

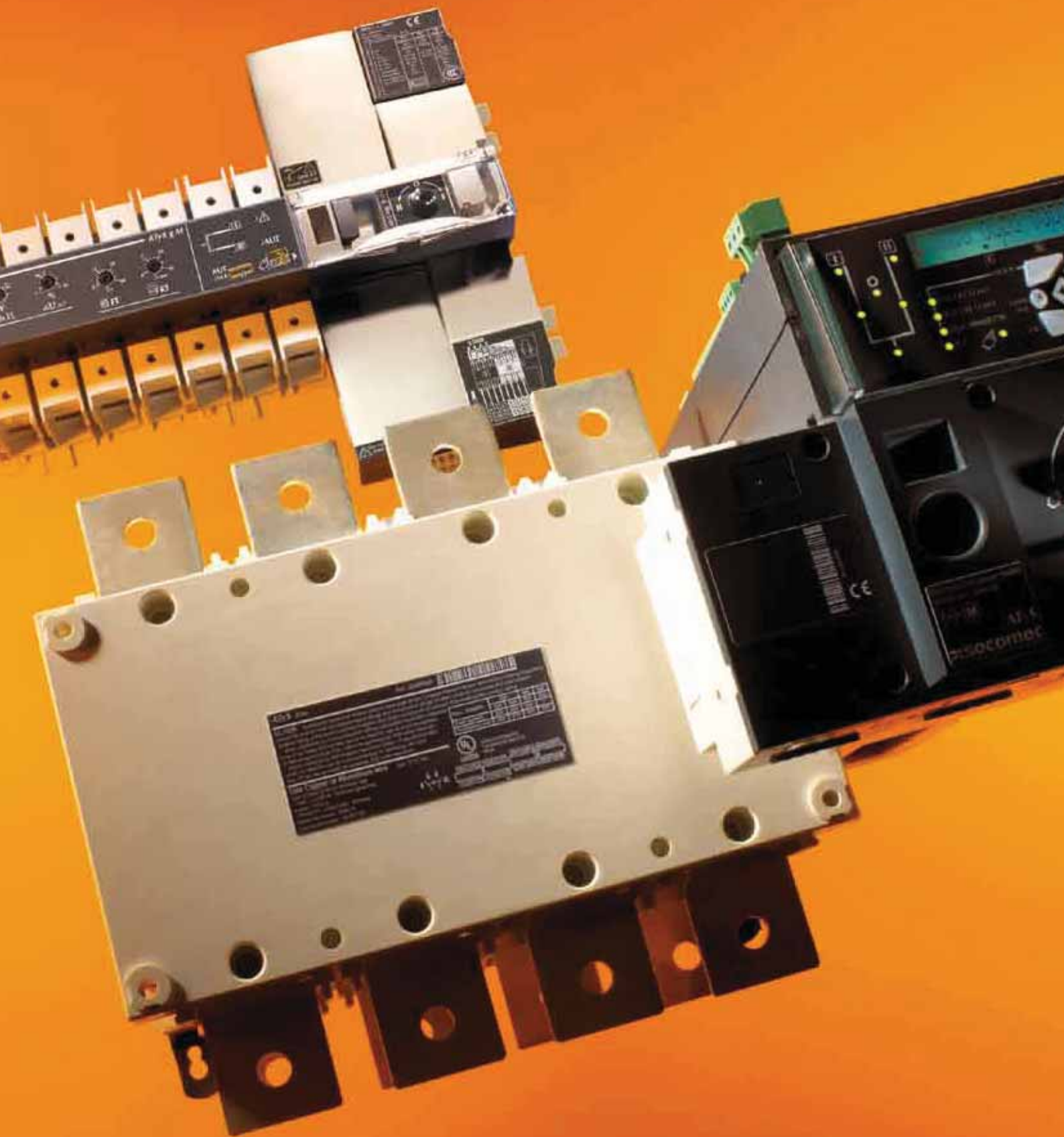
Transfer switching solutions from 40 to 6300 A

2018



your energy
our expertise

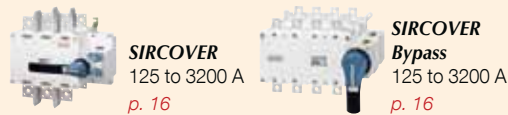




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Manual transfer switches



Motorised modular transfer switches

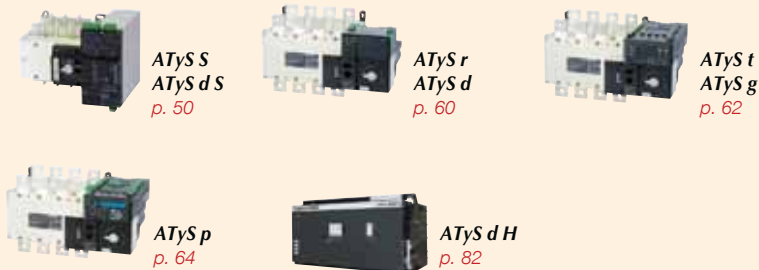
ATyS M range p. 32
40 to 160 A



Motorised transfer switches

ATyS S range p. 48
40 to 6300 A

ATyS range p. 58



Universal ATS controller

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



UL product range

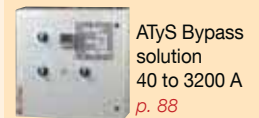
UL range p. 92



Enclosed solution

> SOCOMEC offers a range of pre-equipped enclosures in steel. More information is available in the accessory pages of the different products.

> A complete solution is also available to ensure power supply continuity.



Any particular requirement?

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

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

An independent manufacturer

The benefit of a specialist

3,500 m²
of test platforms

One of the leading independent power testing labs in Europe

65,000
on-site interventions per year

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

10%
of turnover invested in R&D

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



SO innovative!

Since its foundation more than 90 years ago, SOCOMEC continues 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.

SYDV 161 B



Your energy, our expertise



Critical Power

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.



© Datarock



Power Control & Safety

Managing power and protecting persons and facilities

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 fuse-based and other specialist solutions.



APPLI 575A



Energy Efficiency

Managing the energy performance of buildings

Socomec solutions, from current sensors through to a wide choice of innovative scalable software packages are driven by experts in energy performance. They meet the critical requirements of facility managers and operators of commercial, industrial and local authority buildings for:

- measuring energy consumption, identifying sources of excess consumption and raising the awareness of occupants about their impact,
- limiting reactive energy and avoiding the associated tariff penalties,
- using the best available tariffs, checking utility bills and accurately distributing energy billing among consumer entities,
- monitoring and detecting insulation faults.



APPLI 571A



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,
- measurement and analysis of a wide range of electrical parameters leading to

recommendations for improving the site's power quality,

- optimisation of the total cost of ownership and support for a safe transition when migrating from an old to a new generation of equipment,
- consultancy, deployment and training from the project engineering stage through to final procurement,
- performance assessment of the electrical installation throughout the life cycle of the products via analysis of data transmitted by connected devices.



APPLI 760A

Adapted solutions

to meet your energy objectives

SMART BUILDINGS

Reducing your energy bills and energy dependency



DIRIS Digiware multi-circuit measurement system



ENERGY MANAGEMENT software packages



ATyS automatic and remotely operated transfer switches



SUNSYS PCS? Power Conversion System and Storage

HEAVY

Controlling and securing your energy



DELPHYS MX UPS



COUNTIS E energy meter and DIRIS A multifunction meter (PMD)

NAVAL SHIPS

Energy conversion in environments with harsh restrictions



SHARYS IP rectifier



NETYS RT-M UPS



UPS and other customised products



SIRCO load break switches

SHOPPING CENTRES

Assuring your business continuity and visitor safety



COUNTIS E energy meter and multi-utility pulse concentrator



ATyS M automatic and remotely operated modular transfer switches



EMERGENCY CPSS, secure power supply for emergency systems



ENERGY MANAGEMENT software packages

PUBLIC DISTRIBUTION AND SMART GRID

Helping you to meet the challenge of energy demand and response



SUNSYS PCS? Power Conversion System and Storage



TIPI low-voltage feeder pillar with DIRIS multi-function meter



Auxiliary unit with ATyS transfer switch



SIRCO and SIDER load break switches



DIRIS Digiware multi-circuit measurement system

RENEWABLE ENERGY

Guaranteeing the performance, security and durability of your photovoltaic facilities



SUNSYS PCS? Power Conversion System and Storage



INOSYS load break switches with tripping function



PV string enclosure combiner box

INDUSTRY

FUSERBLOC fuse combination switches

Safety enclosure with switch disconnector for standard and explosive environments

POWER PLANTS

Securing the piloting of your high-security installations and installations with seismic constraints

SHARYS IP rectifier

UPS and other customised products

DIRIS Digiware multi-circuit measurement system

TRANSPORT

Securing the continuity of your installations

ATyS Bypass 'zero outage' solution

MASTERYS IP+ Rail UPS

DIRIS A multifunction meter (PMD)

DATA CENTRES

Meeting the challenge of the availability and performance of your energy

MODULYS RM GP Rack-mount modular hot scalable UPS system UPS

DELPHYS Xtend GP Rack-mount modular hot scalable UPS system UPS

ATyS automatic and remotely operated transfer switches

DIRIS Digiware multi-circuit measurement system

MEDICAL FACILITIES

Assuring patient safety and the energy performance of your hospital

Green Power 2.0 UPS

ATyS automatic and remotely operated transfer switches

DIRIS Digiware multi-circuit measurement system

INDUSTRY

Ensuring the competitiveness of your site

MASTERYS IP+ UPS for harsh industrial environments

ENERGY MANAGEMENT software packages

Components for distribution enclosure with **FUSERBLOC** fuse-combination switches

DIRIS Digiware multi-circuit measurement system

SIRCO load break switches

EXPERT SERVICES

PREPARATION AND SERVICE OPERATIONS

MEASUREMENT AND ANALYSIS

OPTIMISATION

CONSULTANCY, DEPLOYMENT AND TRAINING

UNDERSTANDING
EXPERTISE
PROXIMITY
ADAPTATION

We offer a wide range of value-added services ensuring the reliability of your equipment throughout its design life. Ask for personalised support -

Expert Services your partner

enabling available, safe and efficient energy

SOCOMEK is committed to deliver a wide range of value-added services to ensure the availability of your critical installation, the safety of your site operations and the performance optimisation of your low voltage equipment during its life cycle. The expertise and proximity of our specialists are there to ensure the reliability and durability of your equipment.



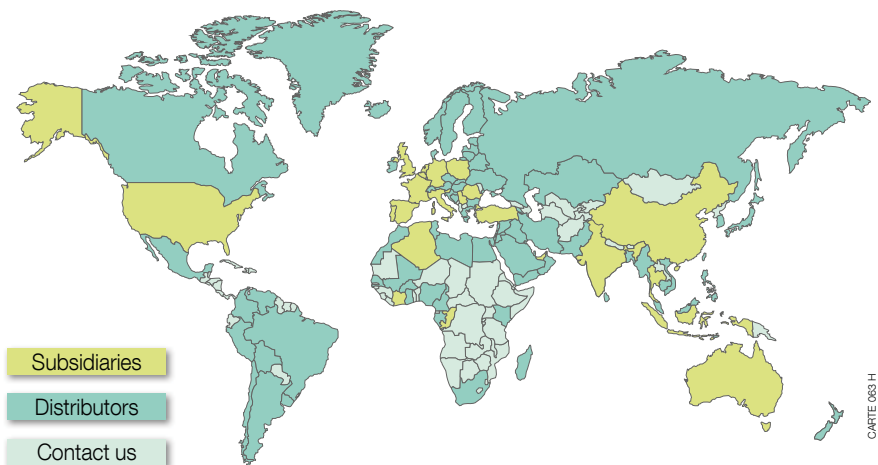
APPLI 724-A

Key figures

Nearly 400 Socomec experts supported by 200 engineers and technicians from our distributors, drive the solutions to your specific needs.

Our global presence includes:

- 10 branches in France,
- 12 European subsidiaries,
- 8 Asian subsidiaries,
- representatives in 70+ countries.



CARTE 068 H

On-site service management

- 65,000 service operations per year (mainly preventive visits).
- 98% Service Level Agreement compliance rate.



APPLI 571 A

Technical hotline network

- 20+ languages spoken.
- 3 advanced technical support centres.
- 100,000+ incoming calls handled per year.



SITE 598 A

Certified expertise

- 5,000 hours of technical training deployed per year (product, methodology and safety).



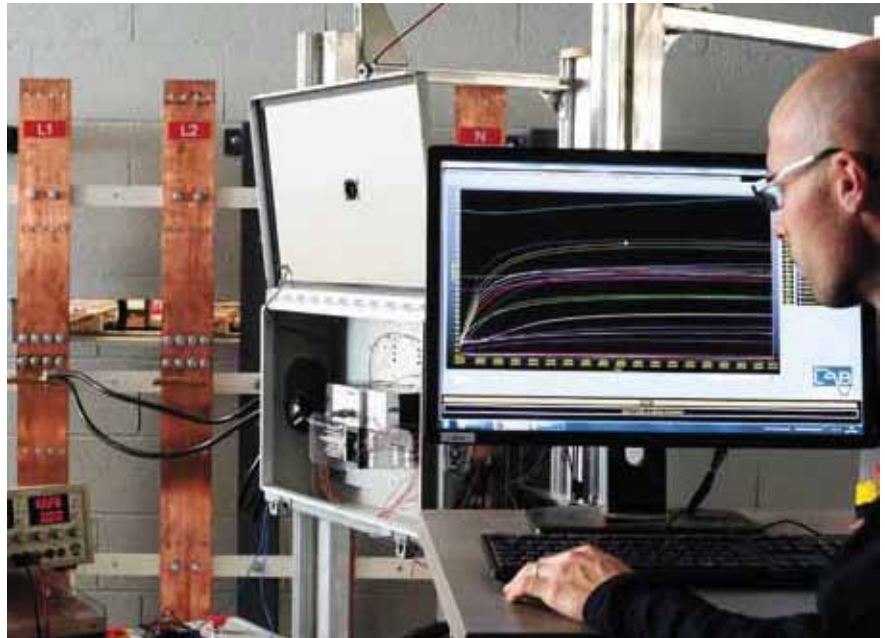
CCPPO 269 A

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 independent 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



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...).

A high-quality power supply

innovative solutions

Critical equipment requires an uninterrupted and continuously available power supply, using energy of the highest quality. Our uninterruptible power supplies (UPS), static transfer systems (STS), energy storage systems and rectifiers comprise the most complete ranges in the world and cover a very wide variety of applications for every sector of activity.



100% availability

High quality energy supply at any moment is strategic in many fields such as telecommunications, data processing or certain industrial processes. It is vital to a number of medical applications. In all these sectors, SOCOMEC has over 45 years of experience at your disposal.

Customised solutions

Underpinned by significant R&D resources, our products are constantly evolving to adapt to the needs of our customers.

Our products have the approval of some of the most stringently demanding users: telecom companies, nuclear industry, naval industry, and many more.

Recognised expertise

SOCOMECS UPS solutions (inverters) have received the most prestigious awards in the industry; testimony to the way we listen to the needs of our users:

- Award for excellence in customer service (2004),
- Award for product innovation (2006),
- Award for Europe's best product range strategy (UPS) (2009),
- Award for product innovation (2011),
- Award for excellence in product differentiation (2013)
- Award for European company of the year in the UPS sector (2014)
- Award for European technological leadership (UPS) (2015)

Continuous innovation

Embedded in the DNA of SOCOMEC, innovation is a challenge that itself undergoes constant reinvention:

- First French manufacturer to offer static power supplies (1968)
- First UPS to use PWM technology (1980)
- First high-performance range of UPS with IGBT technology (1996)
- First modular UPS, with scalable and redundant architecture (2001)
- First manufacturer to integrate hybrid components (2001)
- First 200-kVA UPS with IGBT rectifier (2003)
- New battery charging design (2004)
- Dynamic energy storage system: the flywheel (2006)
- First UPS with 96% efficiency in online double conversion mode (2008)
- Most compact STS with 19" hot-swappable rack design (2009)
- Most compact 900-kVA UPS (2010)
- First complete UPS range (10-2400 KW/ kVA) with triple-tier technology, 96% efficiency and an output power factor of 1 (2012)
- "Forever Young" design for modular UPS (2014)

Always attentive to customer needs

With our extensive sales and after-sales network, we are always there for you. Our clients are happy with the quality of our products and their availability and our commitment to their needs.

Keeping on track with Socomec

SUNSYS PCS² power converter storage solution



This bidirectional power converter is the key element of the energy storage system. It ensures that the batteries are charged and discharged according to the required functions.



Webspace at your service

all our solutions can be adapted to your needs

www.socomec.com

Expertise, customised solutions, products and services, downloads... All yours in a couple of clicks!

- 1 Tap into our expertise
- 2 Discover our customised solutions
- 3 Access all our products and services
- 4 Download photos, documentation, software and CAD files



CORFO 385 A

www.diris-digiware.com

Check out the dedicated site about DIRIS Digiware, our measuring and monitoring system. It gives you all the information you need, including videos, images and documentation on the most revolutionary solution on today's market.



CORFO 466 A

Follow us on social media!





Security and reliability for your transfer applications

Transfer switches

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

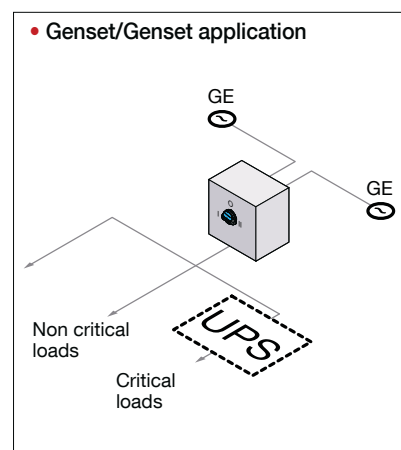
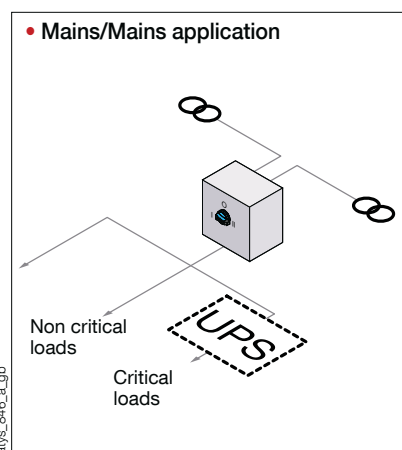
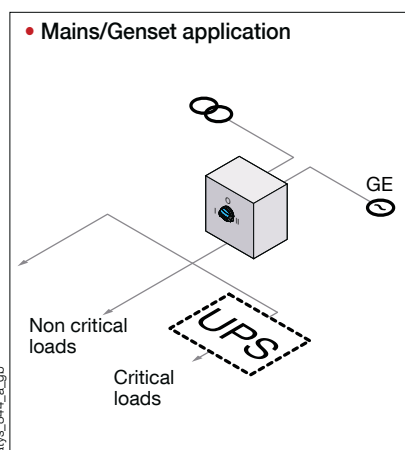
From the COMO C manual transfer switch (25 - 100 A) to the ATyS p automatic transfer switch (up to 3200 A) and the ATyS d H remotely operated transfer switch (up to 6300 A), our range of changeover switches cover most applications as standard.

Products for all switching applications from 25 to 6300 A

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

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

Secure switching for all your transfers



Expert Services

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



Secure switching compliant with standard IEC 60947-6-1

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

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

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

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

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

(1) Application A: Frequent switching.

(2) Application B: Infrequent switching.

UL applications

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

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









Selection guide

Remotely operated and Automatic Transfer Switching Equipment ATyS

Transfer switches

Which type of power supply?

