DPS input (source 1 and 2)
**5.** DPS output to motor
**6.** Genset NO/NC output
**7.** Voltage sensing S1 & S2
**8.** Control outputs to transfer device
**9.** 24 VDC aux power supply (for optional use)

# ATyS C25

## ATS Controller

## entry-level functionalities

new


atysc_015.eps

*ATyS C25*

### The solution for

- ATS panels
- Compact transfer enclosures
- Basic ATS controls

### Strong points

- Self-supplied from sensing circuit
- Integrated AC Double Power Supply
- RS485 Communications
- Multiple mounting options

### Conformity to standards

- IEC 61010-2-201
- IEC 60947-6-1
- GB/T 14048.11 Annex C

## Function

**ATyS C25** is an entry level ATSE controller with communications. It can be used to pilot a remotely operated transfer switch, such as ATyS r, ATyS S and ATyS d M, as well as contactors type transfer switches, for circuit breaker type transfer switches see ATyS C55 and ATyS C65. ATyS C25 ensure the automatic or remotely controlled transfer from one source to another with fixed timers and thresholds.

## Advantages

**Flexible space saving**

The ATyS C25 controller can be mounted on either a DIN rail or to the panel door, offering flexibility and optimising space.

**Cost-effective**

The ATyS C25 has an integrated DPS, for supplying the motorisation of the switch, and can be door mounted, therefore there's no need for an external DPS or display, reducing installation time and costs.

**Fast commissioning & testing**

- 8 dip-switches allow very fast commissioning, even offline.
- All main functions such as remote position control, mode selection, lamp test and genset test on load are available on the front of the product allowing quick and easy operation.
- Remote product information is available through RS485 Modbus communication.

## General characteristics

- Self-powered from sensing.
- Voltage supply range (184 - 300 VAC).
- DC aux power supply (for optional use).
- Main/Main or Main/Genset networks.
- Fixed I/Os.
- RS485 Modbus communication.
- Voltage sensing on all phases.
- Three-phase + Neutral & Single-phase + Neutral networks.
- Phase rotation checking.
- Door or DIN rail mounting.

## References

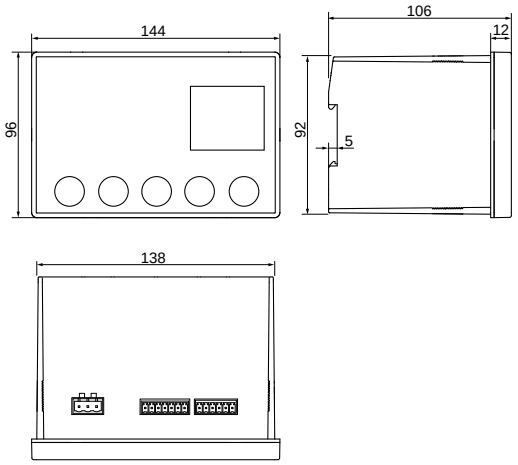
| Description | Reference |
|---|---|
| ATyS C25 – ATS controller | 1600 **0025** |

## Front panel


atysc_015x_a.ai

1. Controller status indication.
2. Configuration dip-switches.
3. Lamp test / Test on Load (3s).
4. Position orders (in Manual).
5. Auto/Manu mode selector.
6. Mimic panel.

## Dimensions (mm)




atysc_001_b_1_x_cat.ai

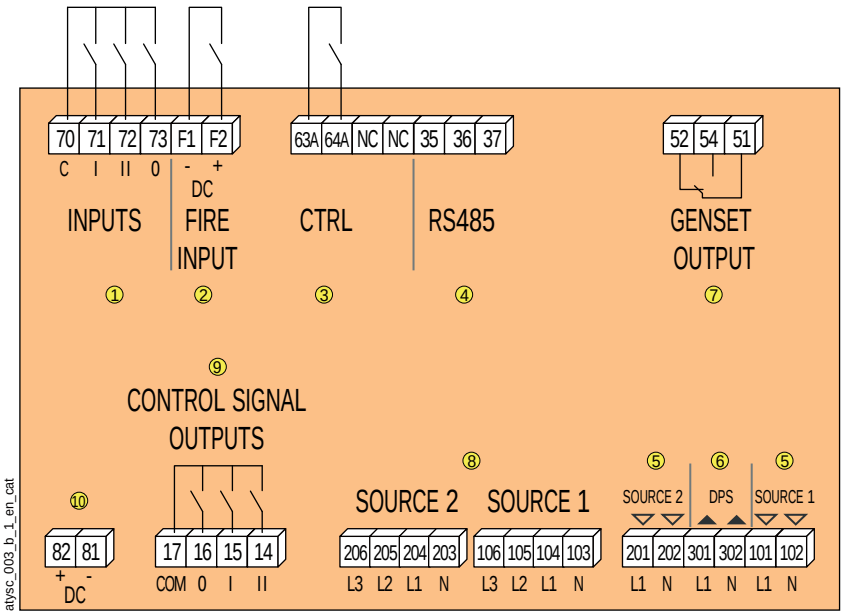
## Characteristics

| Electrical characteristics | |
|---|---|
| AC operating limits | 184 (1) - 300 VAC |
| Optional DC supply | 10-30 VDC |
| Frequency limits | 45 - 65 Hz |
| Power consumption | < 10 W |
| Inputs | 5 - fixed (auto inhibit & DC fire input, position indication I-0-II) |
| Outputs | 4 - fixed (position control I-0-II & genset start) |
| Impulse withstand | 6/4 kV(2) |
| Overvoltage category | CAT 3 |
| **Mechanical characteristics** | |
| Weight | 845 gr |
| Door cutout | 138 x 92 mm |
| Operating temperature | -25 … +70°C |
| **Communications** | |
| Interface type | RS485. 2 to 3 half duplex wires |
| Protocol | MODBUS RTU |
| Baudrate | 2400-38400 |

| Measurement characteristics | |
|---|---|
| Nominal voltage DIP 1 (1PH+N / 3P+N) | 230 / 400 VAC |
| Nominal frequency (fixed) | 50 Hz |
| Voltage threshold settings DIP 4 | 10% / 20% of Nominal voltage |
| Frequency threshold settings DIP 4 | 5% / 10% of nominal frequency |
| Voltage and frequence Hysteresis (fixed) | 20% of ΔU/ΔF |
| **Other settings** | |
| 0DT dead-band timer DIP 5 | 0 / 2 s |
| FT Source 1 and 2 fail timer DIP 6 | 3 / 10s |
| RT Source 1 and 2 return timer DIP 7&8 | 0 (3s) / 3 / 10 / 30 min |
| Source priority DIP 2 | Priority source 1 / No priority |
| Position Output signal DIP 3 | Impulse / Maintained |

*(1) 200 VAC in contactor mode.*
*(2) 6 kV tested between phases of a different source and 4 kV tested between phases of a the same source.*

## Terminals




atysc_003_b_1_en_cat

1. Switch position inputs
2. DC fire input (forces 0 & inhibit)
3. Control inputs
4. RS485 communication
5. DPS input (source 1 and 2)
6. DPS output to motor
7. Genset NO/NC output
8. Voltage sensing S1 & S2
9. Control outputs to transfer device
10. DC aux power supply (for optional use)

# ATyS C55

## ATS Controller

## mid-level functionalities

new


atysc_017_front.eps

*ATyS C55*

## Function

**ATyS C55** is a complete ATSE controller that can be used to pilot a remotely operated transfer switch of any technology: motorised switches (e.g. ATyS r, ATyS S or ATyS d M), circuit breakers or contactors. ATyS C55 ensure the automatic or remotely controlled transfer from one source to another, with configurable timers and thresholds, for any combination of sources: 2 transformers, 1 transformer and 1 genset or 2 gensets.

## Advantages

**Fast commissioning**

On initial power up, the ATyS C55's smart wizard will guide the operator through the commissioning process.

**Versatile**

The ATyS C55 is compatible with contactors, breakers and switches. It can also work for all type of 2-source applications combining mains and gensets.

**Clear visualisation and operation**

- High-resolution LCD screen with clear defined messages.
- Real-time pop-ups to show timers, alarms, faults and information alerts.
- Quick and easy access to main functions through the front face with direct key input.
- Complete configuration can be achieved through the front face or via software (EasyConfig).

## General characteristics

- Self-powered from sensing.
- Wide voltage range (88-576VAC).
- 24 VDC aux power supply (for optional use).
- 2 latching relays.
- Smart commissioning wizard.
- IP65 degree of protection with gasket (accessory).
- 1000 Alarms and Events.
- 6 fully configurable I/O.
- Genset scheduler.
- Door or back plate mounting.
- Main/Main, Main/Genset and Genset/Genset applications.
- Easyconfig configuration software.
- RS485 Modbus communication.
- Ethernet, SNMP, BACnet using DIRIS M-70 gateways. Includes Webserver.
- A DIRIS Digiware D-70 gateway can be utilised as a remote display for multiple ATyS C55/C65 controllers; the D-70 also provides Ethernet, SNMP & BACnet connectivity.

## The solution for

> Commercial buildings
> Applications:
- Genset/Genset
- Network/Genset
- Network/Network
- External/portable systems

## Strong points

> Smart commissioning
> Intuitive use
> Hi-resolution LCD screen

## Conformity to standards

> IEC 61010-2-201
> IEC 60947-6-1
> GB/T 14048.11 Annex C

## Communication gateways

*DIRIS Digiware M-70 & D-70*

## Double power supply - DPS*

** Optional for use with ATyS r, breakers and contactors without integrated DPS*

## References

| Description | Reference |
|---|---|
| ATyS C55 – ATS controller (includes mounting kits) | 1600 **0055** |
| IP65 gasket for door cut-out (1) | 1609 **0001** |
| DIRIS Digiware M-50 multi-protocol Ethernet gateway | 4829 **0221** |
| DIRIS Digiware D-50 multipoint display, Ethernet output | 4829 **0204** |
| DIRIS Digiware M-70 communication gateway for Ethernet & Webserver | 4829 **0222** |
| DIRIS Digiware D-70 communication gateway for Ethernet & Webserver and multi-product display | 4829 **0203** |
| Double power supply - DPS | 1599 **4001** |

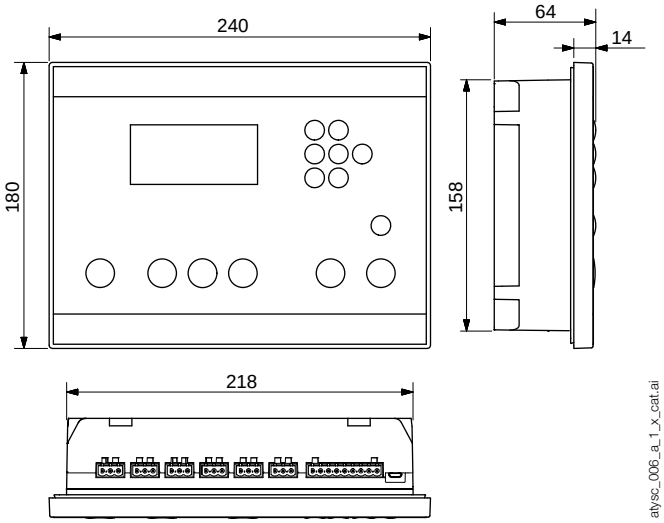
*(1) The gasket provides an IP65 seal between the controller and the panel door; the front face (display & keys) is IP65 as standard.*

## Front panel


atysc_017x

1. Dashboard displays.
2. Navigation keypad.
3. Mimic LED indication.
4. Lamp test button / LED info.
5. AUTO mode select.
6. TEST button.
7. CONTROL mode select.
8. Position orders (only in CONTROL mode).
9. Inhibit and communication indication.
10. Hi-res LCD screen.

## Dimensions (mm)




atysc_006_a_1_x_cat.ai

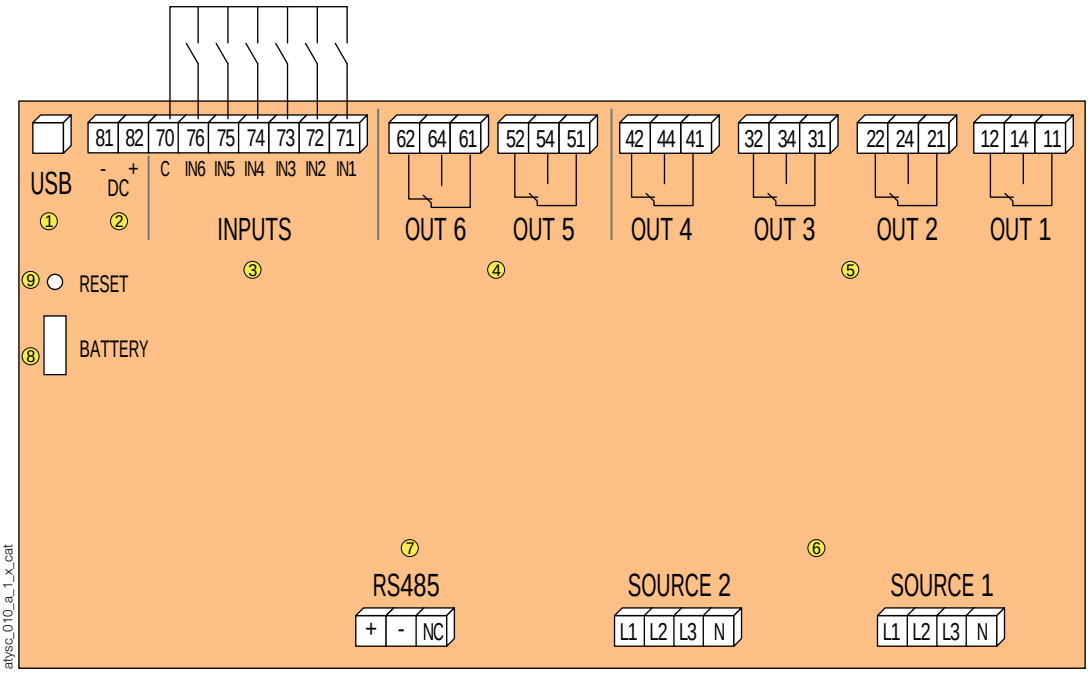
## Characteristics

| Electrical characteristics | |
|---|---|
| AC operating limits | 110 - 480 VAC ±20% |
| Optional DC supply | 24 VDC |
| Frequency limits | 45 - 65 Hz |
| Power consumption | < 10 W |
| Inputs | 6, fully programmable |
| Outputs | 6, fully programmable |
| Output relays | 8 A AC15 |
| EMC classification | Class A and B |
| Impulse withstand | 8/6 kV (1) |
| Overvoltage category | CAT 3 |

*(1) 8 kV tested between phases of a different source and 6 kV tested between phases of a the same source.*

| Mechanical characteristics | |
|---|---|
| Weight | 1080 gr |
| Door cutout | 220 x 160 mm |
| Protection degree | IP65 with optional gasket |
| Operating temperature | -30 … +70 °C |
| **Communications** | |
| Interface type | RS485. 2 to 3 half duplex wires |
| Protocol | MODBUS RTU |
| Baudrate | programmable 1200 - 115200 bps |
| **Display** | |
| Screen resolution | 350 x 160 pixels |
| Event recorder | 1000 events |

## Terminals




atysc_010_a_1_x_cat

1. Configuration USB
2. 24 VDC aux power supply (for optional use)
3. 6 x inputs
4. 2 x latching relay outputs
5. 4 x relay outputs
6. Source sensing (110-480 ±20%)
7. RS485 communication
8. Replaceable RTC battery
9. Hard reset button

# ATyS C65

## ATS Controller

## advanced functionalities

new


*ATyS C65*

## Function

**ATyS C65** is an advanced ATSE controller offering all the functions of the ATyS C55 with the addition of current, power & energy monitoring, increased I/O capacity and functions, load shedding, lift control function, energy backup, increased number of events and alarms (measurement and combination alarms) and DIRIS Digiware module compatibility.

## Advantages

**Fast commissioning**

On initial power up, the ATyS C65's smart wizard will guide the operator through the commissioning process.

**User customisable**

Front face LEDs, Load shedding, Genset schedulers and the lift control signal are just a few of the many customisable features available on ATyS C65.

**Intuitive operation**

- The high-resolution LCD screen provides several dashboards enabling easy monitoring of all parameters, including power and energy consumption of the loads.
- The integrated energy backup provides transitional power to the product enabling status indication (switch position, timer status, fault notifications) and communication to remain active with no supply present.
- Quick and easy access to main functions through the front face with direct key input.
- Complete configuration can be achieved through the front face or via software (EasyConfig).

## General characteristics

- Self-powered from sensing.
- Wide voltage range (88 - 576 VAC).
- 24 VDC aux power supply (for optional use).
- 2 latching relays.
- Digiware IO-10: I/O extension up to 30 inputs and 18 outputs.
- Power & Energy metering with /1 A or /5 A current transformers.
- Energy backup.
- IP65 degree of protection (panel gasket included).
- 3000 Alarms and Events.
- Multiple fully configurable timers, thresholds and I/O.
- Easyconfig configuration software.
- Shock resistant IK08+.
- Digiware compatible (replaces U module).
- Ethernet, SNMP, BACnet using DIRIS M-70 gateway. Includes Webserver.
- A DIRIS Digiware D-70 gateway can be used as a remote display for multiple ATyS C55/C65 controllers; the D-70 also provides Ethernet, SNMP & BACnet connectivity.

### The solution for

- Life safety
- Critical applications
- Transfer panels with ACB

### Strong points

- Advanced I/O functions
- Power monitoring
- Energy backup

### Conformity to standards

- IEC 61010-2-201
- IEC 60947-6-1
- GB/T 14048.11 Annex C

### Communication gateways

*DIRIS Digiware M-70 & D-70*

### Double power supply - DPS*

** Optional for use with ATyS r, breakers and contactors without integrated DPS*

## References

| Description | Reference |
|---|---|
| ATyS C65 – ATS controller (includes mounting kits) and IP65 gasket | 1600 **0065** |
| DIRIS Digiware M-50 multi-protocol Ethernet gateway | 4829 **0221** |
| DIRIS Digiware D-50 multipoint display, Ethernet output | 4829 **0204** |
| DIRIS Digiware M-70 communication gateway for Ethernet & Webserver | 4829 **0222** |
| DIRIS Digiware D-70 communication gateway for Ethernet & Webserver and multi-product display | 4829 **0203** |
| Double power supply - DPS | 1599 **4001** |



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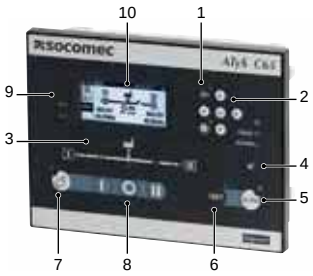
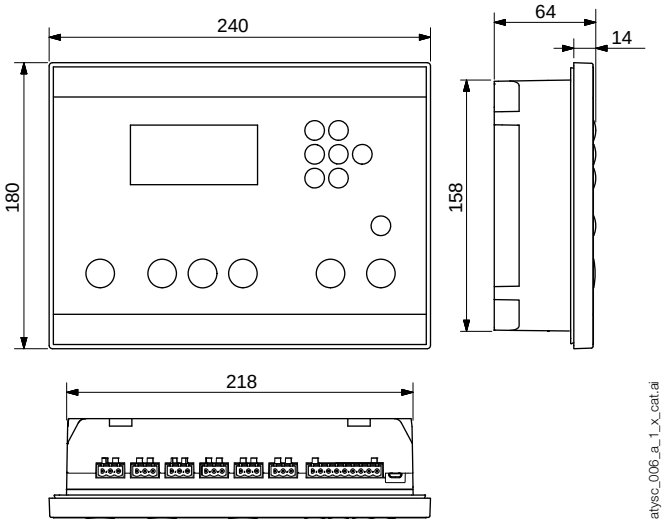
## Front panel




atysc_020x

1. Dashboard displays.
2. Navigation keypad.
3. Mimic LED indication.
4. Lamp test button / LED info.
5. AUTO mode select.
6. TEST button.
7. CONTROL mode select.
8. Position orders (only in CONTROL mode).
9. Customisable LED.
10. Hi-res LCD screen.

## Dimensions (mm)




atysc_006_a_1_x_cat.ai

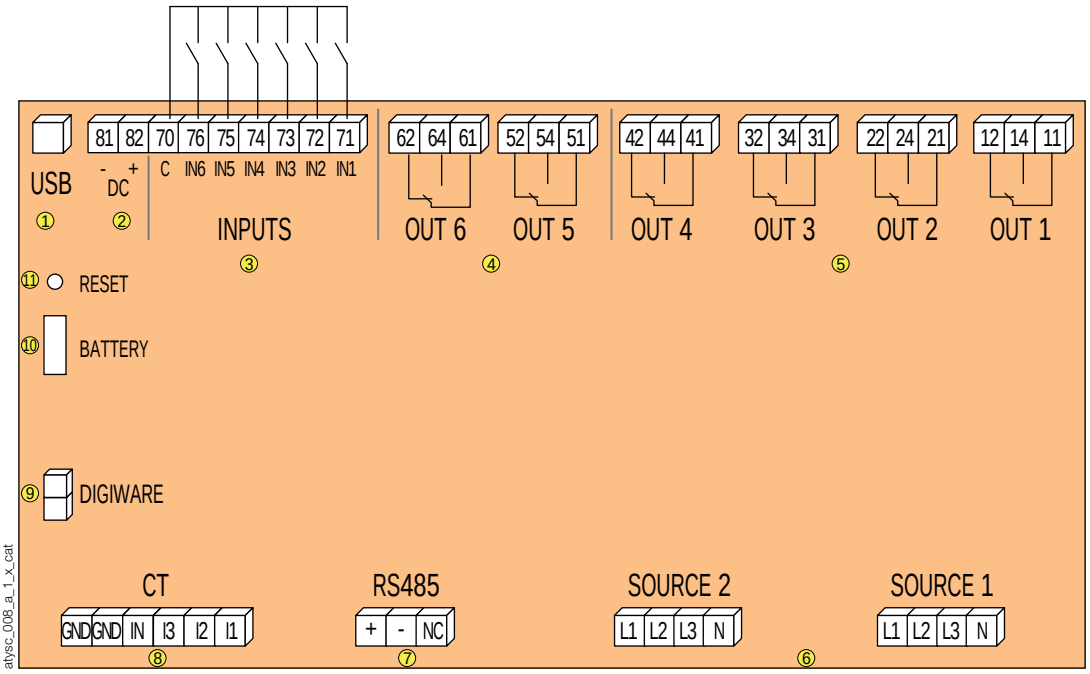
## Characteristics

| Electrical characteristics | |
|---|---|
| AC operating limits | 110 - 480 VAC ±20% |
| Optional DC supply | 24 VDC |
| Frequency limits | 45 - 65 Hz |
| Power consumption | < 10 W |
| Current transformers | 1 or 5A |
| Measurement type | true RMS (TRMS) |
| Inputs | 6, fully programmable |
| Outputs | 6, fully programmable |
| Output relays | 8 A AC15 |
| I/O Extension (IO10) | up to 30 inputs and 18 outputs |
| EMC classification | class A and B |
| Impulse withstand | 8/6 kV (1) |
| Overvoltage category | CAT 3 |

| Mechanical characteristics | |
|---|---|
| Weight | 1080 gr |
| Door cutout | 220 x 160 mm |
| Protection degree | IP65 |
| Operating temperature | -30 … +70 °C |
| **Communications** | |
| Interface type | RS485. 2 to 3 half duplex wires |
| Protocol | MODBUS RTU |
| Baudrate | programmable 1200 - 115200 bps |
| Digiware bus | RJ45 cable |
| **Display** | |
| Screen resolution | 350 x 160 pixels |
| Event recorder | 3000 events |
| Energy backup | up to 30 seconds |

*(1) 8 kV tested between phases of a different source and 6 kV tested between phases of a the same source.*

## Terminals




atysc_008_a_1_x_cat

1. Configuration USB
2. 24 VDC aux power supply (for optional use)
3. 6 x inputs
4. 2 x latching relay outputs
5. 4 x relay outputs
6. Source sensing (110 - 480 ±20%)
7. RS485 communication
8. Current transformers (1 or 5 A)
9. Digiware RJ45 connectors
10. Replaceable RTC battery
11. Hard reset button

By-Pass Double Line
LOAD
Q1
Q2
ATS
Q3
S2
S1
BY-PASS
Q1
Q2
Q3
socomec
ATEX
SWITCH 1
SWITCH 2
SPD 1
SPD 2

# Integrated products & solutions



## Enclosed switches

**Enclosed switches** *p. 130*

Load break switches in insulated enclosures

***COMO***
Polycarbonate
20 to 125 A
*p. 135*

***SIRCO***
Polyester
160 to 630 A
*p. 136*

Load break switches in metallic enclosures

***SIRCO M***
Painted steel
20 to 100 A
*p. 137*

***SIRCO***
Painted steel
160 to 1600A
*p. 136*

***SIRCO M***
Stainless steel
32 to 100 A
*p. 138*

## Safety enclosures

**Safety enclosures** *p. 140*

Normal atmospheres

***SIDER***
Steel
50 to 1600 A
(3/4/6 P)
*p. 142*

## Enclosed transfer switches

For critical applications

***ATyS Bypass***
Steel
40 to 3200 A
*p. 146*

## Specific applications

**H** Solutions for medical locations
*p. 150*

**Specific requirements**

Socomec offers customisation and development of products to meet your every requirement. Contact your sales branch for more information.