Which application?

| RTSE (Remotely operated) | | | | | |
|---|---|--|---|---|---|
| 40 to 125 A | | 40 to 160 A | 125 to 3200 A | | 4000 to 6300 A |
|  |  |  |  |  |  |
| <i>ATyS S</i> p. 50 | <i>ATyS d S</i> p. 50 | <i>ATyS d M</i> p. 34 | <i>ATyS r</i> p. 60 | <i>ATyS d</i> p. 60 | <i>ATyS d H</i> p. 82 |

Type of power supply

| | | | | | | |
|-------------------------------|---|---|---|---|---|---|
| Power supply 12, 24 or 48 VDC | • | | | | | |
| Single power supply 230 VAC | • | | | • | | |
| Dual power supply 230 VAC | | • | • | | • | • |

Connection of remote control interface

| | | | | | | |
|-----|--|--|--|--|---|--|
| D10 | | | | | • | |
| D20 | | | | | | |

Application

| | | | | | | |
|---------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Mains/Mains | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ |
| Mains/Genset | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ |
| Genset/Genset | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ | • ⁽¹⁾ |

Configuration

| | | | | | | |
|---|--|--|--|--|--|--|
| Configuration using potentiometers and dip switches | | | | | | |
| Configuration using display and keyboard | | | | | | |
| Voltage and frequency auto-configuration | | | | | | |

Functions

| | | | | | | |
|---|---|---|---|---|---|---|
| Contact for product availability | | | | • | • | |
| Fixed function inputs/outputs (defined by the factory) | • | • | • | • | • | • |
| Configurable inputs/outputs | | | | | | |
| Voltage and frequency checks | | | | | | |
| Phase rotation check | | | | | | |
| Unbalanced phase check | | | | | | |
| LED indication of source availability | | | | | • | |
| LED position indication | | | | | | |
| Programming of genset startup | | | | | | |
| Genset connected on switch II | • | • | • | • | • | • |
| Genset connected on switch I | • | • | • | • | • | • |
| Test On Load | | | | | | |
| Test Off Load | | | | | | |
| Load shedding | | | | | | |
| Display and measurement of powers and energy (when utilising CTs) | | | | | | |

Supervision

| | | | | | | |
|-------------------------------|--|--|--|--|--|--|
| Programming of genset startup | | | | | | |
| RS485 communication | | | | | | |
| Ethernet communication | | | | | | |
| Webserver via Ethernet module | | | | | | |
| Data logging | | | | | | |

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



SIRCOVER

Manually operated Transfer Switching Equipment
from 125 to 3200 A

Transfer switches



SIRCOVER
250 A



SIRCOVER Bypass
500 A

The solution for

- > Manufacturing
- > Power distribution



Strong points

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

Conformity to standards

- > IEC 60947-6,-1
- > IEC 60947-3
- > GB 14048-11



Approvals and certifications⁽¹⁾



BUREAU
VERITAS

(1) Product references on request.

Function

SIRCOVER products are manually operated transfer switches with positive break indication.

There are 3 ranges in the series:

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

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

Advantages

A complete range

There are 3 SIRCOVER models to meet every need: The standard model I-0-II, the overlapping contact model I-I+II-II and the Bypass model.

Easy to connect

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

Stable positions

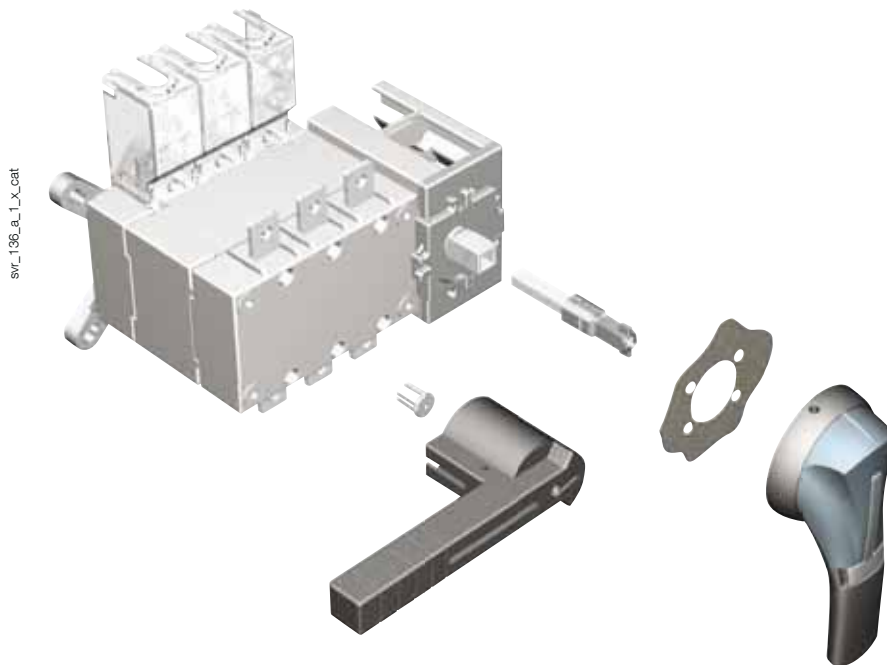
SIRCOVER devices have three stable positions, unaffected by voltage fluctuations and vibrations, protecting your loads from network disturbances.

On-load switching

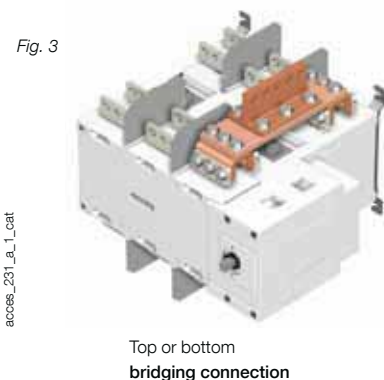
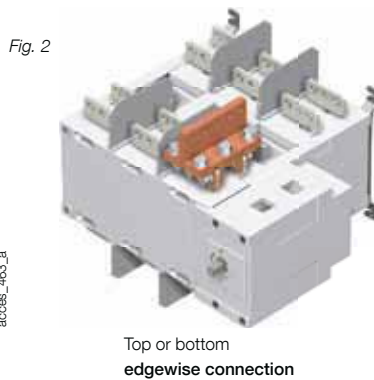
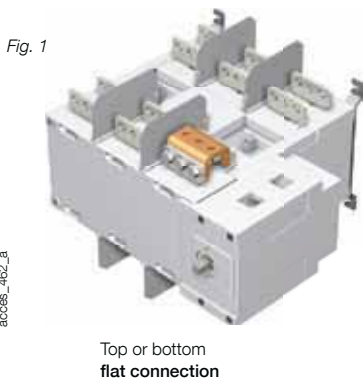
With its AC-23 and AC-33 characteristics, tested according to standards IEC 60947-3 and IEC 60947-6-1, the SIRCOVER enables safe on-load switching for any type of load. With its on-load transfer capabilities, it is not necessary to isolate loads prior to transfer therefore the SIRCOVER offers an economical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

What you need to know

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



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



SIRCOVER

Manually operated Transfer Switching Equipment
from 125 to 3200 A

References

SIRCOVER I-0-II

| Rating (A) / Frame size | No. of poles | Switch body | Direct handle | External handle | Shaft for external handle | Bridging bars | Auxiliary contact | Terminal shrouds | Terminal screens |
|-------------------------|--------------|-------------|--|--|---|--------------------------------------|--|--|--------------------------------------|
| 125 A / B3 | 3 P | 41AC 3013 | J2 type Blue 1122 1111 Red 1123 1111 | S2 type Black IP55 1421 2113 Black IP65 1423 2113 ⁽¹⁾ | 200 mm 1400 1020 320 mm 1400 1032 ⁽¹⁾ | 3 P 4109 3019 4 P 4109 4019 | 1 st /2 nd NO/NC contact 4109 0021 ⁽²⁾ | 3 P 2694 3014 ⁽³⁾⁽⁴⁾ 4 P 2694 4014 ⁽³⁾⁽⁴⁾ | 3 P 1509 3012 4 P 1509 4012 |
| | 4 P | 41AC 4013 | | | | | | | |
| 160 A / B3 | 3 P | 41AC 3016 | | | | | | | |
| | 4 P | 41AC 4016 | | | | | | | |
| 200 A / B3 | 3 P | 41AC 3020 | | | | | | | |
| | 4 P | 41AC 4020 | | | | | | | |
| 250 A / B4 | 3 P | 41AC 3025 | | | | | | | |
| | 4 P | 41AC 4025 | | | | | | | |
| 315 A / B4 | 3 P | 41AC 3031 | | | | | | | |
| | 4 P | 41AC 4031 | | | | | | | |
| 400 A / B4 | 3 P | 41AC 3040 | | | | | | | |
| | 4 P | 41AC 4040 | | | | | | | |
| 500 A / B5 | 3 P | 41AC 3050 | | | | | | | |
| | 4 P | 41AC 4050 | | | | | | | |
| 630 A / B5 | 3 P | 41AC 3063 | | | | | | | |
| | 4 P | 41AC 4063 | | | | | | | |
| 800 A / B6 | 3 P | 41AC 3080 | | | | | | | |
| | 4 P | 41AC 4080 | | | | | | | |
| 1000 A / B6 | 3 P | 41AC 3100 | | | | | | | |
| | 4 P | 41AC 4100 | | | | | | | |
| 1250 A / B6 | 3 P | 41AC 3120 | | | | | | | |
| | 4 P | 41AC 4120 | | | | | | | |
| 1600 A / B7 | 3 P | 41AC 3160 | | | | | | | |
| | 4 P | 41AC 4160 | | | | | | | |
| 2000 A / B8 | 3 P | 41AC 3200 | | | | | | | |
| | 4 P | 41AC 4200 | | | | | | | |
| 2500 A / B8 | 3 P | 41AC 3250 | | | | | | | |
| | 4 P | 41AC 4250 | | | | | | | |
| 3200 A / B8 | 3 P | 41AC 3320 | | | | | | | |
| | 4 P | 41AC 4320 | | | | | | | |
| 1000 A / B6 | 3 P | 41AC 3100 | C1 type Black 2799 7052 | S4 type Black IP65 1443 3113 | 200 mm 1401 1520 320 mm 1401 1532 ⁽¹⁾ | 3 P 4109 3080 3 P 4109 4080 | 1 st and 2 nd NO/NC contact included | 3 P 2694 3051 ⁽³⁾⁽⁴⁾ 4 P 2694 4051 ⁽³⁾⁽⁴⁾ | 3 P 1509 3080 4 P 1509 4080 |
| | 4 P | 41AC 4100 | | | | | | | |
| 1250 A / B6 | 3 P | 41AC 3120 | | | | | | | |
| | 4 P | 41AC 4120 | | | | | | | |
| 1600 A / B7 | 3 P | 41AC 3160 | | | | | | | |
| | 4 P | 41AC 4160 | | | | | | | |
| 2000 A / B8 | 3 P | 41AC 3200 | | | | | | | |
| | 4 P | 41AC 4200 | | | | | | | |
| 2500 A / B8 | 3 P | 41AC 3250 | | | | | | | |
| | 4 P | 41AC 4250 | | | | | | | |
| 3200 A / B8 | 3 P | 41AC 3320 | | | | | | | |
| | 4 P | 41AC 4320 | | | | | | | |

(1) Standard.

(2) 2 contacts supplied: one for position I and one for position II.

(3) To fully shroud the front and rear at the top and bottom, order quantity 4.

(4) To shroud front switch top and bottom, order quantity 2.

(5) See "Copper bar connection pieces" page 21.

Also available

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.

References: 46AC XYYY

| X = number of poles | Y = rating (A) | |
|---------------------|----------------|------------|
| 3 : 3 poles | 013 : 125 | 050 : 500 |
| 4 : 4 poles | 016 : 160 | 063 : 630 |
| | 020 : 200 | 080 : 800 |
| | 025 : 250 | 100 : 1000 |
| | 031 : 315 | 120 : 1250 |
| | 040 : 400 | 160 : 1600 |

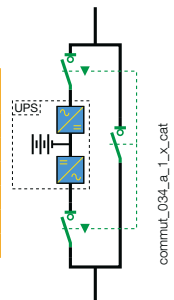
SIRCOVER Bypass

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.

References: 4ZAC XYYY

| Z = switching type | X = number of poles | Y = rating (A) | |
|--------------------|---------------------|----------------|------------|
| 1 : I-0-II | 7 : 3+6 poles | 013 : 125 | 050 : 500 |
| 6 : I-I+II-II | 9 : 4+8 poles | 016 : 160 | 063 : 630 |
| | | 020 : 200 | 080 : 800 |
| | | 025 : 250 | 100 : 1000 |
| | | 031 : 315 | 120 : 1250 |
| | | 040 : 400 | 160 : 1600 |



Accessories

Direct operation handle

| SIRCOVER I-0-II and I-I+II-II | | | | |
|-------------------------------|------------|---------------|-------------|--------------------------|
| Rating (A) | Frame size | Handle colour | Handle type | Reference |
| 125 ... 630 | B3 ... B5 | Blue | J2 | 1122 1111 |
| 125 ... 630 | B3 ... B5 | Red | J2 | 1123 1111 |
| 800 ... 1600 | B6 ... B7 | Black | C1 | 2799 7052 |
| 2000 ... 3200 | B8 | Black | S5 | 2799 7042 ⁽¹⁾ |

| SIRCOVER Bypass | | | | |
|-----------------|------------|---------------|-------------|--------------------------|
| Rating (A) | Frame size | Handle colour | Handle type | Reference |
| 125 ... 200 | B3 | Blue | J2 | 1122 1111 |
| 250 ... 630 | B4 ... B5 | Black | C1 | 2799 7052 |
| 800 ... 1600 | B6 ... B7 | Black | C2 | 2799 7012 ⁽¹⁾ |

(1) Double lever handle.



External operation handle

Use

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

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

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

(2) Double lever handle.

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

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



Alternative S type handle cover colours

Use

For single lever handles S2, S3 and for double lever handle S4. Other colours available: consult us.

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



S type handle adapter

Use

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

Dimensions

Add 12 mm to the handle depth.

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

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



SIRCOVER

Manually operated Transfer Switching Equipment
from 125 to 3200 A

Accessories (continued)

Shaft guide for external operation

Use

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

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

Recommended for a shaft length over 320 mm.



access_260_a_2_cat

| Designation | Reference |
|-------------|-----------|
| Shaft guide | 1429 0000 |

Shaft for external operation

Use

Standard lengths:

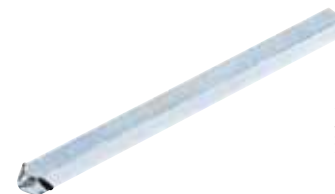
- 200 mm,
- 320 mm,
- 450 mm.

Other lengths available: consult us.



access_369_a_1_cat

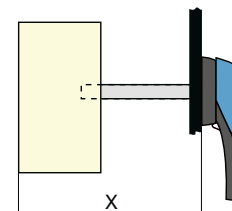
| SIRCOVER I-0-II and I-I+II-II Rating (A) | Frame size | Length (mm) | Side X (mm) | Reference |
|--|------------|-------------|--------------|-----------|
| 125 ... 400 | B3 ... B4 | 200 | 210 ... 310 | 1400 1020 |
| 125 ... 400 | B3 ... B4 | 320 | 210 ... 430 | 1400 1032 |
| 500 ... 630 | B5 | 200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



access_144_b_1_cat

SIRCOVER Bypass

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



access_202_a_1_X_cat

Bridging bars

Use

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

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

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

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



access_205_a_2_cat

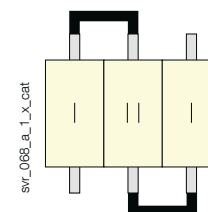
SIRCOVER Bypass



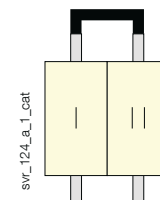
access_208_a_2_cat



access_041_a_1_cat



svr_068_a_1_x_cat



svr_124_a_1_cat

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.

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 |
| Connection - part A | 2619 1200 | 1 | 1 | | 2 ⁽²⁾ | included | |
| Bolt kit 35 mm - part B | 2699 1201 | 1 ⁽¹⁾ | | 2 ⁽²⁾ | 1 ⁽¹⁾ | | 2 ⁽²⁾ |
| Bolt kit 45 mm - part B | 2699 1200 | 1 ⁽¹⁾ | | | 1 ⁽¹⁾ | | |
| T + Bolt kit - part C | 2629 1200 | | 1 | 1 | | 1 | 1 |
| Bracket + Bolt kit - part D | 2639 1200 | | 1 | | | 1 | |
| Bar + Bolt kit - part E | 4109 0320 | | | 1 | | | 1 |

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

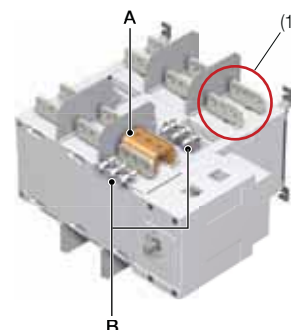
(2) For bridging connections, quantity 2 pieces are required for creating the link between the two power terminals of the same pole for switch bodies I and II.

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 |

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.

Fig. 2

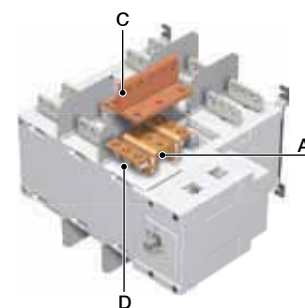
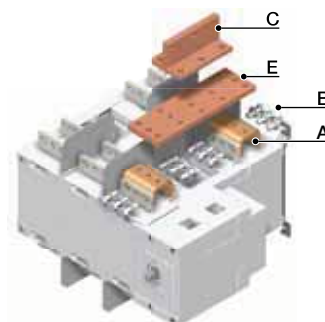


Fig. 3



Auxiliary contact

Use

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

Low level AC: consult us.

Connection to the control circuit

By 6.35 mm fast-on terminal.

Electrical characteristics

30,000 operations.

Characteristics

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

NO/NC changeover contact

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



SIRCOVER

Manually operated Transfer Switching Equipment
from 125 to 3200 A

Accessories (continued)

Terminal shrouds

Use

Protection against direct contact with terminals or connecting parts.

Advantage

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

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



access_206_a_2_cat

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

(2) For top and bottom shrouding for the front only, order 2 x for a SIRCOVER and a SIRCOVER Bypass.

Terminal screens

Use

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

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



access_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 | 2 P | 2998 0033 |
| 125 ... 200 | B3 | 3 P | 2998 0034 |
| 250 ... 400 | B4 | 2 P | 2998 0023 |
| 250 ... 400 | B4 | 3 P | 2998 0024 |
| 500 ... 630 | B5 | 2 P | 2998 0013 |
| 500 ... 630 | B5 | 3 P | 2998 0014 |
| 800 ... 3200 | B6 ... B8 | 2/3 P | included |

Key handle interlocking system

| Padlocking in position I, 0 or II | | | | |
|-----------------------------------|---|-----------|--------|-----------|
| SIRCOVER Rating (A) / Frame size | SIRCOVER Bypass Rating (A) / Frame size | Operation | Figure | Reference |
| 125 ... 630 / B3 ... B5 | 125 ... 200 / B3 | external | 1 | 1423 2813 |

| Locking using RONIS EL11AP lock in position 0 (not included) | | | | |
|--|---|-----------|--------|--------------------------|
| SIRCOVER Rating (A) / Frame size | SIRCOVER Bypass Rating (A) / Frame size | Operation | Figure | Reference |
| 125 ... 630 / B3 ... B5 | 125 ... 200 / B3 | direct | 2 | 4109 1006 ⁽¹⁾ |
| | 250 ... 630 / B4 ... B5 | direct | 3 | consult us |
| 800 ... 1600 / B6 ... B7 | 800 ... 1600 / B6 ... B7 | direct | 3 | 4109 1004 ⁽²⁾ |
| 2000 ... 3200 / B8 | | direct | 3 | 4109 2007 ⁽²⁾ |
| 125 ... 630 / B3 ... B5 | 125 ... 630 / B3 ... B5 | external | 4 | 1499 7701 ⁽²⁾ |
| 2000 ... 3200 / B8 | 800 ... 1600 / B6 ... B7 | external | 4 | 2799 7002 ⁽²⁾ |

(1) Specific handle included.

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

| Locking using RONIS EL11AP lock in position I, 0, II (not included) | | | | |
|---|---|-----------|--------|--------------------------|
| SIRCOVER Rating (A) / Frame size | SIRCOVER Bypass Rating (A) / Frame size | Operation | Figure | Reference |
| 125 ... 630 / B3 ... B5 | 125 ... 200 / B3 | direct | 2 | 4109 1002 ⁽¹⁾ |
| | 250 ... 630 / B4 ... B5 | direct | 3 | consult us |
| 800 ... 1600 / B6 ... B7 | 800 ... 1600 / B6 ... B7 | direct | 3 | 4109 1004 ⁽²⁾ |
| 2000 ... 3200 / B8 | | direct | 3 | 4109 2007 ⁽²⁾ |
| 125 ... 630 / B3 ... B5 | 125 ... 630 / B3 ... B5 | external | 4 | 1499 7701 ⁽²⁾ |
| 2000 ... 3200 | 800 ... 1600 / B6 ... B7 | external | 4 | 2799 7002 ⁽²⁾ |

(1) Specific handle included.

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

| Locking using 230 VAC undervoltage coil in position 0 (factory fitted) | | | | |
|--|---|-----------|--------|------------|
| SIRCOVER Rating (A) / Frame size | SIRCOVER Bypass Rating (A) / Frame size | Operation | Figure | Reference |
| 800 ... 3200 / B6 ... B8 | 800 ... 1600 / B6 ... B7 | direct | 3 | consult us |

| Locking using Type K CASTELL lock (not supplied) | | | | |
|--|---|-----------|--------|-----------|
| SIRCOVER Rating (A) / Frame size | SIRCOVER Bypass Rating (A) / Frame size | Operation | Figure | Reference |
| 125 ... 1600 / B3 ... B7 | 125 ... 630 / B3 ... B5 | external | 4 | 1499 7702 |
| 2000 ... 3200 / B8 | 800 ... 1600 / B6 ... B7 | external | 4 | 2799 7003 |

Use

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

Fig. 1

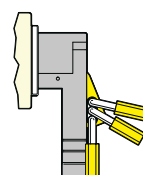
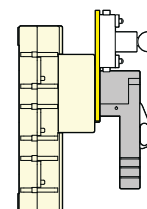


Fig. 2



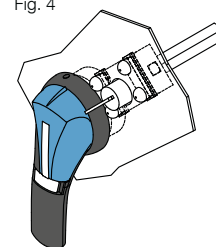
access_061_a_1_x_cat

access_001_a_1_x_cat

Fig. 3



Fig. 4



access_132_a_1_x_cat

access_158_a_1_x_cat

Other specific accessories



bd_03_04_01

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

SIRCOVER

Manually operated Transfer Switching Equipment
from 125 to 3200 A

Polyester enclosed solution

General characteristics

- Adapted to chemical attack, dust hazard, contamination hazard and atmospheric corrosion.
- Operating handle: S type black handle padlockable in position 0.
- Protection degree: IP55 / IK 10.
- Colour: RAL 7030 (rating < 400 A), RAL 9002 (rating ≥ 400 A).
- Cable gland plate: none.
- Material: glass fibre reinforced polyester.
- Coating: none.
- Wall mounting: 4 mounting brackets supplied (not fitted).
- Locking device: screw (rating < 400 A), 3 mm double bar key (rating ≥ 400 A), key supplied.
- Miscellaneous: high resistance to chemicals, self-extinguishable at 960°C, 3 bolted earth connection points.

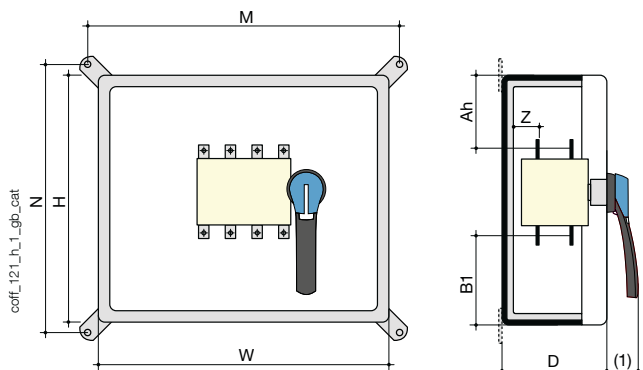
References

| Rating (A) | No. of poles | Top/bottom connection I - O - II Reference |
|------------|--------------|--|
| 125 | 3 P | 4215 3012 |
| 125 | 4 P | 4215 4012 |
| 160 | 3 P | 4215 3016 |
| 160 | 4 P | 4215 4016 |
| 250 | 3 P | 4215 3025 |
| 250 | 4 P | 4215 4025 |
| 400 | 3 P | 4215 3040 |
| 400 | 4 P | 4215 4040 |
| 630 | 3 P | 4215 3063 |
| 630 | 4 P | 4215 4063 |



conf_2099_a_1_cat

Dimensions



(1) 125 ... 630 A: 45 mm

| Rating (A) | No. of poles | H x W x D (mm) | Max. connection cross-section (mm ²) | M (mm) | N (mm) | Z (mm) | Top/bottom connection | | |
|------------|--------------|-----------------|--|--------|--------|--------|-----------------------|---------|-------------|
| | | | | | | | Ah (mm) | B1 (mm) | Weight (kg) |
| 125 | 3 P | 540 x 270 x 233 | 50 | 272 | 542 | 28 | 210 | 210 | 9 |
| 125 | 4 P | 540 x 360 x 233 | 50 | 362 | 542 | 28 | 210 | 210 | 10 |
| 160 | 3 P | 540 x 270 x 233 | 95 | 272 | 542 | 28 | 210 | 210 | 9 |
| 160 | 4 P | 540 x 360 x 233 | 95 | 362 | 542 | 28 | 210 | 210 | 10 |
| 250 | 3 P | 540 x 360 x 233 | 150 | 362 | 542 | 29 | 205 | 205 | 11 |
| 250 | 4 P | 540 x 360 x 233 | 150 | 362 | 542 | 29 | 205 | 205 | 12 |
| 400 | 3 P | 800 x 600 x 300 | 240 | 620 | 796 | 29 | 330 | 330 | 30 |
| 400 | 4 P | 800 x 600 x 300 | 240 | 620 | 796 | 29 | 330 | 330 | 31 |
| 630 | 3 P | 800 x 600 x 300 | 2 x 300 | 620 | 796 | 45 | 297 | 297 | 38 |
| 630 | 4 P | 800 x 600 x 300 | 2 x 300 | 620 | 796 | 45 | 297 | 297 | 40 |

Steel enclosed solution

General characteristics

- Adapted to mechanical risk and dust hazard.
- Operating handle: S type black handle padlockable in position 0.
- Protection degree: IP54
- Colour: RAL 7035 up to 630 A, or RAL 7035 apart from casing and door RAL 9001.
- Cable gland plates: top and bottom.
- Material: XC steel, thickness 1.5 mm.
- Coating: epoxy polyester powder (≤ 630 A), polyester powder (≥ 800 A).
- Mounting: 4 wall mounting brackets - not fitted.
- Door: solid with hinges.
- Locking device: 3 mm double bar key (≤ 630 A), 8 mm spanner key (≥ 800 A), key supplied.
- Miscellaneous: multiple earth connection points, double door locking.

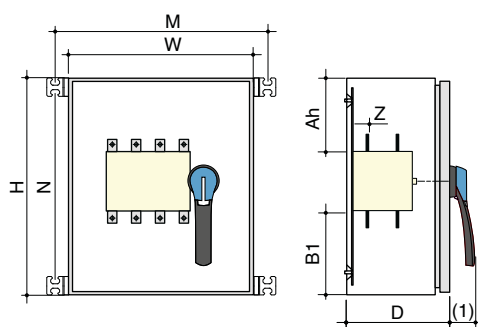
References

| Rating (A) | No. of poles | Top/bottom connection I - O - II Reference |
|------------|--------------|--|
| 125 | 3 P | 4212 3012 |
| 125 | 4 P | 4212 4012 |
| 160 | 3 P | 4212 3016 |
| 160 | 4 P | 4212 4016 |
| 250 | 3 P | 4212 3025 |
| 250 | 4 P | 4212 4025 |
| 400 | 3 P | 4212 3040 |
| 400 | 4 P | 4212 4040 |
| 500 | 3 P | 4212 3050 |
| 500 | 4 P | 4212 4050 |
| 630 | 3 P | 4212 3063 |
| 630 | 4 P | 4212 4063 |
| 800 | 3 P | 4212 3080 |
| 800 | 4 P | 4212 4080 |
| 1250 | 3 P | 4212 3120 |
| 1250 | 4 P | 4212 4120 |
| 1600 | 3 P | 4212 3160 |
| 1600 | 4 P | 4212 4160 |



conf_2395_b

Dimensions



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

conf_318_a_1_gpb_cat

| Rating (A) | No. of poles | H x W x D (mm) | Max. connection cross-section (mm ²) | M (mm) | N (mm) | Z (mm) | Top/bottom connection | | |
|------------|--------------|------------------|--|--------|--------|--------|-----------------------|---------|-------------|
| | | | | | | | Ah (mm) | B1 (mm) | Weight (kg) |
| 125 | 3/4 P | 500 x 400 x 250 | 50 | 448 | 458 | 28 | 190 | 190 | 23 |
| 160 | 3/4 P | 500 x 400 x 250 | 95 | 448 | 458 | 28 | 190 | 190 | 23 |
| 250 | 3/4 P | 500 x 400 x 250 | 150 | 448 | 458 | 29.3 | 185 | 185 | 23 |
| 400 | 3/4 P | 800 x 600 x 300 | 240 | 758 | 552 | 29.3 | 330 | 330 | 45 |
| 500 | 3/4 P | 800 x 600 x 300 | 240 | 648 | 658 | 45 | 298 | 298 | 55 |
| 630 | 3/4 P | 800 x 600 x 300 | 2 x 300 | 648 | 658 | 45 | 290 | 290 | 55 |
| 800 | 3/4 P | 1200 x 700 x 500 | 2 x 300 | 740 | 1152 | 156 | 465 | 465 | 78 |
| 1,250 | 3/4 P | 1200 x 700 x 500 | 4 x 185 | 740 | 1152 | 156 | 465 | 465 | 88 |
| 1,600 | 3/4 P | 1200 x 700 x 500 | 4 x 300 | 740 | 1152 | 156 | 470 | 470 | 94 |

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

125 to 630 A

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

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".

4-pole device with 2 poles in series by polarity.

(3) Interphase barriers must be installed on the products.

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

(5) Values given at 690 VAC.

800 to 3200 A

| Thermal current I th at 40°C | 800 A | 1000 A | 1250 A | 1600 A | 2000 A | 2500 A | 3200 A |
|---|-------|--------|--------|--------|--------|--------|--------|
| Frame size | B6 | B6 | B6 | B7 | B8 | B8 | B8 |
| Rated insulation voltage U _i (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Rated impulse withstand voltage U _{imp} (kV) | 12 | 12 | 12 | 12 | 12 | 12 | 12 |

Rated operational currents I_e (A) according to IEC 60947-6-1

| Rated voltage | Utilisation category | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ |
|---------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 415 VAC | AC-31 B | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 |
| 415 VAC | AC-32 B | 800 | 1000 | 1250 | 1250 | 2000 | 2000 | 2000 |
| 415 VAC | AC-33 B | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 |

Rated operational currents I_e (A) according to IEC 60947-3

| Rated voltage | Utilisation category | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ | A/B ⁽¹⁾ |
|------------------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 415 VAC | AC-21 A / AC-21 B | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2500 | -/3200 |
| 415 VAC | AC-22 A / AC-22 B | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2500 | -/3200 |
| 415 VAC | AC-23 A / AC-23 B | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | -/1600 | -/1600 | -/1600 |
| 500 VAC | AC-21 A / AC-21 B | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2000 | -/2000 |
| 500 VAC | AC-22 A / AC-22 B | 630/630 | 800/800 | 1000/1000 | 1600/1600 | | | |
| 500 VAC | AC-23 A / AC-23 B | 630/630 | 630/630 | 800/800 | 800/800 | 1000/1000 | | |
| 690 VAC ⁽³⁾ | AC-21 A / AC-21 B | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2000 | -/2000 |
| 690 VAC ⁽³⁾ | AC-22 A / AC-22 B | 630/630 | 800/800 | 1000/1000 | 1000/1000 | | | |
| 690 VAC ⁽³⁾ | AC-23 A / AC-23 B | 630/630 | 630/630 | 800/800 | 800/800 | | | |
| 220 VDC | DC-21 A / DC-21 B | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 220 VDC | DC-22 A / DC-22 B | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 220 VDC | DC-23 A / DC-23 B | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 440 VDC ⁽²⁾ | DC-21 A / DC-21 B | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 440 VDC ⁽²⁾ | DC-22 A / DC-22 B | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |
| 440 VDC ⁽²⁾ | DC-23 A / DC-23 B | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | | | |

Operation power in AC-23 (kW)⁽⁴⁾

| | | | | | | | |
|---------------------------------|---------|---------|---------|---------|-------|-------|-------|
| At 415 VAC without AC pre-break | 375/375 | 450/450 | 560/560 | 560/560 | -/710 | -/710 | -/710 |
| At 690 VAC without AC pre-break | 475/475 | 475/475 | 620/620 | 620/620 | | | |

Reactive power (kvar)⁽⁴⁾

| | | | | | | | |
|-------------------|---------|---------|---------|---------|-------|-------|-------|
| At 415 VAC (kvar) | 400/400 | 500/500 | 650/650 | 650/650 | -/850 | -/850 | -/850 |
|-------------------|---------|---------|---------|---------|-------|-------|-------|

Fuse protected short-circuit withstand as per IEC 60947-3 (kA rms prospective)

| | | | | | | | |
|---|-----|------|------|-------|--|--|--|
| Prospective short-circuit current with gG DIN fuses at 415 VAC (kA rms) | 50 | 50 | 100 | 100 | | | |
| Prospective short-circuit current with gG DIN fuses at 690 VAC (kA rms) | 50 | 50 | 50 | | | | |
| Associated fuse rating (A) | 800 | 1000 | 1250 | 2x800 | | | |

Short-circuit withstand without protection as per IEC 60947-3

| | | | | | | | |
|---|----|----|----|-----|-----|-----|-----|
| Rated short-time withstand current 0.3s I _{cw} at 415 VAC (kA rms) | 64 | 64 | 64 | 78 | 78 | 78 | 78 |
| Rated short-time withstand current 1s I _{cw} at 415 VAC (kA rms) | 35 | 35 | 35 | 50 | 50 | 50 | 50 |
| Rated peak withstand current at 415 VAC (kA peak) | 55 | 55 | 80 | 110 | 120 | 120 | 120 |

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 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 x 7 | 2 x 100 x 5 | 3 x 100 x 5 | 2 x 100 x 10 | 3 x 10 x 100 |
| Maximum Cu cable cross-section (mm ²) | 4 x 185 | 4 x 185 | 4 x 185 | 6 x 185 | | | |
| Maximum Cu busbar width (mm) | 63 | 63 | 63 | 100 | 100 | 100 | 100 |
| Min./max. tightening torque (Nm) | 20/26 | 20/26 | 20/26 | 40/45 | 40/45 | 40/45 | 40/45 |

Mechanical specifications

| | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|
| Durability (number of operating cycles) | 4,000 | 4,000 | 4,000 | 3,000 | 3,000 | 3,000 | 3,000 |
| Weight 3 P (kg) | 20.5 | 21.0 | 21.6 | 25.7 | 42.0 | 42.0 | 52.3 |
| Weight 4 P (kg) | 24.8 | 25.6 | 26.2 | 32.0 | 52.9 | 52.9 | 66.6 |

(1) Category with index A = frequent operation - Category with index B = infrequent operation.

(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".

4-pole device with 2 poles in series by polarity.

(3) Interphase barriers must be installed on the products.

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

(5) Values given at 690 VAC.

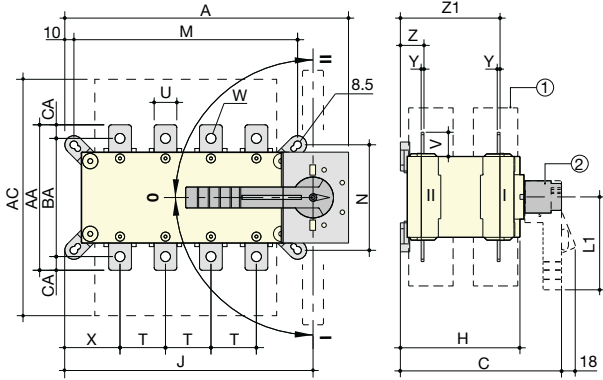
SIRCOVER

Manually operated Transfer Switching Equipment
from 125 to 3200 A

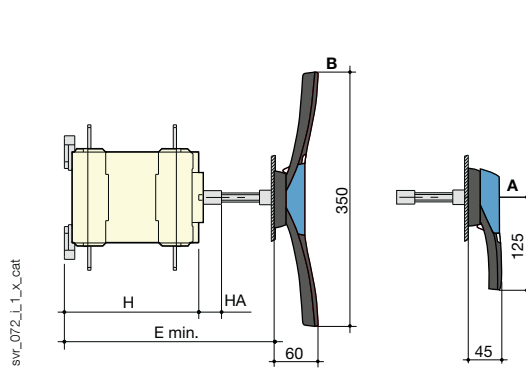
Dimensions

SIRCOVER 125 to 1600 A / B3 to B7

Direct front operation



External front operation



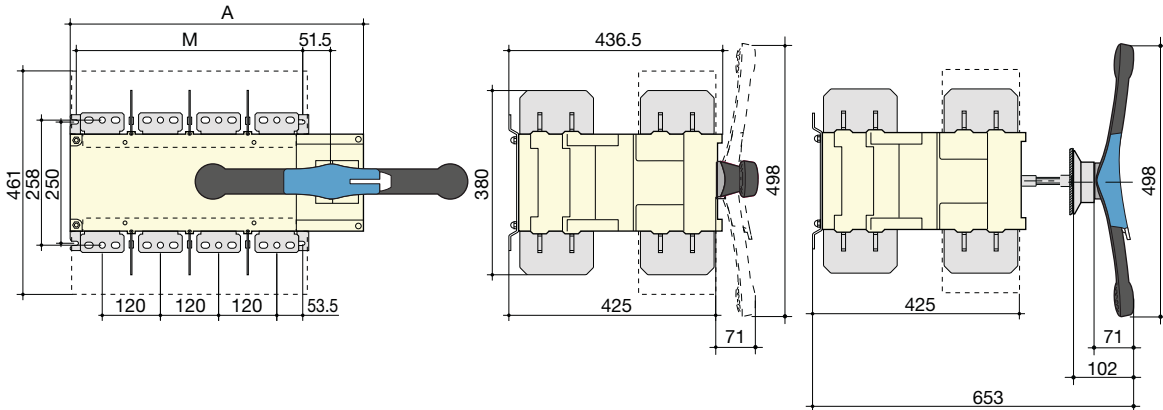
A. S2 type handle for external operation: 125 to 630 A
B. S4 type handle for external operation: 800 to 1600 A