# Enclosed Products and Equipment to suit all your applications

The **specialist** in load breaking, switching, protection, metering and measurement, SOCOMEC designs and produces **standard and tailored integrated solutions.**

With our dual expertise (in products and solutions) we can offer you the electrical equipment you need for your systems, all under a **manufacturer's guarantee.**

IEC 61439

**The result of the long accumulation of extensive** experience, our **standard integrated solutions** bring you:

- **Fast implementation backed up** by a review of system limitations
- **Ease-of-use, without any risk of** non-compliance errors

Our solutions guarantee:

- **The safety and protection of people and goods**
- **Continuity of use**
- **Compliance with standards on products, assemblies and installations**

## What you need to know!

SOCOMEC has an entire department at your service, dedicated to the design and production of specialist equipment.

This department is here to support you throughout your projects, including:

- Building specifications
- Budgets
- Planning
- Design and production
- Qualification and certification
- Support during installation and startup
- Training

**Draw on our expertise and contact your local SOCOMEC branch.**

## Enclosed switches

SITE 301 A

Enclosed switches incorporate load-break switches with or without fuses, developed, qualified and certified for industrial electrical distribution and service sector networks.

They support the load-breaking, isolation and lockout of the mains power for all types of loads and can also be used as a general switch for equipment in various applications.

## Safety enclosures

SITE 558 A

Safety enclosures are designed to be installed near a motor or a machine to **separate them from the power supply**. This includes manually operated, **padlockable load-break switches**, in the OFF position with a **visible and reliable display** of the switchgear's open position.

During preventive maintenance or inspection work, these enclosures ensure operator **safety** against **the accidental startup of electrical machines**.

For use in an explosive atmosphere (dust), use our ATEX model to prevent any explosion during the unit's opening/closing phases, which generate electrical arcs.

## Enclosed Transfer Switch


SITE 375 A

Switching enclosures ensure the availability of electrical power in critical facilities (high-rises, public buildings, hospitals, IT or telecommunications centres, airports, industrial sites, etc.), operated manually or automatically to switch between a normal power source and a backup source (genset or auxiliary transformer) to cover in the event of failure.

For sites that require a power availability rate close to 100%, our **ATyS Bypass** solution offers dual redundancy during normal operation, service and maintenance work. With its capacity to resume Normal/Bypass channels, the ATyS Bypass solution allows the continued, seamless and safe use of your systems.

## Solutions for medical premises


SITE 629 A

The availability of a reliable electrical power supply is vital to ensure continuity of care. There is no excuse today for power failures that can lead to life-or-death situations.

Medical IT unearthing system cabinets ensure the availability of electrical power in medical centres (in accordance with standard IEC 60364-7-710).

The SOCOMEC medical IT cabinet range comes in three models and provides the solution for all your medical centre needs, with manufacturer's guarantee.

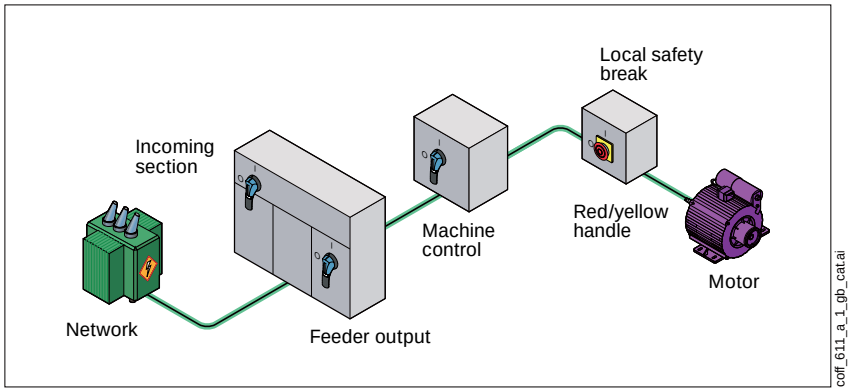
# Enclosed switches



## Enclosed load break switches and fuse combination load break switches

Switchgear systems are an essential part of your electrical system. Installed at every level of the distribution, they allow you to secure and isolate parts of the network or electrical equipment.

### SOCOMEC load break switches in power distribution and machine control applications




**The solution for**

> Processing industry
> Infrastructure
> OEM

**The advantages**

> Increased flexibility
> Maintenance safety
> Adaptable to every environment

**A manufacturer's expertise**

> Active in the electrical switchgear market since 1922, Socomec is both a global leader and an undisputed benchmark reference.
> Our enclosed solutions, with or without fuse protection, are suitable for a wide variety of commercial and industrial power distribution operating environments and applications.
From 20 to 1600 A, to IEC or UL standards, we now have one of the widest ranges on the market.

## Business sectors

**Processing industry**
- Cement plant - Quarries
- Steel plant
- Food processing industries

**OEM**
- HVAC - heating, ventilation and air-conditioning
- Lifting

**Infrastructure**
- Airports - Tunnels - Motorways
- Water treatment

## Which product for which business?

| Enclosure | Insulated | | Metallic | |
|---|---|---|---|---|
| | Polycarbonate | Polyester | Painted sheet metal | Stainless steel |
| Rating | 20 to 125 A | 160 to 630 A | 20 to 1600 A | 32 to 100 A |
| Application | | | | |
| Cement plant | | ++ | +++ | |
| Steel plant | | ++ | +++ | |
| Food processing | + | ++ | | +++ |
| Tunnels | +++ | ++ | + | |
| Water treatment | ++ | +++ | | |
| HVAC | +++ | ++ | | |
| Lifting | + | ++ | +++ | |

## The benefits of our range

Enclosed switches equipped with Socomec load break switches or fuse combination load break switches provide emergency breaking, breaking for mechanical maintenance, local safety isolation and fuse protection for any low voltage circuit.

FLEXIBILITY

**Increased flexibility for more productivity**

Controlling the power as close as possible to consumers makes operation and maintenance easy, autonomous and safe. This allows you to optimise the equipment's operating times.

**Maintenance safety**

Breaking close to the load means the system can reliably identify which circuits need to be disconnected.

On-load breaking and isolating, as well as the clear indication of the load break switch's position and the triple lock of the operating handle (in the open position) allows non-qualified persons to reliably and easily shutdown and isolate a supply circuit.

The locking of access (live or non current-carrying) to the enclosure's internal equipment can be managed to suit all kinds of safety procedures.

**A solution to suit any environment**

Available in 4 materials, the Socomec enclosed switch range can withstand most environmental constraints; protection against water and dust (IP), mechanical impact (IK) or corrosion.



# Selection guide

## Enclosed switches

Which application? ▶ In which operating environment?

| Electrical feature | Load break switches | | |
|---|---|---|---|
| Enclosure | Insulated | | |
| |  |  | |
| Model | ***COMO*** **20 to 125 A** *p. 135* | ***SIRCO*** **160 to 630 A** *p. 136* | |
| **Application** | | | |
| Local breaking | • | • | |
| Circuit protection | | | |
| **Environmental risks** | | | |
| Corrosion | +++ | +++ | |
| Chemical | ++ | ++ | |
| Mechanical impact | + | ++ | |
| **Electrical characteristics** | | | |
| Rated current: AC-22A, 400 V | 20 … 125 A | 160 … 630 A | |
| Motor power AC-22A, 400 VAC (kW) | 7.5 … 45 | 80 … 280 | |
| Number of poles | 3 / 4 / 6 / 8 P | 3 / 4 P | |
| **Enclosure characteristics** | | | |
| **Material** | | | |
| Polycarbonate | • | | |
| Polyester | | • | |
| Painted sheet metal | | | |
| Stainless steel | | | |
| Protection degree | IP 65 | IP 65 | |
| **Connection characteristics** | | | |
| High-Low | • | • | |
| Low-Low | • | • | |
| Minimum recommended connection section (mm²) | 1.5 | 50 | |
| Max. connection cross section (mm²) | 50 | 2 x 300 | |



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Which electrical feature ?

Which connection?

| | Load break switches | | |
|---|---|---|---|
| | Metallic | | |
| |  |  |  |
| | ***SIRCO M***<br>**20 to 100 A**<br>*p. 136* | ***SIRCO***<br>**160 to 1600 A**<br>*p. 137* | ***SIRCO M***<br>**32 to 100 A**<br>*p. 138* |
| | | | |
| | • | • | • |
| | | | |
| | | | |
| | + | + | +++ |
| | + | + | +++ |
| | +++ | +++ | +++ |
| | | | |
| | 20 … 100 A | 160 … 1600 A | 32 … 100 A |
| | 9 … 45 | 80 … 710 | 15 … 45 |
| | 3 / 4 P | 3 / 4 P | 3 / 4 P |
| | | | |
| | | | |
| | | | |
| | • | • | |
| | | | • |
| | IP 65 | IP 65 | IP 65 |
| | | | |
| | • | • | |
| | • | < 630 A | • |
| | 1.5 | 50 | 1.5 |
| | 70 | 6 x 185 | 70 |



# Enclosed switches

## Load break switches

20 to 1600 A


***COMO*** *enclosure 20 to 125 A*
*Polycarbonate - IP65*


***SIRCO*** *enclosure 160 to 630 A*
*Polyester - IP65*


***SIRCO M*** *enclosure 32 to 100 A*
*Stainless steel - IP65*


***SIRCO M*** *enclosure 20 to 100 A*
*Painted steel - IP65*


***SIRCO*** *enclosure 160 to 1600 A*
*Painted steel - IP65*

### The solution for

- > OEM
- > Industries
- > Commercial buildings
- > Electrical distribution

### Strong points

- > Safe operation
- > Suitable for all kinds of environment
- > Easy setup
- > Extensive range

### Compliance with standards

- > IEC 60947-3
- > IEC 60364
- > EN 60947-3
- > EN 61439
- > EN 60204-1

### Other products

- > Customised solutions available on request.

## Function

**Enclosed load break switches** ensure the on-load breaking and making of circuits and safely isolate all low-voltage electrical circuits by providing protection against contact with live parts and environmental elements, such as dust, water and other hazards.

They enable the shutdown and isolation of the power supply as close to the equipment as possible.

## Advantages

**Safe operation**

- Reliable lockout for safe maintenance procedures.
- On-load breaking.
- Ergonomic operating handle, available in red/yellow or black.
- Triple lock in OFF position.

**Easy setup**

- Cable access top and/or bottom.
- Cable gland knockouts (≤ 125 A).
- Removable gland plates at top and bottom for steel enclosures ≥160 A.
- Plenty of room for cabling.

**Extensive range**

- Standard range
- Customised on request.

**Suitable for all kinds of environment**

- Insulated enclosure for chemical and food processing applications, indoor or outdoor installation.
- Painted steel enclosure for areas at risk of mechanical impact.
- Stainless enclosure for food processing and pharmaceutical applications.




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# Load break switch in insulated enclosure

## ■ *COMO* in polycarbonate enclosure


como-enc_002 - 032 - 026 - 036

## General characteristics

- From 20 to 125 A.
- 3, 4, 6, 8 poles.
- Yellow/red or grey/blue version.
- Triple lock in OFF position.
- Polycarbonate enclosure.
- Screw-on front.
- Degree of protection: IP65.
- Cable gland knock-outs at top, bottom and sides.
- Door interlocking when switch is ON.

**Accessories**

- Solid neutral pole (max. 1).
- NO+NC or 2 NO auxiliary contact module for pre-break and signalling of positions 0 and I.
  Up to 2 auxiliary contact modules can be fitted to each product, one on each side of the switch.