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

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

SIRCOVER 2000 to 3200 A / B8

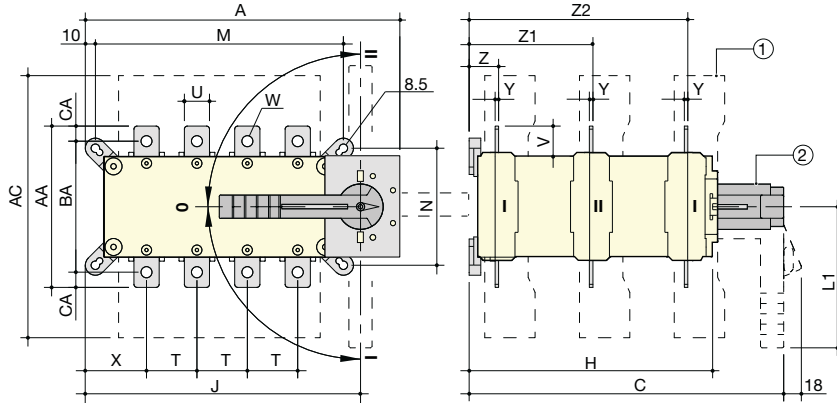
Direct front operation



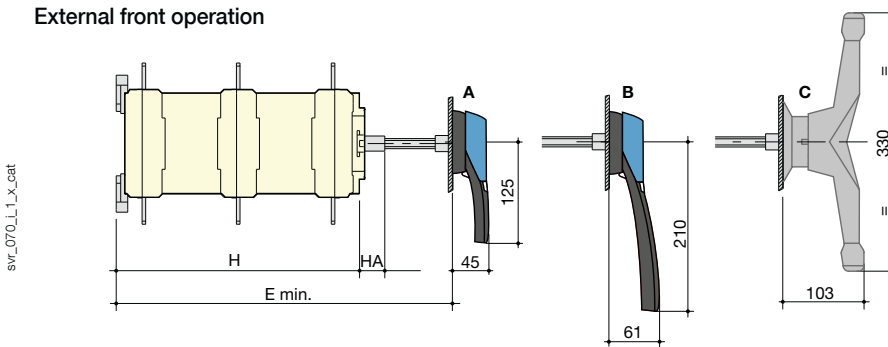
| Rating (A) / Frame size | Overall dimensions | | Switch mounting | |
|-------------------------|--------------------|----------|-----------------|----------|
| | A 3p. | A 4p. | M 3p. | M 4p. |
| 2000 ... 3200 / B8 | 478 | 598 | 347 | 467 |

SIRCOVER Bypass 125 to 1600 A / B3 to B7

Direct front operation



External front operation



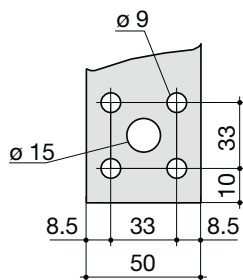
A. S2 type handle for external operation: 125 to 200 A
B. S3 type handle for external operation: 250 to 630 A
C. External double lever handle: 800 to 1600 A

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

| Rating (A) / Frame size | Overall dimensions | | | | Terminal shrouds | Switch body | | | | Switch mounting | | | | Connection | | | | | | | | | | | |
|-------------------------|--------------------|---------|-----|--------|------------------|-------------|----|-------|---------|-----------------|---------|---------|-----|------------|------|--------|------|---------|---------|------|-------|-------|-----|-----|-------|
| | A 3+6p. | A 4+8p. | C | E min. | | AC | H | HA | J 3+6p. | J 4+8p. | M 3+6p. | M 4+8p. | N | T | U | V | W | X 3+6p. | X 4+8p. | Y | Z | Z1 | Z2 | AA | BA |
| 125 / B3 | 221 | 251 | 313 | 320 | 235 | 243 | 25 | 182 | 212 | 156 | 186 | 101 | 36 | 20 | 25 | 8.5 | 56 | 50 | 3.5 | 28 | 124 | 219 | 135 | 115 | 10 |
| 160 / B3 | 221 | 251 | 313 | 320 | 235 | 243 | 25 | 182 | 212 | 156 | 186 | 101 | 36 | 20 | 25 | 8.5 | 56 | 50 | 3.5 | 28 | 124 | 219 | 135 | 115 | 10 |
| 200 / B3 | 221 | 251 | 313 | 320 | 235 | 243 | 25 | 182 | 212 | 156 | 186 | 101 | 36 | 20 | 25 | 8.5 | 56 | 50 | 3.5 | 28 | 124 | 219 | 135 | 115 | 10 |
| 250 / B4 | 262 | 312 | 313 | 298 | 280 | 243 | 25 | 223 | 273 | 196 | 246 | 116 | 50 | 25 | 30 | 11 | 61 | 61 | 3.5 | 30 | 124 | 219 | 160 | 130 | 10 |
| 400 / B4 | 262 | 312 | 313 | 298 | 280 | 243 | 25 | 223 | 273 | 196 | 246 | 116 | 50 | 35 | 35 | 11 | 61 | 61 | 3.5 | 30 | 124 | 219 | 170 | 140 | 15 |
| 500 / B5 | 319 | 379 | 432 | 417 | 401 | 362 | 25 | 272 | 332 | 246 | 306 | 176 | 65 | 32 | 37 | 13 | 70.5 | 65.5 | 5 | 43 | 180 | 317 | 235 | 205 | 15 |
| 630 / B5 | 319 | 379 | 432 | 417 | 400 | 362 | 25 | 272 | 332 | 246 | 306 | 176 | 65 | 45 | 50 | 13 | 70.5 | 65.5 | 5 | 43 | 180 | 317 | 260 | 220 | 20 |
| 800 / B6 | 386 | 466 | 560 | 550 | 459 | 479 | 29 | 306.5 | 386.5 | 255 | 335 | 250 | 80 | 50 | 60.5 | 15 | 48 | 48 | 7 | 66.5 | 253.5 | 439.5 | 321 | | 26.5 |
| 1250 / B6 | 386 | 466 | 560 | 550 | 459 | 479 | 29 | 306.5 | 386.5 | 255 | 335 | 250 | 80 | 60 | 65 | 16x11 | 48 | 48 | 7 | 66.5 | 253.5 | 439.5 | 320 | | 29.25 |
| 1600 / B7 | 478 | 598 | 560 | 550 | 461 | 479 | 29 | 388.5 | 518.5 | 347 | 467 | 250 | 120 | 90 | 43.5 | 12.5x5 | 54 | 54 | 8 | 66.5 | 253.5 | 439.5 | 288 | | 15 |

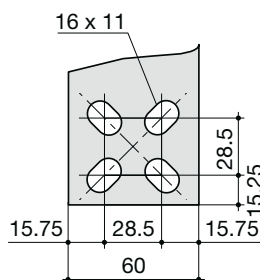
Connection terminals

SIRCOVER and SIRCOVER Bypass 800 A / B6



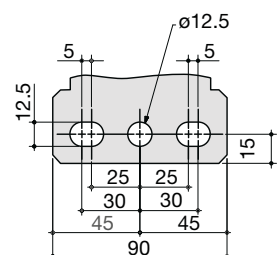
svr_077_a_1_x_cat

SIRCOVER and SIRCOVER Bypass 1250 A / B6



svr_078_b_1_x_cat

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



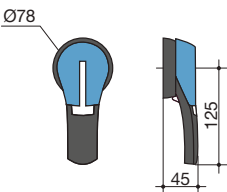
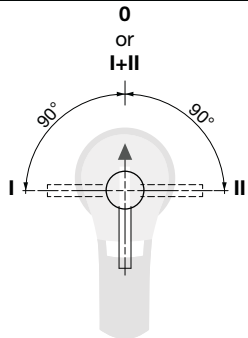
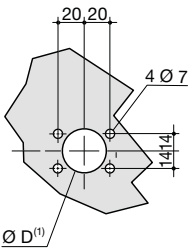
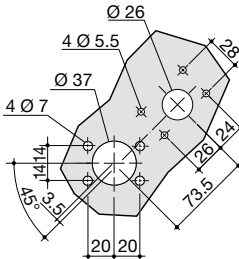
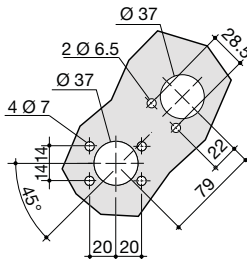
svr_088_a_1_x_cat

SIRCOVER

Manually operated Transfer Switching Equipment
from 125 to 3200 A

Dimensions for external handles

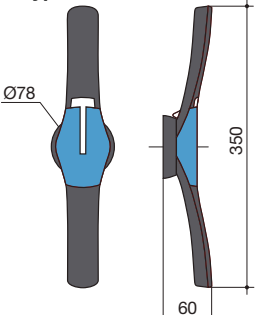
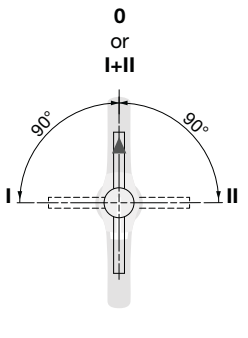
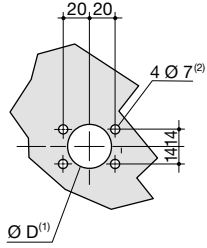
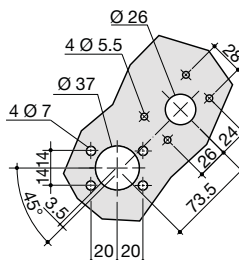
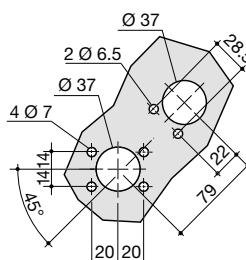
SIRCOVER 125 to 630 A / B3 to B5

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

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

poign_030_a_1_gb_cat

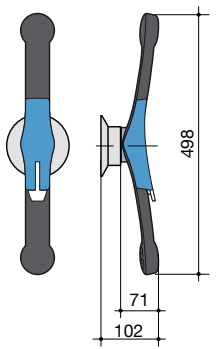
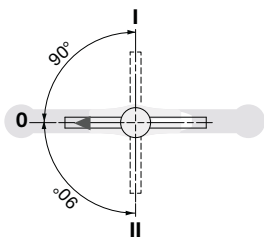
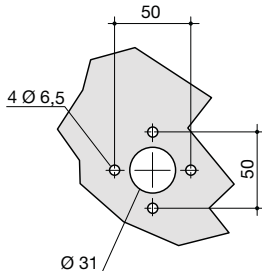
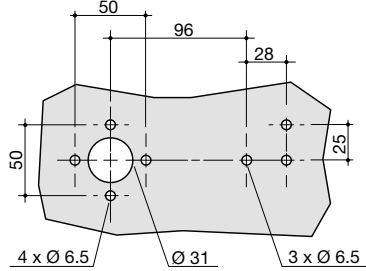
SIRCOVER 800 to 1600 A / B6 to B7

| Handle type | Front operation Direction of operation | Door drilling | | |
|---|---|---|---|---|
| S4 type  |  |  | With lock RONIS EL11AP  | With lock CASTELL K  |

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

poign_031_a_1_gb_cat

SIRCOVER 2000 to 3200 A / B8

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

poign_023_a_1_gb_cat

SIRCOVER Bypass 125 to 200 A / B3

| Handle type | Front operation Direction of operation | Door drilling | |
|----------------|---|---------------|---|
| S2 type | | | <div style="display: flex; justify-content: space-around;"> <div> <p>With lock RONIS EL11AP</p> </div> <div> <p>With lock CASTELL K</p> </div> </div> |

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

SIRCOVER Bypass 250 to 630 A / B4 to B5

| Handle type | Front operation Direction of operation | Door drilling | |
|----------------|---|---------------|---|
| S3 type | | | <div style="display: flex; justify-content: space-around;"> <div> <p>With lock RONIS EL11AP</p> </div> <div> <p>With lock CASTELL K</p> </div> </div> |

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

SIRCOVER Bypass 800 to 1600 A / B6 to B7

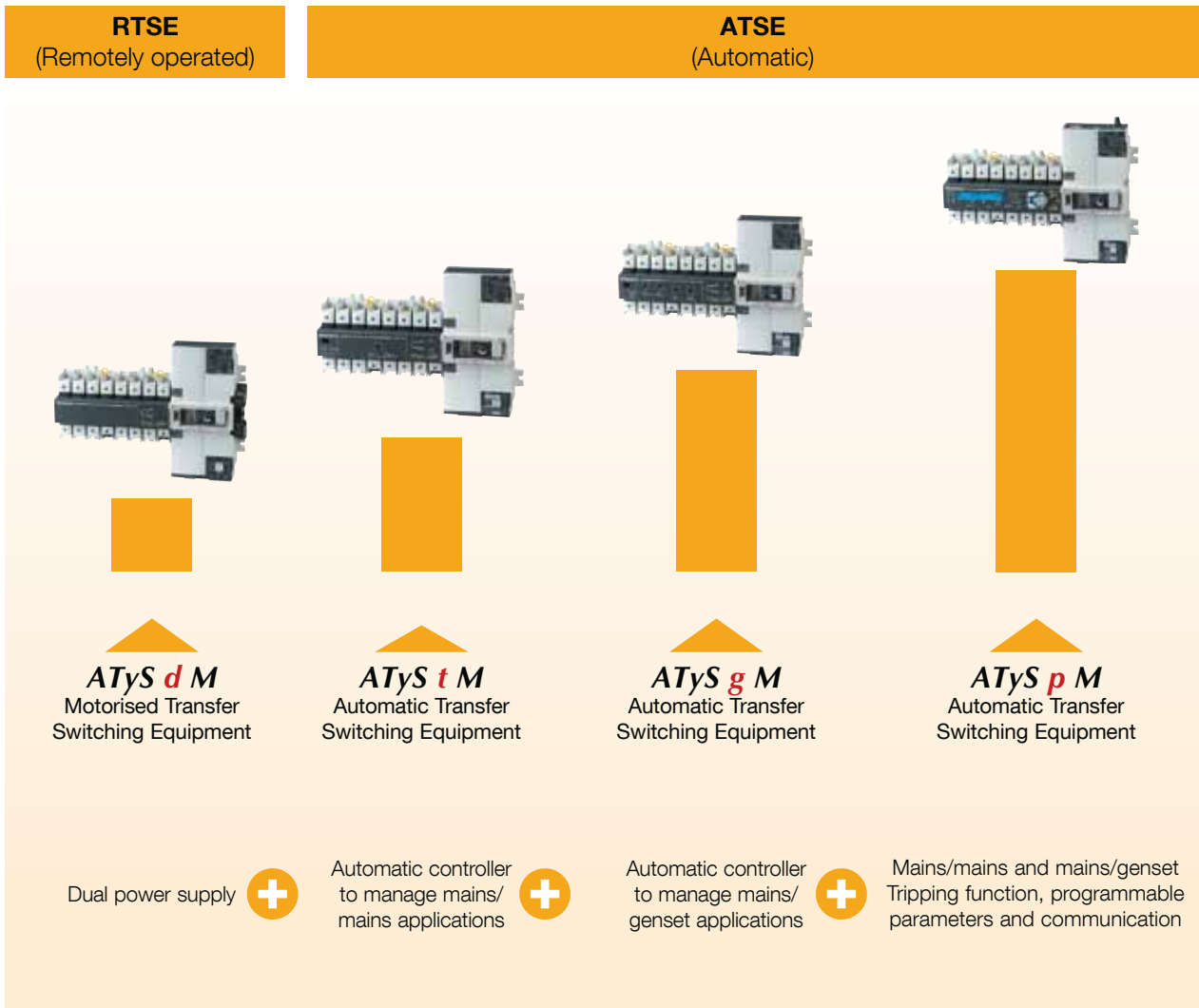
| Handle type | Front operation Direction of operation | Door drilling | |
|---------------|---|---------------|--------------------------------|
| C type | | | <p>With lock CASTELL K</p> |



The *ATyS M* range: safe and reliable solutions

Transfer switches

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



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

IEC 60947-3

- > AC 23B - up to 160 A

Expert Services

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





ATyS d M

Remotely operated Transfer Switching Equipment from 40 to 160 A

Transfer switches



ATyS d M
I-O-II 4P

The solution for

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



Strong points

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

Conformity to standards

- > IEC 60947-6,-1
- > IEC 60947-3
- > GB 14048.11



Approvals and certifications



Function

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

Advantages

Secure

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

High-speed transfer

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

Superior electrical performance

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

Immune to voltage fluctuations

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

Operating modes



ATySm_014_c

Easy selection of AUT/MAN mode



ATySm_015_c-1_cat

Manual emergency operation



ATySm_016_c-1_cat

Padlocking facility

What you need to know

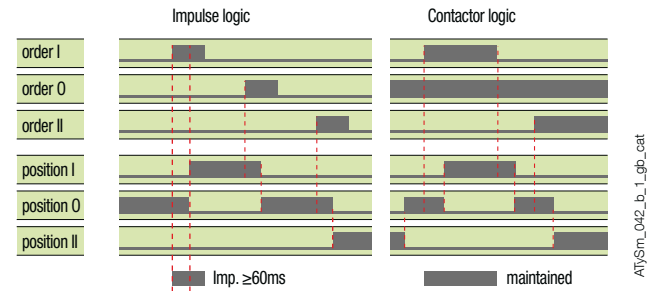
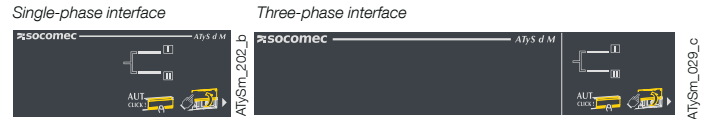
Electrical control

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

Control logic

Two types of control logic are offered:

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



Power supply

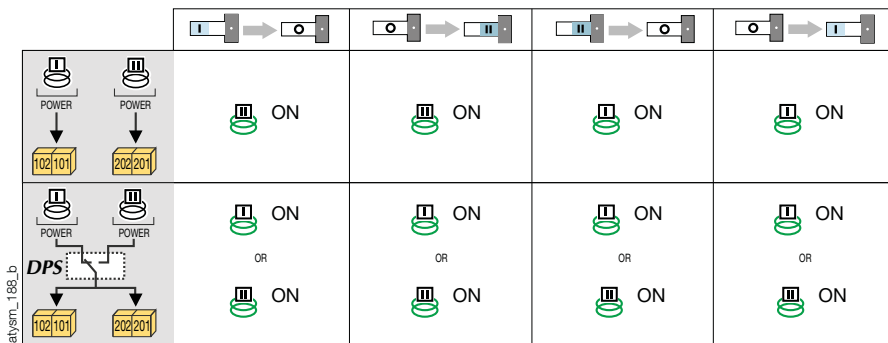
The ATyS d M is equipped with two independent 230 VAC power inputs (176-288 VAC), 50/60 Hz (45/65 Hz).

These two supplies can be connected individually; one to switch I and the other to switch II:

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

The use of a dual power supply (DPS) or an external supply module secures the command of the 3 positions irrespective of the power supply source.

In this case, both the supply inputs must be connected in parallel.



References

ATyS d M

| Rating (A) | No. of poles | ATyS d M | Bridging bars | Voltage sensing and power supply tap | Terminal shrouds | Auxiliary contact block |
|------------|--------------|-----------|--------------------------------------|--------------------------------------|--------------------------------------|---|
| 40 A | 2 P | 9323 2004 | 2 P 1309 2006 4 P 1309 4006 | 2 pieces 1399 4006 | 2 pieces 2294 4016 ⁽¹⁾ | 1 st unit included 2 nd unit Separate common points 1309 0001 ⁽²⁾ Linked common points 1309 0011 ⁽²⁾ |
| | 4 P | 9323 4004 | | | | |
| 63 A | 2 P | 9323 2006 | | | | |
| | 4 P | 9323 4006 | | | | |
| 80 A | 2 P | 9323 2008 | | | | |
| | 4 P | 9323 4008 | | | | |
| 100 A | 2 P | 9323 2010 | | | | |
| | 4 P | 9323 4010 | | | | |
| 125 A | 2 P | 9323 2012 | | | | |
| | 4 P | 9323 4012 | | | | |
| 160 A | 2 P | 9323 2016 | 1309 2016 | | | |
| | 4 P | 9323 4016 | 1309 4016 | | | |

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



ATyS *t* M - ATyS *g* M

Automatic Transfer Switching Equipment

from 40 to 160 A

Transfer switches



ATyS *t* M
1-0-II 4P

atyS-tm_001_b_1_cat



ATyS *g* M
1-0-II 2P

atyS-gm_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 14048.11



Approvals and certifications⁽¹⁾



⁽¹⁾ Product references on request.

Function

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

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

Advantages

Quick start

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

ATyS *g* M: dedicated to mains/genset applications

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

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

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

Secure programming

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

What you need to know

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

References

ATyS t M

| Rating (A) | No. of poles | Network (VAC) | ATyS t M | Bridging bars | Voltage sensing and power supply tap | Terminal shrouds | Auxiliary contact block | Sealable cover |
|------------|--------------|---------------|-----------|------------------|--------------------------------------|--------------------------------------|--|----------------|
| 40 A | 4 P | 230/400 | 9344 4004 | 4 P 1309 4006 | 2 pieces 1399 4006 | 2 pieces 2294 4016 ⁽¹⁾ | 1 unit Separate common points 1309 0001 ⁽²⁾ Linked common points 1309 0011 ⁽²⁾ | 1359 0000 |
| 63 A | 4 P | 230/400 | 9344 4006 | | | | | |
| 80 A | 4 P | 230/400 | 9344 4008 | | | | | |
| 100 A | 4 P | 230/400 | 9344 4010 | | | | | |
| 125 A | 4 P | 230/400 | 9344 4012 | | | | | |
| 160 A | 4 P | 230/400 | 9344 4016 | 1309 4016 | | | | |

(1) For complete upstream and downstream protection please order quantity 2.

(2) 1 NO/NC contact block for positions I, 0 and II.

ATyS g M

| Rating (A) | No. of poles | Network (VAC) ⁽³⁾ | ATyS g M | Bridging bars | Voltage sensing and power supply tap | Terminal shrouds | Auxiliary contact block | Sealable cover |
|------------|--------------|------------------------------|-----------|--------------------------------------|--------------------------------------|--------------------------------------|--|--------------------------------------|
| 40 A | 2 P | 230 | 9353 2004 | 2 P 1309 2006 4 P 1309 4006 | 2 pieces 1399 4006 | 2 pieces 2294 4016 ⁽¹⁾ | 1 unit Separate common points 1309 0001 ⁽²⁾ Linked common points 1309 0011 ⁽²⁾ | 2 P 1359 2000 4 P 1359 0000 |
| | 4 P | 230/400 | 9354 4004 | | | | | |
| 63 A | 2 P | 230 | 9353 2006 | | | | | |
| | 4 P | 230/400 | 9354 4006 | | | | | |
| 80 A | 2 P | 230 | 9353 2008 | | | | | |
| | 4 P | 230/400 | 9354 4008 | | | | | |
| 100 A | 2 P | 230 | 9353 2010 | | | | | |
| | 4 P | 230/400 | 9354 4010 | | | | | |
| 125 A | 2 P | 230 | 9353 2012 | | | | | |
| | 4 P | 230/400 | 9354 4012 | | | | | |
| 160 A | 2 P | 230 | 9353 2016 | 1309 2016 | | | | |
| | 4 P | 230/400 | 9354 4016 | 1309 4016 | | | | |

(1) 4 pole version - for complete upstream and downstream protection please order quantity 2; for 2 pole version order quantity 1.

(2) 1 NO/NC contact block for positions I, 0 and II.

(3) For 127/230VAC networks, please contact your supplier.



ATyS p M

Automatic Transfer Switching Equipment from 40 to 160 A

Transfer switches



ATyS p M
I-O-II 4P

The solution for

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



Strong points

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

Conformity to standards

- > IEC 60947-6,-1
- > IEC 60947-3
- > GB 14048.11



Approvals and certifications



Function

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

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

Advantages

Flexible programming

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

Trip function

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

Communication and configuration

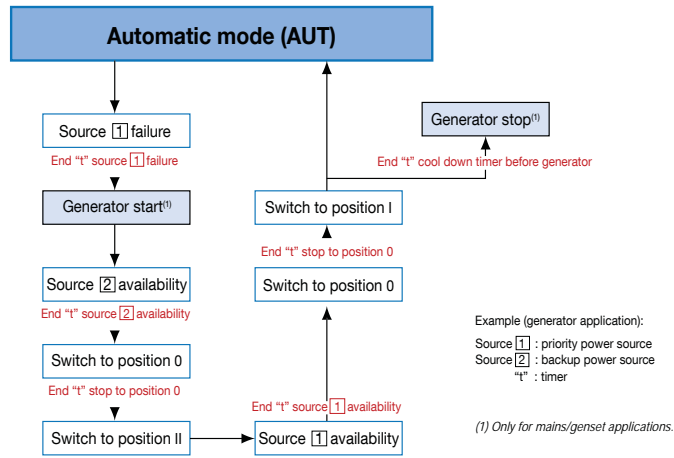
A specific version of ATyS p M is available with integrated Modbus communication. This gives access to most product data (status, voltages, frequencies...). A user friendly configuration software is also available free (Easyconfig) to configure, view and save all the parameters in the ATyS p M.

Remote control interface

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

What you need to know

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



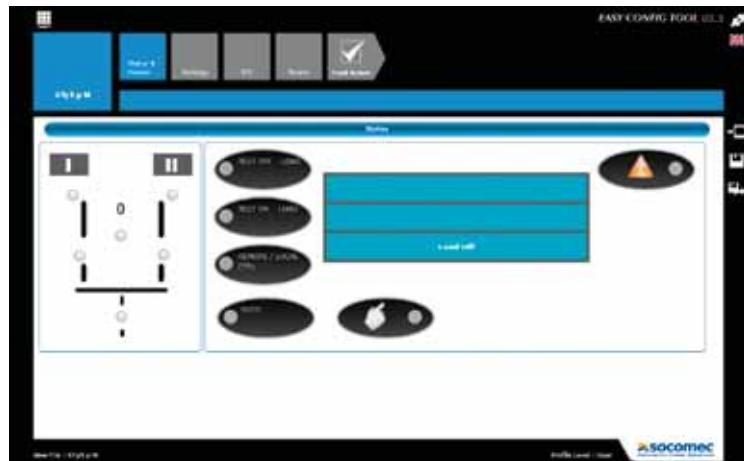
atys_028_h_1_glb_cat

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...



atys_849_b_gb

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 | D10 9599 2010 D20 9599 2020 |
| 63 A | 4 P | 230/400 | 9364 4006 | 9384 4006 | | | | Separate common points 1309 0001 ⁽²⁾ | |
| 80 A | 4 P | 230/400 | 9364 4008 | 9384 4008 | | | | Linked common points 1309 0011 ⁽²⁾ | |
| 100 A | 4 P | 230/400 | 9364 4010 | 9384 4010 | | | | | |
| 125 A | 4 P | 230/400 | 9364 4012 | 9384 4012 | | | | 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

Transfer switches

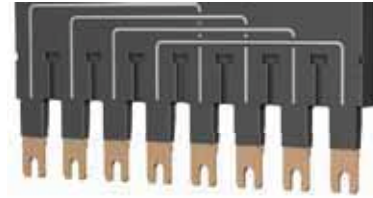
Accessories

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 |



atysm_025_a

Voltage sensing and power supply tap

Use

It allows connection of $2 \times \leq 1.5 \text{ mm}^2$ 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 |



atysm_026_a

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.



atysm_027_a

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, O, 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 0001 |
| 40 ... 160 | Linked common points | 1309 0011 |



access_383_a

access_388_a

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 |



atysm_313_a

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 |



atysm_036_b_1_cat

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 |



atysm_039_a_1_x_cat

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 |



atysm_196_a_1_cat

Double power supply - DPS

Use

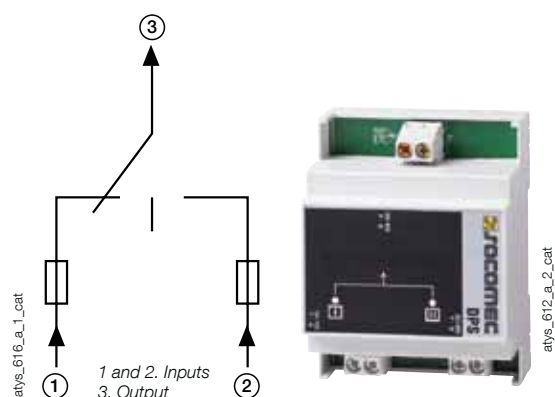
Allows an ATyS *d* M to be supplied by two 230 VAC 50/60 Hz networks.

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 |



ATyS M range

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

from 40 to 160 A

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.



trafo_165_b_1

| 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.



aty_s_564_c_1_cat

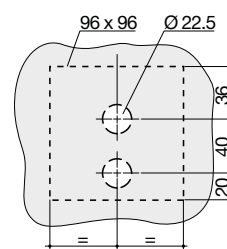


aty_s_565_c_1_cat



aty_s_597_a_1_cat

RJ45 to connect to ATyS p M



Drillings

aty_s_161_a_1_x_cat

| 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.



acces_209_a_2_cat

| 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.



acces_292_a_1_cat

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

(1) For complete conversion, order quantity 3.

Polycarbonate enclosed solution

General characteristics

- From 40 to 160 A.
- 230 VAC [176 VAC-288 VAC] 50 Hz network or 60 Hz [45 Hz-65 Hz]
- Protection degree: IP 55, IK08.
- Colour: RAL 7035.
- Material: transparent cover, enclosure base: polycarbonate.
- Mounting: 4 holes on the rear of the enclosure.
- Flame resistant to 650°C.

References

ATyS d M single-phase model (2 P)

| Rating (A) | Reference |
|------------|-----------|
| 40 | 1823 2004 |
| 63 | 1823 2006 |
| 80 | 1823 2008 |
| 100 | 1823 2010 |
| 125 | 1823 2012 |
| 160 | 1823 2016 |

ATyS g M single-phase model (2 P)

| Rating (A) | Reference |
|------------|-----------|
| 40 | 1854 2004 |
| 63 | 1854 2006 |
| 80 | 1854 2008 |
| 100 | 1854 2010 |
| 125 | 1854 2012 |
| 160 | 1854 2016 |



atysm_251_a_1_cat

Accessories

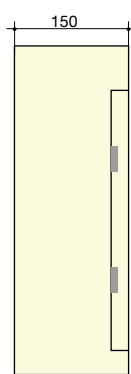
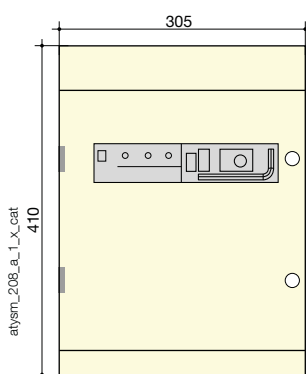
Customer fit

| Description | Reference |
|--|-----------|
| Auxiliary contact | 1309 0001 |
| Voltage sensing and power supply tap (2 per reference) | 1399 4006 |

For model ATyS d M only

| Description | Reference |
|-----------------------|-----------|
| ATyS C30 relay driver | 1599 3030 |
| ATyS C40 relay driver | 1599 3040 |
| Dual power supply | 1599 4001 |

Dimensions



- Weight: 5.5 kg.
- Connection: recommended cable size (Cu): 25 to 70 mm² according to rating (max. cable size: 70 mm²).

ATyS M range

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

from 40 to 160 A

Steel enclosed solution

General characteristics

- Adapted to mechanical risk and dust hazard.
- Integrated bridging bar.
- Protection degree: IP3x or IP54.
- Colour: RAL 7035.
- Cable gland plates: top and bottom.
- Material: 1.2 mm thick steel.
- Coating: epoxy polyester powder.
- Mounting: 4 wall mounting brackets - not fitted.
- Door: hinged, cut-out 327.4x47.6 mm.
- Door lock: 3 mm double bar (key included).

References

ATyS d M models

| Rating (A) | No. of poles | IP 3X Reference | IP 54 Reference |
|------------|--------------|-----------------|-----------------|
| 40 | 4 P | 1823 4004 | 1823 4005 |
| 63 | 4 P | 1823 4006 | 1823 4007 |
| 80 | 4 P | 1823 4008 | 1823 4009 |
| 100 | 4 P | 1823 4010 | 1823 4011 |
| 125 | 4 P | 1823 4012 | 1823 4013 |
| 160 | 4 P | 1823 4016 | 1823 4017 |

ATyS g M models

| Rating (A) | No. of poles | IP 3X Reference | IP 54 Reference |
|------------|--------------|-----------------|-----------------|
| 40 | 4 P | 1854 4004 | 1854 4005 |
| 63 | 4 P | 1854 4006 | 1854 4007 |
| 80 | 4 P | 1854 4008 | 1854 4009 |
| 100 | 4 P | 1854 4010 | 1854 4011 |
| 125 | 4 P | 1854 4012 | 1854 4013 |
| 160 | 4 P | 1854 4016 | 1854 4017 |

ATyS p M + COM RS485 models

| Rating (A) | No. of poles | IP 3X Reference | IP 54 Reference |
|------------|--------------|-----------------|-----------------|
| 40 | 4 P | 1884 4004 | 1884 4005 |
| 63 | 4 P | 1884 4006 | 1884 4007 |
| 80 | 4 P | 1884 4008 | 1884 4009 |
| 100 | 4 P | 1884 4010 | 1884 4011 |
| 125 | 4 P | 1884 4012 | 1884 4013 |
| 160 | 4 P | 1884 4016 | 1884 4017 |



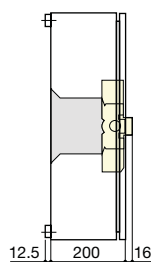
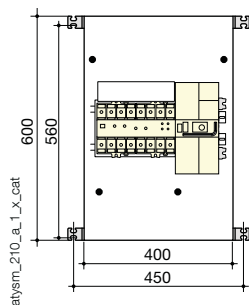
conf_366_b

Accessories

Customer fit

| Description | Reference |
|---------------|-----------|
| Solid neutral | 1309 9008 |
| IP54 kit | 1399 4016 |

Dimensions

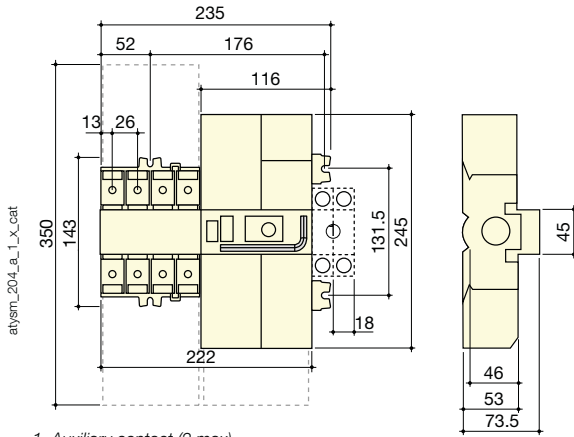


- Weight (without accessories): 15 kg.
- Connection (without cage/terminal interface): min. Cu 10 mm², max. 70 mm².

Dimensions

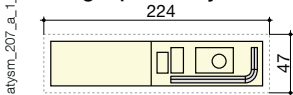
ATyS M 40 to 160 A

Single-phase ATyS M

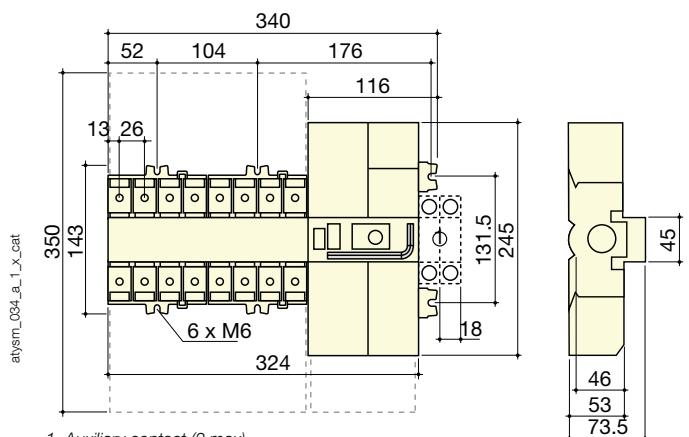


1. Auxiliary contact (2 max).

Single-phase ATyS M - door cut-out

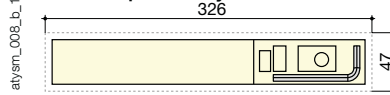


Three-phase ATyS M



1. Auxiliary contact (2 max).

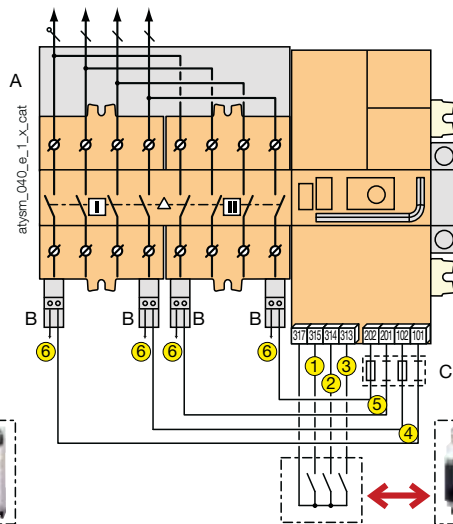
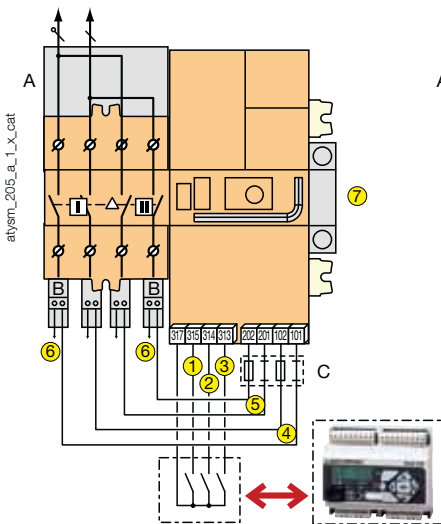
Three-phase ATyS M - door cut-out



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

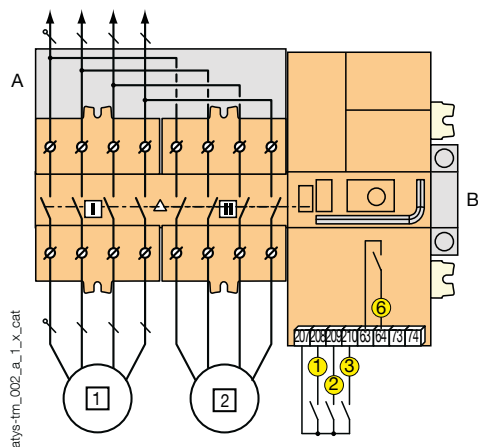
ATyS M range

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

from 40 to 160 A

Terminals and connections (continued)

Three-phase ATyS t M

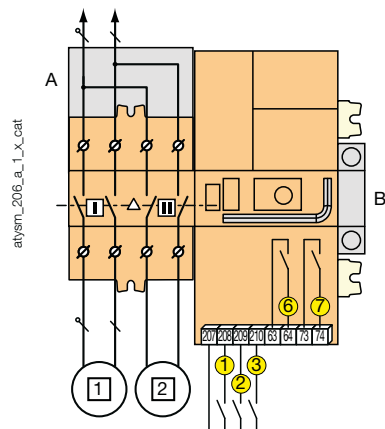


- 1 primary source (network)
- 2 backup source (network)

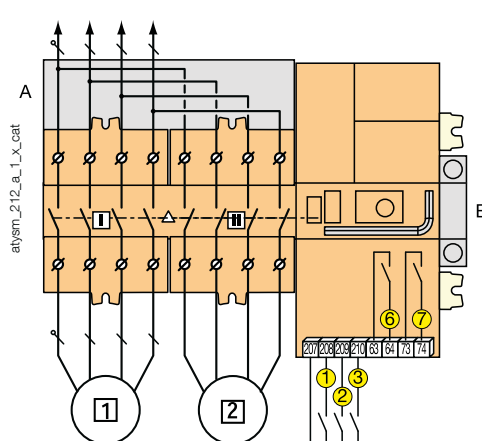
- 1: position 0 control
- 2: preferred source selection
- 3: automatic mode inhibition
- 6: availability S1 or S2

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

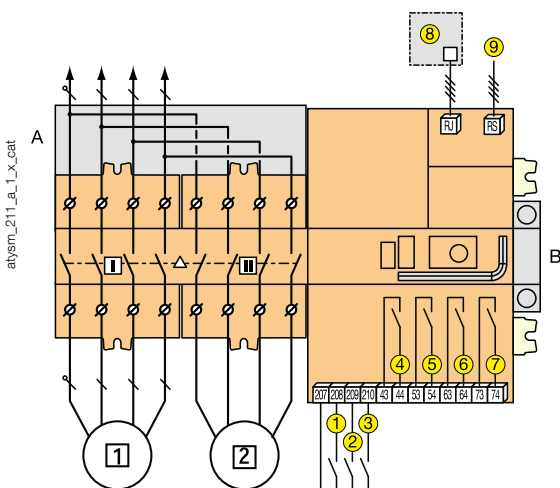


- 1 primary source
- 2 backup source

- 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 low 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

| | | | | | | |
|---|----|----|----|----|----|----|
| Min. connection cross-section | 10 | 10 | 10 | 10 | 10 | 10 |
| Minimum 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. supply (VAC) (ATyS d M, t M and g M) | 176/288 | 176/288 | 176/288 | 176/288 | 176/288 | 176/288 |
| Min./max. 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.