## References

| Rating (A) | N° of poles | With blue handle | With red handle | Solid neutral pole[1] | Auxiliary contacts[1] | Enclosure Size | Enclosure H x W x D (mm) | Enclosure Cable-in top and bottom (mm) |
|---|---|---|---|---|---|---|---|---|
| 20 | 3 P | 2115 **3301** | 2115 **3401** | - | - | CPC 0 | 92 x 64 x 83 | 2 x Ø 25 |
| | 4 P | 2115 **4301** | 2115 **4401** | | | | | |
| 25 | 3 P | 2115 **3302** | 2115 **3402** | 2115 **5005** | 1 AC NO+NC 2113 **4001**<br>1 AC 2 NO 2113 **4002** | CPC 1 | 163 x 100 x 115 | 2 x Ø 25[2] |
| | 4 P | 2115 **4302** | 2115 **4402** | | | | | |
| 32 | 3 P | 2115 **3303** | 2115 **3403** | | | CPC 2 | 200 x 146 x 150 | 2 x Ø 32 / 40[2] |
| | 4 P | 2115 **4303** | 2115 **4403** | | | | | |
| | 6 P | 2115 **6303** | 2115 **6403** | | | | | |
| | 8 P | 2115 **8303** | 2115 **8403** | | | | | |
| 40 | 3 P | 2115 **3304** | 2115 **3404** | 2115 **5007** | | CPC 1 | 163 x 100 x 115 | 2 x Ø 25[2] |
| | 4 P | 2115 **4304** | 2115 **4404** | | | | | |
| 63 | 3 P | 2115 **3306** | 2115 **3406** | | | CPC 2 | 200 x 146 x 150 | 2 x Ø 32 / 40[2] |
| | 4 P | 2115 **4306** | 2115 **4406** | | | | | |
| | 6 P | 2115 **6306** | 2115 **6406** | | | CPC 3 | 304 x 214 x 182 | 2 x Ø 50 / 63[2] |
| | 8 P | 2115 **8306** | 2115 **8406** | | | | | |
| 80 | 3 P | 2115 **3308** | 2115 **3408** | 2115 **5009** | | CPC 2 | 200 x 146 x 150 | 2 x Ø 32 / 40[2] |
| | 4 P | 2115 **4308** | 2115 **4408** | | | | | |
| 100 | 3 P | 2115 **3309** | 2115 **3409** | 2115 **5011** | | CPC 3 | 304 x 214 x 182 | 2 x Ø 50 / 63[2] |
| | 4 P | 2115 **4309** | 2115 **4409** | | | | | |
| 125 | 3 P | 2115 **3312** | 2115 **3412** | | | | | |
| | 4 P | 2115 **4312** | 2115 **4412** | | | | | |

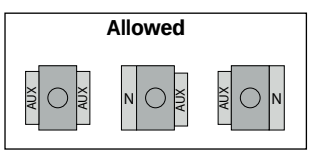
*(1) Max. configuration capacity: 1 solid neutral pole + 1 aux contact, or 2 aux contacts.*
*(2) In addition to top and bottom gland knock-outs, 2 x M20 knock-outs are included on each side of the enclosure fot CPC 1 thru CPC 3.*

## Configurations

### Possible configurations

Solid neutral pole and auxiliary contact accessories can be fitted to the left and/or right side of the COMO switch. Note that only one neutral pole can be fitted. See the below table for details.

| Accessory 1 (left) | COMO switch | Accessory 2 (right) |
|---|---|---|
| Aux. contact | 3/4/6/8P | Aux. contact |
| Solid neutral | 3/4/6/8P | Aux. contact |
| Aux. contact | 3/4/6/8P | Solid neutral |

# Enclosed switches

Load break switches

20 to 1600 A

## Load break switch in metallic enclosure

### ■ *SIRCO M* in painted steel enclosure


#### General characteristics

- From 20 to 100 A.
- 3 poles + solid neutral.
- Red/yellow or black handle.
- Triple lock in OFF position.
- Painted steel enclosure.
- Hinged door or screw-on cover.
- Colour: RAL 7035.
- Pre-punched cable gland knockouts at top and bottom.
- Degree of protection: IP65.

**Accessories**

- Switched 4th pole (max. 1).
- NO+NC or 2 NO auxiliary contact (max. 2).
- Terminal shrouds.
- Wall mounting brackets.

#### References

| Rating (A) | N° of poles | With black handle | With red/ yellow handle | Switched 4th pole | Auxiliary contacts | Terminal shroud | Wall brackets | Enclosure Size | Enclosure H x W x D (mm) | Enclosure Cable-in top and bottom (mm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 3 P + N | 3032 **5002**(1) | 3032 **5102**(1) | 2200 **1001** | 1 AC NO + NC 2299 **0001**<br>1 AC 2 NO 2299 **0011** | 2294 **3005** (3 P) 2294 **1005** (1 P) | 3031 **0011** | CT 21 | 200 x 150 x 120 | 2 x Ø 25 + 2 x Ø 32 + Ø 16 |
| | 3 P + N | 3032 **5202**(2) | 3032 **5302**(2) | | | | | CT 21a | | |
| 32 | 3 P + N | 3032 **5003**(1) | 3032 **5103**(1) | 2200 **1003** | | | | CT 21 | | |
| | 3 P + N | 3032 **5203**(2) | 3032 **5303**(2) | | | | | CT 21a | | |
| 63 | 3 P + N | 3032 **5006**(1) | 3032 **5106**(1) | 2200 **1006** | | 2294 **3009** (3 P) 2294 **1009** (1 P) | | CT 21 | | |
| | 3 P + N | 3032 **5206**(2) | 3032 **5306**(2) | | | | | CT 21a | | |
| 100 | 3 P + N | 3032 **5010**(1) | 3032 **5110**(1) | 2200 **1010** | | 2294 **3016** (3 P) 2294 **1011** (1 P) | | CT 32 | 300 x 200 x 120 | Ø 32 + 2 x Ø 50 + Ø 16 |
| | 3 P + N | 3032 **5210** (2) | 3032 **5310**(2) | | | | | CT 32a | | |

*(1) Hinged door closed with double bar locks.*
*(2) Front panel screw-on.*

### ■ *SIRCO M* in stainless steel enclosure


#### General characteristics

- 32 to 100A.
- 3 poles + solid neutral.
- Black or red/yellow handle.
- Triple lock in OFF position.
- Brushed stainless steel enclosure 304 (please ask for other options).
- Degree of protection: IP65.
- Pre-punched cable gland knockouts at bottom.
- Hinged door with double bar locking.

**Accessories**

- Switched 4th pole (max. 1).
- NO+NC or 2 NO auxiliary contact (max. 2).
- Wall mounting brackets.

#### References

| Rating (A) | N° of poles | With black handle | With red/ yellow handle | Switched 4th pole | Auxiliary contacts | Terminal shroud | Set of stainless steel brackets | Enclosure Size | Enclosure H x W x D (mm) | Enclosure Cable-in bottom (mm) |
|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 3 P + N | 3032 **8003** | 3032 **8103** | 2200 **1003** | 1 AC NO + NC 2299 **0001**<br>1 AC 2 NO 2299 **0011** | 2294 **3005** (3 P) 2294 **1005** (1 P) | 3031 **0012** | CI 21 | 200 x 150 x 120 | 2 x Ø 25 + 2x Ø 32 + Ø 16 |
| 63 | 3 P + N | 3032 **8006** | 3032 **8106** | 2200 **1006** | | 2294 **3009** (3 P) 2294 **1009** (1 P) | | | | |
| 100 | 3 P + N | 3032 **8010** | 3032 **8110** | 2200 **1010** | | 2294 **3016** (3 P) 2294 **1011** (1 P) | | CI 32 | 300 x 200 x 120 | Ø 32 + 2 x Ø 50 + Ø 16 |



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# Characteristics

## Electrical features according to IEC 60947-3

| | | COMO | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Thermal current $I_{th}$ (40°C)** | | **20 A** | **25 A** | **32 A** | **40 A** | **63 A** | **80 A** | **100 A** | **125 A** |
| Enclosed thermal current $I_{th}$ (35°C) (A) | | 20 | 25 | 32 | 40 | 63 | 80 | 100 | 125 |
| Enclosed thermal current $I_{th}$ (50°C) (A) | | 17 | 22 | 28 | 35 | 54 | 69 | 86 | 108 |
| Rated insulation voltage $U_i$ (V) | | 690 | 690 | 690 | 690 | 690 | 690 | 690 | 690 |
| Rated impulse withstand voltage $U_{imp}$ (kV) | | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Rated operational currents $I_e$ (A) | | | | | | | | | |
| **Rated voltage** | **Utilisation category** | | | | | | | | |
| 400 VAC | AC-22 A / AC-22 B | 20 | 25 | 32 | 40 | 63 | 80 | 100 | 125 |
| 400 VAC | AC-23 A / AC-23 B | 15 | 20 | 22 | 40 | 44 | 53 | 70 | 84 |
| 690 VAC | AC-22 A / AC-22 B | | 12 | 13 | 18 | 22 | 23.5 | 34 | 41 |
| 690 VAC | AC-23 A / AC-23 B | | 9.5 | 11.5 | 13 | 17.5 | 22 | 25.5 | 35 |
| Operational power in AC-23 (kW) without pre-break auxiliary contact | | | | | | | | | |
| 400 VAC without pre-break AC (kW)(1) | | 7.5 | 9.5 | 11.5 | 20 | 22 | 30 | 37 | 45 |
| 690 VAC without pre-break AC (kW)(1) | | | 12 | 13 | 18 | 22 | 25.5 | 34 | 41 |
| gG DIN(2) fuse protected short-circuit withstand | | | | | | | | | |
| Prospective short-circuit current (kA rms) | | 1 | 8 | 8 | 8 | 8 | 10 | 20 | 20 |
| Associated fuse rating (A) | | 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 | | | | | | | | | |
| Current rated as short-time withstand $I_{cw}$ 0.3s (kA rms) | | 0.68 | 0.68 | 1.28 | 1.28 | 2.52 | 2.52 | 4 | 4 |
| Short-circuit operation (switch only) | | | | | | | | | |
| Current rated as short-time withstand $I_{cw}$ 1s (kA rms) | | 0.34 | 0.34 | 0.64 | 0.64 | 1.26 | 1.26 | 2 | 2 |
| Connection | | | | | | | | | |
| Minimum Cu cable cross-section (mm²) | | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 4 | 4 |
| Maximum Cu cable cross-section (mm²) | | 4 | 10 | 10 | 10 | 16 | 25 | 35 | 50 |

*(1) The power value is given for information only, the current values vary from one manufacturer to another. (2) For a rated operational voltage $U_e$ = 415 VAC.*

| | | SIRCO M / SIRCO | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Thermal current $I_{th}$ (40°C)** | | **20 A** | **32 A** | **63 A** | **100 A** | **160 A** | **250 A** | **400 A** | **630 A** | **800 A** | **1250 A** | **1600 A** |
| **Frame size** | | **M1** | **M1** | **M2** | **M3** | **B3** | **B4** | **B5** | **B5** | **B6** | **B7** | **B7** |
| Enclosed thermal current $I_{th}$ (35°C) (A) | | 20 | 32 | 63 | 100 | 160 | 250 | 400 | 630 | 770 | 1000 | 1450 |
| Enclosed thermal current $I_{th}$ (50°C) (A) | | 17 | 28 | 54 | 86 | 138 | 216 | 345 | 544 | 665 | 863 | 1252 |
| Rated insulation voltage $U_i$ (V) | | 800 | 800 | 800 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Rated impulse withstand voltage $U_{imp}$ (kV) | | 8 | 8 | 8 | 8 | 8 | 8 | 12 | 12 | 12 | 12 | 12 |
| Rated operational currents $I_e$ (A) | | | | | | | | | | | | |
| **Rated voltage** | **Utilisation category** | | | | | | | | | | | |
| 415 VAC | AC-22 A / AC-22 B | 20 | 32 | 63 | 100 | 160 | 250 | 400 | 630 | 800 | 1250 | 1600 |
| 415 VAC | AC-23 A / AC-23 B | 20 | 32 | 63 | 100 | 160 | 250 | 400 | 500 | 800 | 1250 | 1250 |
| 500 VAC | AC-22 A / AC-22 B | 20 | 32 | 63 | 100 | | | | | | | |
| 500 VAC | AC-23 A / AC-23 B | 20 | 25 | 63 | 80 | | | | | | | |
| 690 VAC | AC-22 A / AC-22 B | 20 | 32 | 40/63 | 80/100 | | | | | | | |
| 690 VAC | AC-23 A / AC-23 B | 20 | 25 | 40 | 63 | | | | | | | |
| Operational power in AC-23 (kW) | | | | | | | | | | | | |
| 400 VAC without pre-break AC (kW)(1) | | 9 | 15 | 30 | 45 | 80 | 132 | 220 | 280 | 450 | 710 | 710 |
| 500 VAC without pre-break AC (kW)(1) | | 9 | 15 | 30 | 45 | | | | | | | |
| 690 VAC without pre-break AC (kW)(1) | | 11 | 15 | 30 | 45 | | | | | | | |
| gG DIN(2) fuse protected short-circuit withstand | | | | | | | | | | | | |
| Prospective short-circuit current (kA rms) | | 50 | 50 | 50 | 25 | 100 | 50 | 100 | 70 | 50 | 100 | 100 |
| Associated fuse rating (A) | | 20 | 32 | 63 | 100 | 160 | 250 | 400 | 630 | 800 | 1250 | 2x800 |
| Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s | | | | | | | | | | | | |
| Current rated as short-time withstand $I_{cw}$ 0.3s (kA rms) | | 2.5 | 2.5 | 3 | 5 | 15 | 17 | 25 | 25 | 50 | 100 | 100 |
| Short-circuit operation (switch only) | | | | | | | | | | | | |
| Current rated as short-time withstand $I_{cw}$ 1s (kA rms) | | 1.26 | 1.26 | 1.5 | 2.75 | 7 | 9 | 13 | 13 | 35 | 50 | 50 |
| Dynamic withstand current in $I_{cc}$ (kA peak) (6) | | 6 | 6 | 9 | 12 | 20 | 30 | 45 | 45 | 55 | 110 | 110 |
| Connection | | | | | | | | | | | | |
| Minimum Cu cable cross-section (mm²) | | 1.5 | 1.5 | 2.5 | 10 | 50 | 95 | 185 | 2x150 | 2x185 | | |
| Maximum Cu cable cross-section (mm²) | | 16 | 16 | 35 | 70 | 95 | 150 | 240 | 2x300 | 2x300 | 4x185 | 6x185 |