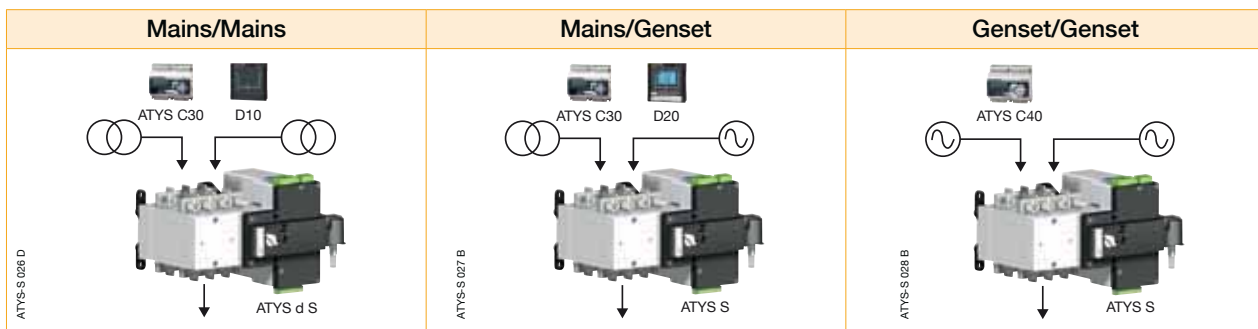
The *ATyS S* range: a robust solution

Transfer switches

A range of transfer switches from 40 to 125 A



Three application types



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.

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

Transfer switches



atys-s_018_a

The solution for

- > Genset < 90 kVA
- > Heating systems
- > Climate control
- > Ventilation systems
- > Telecommunications



Strong points

- > Extensive power supply range
- > Safety and reliability
- > Easy integration
- > Simplified maintenance
- > ATyS d S: Dual power supply

Conformity to standards

- > IEC 60947-6-1
- > IEC 60947-3
- > GB 14048-11



Approvals and certifications



Function

ATyS S products are 4 pole remotely operated transfer switches with positive break indication. They enable the on-load transfer of two three-phase supplies via remote volt-free contacts, from either an external automatic controller, using pulse logic, or a switch. They are intended for use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Advantages

Extensive power supply range

The ATyS S is available in four supply versions, each with a broad range (+/-30%). The four versions are:

- 12 VDC power supply.
- 24/48 VDC power supply.
- 230 VAC single power supply.
- 2 x 230 VAC dual power supply.

Safety and reliability

ATyS S products use stable position technology, ensuring constant pressure on the contacts and preventing premature faults. In addition, they do not require a power supply to maintain position, thus protecting their loads from voltage fluctuations.

Easy integration

ATyS S products can be easily installed inside enclosures. Their design, and in particular their compact size, enables integration within most 200 mm deep enclosures.

Simplified maintenance

Maintenance can be carried out easily under load, with manual operation still available. The control and motorisation section can be replaced simply by removing 4 screws, with no work required on the installation cabling.

ATyS d S: Dual power supply

In addition to the functions offered by the ATyS S, the ATyS d S incorporates supply redundancy without the need for additional wiring. This is obtained by integrating a double supply (2 independent supplies) directly within the product.

References

ATyS S

| Rating (A) | No. of poles | Power supply | ATyS S | Bridging bars | Terminal shrouds | Voltage tap | Terminal retainer | DIN rail |
|------------|--------------|--------------|-----------|------------------|--|-------------|-----------------------|------------------------|
| 40 A | 4 P | 24/48 VDC | 9506 4004 | 4 P 9509 4013 | Source side 2 pieces 9594 4012 Load side 2 pieces 9594 9012 | 9599 4001 | 2 pieces 9599 4003 | 4 modules 9599 4002 |
| | 4 P | 12 VDC | 9505 4004 | | | | | |
| | 4 P | 230 VAC | 9503 4004 | | | | | |
| 63 A | 4 P | 24/48 VDC | 9506 4006 | | | | | |
| | 4 P | 12 VDC | 9505 4006 | | | | | |
| | 4 P | 230 VAC | 9503 4006 | | | | | |
| 80 A | 4 P | 24/48 VDC | 9506 4008 | | | | | |
| | 4 P | 12 VDC | 9505 4008 | | | | | |
| | 4 P | 230 VAC | 9503 4008 | | | | | |
| 100 A | 4 P | 24/48 VDC | 9506 4010 | | | | | |
| | 4 P | 12 VDC | 9505 4010 | | | | | |
| | 4 P | 230 VAC | 9503 4010 | | | | | |
| 125 A | 4 P | 24/48 VDC | 9506 4012 | | | | | |
| | 4 P | 12 VDC | 9505 4012 | | | | | |
| | 4 P | 230 VAC | 9503 4012 | | | | | |

ATyS d S

| Rating (A) | No. of poles | Power supply | ATyS d S | Bridging bars | Terminal shrouds | Voltage tap | Terminal retainer | DIN rail |
|------------|--------------|--------------|-----------|------------------|--|-------------|-----------------------|------------------------|
| 40 A | 4 P | 2 x 230 VAC | 9513 4004 | 4 P 9509 4013 | Source side 2 pieces 9594 4012 Load side 2 pieces 9594 9012 | 9599 4001 | 2 pieces 9599 4003 | 4 modules 9599 4002 |
| 63 A | 4 P | 2 x 230 VAC | 9513 4006 | | | | | |
| 80 A | 4 P | 2 x 230 VAC | 9513 4008 | | | | | |
| 100 A | 4 P | 2 x 230 VAC | 9513 4010 | | | | | |
| 125 A | 4 P | 2 x 230 VAC | 9513 4012 | | | | | |

ATyS S - ATyS d S

Remotely operated Transfer Switching Equipment
from 40 to 125 A

Accessories

Bridging bars

Use

For bridging power terminals on the top or bottom side of the switch.

| Rating (A) | No. of poles | Reference |
|------------|--------------|-----------|
| 40 ... 125 | 4 P | 9509 4013 |



access_385_a_2_cat

Voltage tap

Use

Enables the required power supply for ATyS S 230 VAC and ATyS d S products to be tapped directly from the product's incoming power terminals. Can also be utilised in applications without neutral, to provide 400 VAC to the autotransformer.

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



atyS-s_022_a

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 4003 |



atyS-s_021_a

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 4012 |

Terminal shrouds for the load side

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



atyS-s_020_a



atyS-s_020_a

Autotransformer 400/230 VAC

Use

For applications without neutral, this autotransformer provides the 230 VAC required to power these ATyS products.

Dimensions

75x80x72 mm

| Rating (A) | Reference |
|------------|-----------|
| 40 ... 125 | 9599 4004 |

DIN rail

Use

This 4-module DIN rail can be installed directly on the front of the ATyS S and can be utilised, for example, for the installation of a surge protection device.

| Rating (A) | Reference |
|------------|-----------|
| 40 ... 125 | 9599 4002 |



access_417_a_1_cat

Spares

Motorisation unit

Use

The motorisation module of the ATyS S can be easily replaced in case of problems, even when the load is supplied.

| Rating (A) | ATyS S 12 VDC | ATyS S 24/48 VDC | ATyS S 230 VAC | ATyS d S 2x230 VAC |
|------------|------------------|---------------------|-------------------|-----------------------|
| 40 | 9505 5004 | 9506 5004 | 9503 5004 | 9513 5004 |
| 63 | 9505 5006 | 9506 5006 | 9503 5006 | 9513 5006 |
| 80 | 9505 5008 | 9506 5008 | 9503 5008 | 9513 5008 |
| 100 | 9505 5010 | 9506 5010 | 9503 5010 | 9513 5010 |
| 125 | 9505 5012 | 9506 5012 | 9503 5012 | 9513 5012 |



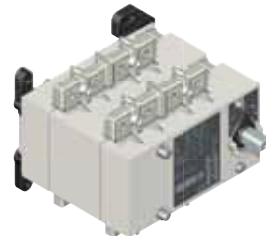
access_415_a_1_cat

Switching unit

Use

References to be used for replacing the switching module of ATyS S products.

| Rating (A) | Reference |
|------------|-----------|
| 40 | 9509 1004 |
| 63 | 9509 1006 |
| 80 | 9509 1008 |
| 100 | 9509 1010 |
| 125 | 9509 1012 |



access_414_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 5012 |



poign_058_a_1_x_cat

Connector kit

Use

This kit, including all the connector types for the different products, can be ordered in case of loss or breaking of one connector.

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



access_416_a_1_cat

ATyS S - ATyS d S

Remotely operated Transfer Switching Equipment

from 40 to 125 A

Enclosed solutions

General characteristics



coff_418_a

ATyS S and ATyS d S

- Adapted to mechanical risk and dust hazard.
- Protection degree: IP3X (IP54 optional)
- Colour: RAL 7035, epoxy polyester powder.
- Wall mounting: 4 fixing lugs supplied loose.
- Connection of cables: top or bottom.
- Locking system: 3 mm double-bar Lock (key supplied)
- Power network 230/400 VAC +/-30%, 50/60 Hz.
- Two power supplies: 12 VDC and 2 x 230 VAC.
- Manual emergency operation handle provided with the enclosure.
- Bridging bars provided fitted on the product.

References

| Rating (A) | No. of poles | ATyS S 12 VDC | ATyS d S 2 x 230 VAC |
|------------|--------------|------------------|-------------------------|
| 40 | 4 P | 3505 4004 | 3513 4004 |
| 63 | 4 P | 3505 4006 | 3513 4006 |
| 80 | 4 P | 3505 4008 | 3513 4008 |
| 100 | 4 P | 3505 4010 | 3513 4010 |
| 125 | 4 P | 3505 4012 | 3513 4012 |

Accessories

Factory fitted

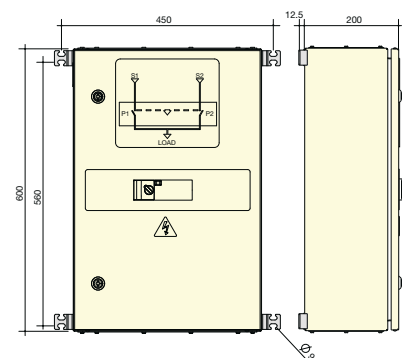
| Description | Reference |
|--|-----------|
| LEDs indicating if voltage is present | 9599 0005 |
| LEDs for position indication | 9599 0006 |
| TESTS/AUTO modes selection (with C30 option) | 9599 0007 |
| Priority selection (with C30 option) | 9599 0008 |
| Surge arresters for enclosure (SURGYS D40) | 9599 0010 |
| Three-phase kit without neutral | 9599 0012 |
| Kit for auxiliary output (3Ph+N) 16A | 9599 0016 |
| Copper bar connection kit | 9599 0019 |
| IP54 kit | 9599 0020 |
| IPXXB protection screen (door open) | 9599 0021 |
| Battery charger | 9599 0024 |
| Kit for voltage sensing on terminals | 9599 0028 |
| Auxiliary kit for control on terminals | 9599 0029 |
| Kit for ATyS C30 control/command | 9599 0030 |

Customer fit

| Description | Reference |
|-------------------------------------|-----------|
| Copper bar connection kit | 9599 0018 |
| IP54 kit | 9599 0020 |
| IPXXB protection screen (door open) | 9599 0021 |

Dimensions

| Rating (A) | Connection cross-section (mm ²) | H (mm) | L (mm) | P (mm) | Weight (kg) |
|------------|---|--------|--------|--------|-------------|
| 40 | 10 | 600 | 400 | 200 | 25 |
| 63 | 16 | 600 | 400 | 200 | 25 |
| 80 | 25 | 600 | 400 | 200 | 25 |
| 100 | 35 | 600 | 400 | 200 | 25 |
| 125 | 50 | 600 | 400 | 200 | 25 |



coff_423_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 |

| Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s⁽¹⁾ | | | | | | |
|---|--|-----|-----|-----|-----|-----|
| Rated short-time withstand current 0.3s I_{cw} (kA rms) | | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |

| Short-circuit capacity as per IEC 60947-6-1 | | | | | | |
|--|--|------|------|------|------|---|
| Rated short-time withstand current 0.03 s. (kA) | | 5 | 5 | 5 | 5 | - |
| Rated short-circuit making capacity I_{cm} (kA peak) | | 7.65 | 7.65 | 7.65 | 7.65 | - |

| Short-circuit capacity as per IEC 60947-3 (without protection) | | | | | | |
|---|--|-----|-----|-----|-----|-----|
| Rated short-time withstand current 1 s. I_{cw} (kA rms) | | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Rated peak withstand current (kA peak) | | 12 | 12 | 12 | 12 | 12 |

| Connection | | | | | | |
|---|--|-------|-------|-------|-------|-------|
| Maximum Cu cable cross-section (mm ²) | | 50 | 50 | 50 | 50 | 50 |
| Tightening torque mini / maxi (Nm) | | 1.2/3 | 1.2/3 | 1.2/3 | 1.2/3 | 1.2/3 |

| Switching time (Standard setting) | | | | | | |
|---|--|------|------|------|------|------|
| I - 0 or II - 0 (ms) | | 500 | 500 | 500 | 500 | 500 |
| I - II or II - I (ms) | | 1000 | 1000 | 1000 | 1000 | 1000 |
| Duration of "electrical blackout" I - II (ms) minimum | | 500 | 500 | 500 | 500 | 500 |

| Power supply | | | | | | |
|--|--|---------|---------|---------|---------|---------|
| Power supply 12 VDC min / max (VDC) | | 9/15 | 9/15 | 9/15 | 9/15 | 9/15 |
| Power supply 24/48 VDC min / max (VDC) | | 17/62 | 17/62 | 17/62 | 17/62 | 17/62 |
| Power supply 230 VAC min / max (VAC) | | 160/310 | 160/310 | 160/310 | 160/310 | 160/310 |

| Control supply power demand | | | | | | |
|--|--|--------|--------|--------|--------|--------|
| Power supply 12 VDC inrush / nominal (VA) | | 200/40 | 200/40 | 200/40 | 200/40 | 200/40 |
| Power supply 24/48 VDC inrush / nominal (VA) | | 200/40 | 200/40 | 200/40 | 200/40 | 200/40 |
| Supply 230 VAC inrush / nominal (VA) | | 200/40 | 200/40 | 200/40 | 200/40 | 200/40 |

| Mechanical characteristics | | | | | | |
|---|--|--------|--------|--------|--------|--------|
| Durability (number of operating cycles) | | 25 000 | 25 000 | 25 000 | 25 000 | 25 000 |
| Weight ATyS S and ATyS d S 4 P (kg) | | 3 | 3 | 3 | 3 | 3 |

(1) Value for coordination with any circuit breaker that ensures tripping in less than 0.3s. For coordination with specific circuit-breaker references, higher short-circuit current values are available. Please consult us.

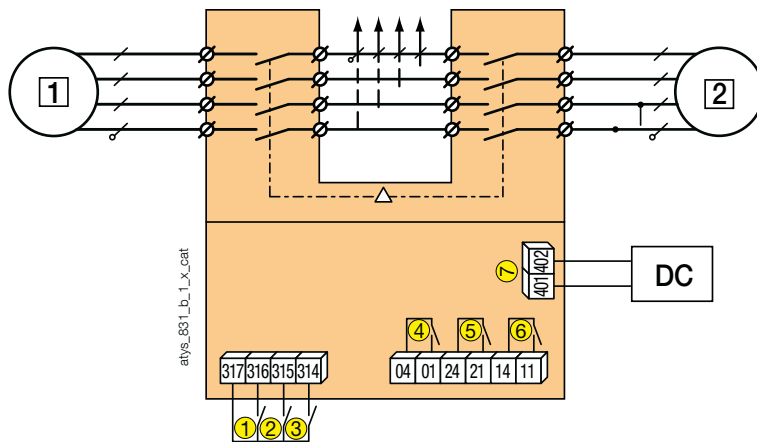
ATyS S - ATyS d S

Remotely operated Transfer Switching Equipment

from 40 to 125 A

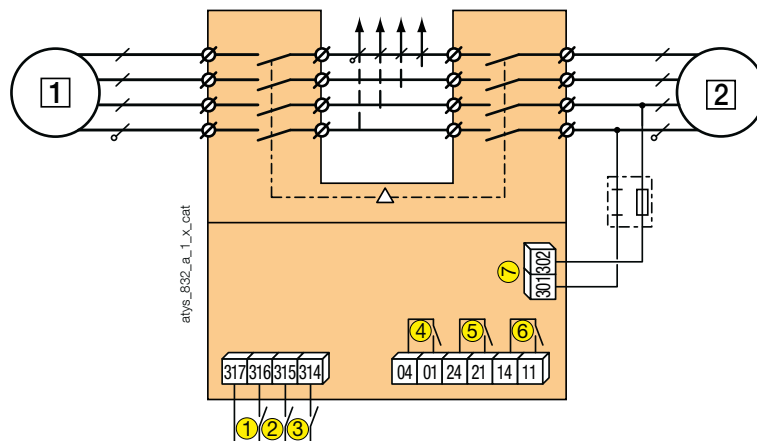
Terminals and connections

ATyS S DC version



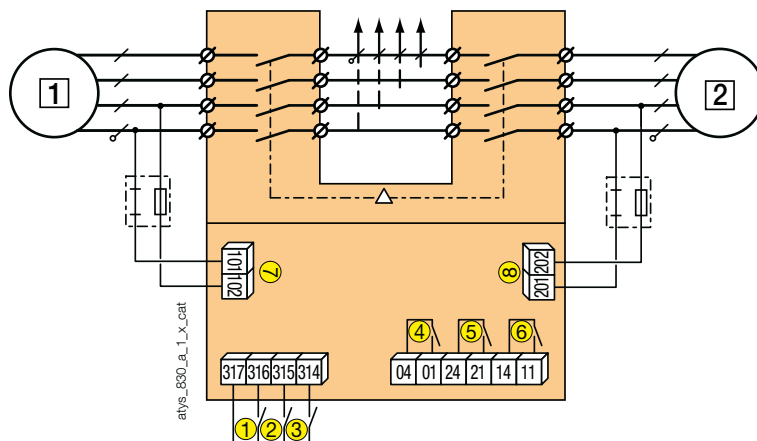
- 1 preferred source
- 2 alternate source
- 1: position 0 control
- 2: position I control
- 3: position II control
- 4: auxiliary contact, closed when the switch is in position 0
- 5: auxiliary contact, closed when the switch is in position II
- 6: auxiliary contact, closed when the switch is in position I
- 7: power supply 12 VDC (9-15 VDC) or 24 VDC / 48 VDC (17-62 VDC) depending on the version.

ATyS S: 230 VAC



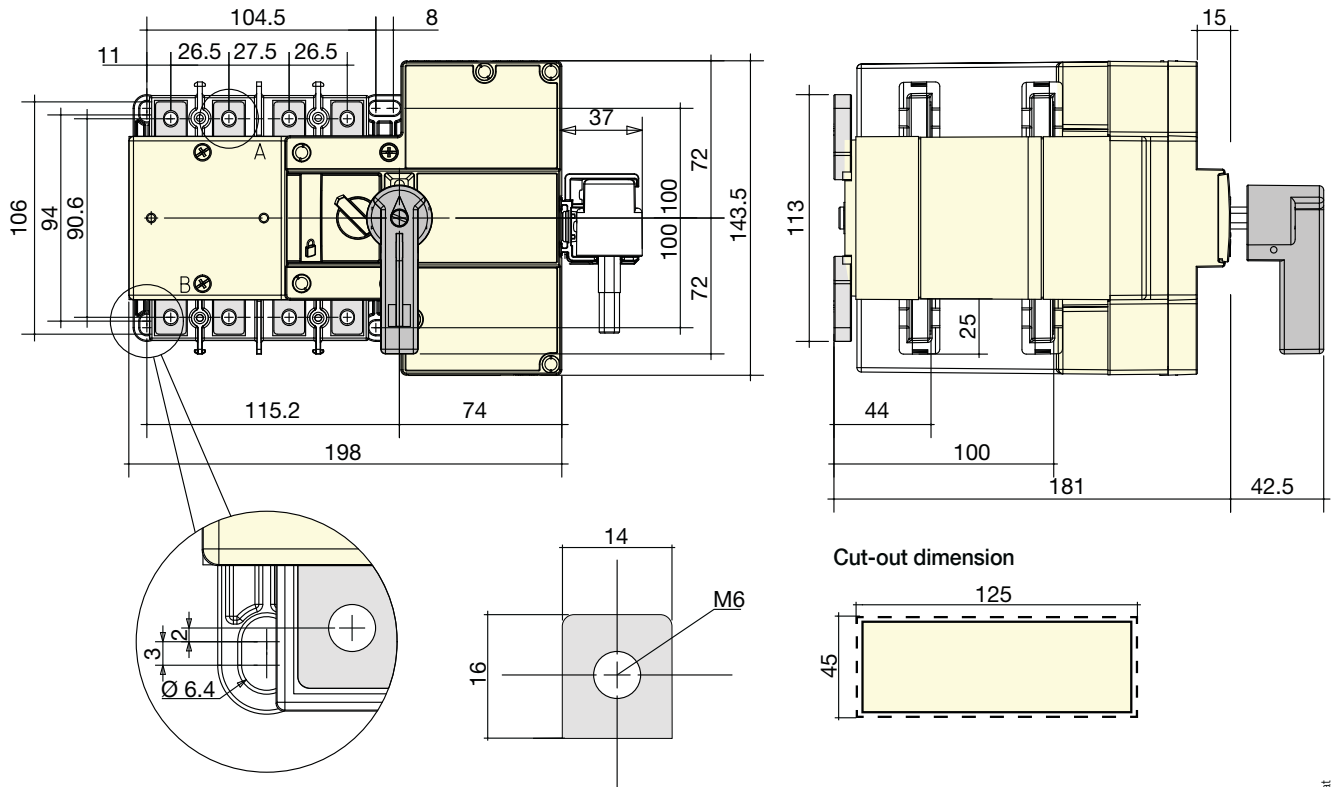
- 1 preferred source
- 2 alternate source
- 1: position 0 control
- 2: position I control
- 3: position II control
- 4: auxiliary contact, closed when the switch is in position 0
- 5: auxiliary contact, closed when the switch is in position II
- 6: auxiliary contact, closed when the switch is in position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

ATyS d S: 2 x 230 VAC



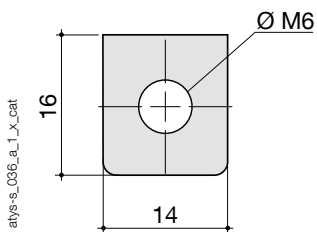
- 1 preferred source
- 2 alternate source
- 1: position 0 control
- 2: position I control
- 3: position II control
- 4: auxiliary contact, closed when the switch is in position 0
- 5: auxiliary contact, closed when the switch is in position II
- 6: auxiliary contact, closed when the switch is in position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

Dimensions



atys-s_024_a_1_x_cat

Connection terminal



atys-s_036_a_1_x_cat






















The **ATyS** range: intuitive, reliable and robust solutions

Transfer switches

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. Five product versions are available to find the right solution perfectly adapted to your application.

| RTSE (Remotely operated) | | ATSE (Automatic) | | |
|---|---|--|---|---|
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| ATyS <i>r</i> | ATyS <i>d</i> Motorised Transfer Switching Equipment | ATyS <i>t</i> Automatic Transfer Switching Equipment | ATyS <i>g</i> Automatic Transfer Switching Equipment | ATyS <i>p</i> Automatic Transfer Switching Equipment |
| Motorised Transfer Switching Equipment  | Dual power supply  | Automatic controller to manage mains/ mains applications  | Automatic controller to manage mains/ genset applications  | Functions for energy management Communication options |

WEB
SERVER
OPTION

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.



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.



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.



Rapid commissioning

- **ATyS** and **ATyS d**: no configuration required.
- **ATyS t** and **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 t, 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

Expert Services

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





ATyS r - ATyS d

Remotely operated Transfer Switching Equipment from 125 to 3200 A

Transfer switches



atyS_d_001_a_1_cat



atyS_r_006_a_1_cat

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
- > ATyS d: integrated dual power supply

Conformity to standards

- > IEC 60947-6-1
- > IEC 60947-3
- > GB 14048.11



Approvals and certifications⁽¹⁾



BUREAU
VERITAS

(1) Product references on request.

External automatic controller

- > The ATyS r and ATyS d are compatible with our ATyS C30 external controllers (for mains/mains and mains/genset applications) and ATyS C40 controllers (for genset/genset applications).

Function

ATyS r and ATyS d 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 and ATyS d 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 and ATyS d 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 and ATyS d products offer greater availability thanks to their extensive power supply range of 208 to 277 VAC ± 20%.

ATyS d: integrated dual power supply

In addition to the functions offered by the ATyS r, the ATyS d incorporates supply redundancy without the need for additional wiring. This is obtained by integrating a double supply (2 independent power supplies) directly within the product.

References

ATyS r - ATyS d

| Rating (A) / Frame size | No. of poles | ATyS r | ATyS d | Bridging bars | Terminal shrouds | Terminal screens | Auxiliary contact | 3 position padlocking | Auto transformer |
|-------------------------|--------------|-----------|-----------|--------------------------------------|--|--------------------------------------|-------------------|--------------------------|--------------------------|
| 125 A / B3 | 3 P | 9523 3012 | 9533 3012 | | | | | | |
| | 4 P | 9523 4012 | 9533 4012 | | | | | | |
| 160 A / B3 | 3 P | 9523 3016 | 9533 3016 | 3 P 4109 3019 4 P 4109 4019 | 3 P 2694 3014 ⁽²⁾ 4 P 2694 4014 ⁽²⁾ | 3 P 1509 3012 4 P 1509 4012 | | | |
| | 4 P | 9523 4016 | 9533 4016 | | | | | | |
| 200 A / B3 | 3 P | 9523 3020 | 9533 3020 | | | | | | |
| | 4 P | 9523 4020 | 9533 4020 | | | | | | |
| 250 A / B4 | 3 P | 9523 3025 | 9533 3025 | 3 P 4109 3025 4 P 4109 4025 | | | 1599 0502 | 9599 0003 ⁽³⁾ | |
| | 4 P | 9523 4025 | 9533 4025 | | | | | | |
| 315 A / B4 | 3 P | 9523 3031 | 9533 3031 | 3 P 4109 3039 4 P 4109 4039 | 3 P 2694 3021 ⁽²⁾ 4 P 2694 4021 ⁽²⁾ | 3 P 1509 3025 4 P 1509 4025 | | | |
| | 4 P | 9523 4031 | 9533 4031 | | | | | | |
| 400 A / B4 | 3 P | 9523 3040 | 9533 3040 | | | | | | |
| | 4 P | 9523 4040 | 9533 4040 | | | | | | |
| 500 A / B5 | 3 P | 9523 3050 | 9533 3050 | 3 P 4109 3050 4 P 4109 4050 | 3 P 2694 3051 ⁽²⁾ 4 P 2694 4051 ⁽²⁾ | 3 P 1509 3063 4 P 1509 4063 | | | 400/230 VAC 1599 4064 |
| | 4 P | 9523 4050 | 9533 4050 | | | | | | |
| 630 A / B5 | 3 P | 9523 3063 | 9533 3063 | 3 P 4109 3063 4 P 4109 4063 | | | | | |
| | 4 P | 9523 4063 | 9533 4063 | | | | | | |
| 800 A / B6 | 3 P | 9523 3080 | 9533 3080 | 3 P 4109 3080 4 P 4109 4080 | | | | | |
| | 4 P | 9523 4080 | 9533 4080 | | | | | | |
| 1000 A / B6 | 3 P | 9523 3100 | 9533 3100 | | | 3 P 1509 3080 4 P 1509 4080 | 1599 0532 | | |
| | 4 P | 9523 4100 | 9533 4100 | | | | | | |
| 1250 A / B6 | 3 P | 9523 3120 | 9533 3120 | 3 P 4109 3120 4 P 4109 4120 | | | | | |
| | 4 P | 9523 4120 | 9533 4120 | | | | | | |
| 1600 A / B7 | 3 P | 9523 3160 | 9533 3160 | 3 P 4109 3160 4 P 4109 4160 | | 3 P 1509 3160 4 P 1509 4160 | | 9599 0004 ⁽³⁾ | |
| | 4 P | 9523 4160 | 9533 4160 | | | | | | |
| 2000 A / B8 | 3 P | 9523 3200 | 9533 3200 | | | | | | |
| | 4 P | 9523 4200 | 9533 4200 | | | | | | |
| 2500 A / B8 | 3 P | 9523 3250 | 9533 3250 | (1) | | 3 P 1509 3200 4 P 1509 4200 | included | | |
| | 4 P | 9523 4250 | 9533 4250 | | | | | | |
| 3200 A / B8 | 3 P | 9523 3320 | 9533 3320 | | | | | | |
| | 4 P | 9523 4320 | 9533 4320 | | | | | | |

(1) See "Copper bar connection pieces" page 69.

(2) To fully shroud front, rear, top and bottom 4 references required.
To shroud front switch top and bottom 2 references required.

(3) Factory mounting only.

Technical information

- > Accessories: see page 68.
- > Characteristics: see page 76.
- > Terminals and connections: see page 78.
- > Dimensions: see page 80.



ATyS t - ATyS g

Automatic Transfer Switching Equipment

from 125 to 3200 A

Transfer switches



The solution for

- > Mains/mains applications (ATyS t)
- > Mains/genset applications (ATyS g)



Strong points

- > Rapid commissioning
- > ATyS d with integrated controller for functions dedicated to mains/mains or mains/genset applications

Conformity to standards

- > IEC 60947-6-1
- > IEC 60947-3
- > GB 14048.11



Approvals and certifications⁽¹⁾



BUREAU
VERITAS

(1) Product references on request.

Function

ATyS t and **ATyS g** are 3 or 4 pole automatic transfer switches, with positive break indication. They incorporate all the functions offered by the ATyS d, as well as functions intended for **mains/mains** applications (ATyS t) and **mains/genset** applications (ATyS g).

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 two potentiometers and four 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.

Advantages

Rapid commissioning

ATyS t and g switches offer significant time saving during commissioning (process takes 2 to 3 minutes). Owing to the design that allows commissioning through just two potentiometers (4 on the ATyS g) 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.

ATyS t: specifically designed for mains/mains applications

The ATyS t's integrated controller has been designed to provide only the functions required 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 and single-phase networks.

ATyS g: specifically designed for 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.

References

ATyS t - ATyS g

| Rating (A) / Frame size | No. of poles | ATyS t | ATyS g | Bridging bars | Voltage sensing and power supply tap | Terminal shrouds | Terminal screens | Auxiliary contact |
|----------------------------|--------------|-----------|-----------|--------------------------------------|---|--|--------------------------------------|----------------------|
| 125 A / B3 | 3 P | 9543 3012 | 9553 3012 | | | | | |
| | 4 P | 9543 4012 | 9553 4012 | | | | | |
| 160 A / B3 | 3 P | 9543 3016 | 9553 3016 | 3 P 4109 3019 4 P 4109 4019 | 3 P 1559 3012 4 P 1559 4012 ⁽¹⁾ | 3 P 2694 3014 ⁽²⁾ 4 P 2694 4014 ⁽²⁾ | 3 P 1509 3012 4 P 1509 4012 | |
| | 4 P | 9543 4016 | 9553 4016 | | | | | |
| 200 A / B3 | 3 P | 9543 3020 | 9553 3020 | | | | | |
| | 4 P | 9543 4020 | 9553 4020 | | | | | |
| 250 A / B4 | 3 P | 9543 3025 | 9553 3025 | 4109 3025 | 1559 3025 | | | 1599 0502 |
| | 4 P | 9543 4025 | 9553 4025 | 4109 4025 | 1559 4025 | | | |
| 315 A / B4 | 3 P | 9543 3031 | 9553 3031 | 3 P 4109 3039 4 P 4109 4039 | 3 P 1559 3040 4 P 1559 4040 | 3 P 2694 3021 ⁽²⁾ 4 P 2694 4021 ⁽²⁾ | 3 P 1509 3025 4 P 1509 4025 | |
| | 4 P | 9543 4031 | 9553 4031 | | | | | |
| 400 A / B4 | 3 P | 9543 3040 | 9553 3040 | 4109 4039 | 1559 4040 | | | |
| | 4 P | 9543 4040 | 9553 4040 | | | | | |
| 500 A / B5 | 3 P | 9543 3050 | 9553 3050 | 4109 3050 | 3 P 1559 3063 4 P 1559 4063 | 3 P 2694 3051 ⁽²⁾ 4 P 2694 4051 ⁽²⁾ | 3 P 1509 3063 4 P 1509 4063 | |
| | 4 P | 9543 4050 | 9553 4050 | 4109 4050 | | | | |
| 630 A / B5 | 3 P | 9543 3063 | 9553 3063 | 4109 3063 | 1559 4063 | 2694 4051 ⁽²⁾ | 1509 4063 | |
| | 4 P | 9543 4063 | 9553 4063 | 4109 4063 | | | | |
| 800 A / B6 | 3 P | 9543 3080 | 9553 3080 | 3 P 4109 3080 4 P 4109 4080 | 3 P 1559 3080 4 P 1559 4080 | | 3 P 1509 3080 4 P 1509 4080 | 1599 0532 |
| | 4 P | 9543 4080 | 9553 4080 | | | | | |
| 1000 A / B6 | 3 P | 9543 3100 | 9553 3100 | 4109 4080 | 1559 4080 | | 1509 4080 | |
| | 4 P | 9543 4100 | 9553 4100 | | | | | |
| 1250 A / B6 | 3 P | 9543 3120 | 9553 3120 | 4109 3120 | 1559 3120 | | 1509 3160 | |
| | 4 P | 9543 4120 | 9553 4120 | 4109 4120 | 1559 4120 | | | |
| 1600 A / B7 | 3 P | 9543 3160 | 9553 3160 | 4109 3160 | 1559 3160 | | 1509 3160 | |
| | 4 P | 9543 4160 | 9553 4160 | 4109 4160 | 1559 4160 | | 1509 4160 | |
| 2000 A / B8 | 3 P | 9543 3200 | 9553 3200 | | | | | |
| | 4 P | 9543 4200 | 9553 4200 | | | | | |
| 2500 A / B8 | 3 P | 9543 3250 | 9553 3250 | (1) | 3 P 1559 3200 4 P 1559 4200 | | 3 P 1509 3200 4 P 1509 4200 | included |
| | 4 P | 9543 4250 | 9553 4250 | | | | | |
| 3200 A / B8 | 3 P | 9543 3320 | 9553 3320 | | | | | |
| | 4 P | 9543 4320 | 9553 4320 | | | | | |

(1) See "Copper bar connection pieces" page 69.

(2) To fully shroud front, rear, top and bottom 4 references required.
To shroud front switch top and bottom 2 references required.

Technical information

- > Accessories: see page 68.
- > Characteristics: see page 76.
- > Terminals and connections: see page 78.
- > Dimensions: see page 80.



ATyS p

Automatic Transfer Switching Equipment from 125 to 3200 A

Transfer switches



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
- > IEC 60947-3
- > GB 14048.11



Approvals and certifications⁽¹⁾



BUREAU
VERITAS

⁽¹⁾ Product references on request.

Webserver

The Webserver function comprises HTML pages embedded in the Ethernet communication module.

These pages can be accessed via an internet browser, simply by entering the IP address.

The webserver offers the following functionalities:

- > Display of source status and switch position
- > Display of the main measurements
- > Extraction of the latest logged events
- > Display of the product configuration

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 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

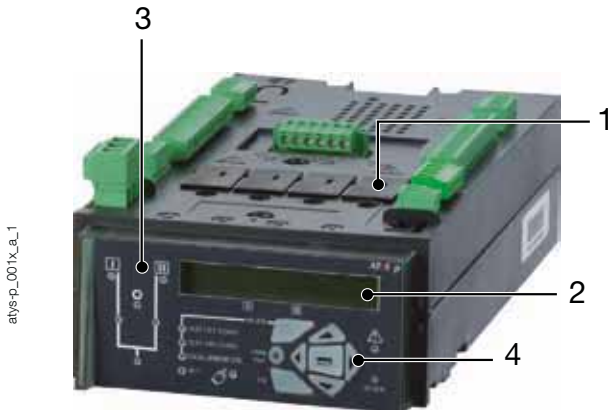
ATyS p products are particularly suited to energy management and monitoring.

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.

Front panel



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.