*(1) The power value is given for information only, the current values vary from one manufacturer to another. (2) For a rated operational voltage $U_e$ = 415 VAC.*

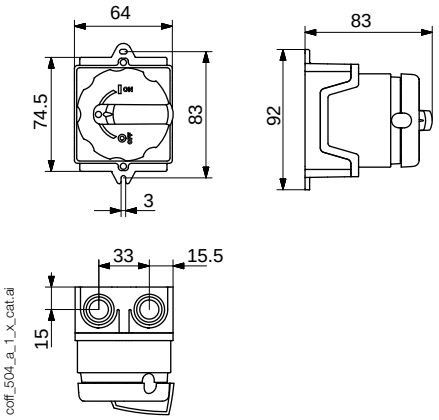
# Enclosed switches

Load break switches

20 to 1600 A

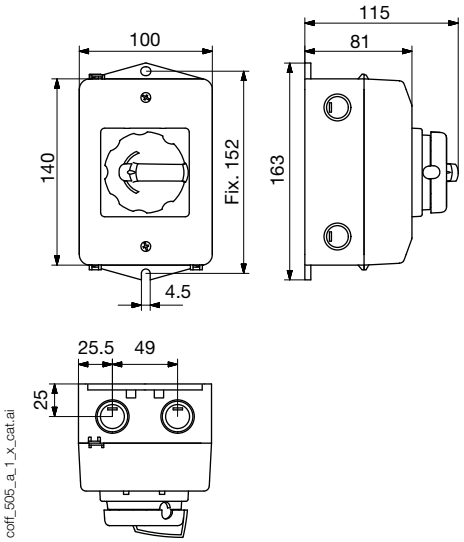
## COMO dimensions

### Size CPC 0



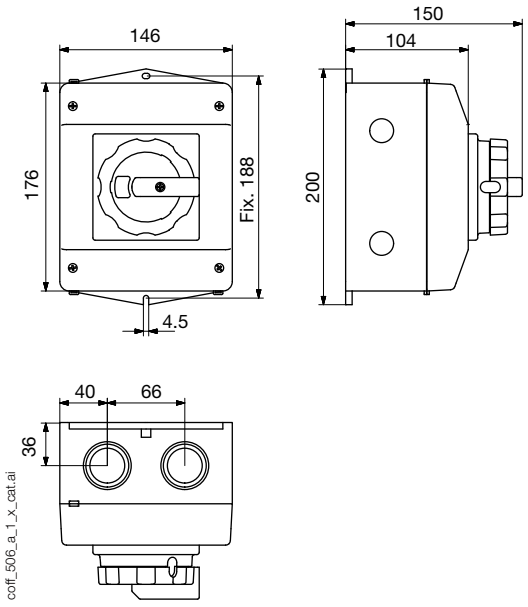

- 2x M25 cable knockouts (top and bottom)

### Size CPC 1



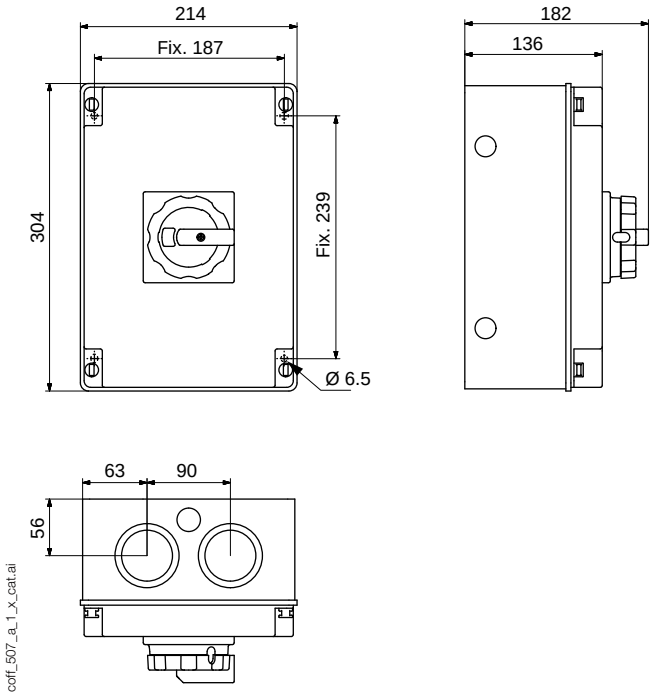

- 2x M20 cable knockouts (on each side)
- 2x M25 cable knockouts (top and bottom)
- 2 pre-drilled holes to expel water

### Size CPC 2




- 2x M20 cable knockouts (on each side)
- 2x M32/M40 cable knockouts (top and bottom)
- 2 pre-drilled holes to expel water

### Size CPC 3




- 2x M20 cable knockouts (on each side)
- 2x M50/M63 cable knockouts (top and bottom)
- 2 pre-drilled holes to expel water



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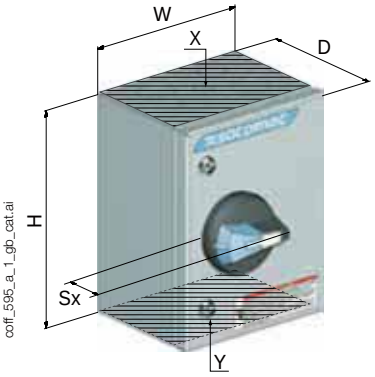
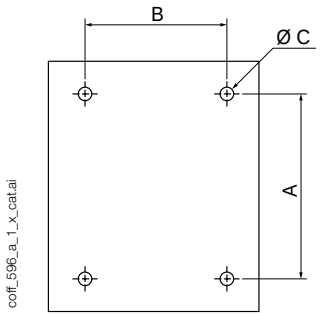
# SIRCO M and SIRCO dimensions

## Enclosures

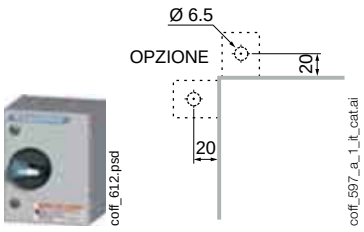



| Size | Type | H x W x D (mm) | Sx (mm) | A (mm) | B (mm) | Diameter C (mm) | X - Y Cable-in top and bottom(1) |
|---|---|---|---|---|---|---|---|
| CT 21, CI21, CT 21a | 1 | 200 x 150 x 120 | 36 | 135 | 85 | 6.5 | 2 x Ø 25 + 2 x Ø 32 + Ø 16 |
| CT 32, CI32, CT 32a | | 300 x 200 x 120 | | 235 | 135 | | 1 x Ø 32 + 2 x Ø 50 + Ø16 |
| CP 32 | 3 | 360 x 270 x 171 | 45 | 337 | 247 | | – |
| CP 53 | | 540 x 360 x 171 | | 516 | 337 | | |
| CP 75 | | 720 x 540 x 201 | | 696 | 516 | | |
| CT 43 | 2 | 400 x 300 x 210 | | 362 | 262 | 12.5 | 180 x 100 |
| CT 66 | | 600 x 600 x 300 | | 562 | 562 | | 380 x 100 |
| CT 86 | | 800 x 600 x 350 | 60 | 762 | 562 | | |
| CT 128 | | 1200 x 800 x 300 | | 1162 | 762 | | 660 x 100 |

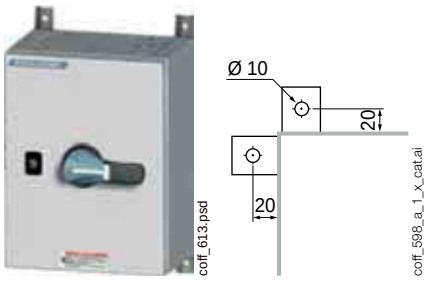
*(1) For stainless steel enclosure, cable-in at bottom only*



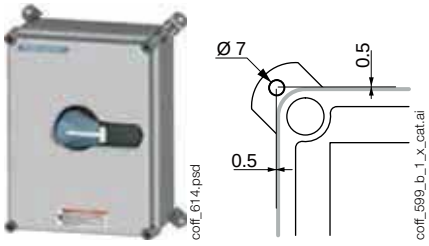

**Type 1**




**Type 2**




**Type 3**



# Safety enclosures



**Socomec safety enclosures** are designed for installation near a motor or a machine in order to **isolate it from the power supply.**

All the safety enclosures are equipped with **load break switches** with front or side operating handles which are **lockable** in the open position, and with **visible, reliable indication** of the contacts' open position. They make and break under load conditions and provide safety isolation for any low voltage circuit.

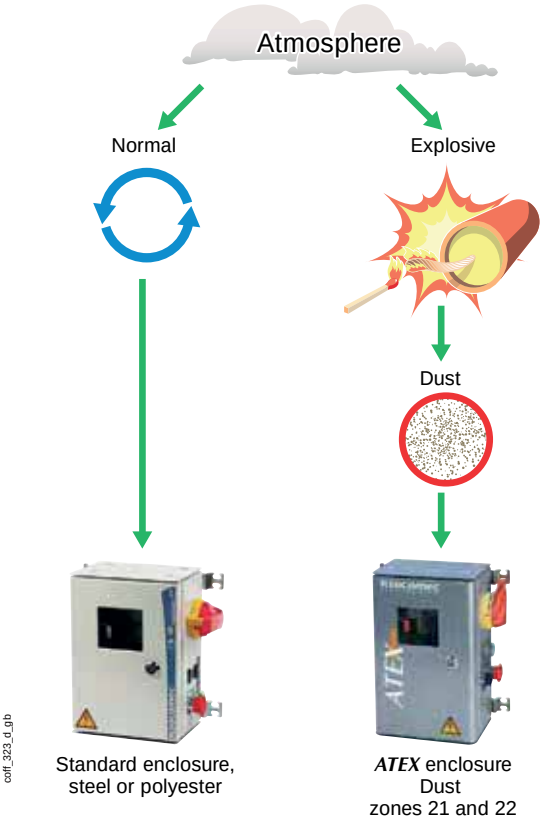
During maintenance or inspection operations, the safety enclosures guarantee the operator's **protection against the accidental startup of electrical machines**.

For use in explosive atmospheres, **ATEX dust** enclosures are available to prevent explosions caused by electrical arcs generated when opening or closing the circuits protected by the device.

STE_258_A

## Which ambient atmosphere?

The operating environment is an essential parameter when choosing an enclosure. Our range of enclosures offers you solutions for the most varied of atmospheres, including the most severe.




| Environment | Steel enclosure | Polyester enclosure | Stainless steel enclosures(1) | ATEX enclosures |
|---|---|---|---|---|
| Chemical aggression | | • | • | |
| Mechanical risks | • | | • | • |
| Dust risks | • | | | • |
| Contamination risks | | • | • | |
| Atmospheric corrosion | | • | • | |
| Risk of explosion | | | | • |

*(1) Made to order.*



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## Safety functions

### Positive break indication

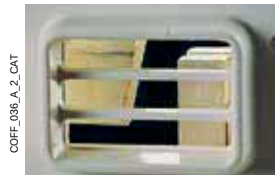


Clear indication of the open or closed position of the switch via the handle and its clear marking.

### Visible breaking

In position 1

In position 0


In accordance with IEC 60364, “an isolating device is considered as having visible breaking if the separation of the contacts is directly visible”. All the devices used in the safety enclosures have visible breaking.

### Padlocking

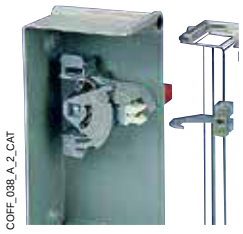

When working on the machine during the lockout phase, qualified personnel may perform triple handle padlocking in the open position. The ergonomic handle can accommodate up to three locks.

### Mechanical flag indicator (optional)

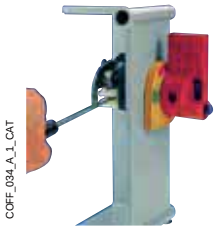



Flush with the viewing window and directly linked to the operating mechanism, this gives clear, at-a-glance indication of contact position, providing easier visualisation of the breaking (standard with steel safety enclosures, optional for polyester).

### Double locking


In accordance with standard 60204-1, devices located outside a closed electrical service area must be equipped with the means to allow them to be secured in the OFF position (disconnected state). Qualified personnel may use the ergonomic handle to perform triple handle padlocking.




It is possible to close the breaking device when the enclosure door is open by using a tool to inhibit the double lock, thus allowing tests to be carried out by qualified staff.

## Overview of our range

### For normal atmospheres

**Polyester**


**Steel**


### For explosive atmospheres

**Steel**



# Safety enclosures

## Normal atmospheres

steel enclosure from 50 to 630 A



## Function

**Safety enclosures** equipped with SOCOMEC switches provide emergency breaking, breaking for mechanical maintenance and safety isolation in the vicinity of any low voltage final circuit.

## Advantages

**Operator safety**

- Protects operators against accidental start-up of machines.
- Ease of operation without risk of error for unqualified operators.
- Maximum security for all types of simple mechanical and electrical maintenance operations.

**Quick and easy implementation**

The space available within the enclosure and the dimension of the closing plates facilitate connection.

**Durability**

The product is designed for harsh industrial environments with mechanical risks or non-explosive dust risks.

**Operating continuity**

- Local disconnection: only the targeted machine is switched off, the rest of the installation can continue operating.
- Reduced costs related to production downtime.

**Inductive load breaking (AC23)**

Safety enclosures are designed for use with inductive loads and are able to make and break on load (AC23).

### The solution for

> Cement plants
> Iron and steel industry
> Paper mills
> Sawmills
> Hydraulic power packs
> Automobile
> Mining

### Strong points

> Operator safety
> Quick and easy implementation
> Operating continuity
> Inductive load breaking (AC23)

### Compliance with standards

> IEC 60947-3
> IEC 61439-2

### Specific requirements

> SOCOMEC can offer you customised solutions to meet your specific requirements. (Eg. Stainless steel enclosure, front operation).
Contact your Socomec office for further information.

### Also available

> ATEX enclosures providing emergency breaking and maintenance isolation for any low voltage electrical circuit which is in an area where there is a risk of explosion due to dust.



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## General characteristics

### Enclosure

The robustness of the safety enclosure is ensured by its 2mm thick sheet steel construction (3mm for the welded roof). Corrosion protection is provided by an anti-corrosion polyester powder coating (RAL7035). The door is hinge-mounted (180° opening) and is secured with a key lock (8 mm square key). Two type of enclosure with different degree of protection IP55 and IP65.

### Switching device

Safety enclosures are equipped with visible break SOCOMEC load break switches. They make and break under load and provide safety isolation for any low voltage electric circuit. Separation of the contacts is visible through the triplex window, located on the enclosure door, providing guaranteed isolation to the operator. A mechanical indicator linked directly to the operation of the contacts, is also provided to give clear position indication.


coff_042_a_2_cat


coff_043_a_2_cat


coff_362_a

### Operating handle

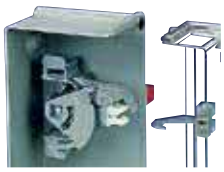
The safety enclosure is equipped with a red plastic handle with a metal padlocking lever which is used for both normal and emergency cut-off operations. The handle can be locked with up to 3 padlocks with a diameter 4 and 8 mm.


coff_326_a

### Double locking

Double locking prevents the opening of the enclosure door with the switch in its closed position and the closing of the switch when the door is open. With the use of a tool authorized personnel can bypass this system when the door is open for maintenance purposes. The locking system comprises a single guard moulded from zamak (aluminium alloy) with a simple and robust mechanism driven directly by the handle's operating shaft.


coff_037_a_2_cat


coff_038_a_2_cat

### Connections

A bottom removable gland plates facilitate cable entry and connections. Cables connect to descending bars.

### Miscellaneous

2 grounding points enables the termination of earth connections inside of the enclosure.

# Safety enclosures

## Normal atmospheres

steel enclosure from 50 to 630 A

## References

coff_358_a

### Side operation - IP55

| Rating (A) | No. of poles | Connection cable | Package (1) | 1 Way (2) | 2 Way (3) | VSD (4) |
|---|---|---|---|---|---|---|
| 50 | 3P | Copper | 32AS **3005** | 32AS **3105** | 32AS **3205** | 32AS **3305** |
| | | Aluminium | 32AA **3005** | 32AA **3105** | 32AA **3205** | 32AA **3305** |
| 80 | | Copper | 32AS **3008** | 32AS **3108** | 32AS **3208** | 32AS **3308** |
| | | Aluminium | 32AA **3008** | 32AA **3108** | 32AA **3208** | 32AA **3308** |
| 125 | | Copper | 32AS **3012** | 32AS **3112** | 32AS **3212** | 32AS **3312** |
| | | Aluminium | 32AA **3012** | 32AA **3112** | 32AA **3212** | 32AA **3312** |
| 200 | | Copper | 32AS **3020** | 32AS **3120** | 32AS **3220** | 32AS **3320** |
| | | Aluminium | 32AA **3020** | 32AA **3120** | 32AA **3220** | 32AA **3320** |
| 400 | | Copper | 32AS **3040** | 32AS **3140** | 32AS **3240** | 32AS **3340** |
| | | Aluminium | 32AA **3040** | 32AA **3140** | 32AA **3240** | 32AA **3340** |
| 630 | | Copper | 32AS **3063** | 32AS **3163** | 32AS **3263** | 32AS **3363** |
| | | Aluminium | 32AA **3063** | 32AA **3163** | 32AA **3263** | 32AA **3363** |

*(1) Package: 0 push button; 0 auxiliary contacts.*
*(2) 1 way: 1 ON and 1 OFF push buttons; 2 NO/NC pre-cut off auxiliary contacts.*
*(3) 2 way: 2 ON and 1 OFF push buttons; 2 NO/NC pre-cut off auxiliary contacts.*
*(4) VSD: Variable Speed Drive, 1 ON, 1 OFF and 2 +&- speed push buttons; 2 NO/NC pre-cut off auxiliary contacts.*

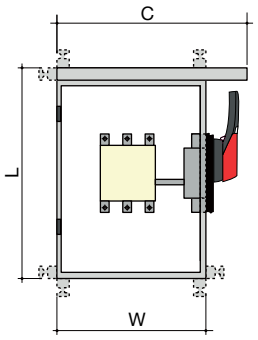
coff_359_a

### Side operation - IP65

| Rating (A) | No. of poles | Connection cable | Package (1) | 1 Way (2) | 2 Way (3) | VSD (4) |
|---|---|---|---|---|---|---|
| 50 | 3P | Copper | 34AS **3005** | 34AS **3105** | 34AS **3205** | 34AS **3305** |
| | | Aluminium | 34AA **3005** | 34AA **3105** | 34AA **3205** | 34AA **3305** |
| 80 | | Copper | 34AS **3008** | 34AS **3108** | 34AS **3208** | 34AS **3308** |
| | | Aluminium | 34AA **3008** | 34AA **3108** | 34AA **3208** | 34AA **3308** |
| 125 | | Copper | 34AS **3012** | 34AS **3112** | 34AS **3212** | 34AS **3312** |
| | | Aluminium | 34AA **3012** | 34AA **3112** | 34AA **3212** | 34AA **3312** |
| 200 | | Copper | 34AS **3020** | 34AS **3120** | 34AS **3220** | 34AS **3320** |
| | | Aluminium | 34AA **3020** | 34AA **3120** | 34AA **3220** | 34AA **3320** |
| 400 | | Copper | 34AS **3040** | 34AS **3140** | 34AS **3240** | 34AS **3340** |
| | | Aluminium | 34AA **3040** | 34AA **3140** | 34AA **3240** | 34AA **3340** |
| 630 | | Copper | 34AS **3063** | 34AS **3163** | 34AS **3263** | 34AS **3363** |
| | | Aluminium | 34AA **3063** | 34AA **3163** | 34AA **3263** | 34AA **3363** |

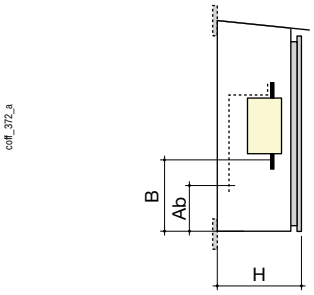
*(1) Package: 0 push button; 0 auxiliary contacts.*
*(2) 1 way: 1 ON and 1 OFF push buttons; 2 NO/NC pre-cut off auxiliary contacts.*
*(3) 2 way: 2 ON and 1 OFF push buttons; 2 NO/NC pre-cut off auxiliary contacts.*
*(4) VSD: Variable Speed Drive, 1 ON, 1 OFF and 2 +&- speed push buttons; 2 NO/NC pre-cut off auxiliary contacts.*

## Dimensions




**Copper cable connection**

| Rating (A) | No. of poles | H x W x D (mm) | Max connection section ($mm^2$) | Ab (mm) | B (mm) | C (mm) |
|---|---|---|---|---|---|---|
| 50 | 3 P | 374 x 230 x 160 | 35 | 172.5 | 193 | 300 |
| 80 | 3 P | 374 x 230 x 160 | 35 | 172.5 | 193 | 300 |
| 125 | 3 P | 450 x 375 x 230 | 70 | 194 | 216 | 445 |
| 200 | 3 P | 450 x 375 x 230 | 150 | 194 | 214 | 445 |
| 400 | 3 P | 700 x 415 x 300 | 240 | 350 | 379 | 485 |
| 630 | 3 P | 901 x 505 x 354.5 | 2 x 300 | 480 | 513 | 575 |

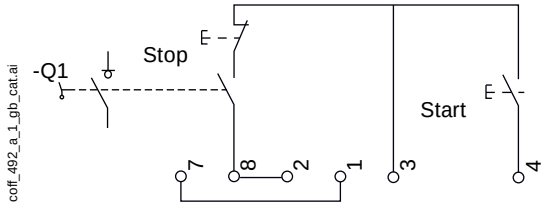



**Aluminium cable connection**

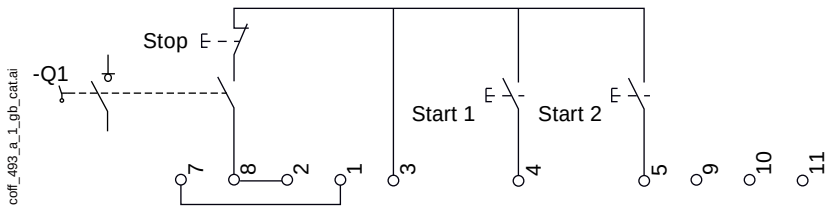
| Rating (A) | No. of poles | H x W x D (mm) | Max connection section ($mm^2$) | Ab (mm) | B (mm) | C (mm) |
|---|---|---|---|---|---|---|
| 50 | 3 P | 499 x 310 x 160 | 35 | 148.5 | 148.5 | 380 |
| 80 | 3 P | 499 x 310 x 160 | 35 | 148.5 | 148.5 | 380 |
| 125 | 3 P | 551 x 375 x 230 | 70 | 181.5 | 254 | 445 |
| 200 | 3 P | 551 x 375 x 230 | 150 | 189 | 257 | 445 |
| 400 | 3 P | 900 x 465 x 300 | 300 | 423.5 | 468 | 535 |
| 630 | 3 P | 900.5 x 505 x 354.5 | 2 x 300 | 363 | 418 | 575 |

## Control diagram

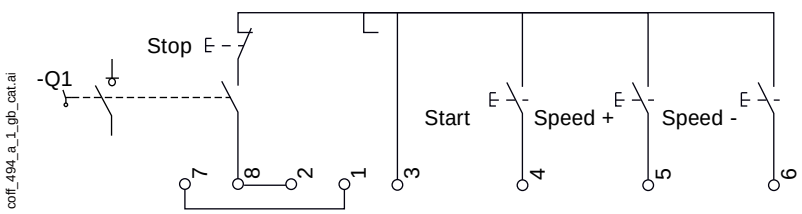
**1 way**




**2 way**




**VSD**



# Enclosed Transfer Switches

## ATyS Bypass

40 to 3200 A




tablo_036


tablo_035

### Function

- Automatically transfers to the available source to ensure continuity of the supply to life safety and critical loads such as sprinklers, firefighting/evacuation lifts, water pumps, etc.
- Assures continuity of service during preventative, maintenance and testing.
- Full isolation of the Automatic Transfer Switch ensures that maintenance work can be carried out safely without interruption to the load.
- Source availability, ATS position & status, and source measurements are displayed on the door-mounted D20 interface. Access to configuration parameters, test and control functions (password protected) is also available via the D20.
- ATS Bypass are required for compliance with installation stadards **BS 9999**:2017 and **BS 8519**:2020, where occupation of the building is conditional upon the availability of the life safety and fire-fighting equipment.

### General features

- 40 to 3200 A, 4-pole.
- 230/400 VAC ± 20%, 50/60 Hz (ATS is self-powered from incoming sources).
- Class PC Automatic Transfer Switch.
- No-break bypass solution.
- Voltage and frequency monitoring of both sources.
- Phase rotation and neutral position control.
- Bi-stable output relay for genset start/stop command (NO/NC).
- Remote position control (I, 0, II) with dry contact.
- Manual emergency operation.
- Volt-free programmable outputs for BMS/ remote indication.
- ATS and bypass switch auxiliary contacts.
- RS485 JBus/Modbus communication (as standard).
- ATS Auto/Manual selector.
- Degree of protection: IP41 as standard (others available on request).
- Hinged door with 3 mm double bar locking.
- Mounting: ≤160A wall-mounted (brackets supplied loose), ≥250A floor-mounted on feet.
- D20 remote interface (door-mounted).
- Mimic panel (3 LEDs for live voltage on source 1, source 2, and load; optional 15/17-LED mimic panel).
- Protection against direct contact from each functional unit.
- Enclosure material: Steel.
- Colour: RAL 7035 epoxy powder coating.

### The solution for

- > Data centres
- > Energy generation
- > Healthcare buildings
- > High-rise buildings
- > Banks and insurance companies
- > Transport

### Strong points

- > No-break bypass solution prevents interruption to the load when switching to bypass.
- > IEC 61439-2 type tested solution
- > Continuity of service for critical and life safety applications

### Compliance with standards

- > IEC 61439-2
- > IEC 60947-6-1
- > IEC 60947-3
- > BS 60947-6-1

### Expert Services

Technical site audit, solution specification, advice, commissioning, maintenance, training, etc.

Our Expert Services extend to a complete offer of customised services to make your project a success.



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## 2 model versions

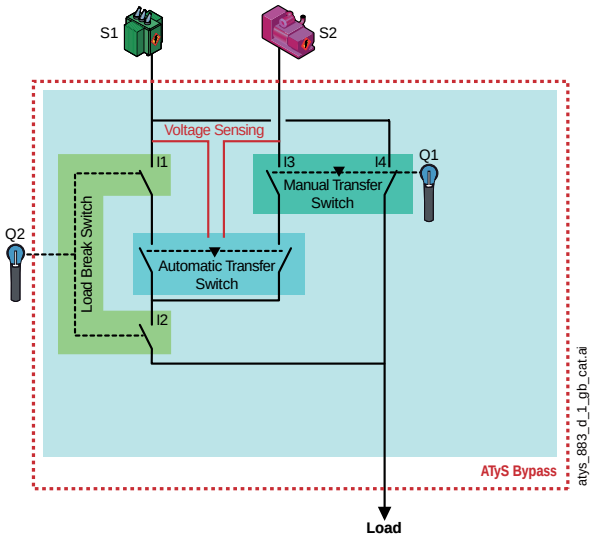
**ATyS Single Line Bypass**

- Comprises an Automatic Transfer Switch and a priority source bypass line. Bypass and isolation of the ATSE can be performed without interruption to the load.

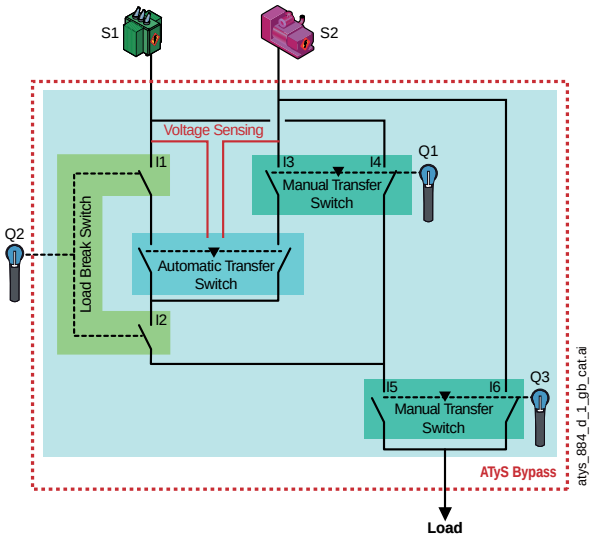
**ATyS Double Line Bypass**

- Comprises an Automatic Transfer Switch, a priority source bypass line and an alternative source bypass line. Priority source bypass, and isolation of the ATS, can be performed without interruption to the load.
- The addition of the alternative bypass line allows the backup source to be selected during maintenance work, should the priority source fail. ATyS Double Line Bypass provide an extra layer of power availability for the most critical applications.

ATyS Bypass - SINGLE LINE




ATyS Bypass - DOUBLE LINE




## Functions

**Normal position:**

- The load is supplied by the priority source (S1). In the event of priority source failure, the ATS will automatically transfer to the alternative source (S2) when it is available.

**Bypass position:**

- Operating Q1 to Bypass creates a direct connection between the priority source (S1) and the load, without causing interruption. Opening switch Q2 provides complete isolation of the ATS from the sources and the load, thereby ensuring maintenance safety.
- Operating Q3 (Double Line only) to Bypass creates a direct connection between the alternative source (S2) and the load.
- While in bypass, tests can be performed (≥160A) without interruption to the load.

# References

**Standard device - 230 VAC for ATyS p M**

| Rating (A) | No. of poles(1) | Single line Reference | Double line Reference |
|---|---|---|---|
| 40 | 4 P | 1785 **4004** | 1786 **4004** |
| 63 | 4 P | 1785 **4006** | 1786 **4006** |
| 80 | 4 P | 1785 **4008** | 1786 **4008** |
| 100 | 4 P | 1785 **4010** | 1786 **4010** |
| 125 | 4 P | 1785 **4012** | 1786 **4012** |

*(1) Standard ATyS Bypass require a distributed neutral to power the ATS and other components (230 VAC). If no neutral is available, please contact us for a solution.*

**Standard device - 230 VAC for ATyS p**

| Rating (A) | No. of poles(1) | Single line Reference | Double line Reference |
|---|---|---|---|
| 160 | 4 P | 1785 **4016** | 1786 **4016** |
| 250 | 4 P | 1785 **4025** | 1786 **4025** |
| 400 | 4 P | 1785 **4040** | 1786 **4040** |
| 630 | 4 P | 1785 **4063** | 1786 **4063** |
| 800 | 4 P | 1785 **4080** | 1786 **4080** |
| 1000 | 4 P | 1785 **4100** | 1786 **4100** |
| 1250 | 4 P | 1785 **4120** | 1786 **4120** |
| 1600 | 4 P | 1785 **4160** | 1786 **4160** |
| 2000 | 4 P | 1785 **4200** | 1786 **4200** |
| 2500 | 4 P | 1785 **4250** | 1786 **4250** |
| 3200 | 4 P | 1785 **4320** | 1786 **4320** |

*(1) Standard ATyS Bypass require a distributed neutral to power the ATS and other components (230 VAC). If no neutral is available, please contact us for a solution.*

# Accessories

## Customer fit

| Designation | Reference |
|---|---|
| 2 input/2 output plug-in programmable output module (ATyS p only) | 1599 **2001**(1) |

*(1) Maximum 3 modules can be installed.*

# Factory-fitted

## Cable entry/exit configuration

**Use**

To permit any cable entry and exit configuration (e.g. top/top), specific mounting brackets (≤ 160 A) or a factory-fitted side extension cabinet (≥ 250 A) can be provided. For ≥ 250 A solutions, power terminals can be factory-mounted within the extension cabinet to facilitate connection. Please contact us for more information.

kdrys_504

## Surge protection

**Use**

Factory-fitted surge protection for either or both incoming sources is available on request.

sgys_069

## Load measurement

**Use**

≥160A: Factory-fit installation of current transformers on the outgoing side of the ATyS Bypass provides current, power and energy load measurements. Available on request.

## Tin-plated bars

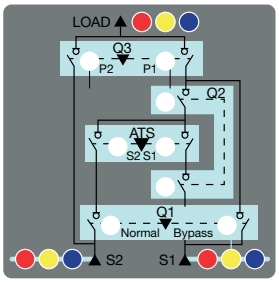
**Use**

≥250A: For harsh environments, tinned copper can be factory-fitted in place of the standard copper bars. Please contact us for details.

## Signalling

**Use**

For a full overview of the system's state, opt for a 17-LED (15 for single line bypass) mimic panel (live voltage LED per phase and switch positions). Available on request.




acces_275_b_1_x_cat



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# Factory-fitted (continued)

## Connectivity

**Use**

≤125A: DIRIS Digiware M-70 gateway with WEBVIEW-M (Webserver) can be factory-fitted.

≥160A: Ethernet plug-in module (4825 0203) can be customer-fitted in place of the standard RS485 MODBUS module (plug-in Ethernet module populates 2 of the 4 ATyS p slots).

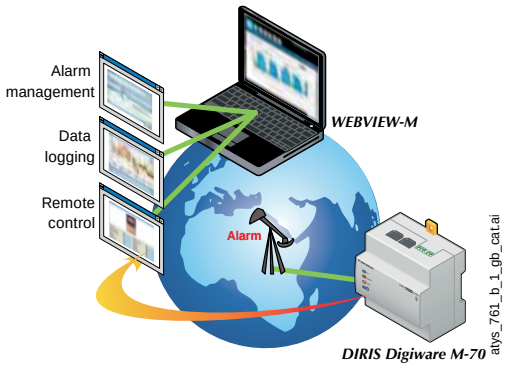
The above options provide the following:

- Remote Ethernet connectivity with real-time monitoring via a Web browser
- ATS status (position, mode, fault)
- Availability of sources (including measurements)
- Access to ATS parameters (viewing)
- ATS input and output status
- Event history

Easy Config System Software (free download)
allows the following to be performed via Ethernet connectivity:

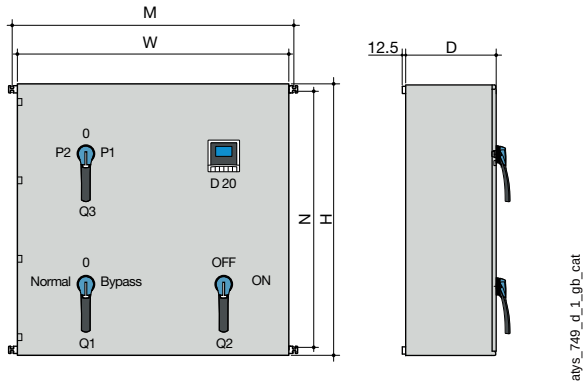
- ATS parameter configuration (1)
- Controls (remote transfers, auto inhibit, test ON/OFF load) (1)

*(1) Password required.*




# Dimensions

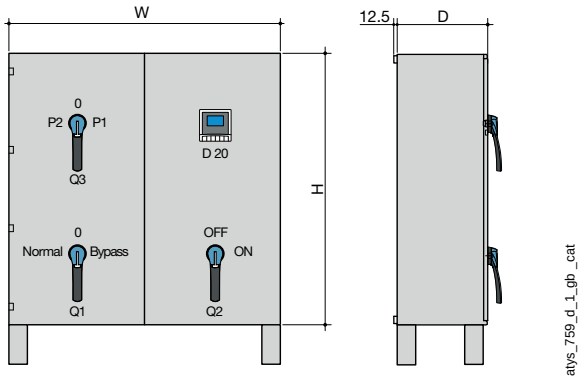
## 40 to 160 A




**Wall-mounted**

| Rating (A) | Recommended cross-section ($mm^2$) | H (mm) | W (mm) | D (mm) | M (mm) | N (mm) | Weight (kg) |
|---|---|---|---|---|---|---|---|
| 40 | 10 | 800 | 800 | 300 | 840 | 758 | 80 |
| 63 | 16 | 800 | 800 | 300 | 840 | 758 | 80 |
| 80 | 25 | 800 | 800 | 300 | 840 | 758 | 80 |
| 100 | 35 | 1000 | 800 | 300 | 840 | 958 | 80 |
| 125 | 50 | 1000 | 800 | 300 | 840 | 958 | 80 |
| 160 | 70 | 1000 | 800 | 400 | 840 | 958 | 160 |

## ≥ 250 A




**Floor-mounted**

| Rating (A) | Recommended cross-section ($mm^2$) | H (mm) | W (mm) | D (mm) | Weight (kg) |
|---|---|---|---|---|---|
| 250 | 120 | 1200 (1) | 1000 | 520 | 180 |
| 400 | 240 | 1200 (1) | 1000 | 520 | 200 |
| 630 | 2 x 185 | 1600 (2) | 1200 | 600 | 600 |
| 800 | 2 x 240 | 1800 (2) | 1600 | 800 | 1000 |
| 1000 | 4 x 150 | 1800 (2) | 1600 | 800 | 1000 |
| 1250 | 4 x 185 | 2000 (3) | 2000 | 1000 | 2000 |
| 1600 | 4 x 240 | 2000 (3) | 2000 | 1000 | 2000 |
| 2000 | 8 x 150 | 2000 (4) | 2200 | 1000 | 2500 |
| 2500 | 8 x 185 | 2000 (4) | 2200 | 1000 | 2500 |
| 3 200 | 8 x 240 | 2000 (4) | 2200 | 1000 | 2500 |

*(1) Add 200 mm for the base feet.*
*(2) Add 100 mm for the base feet.*
*(3) Add 125 mm for the base feet.*
*(4) Add 120 mm for the base feet (allow for an additional 160 mm for roof fan).*

## Connection (input/output)

- Standard cable entry and exit is at the bottom. Other configurations may, according to cable size, require specific mounting brackets (≤160A) or a factory-fitted side extension cabinet (≥250A). Please contact us for more information.



# Solutions for medical locations

## Solution for the continuity and availability of the power supply in Group 2 medical facilities

Standard IEC 60364-7-710 categorises medical facilities into the three following groups, according to the risk of electric shock:

### Group 0


Medical facilities which do not have any 'applied parts' intended for use.

### Group 1


Medical facilities in which 'applied parts' are intended for use, as follows:

- externally, or
- invasively across every part of the body, except where Group 2 applies.

### Group 2


Medical facilities in which 'applied parts' are intended for use in applications such as medical procedures, surgical procedures and life-saving treatments.

### What is an 'applied part'?

Standard IEC 60364-7-710 defines an “applied part” as being part of the medical electrical equipment which in normal use

- necessarily comes into physical contact with the patient for the equipment to perform its function, or
- can be brought into contact with the patient, or
- needs to be touched by the patient.

Standard IEC 60364-7-710 also defines the precise continuity of service requirements for the power supply, depending on the type of care being given.

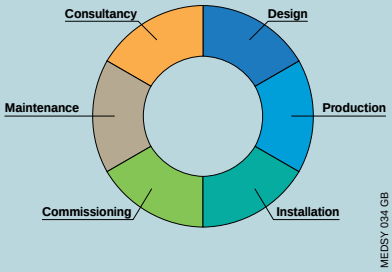
- Class 0:  power supply without switching,
- Class 0.5: power available in max. 0.5 s
- Class 15: power available in max. 15 s
- Class >15: power supply available in 15 s or longer

## The MEDSYS range

**The MEDSYS range meets Class 0, 0.5 or ≤ 15 levels for Groups 0, 1 and 2, as defined in standard IEC 60364-7-710. It is the only IEC 61439-certified and accredited manufacturer solution. MEDSYS also meets European standard HD60364-7-710 and local requirements such as NFC15-211 for France and other countries (please contact us for more information).**

### From design to maintenance

In addition to its standard products, Socomec has a department dedicated to designing customised systems and meeting the requirements of your project. We support you through the various stages of your project.




**Continuity of service**

- Service continuity even in single fault conditions.
- Insulation fault detected in less than 6 seconds even with high-interference equipment present.
- Power availability guaranteed by automatic, static and/or continuous power transfer systems.

**Guaranteed safety**

- Personal protection against indirect contact (IT system, insulation) and direct contact (IP2X, segregation).
- All device signalling contacts are built-in,
- to back up data to a BMS/CTM.

**Improved implementation**

- The cabinets are fitted with a pivoting body, for rapid access to all functional units.
- Visual identification of the various compartments.

**Technological performance**

- Predictive maintenance across your entire IT system (OhmScanner technology integrated into ISOM Digiware).

**IoT Ready**

- Embedded web technology.
- Remote control/consultation.
- Alarm control and data analytics.

**Complete range**

- Four versions and eight configurations.
- Solution adapts to the usage conditions and structural properties of Group 2 locations.
- Insulation fault detection and overvoltage protection available for all configurations.

**Easy maintenance**

- All connections are grouped in a separate compartment.
- Some critical components can be removed (transformer, UPS, static transfer system).

### Range of services

To ensure your MEDSYS bay works at its best, Socomec offers expert services including commissioning, troubleshooting and training. Contact your sales branch for more information.

## Selection guide

| | Basic configuration | | Advanced configuration |
|---|---|---|---|
| | Includes all the equipment required to protect against indirect contact, with **a single normal** or **safety incomer** | | Includes all the equipment required to protect against indirect contact for **2 normal and safety incomers** or **2 safety incomers** |
| |  | |  |
| | *MEDSYS 20* | | *MEDSYS 30 CD* |
| | **A** | **B** | **A** |
| **Inputs** | | | |
| 1 inverter/normal input | • | • | |
| 1 inverter input and 1 spare input | | | • |
| 2 inverter inputs | | | • |
| 1 normal input | | | |
| 2 normal/standby inputs | | | |
| **Insulation transformer** | | | |
| Power (kVA) | 4 | 6.3 | 10 |
| Switched | • | • | |
| Integrated | | | • |
| **Headgear** | | | |
| Load-break switch | • | • | |
| STATYS Static Transfer System | | | |
| ATyS M transfer switch | | | • |
| **Integrated UPS** | | | |
| MODULYS or NETYS RT Uninterrupted Power Supply (UPS) | | | |
| **Distribution** | | | |
| TN-S | | • | • |
| IT-M (ISOM K-40h) | • | • | • |
| **Alarm report** | | | |
| ISOM D-15h Alarm notification | • | • | • |
| **Options** | | | |
| Surge protection device (SURGYS D40) | • | • | • |
| ISOM Digiware insulation fault detection | Contact us | Contact us | • |
| **Dimensions** | | | |
| H x W x D (mm) | 630 x 403 x 129 | | 1800 x 400 x 400 |

| | Full configuration | | | | |
|---|---|---|---|---|---|
| | Includes all the equipment required to protect against indirect contact, with **2 safety incomers** | | Includes all the equipment required to protect against indirect contacts, with **1 single normal incomer** or **2 normal/standby incomer** | | |
| |  | |  | | |
| | *MEDSYS 40 CD* | | *MEDSYS 60* | | |
| | **A** | **B** | **A** | **B** | **C** |
| | | | | | |
| | | | | | |
| | • | • | | | |
| | | | • | | |
| | | | | • | • |
| | 10 | 2 x 5 | 10 | 10 | 2 x 10 |
| | | | | | |
| | • | • | • | • | • |
| | | | • | | |
| | • | • | | | |
| | | | | • | • |
| | | | • | • | • |
| | • | • | • | • | • |
| | • | • | • | • | • |
| | • | • | • | • | • |
| | • | • | • | • | • |
| | • | • | • | • | • |
| | 2000 x 600 x 450 | | 2200 x 800 x 800 | | |

# Solutions for medical locations

## Configuration that adapts as your needs change

Standard IEC 60364-7-710 requires a medical IT system for Group 2 locations and at least one transformer for each operating room or each medical site.

### Transformer for the medical IT system

Socomec dry TRM transformers are LV/LV transformers that separate the general distribution network from the medical facility's power supply provided in an IT system. As such, they can isolate and compartmentalise the electrical disturbances across the entire installation.


AND

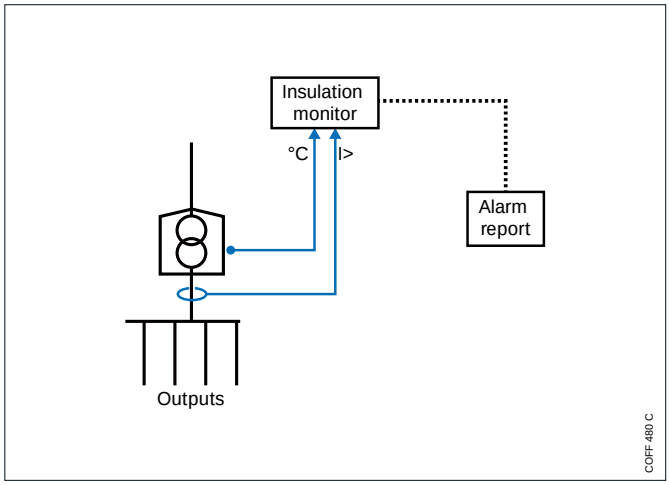
### Insulation Monitoring Device and alarm report

The ISOM K-40h insulation monitoring device is a combined unit for monitoring:

- The level of insulation of a medical IT system
- The charging current of single-phase transformers for medical IT systems (up to 50 A)
- The temperature of the medical IT transformer

The D-15h alarm report summarises the alarms from insulation monitoring, overheating and overloads of the medical IT transformer measured by the ISOM K-40h IMD.






Standard IEC 60364-7-710 stipulates that Group 2 medical facilities be powered by 2 separate sources.

### Automatic Transfer Switch (ATS)

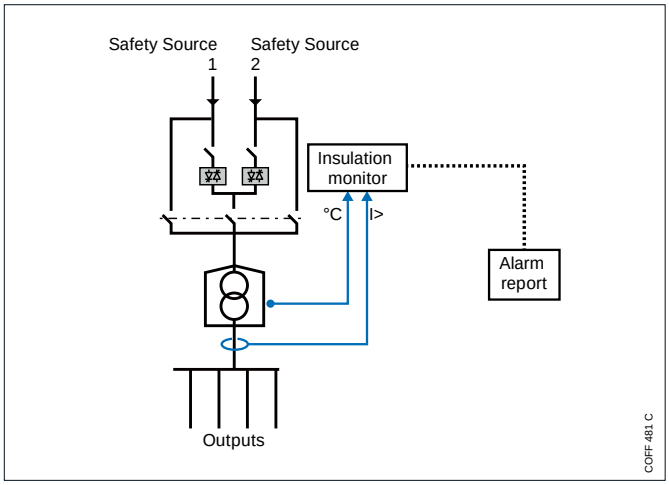
ATyS M devices are switching systems that provide automatic transfer between 2 power sources. They have been developed, tested and approved according to criteria defined by the international product standards IEC 60947-3 and IEC 60947-6-1.


OR

### Static Transfer System (STS)

STATYS static transfer systems ensure power supply redundancy between two independent sources while ensuring power continuity to critical applications by choosing the most reliable source. Loads are transferred without interruption in accordance with IEC 62310.

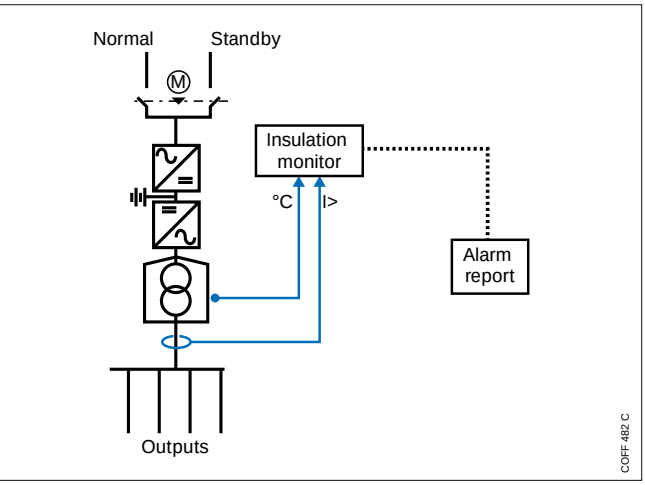




Standard IEC 60364-7 stipulates that Group 2 locations must be powered continuously.

## Uninterrupted Power Supply (UPS)

The uninterruptible power supply (UPS) NETYS RT ensures continuity of power supply. Double conversion technology ensures the ultimate protection for loads.
The rack design means power and/or redundancy can be upgraded as your requirements evolve.

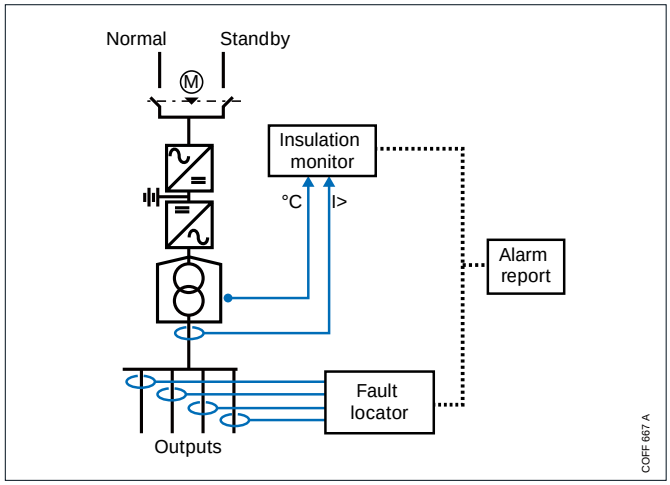

The document HD 60364-7-710 stipulates the use of a fault location device.

## Insulation and multi-measurement monitoring

ISOM Digiware is a 2-in-1 system that combines insulation and multi-measurement monitoring for IT systems. This interconnected system instantly detects and pinpoints any insulation fault. It guarantees continuity of service even for single fault conditions, while protecting people and property.


### OhmScanner solution

The OhmScanner detects an insulation fault before it happens. Mapping the insulation of each circuit in detail helps the user to perform predictive maintenance work (available with the ISOM Digiware system).



# References list





socomec
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Model: SOCOMEC
Production: SOCOMEC
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