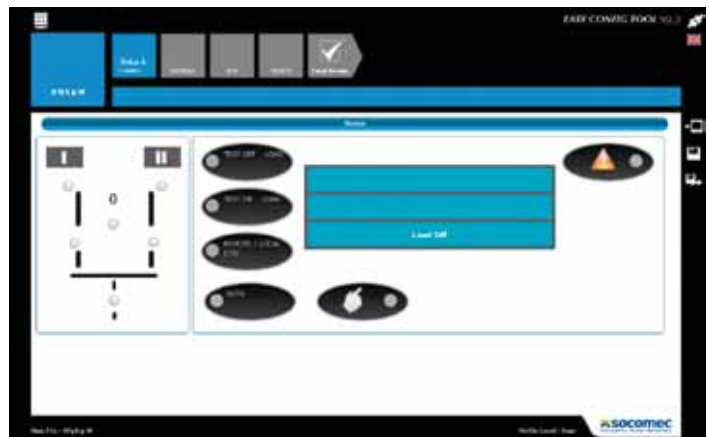
Communication and configuration

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...



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 ATySp 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.



References

ATyS p

| Rating (A) / Frame size | No. of poles | ATyS p | Bridging bars | Voltage sensing and power supply tap | Terminal shrouds | Terminal screens | Optional modules | Auxiliary contact |
|-------------------------|--------------|-----------|------------------|--------------------------------------|---------------------------------|------------------|--|-------------------|
| 125 A / B3 | 3 P | 9573 3012 | | | | | | |
| | 4 P | 9573 4012 | | | | | | |
| 160 A / B3 | 3 P | 9573 3016 | 3 P 4109 3019 | 3 P 1559 3012 | 3 P 2694 3014 ⁽²⁾ | 3 P 1509 3012 | | |
| | 4 P | 9573 4016 | 4 P 4109 4019 | 4 P 1559 4012 | 4 P 2694 4014 ⁽²⁾ | 4 P 1509 4012 | | |
| 200 A / B3 | 3 P | 9573 3020 | | | | | | |
| | 4 P | 9573 4020 | | | | | | |
| 250 A / B4 | 3 P | 9573 3025 | 4109 3025 | 1559 3025 | | | | |
| | 4 P | 9573 4025 | 4109 4025 | 1559 4025 | | | | |
| 315 A / B4 | 3 P | 9573 3031 | 3 P 4109 3039 | 3 P 1559 3040 | 3 P 2694 3021 ⁽²⁾ | 3 P 1509 3025 | RS485 MODBUS communication 4825 0092 | 1599 0502 |
| | 4 P | 9573 4031 | | | | | | |
| 400 A / B4 | 3 P | 9573 3040 | | | | | 2 inputs / 2 outputs 1599 2001 | |
| | 4 P | 9573 4040 | | | | | | |
| 500 A / B5 | 3 P | 9573 3050 | 4109 3050 | 3 P 1559 3063 | 3 P 2694 3051 ⁽²⁾ | 3 P 1509 3063 | Ethernet communication 4825 0203 | |
| | 4 P | 9573 4050 | 4109 4050 | | | | | |
| 630 A / B5 | 3 P | 9573 3063 | 4109 3063 | 4 P 1559 4063 | 4 P 2694 4051 ⁽²⁾ | 4 P 1509 4063 | Ethernet communication + RS485 MODBUS gateway 4825 0204 | |
| | 4 P | 9573 4063 | 4109 4063 | | | | | |
| 800 A / B6 | 3 P | 9573 3080 | 3 P 4109 3080 | 3 P 1559 3080 | | | Analogue outputs 4825 0093 | |
| | 4 P | 9573 4080 | | | | | | |
| 1000 A / B6 | 3 P | 9573 3100 | | | | 3 P 1509 3080 | Pulse outputs 4825 0090 | 1599 0532 |
| | 4 P | 9573 4100 | | | | | | |
| 1250 A / B6 | 3 P | 9573 3120 | 4109 3120 | 3 P 1559 3120 | | | | |
| | 4 P | 9573 4120 | 4109 4120 | 4 P 1559 4120 | | | | |
| 1600 A / B7 | 3 P | 9573 3160 | 4109 3160 | 3 P 1559 3160 | | 1509 3160 | | |
| | 4 P | 9573 4160 | 4109 4160 | 4 P 1559 4160 | | 1509 4160 | | |
| 2000 A / B8 | 3 P | 9573 3200 | | | | | | |
| | 4 P | 9573 4200 | | | | | | |
| 2500 A / B8 | 3 P | 9573 3250 | (1) | 3 P 1559 3200 | | 3 P 1509 3200 | | included |
| | 4 P | 9573 4250 | | | | | | |
| 3200 A / B8 | 3 P | 9573 3320 | | | | | | |
| | 4 P | 9573 4320 | | | | | | |

(1) See "Copper bar connection pieces" page 69.

(2) To fully shroud front, rear, top and bottom 4 references required.

To shroud front switch top and bottom 2 references required.

ATyS p

| Rating (A) / Frame size | No. of poles | ATyS p | DC power supply | 3 position padlocking | Key handle interlocking system | Door protective surround | Mounting spacers | Remote control interface |
|----------------------------|--------------|-----------|---|--------------------------|---|-----------------------------|---------------------------------|--|
| 125 A / B3 | 3 P | 9573 3012 | 12 VDC/230 VAC 1599 5012 24 VDC/230 VAC 1599 5112 48 VDC/230 VAC 1599 5212 | 9599 0003 ⁽¹⁾ | Using lock RONIS EL11AP in position 0 9599 1006 ⁽¹⁾ | 1539 0012 | 1 set of 2 spacers 1509 0001 | D20 9599 2020 + RJ45 cable connection 1599 2009 |
| | 4 P | 9573 4012 | | | | | | |
| 160 A / B3 | 3 P | 9573 3016 | | | | | | |
| | 4 P | 9573 4016 | | | | | | |
| 200 A / B3 | 3 P | 9573 3020 | | | | | | |
| | 4 P | 9573 4020 | | | | | | |
| 250 A / B4 | 3 P | 9573 3025 | | | | | | |
| | 4 P | 9573 4025 | | | | | | |
| 315 A / B4 | 3 P | 9573 3031 | | | | | | |
| | 4 P | 9573 4031 | | | | | | |
| 400 A / B4 | 3 P | 9573 3040 | | | | | | |
| | 4 P | 9573 4040 | | | | | | |
| 500 A / B5 | 3 P | 9573 3050 | | | | | | |
| | 4 P | 9573 4050 | | | | | | |
| 630 A / B5 | 3 P | 9573 3063 | | | | | | |
| | 4 P | 9573 4063 | | | | | | |
| 800 A / B6 | 3 P | 9573 3080 | | | | | | |
| | 4 P | 9573 4080 | | | | | | |
| 1000 A / B6 | 3 P | 9573 3100 | | | | | | |
| | 4 P | 9573 4100 | | | | | | |
| 1250 A / B6 | 3 P | 9573 3120 | | | | | | |
| | 4 P | 9573 4120 | | | | | | |
| 1600 A / B7 | 3 P | 9573 3160 | | | | | | |
| | 4 P | 9573 4160 | | | | | | |
| 2000 A / B8 | 3 P | 9573 3200 | | | | | | |
| | 4 P | 9573 4200 | | | | | | |
| 2500 A / B8 | 3 P | 9573 3250 | | | | | | |
| | 4 P | 9573 4250 | | | | | | |
| 3200 A / B8 | 3 P | 9573 3320 | | | | | | |
| | 4 P | 9573 4320 | | | | | | |
| | | | | 9599 0004 ⁽¹⁾ | Using lock RONIS EL11AP in position 0 9599 1004 ⁽¹⁾ | 1539 0080 | | |

(1) Factory mounting only.



ATyS range

ATyS *r*, ATyS *d*, ATyS *t*, 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⁾ |



access_206_a_2_cat

(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 | 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 |



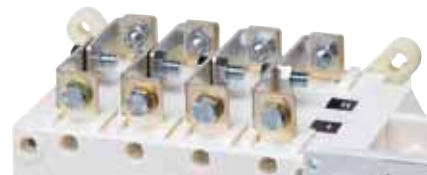
access_207_a_2_cat

Bridging bars

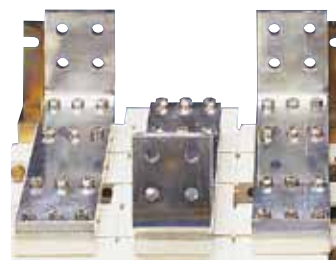
Use

For bridging power terminals on the upstream or downstream side of the switch.
One reference required per ATyS.

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



access_205_a_2_cat



access_041_a_1_cat

Copper bar connection pieces

Use

For ratings 2000 to 3200 A.

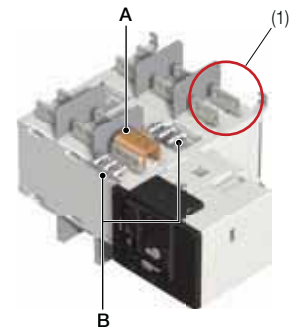
Enables:

- 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.

Fig. 2

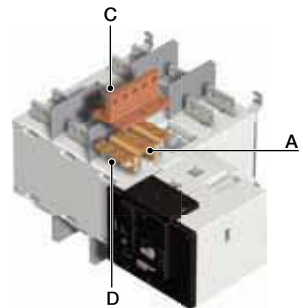
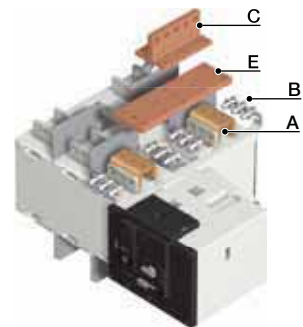


Fig. 3



| | 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 |
| Connection - part A | 2619 1200 | 1 | 1 | | | included | |
| Bolt kit 35 mm - part B | 2699 1201 | 1 ⁽¹⁾ | | 2 ⁽²⁾ | 1 ⁽¹⁾ | 2 ⁽²⁾ | |
| Bolt kit 45 mm - part B | 2699 1200 | 1 ⁽¹⁾ | | | 1 ⁽¹⁾ | | |
| T + Bolt kit - part C | 2629 1200 | | 1 | 1 | | 1 | |
| Bracket + bolt kit - part D | 2639 1200 | | 1 | | | 1 | |
| Bar + bolt kit - part E | 4109 0320 | | | 1 | | 1 | |

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

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

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 |

Solid neutral

Use

The solid neutral kit provides connection between the incoming and outgoing neutrals with no disconnection during transfer.

| Rating (A) | Frame size | Reference |
|--------------|------------|-----------|
| 125 ... 200 | B3 | 9509 0012 |
| 200 ... 315 | B4 | 9509 0025 |
| 400 | B4 | 9509 0040 |
| 500 ... 630 | B5 | 9509 0063 |
| 800 ... 1000 | B6 | 9509 0080 |
| 1250 | B6 | 9509 0120 |
| 1600 | B7 | 9509 0160 |

ATyS range

ATyS r, ATyS d, ATyS t, ATyS g, ATyS p

from 125 to 3200 A

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 tapping and power supply kit

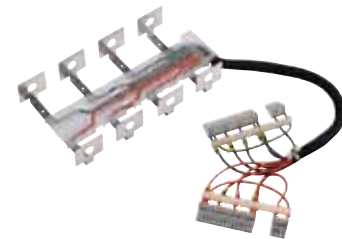
Use

For power supply and voltage measurement (4 wire, three-phase) for the ATyS t, g and p. Routing of the conductors is controlled, which means that no specific protective device is necessary for these connections.

The kit can be fitted on the top or bottom of the switch.

Note: the 3-pole version does not integrate the power supply.

125 to 630 A kit



atys_606_a_1_cat

800 to 3200 A kit



atys_603_a_2_cat

For ATyS t, 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 t, 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 relay

Use

The DS is a voltage relay for monitoring a single power supply.

If it detects a fault in the source, the default relay contact closes.

| Rating (A) | Reference |
|------------|-----------|
| DS | 192X 0056 |



atys_762_a_1_cat

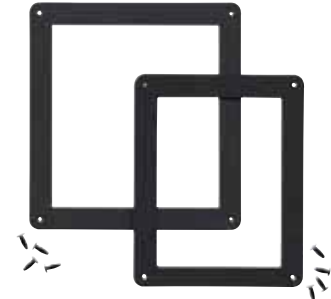
Door protective surround

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 d, t, g and p | | |
|------------------------|------------|-----------|
| Rating (A) | Frame size | Reference |
| 125 ... 630 | B3 ... B5 | 1539 0012 |
| 800 ... 3200 | B6 ... B8 | 1539 0080 |



atys_595_a_2_cat

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.

| 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 |



800 to 1600 A

If additional auxiliary contacts are required please consult us.



125 to 630 A

access_396_a

access_397_a

Mounting spacers

Use

Increases the distance between the rear power terminals and the backplate by 1 cm.

This accessory may also be used to replace the original mounting spacers.

| Rating (A) | Frame size | Description of accessories | Reference |
|-------------|------------|----------------------------|-----------|
| 125 ... 630 | B3 ... B5 | 1 set of 2 spacers | 1509 0001 |



atys_009_a_2_cat

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 |



atys_867_a

Key handle interlocking system

Use

With the product in manual mode, it enables locking in position 0 using a RONIS EL1 1AP 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 |



atys_866_a

ATyS range

ATyS r, ATyS d, ATyS t, ATyS g, ATyS p

from 125 to 3200 A

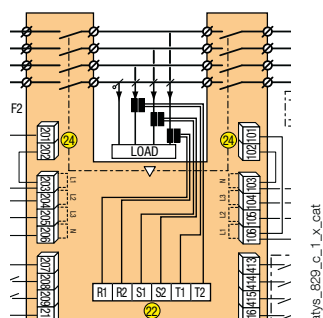
Accessories (continued)

Current transformer

Use - for ATyS p only

Used with ATyS p units, these current transformers enable information to be obtained on the load current.

See our general catalogue or our website:
www.socomec.com.



trafo_025_a_2_cat



trafo_077_b_1_cat

Plug-in optional modules

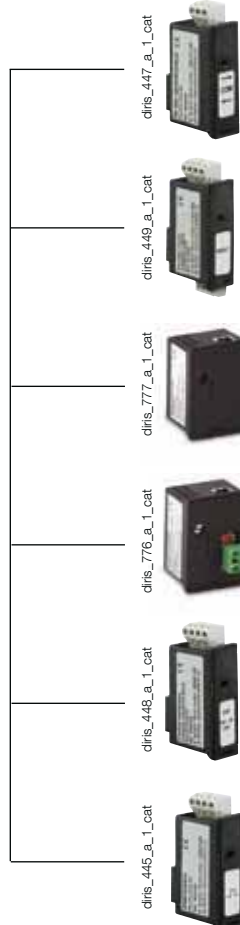
Use - for ATyS p only

Number of modules per device

A maximum of four modules can be fitted to each ATyS p, unless you are using either Ethernet communication module. In this case, you can connect up to 2 modules as well as the Ethernet communication module.



atys_016_c_1_cat



RS485 JBUS / MODBUS® communication

- RS485 link with JBUS / MODBUS® protocol (speed up to 38400 bauds).

2 inputs - 2 outputs

- 2 inputs and 2 outputs (programmable) on each module.

Ethernet communication

- Ethernet link with MODBUS/TCP or JBUS/MODBUS RTU over TCP.
- Embedded Ethernet Webserver software.

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.

Analogue outputs

- Allocate outputs to: 3I, In, 3V, 3U, F, ± ΣP, ± ΣQ, ΣS.

Pulse outputs

- 2 configurable pulse outputs (type, weight and duration) on ±kWh, ±kvarh and kVAh.

| Description of accessories | Reference |
|---|-----------|
| RS485 MODBUS communication | 4825 0092 |
| 2 inputs - 2 outputs | 1599 2001 |
| Ethernet communication (embedded Ethernet Webserver software) | 4825 0203 |
| Ethernet communication + RS485 JBUS/MODBUS gateway (embedded Ethernet Webserver software) | 4825 0204 |
| Analogue outputs | 4825 0093 |
| Pulse outputs | 4825 0090 |

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 d, ATyS t and 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 $\varnothing 22.5$.

ATyS transfer switch via RJ45 cable, not isolated. Cable available as an accessory.

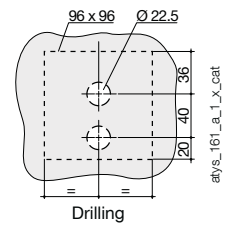


atys_564_d_1_cat

atys_565_d_1_cat



RJ45 port to connect to ATyS.



atys_161_a_1_x_cat

| 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 d, t, g or p).

Characteristics

RJ45 8 straight-through, non insulated cables, length 3 m.



access_209_a_2_cat

| For ATyS d, t, g and p | | |
|------------------------|--------|-----------|
| Type | Length | Reference |
| RJ45 cable | 3 m | 1599 2009 |

Sealable cover

Use - for ATyS t and g

Prevents access to the configuration of ATyS t and g devices (seals supplied).

| Rating (A) | Frame size | Reference |
|--------------|------------|-----------|
| 125 ... 3200 | B3 ... B8 | 9599 0000 |



atys_870_a

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 |



atys_869_a

Double power supply - DPS

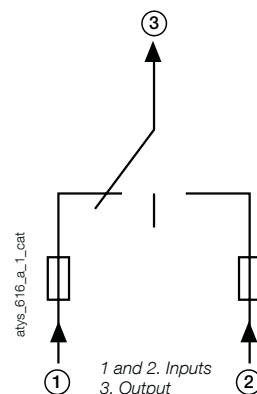
Use

Allows an ATyS r to be supplied by two 230 VAC, 50/60 Hz networks.

Input

- The input is considered "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 device: 4 module width.

| Description of accessories | Reference |
|----------------------------|-----------|
| DPS | 1599 4001 |



atys_612_a_2_cat

ATyS range

ATyS r, ATyS d, ATyS t, ATyS g, ATyS p

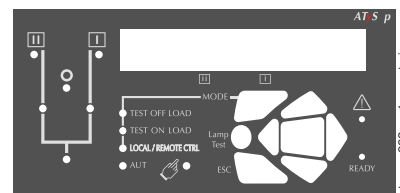
from 125 to 3200 A

Spares

ATyS p front panel

This front panel is used, for the ATyS p only, if source 2 is connected to unit I and source 1 is connected to unit II. Positions I and II are reversed on the front panel.

| Product model | Reference |
|---------------|-----------|
| ATyS p | 9599 1008 |



atys-p_002_a_1_x_cat.ai

Electronic module

The electrical components of the ATyS d, t, g and p are easy to replace in case there is a problem, even when on-load.

| Product model | Reference |
|---------------|-----------|
| ATyS d | 9539 2001 |
| ATyS t | 9549 2001 |
| ATyS g | 9559 2001 |
| ATyS p | 9579 2001 |



atys-p_001_b

Motorisation module

The motor units of the ATyS r, d, t, g and p are easy to replace in case there is a problem, even when on-load.

| Rating (A) | Reference |
|---------------|-----------|
| 125 ... 200 | 9509 5020 |
| 250 ... 400 | 9509 5040 |
| 500 ... 630 | 9509 5063 |
| 800 ... 1250 | 9509 5120 |
| 1600 | 9509 5160 |
| 2000 ... 3200 | 9509 5320 |



atys_871_a

Switching module

If you need to replace just the switching part on an ATyS r, d, t, g or p, order SIRCOVER items. Please refer to page 18.



svr_151_a

Enclosed solutions

General characteristics

ATyS d and ATyS p

- Adapted to mechanical risk and dust hazard.
- IP rating: IP54.
- Colour: RAL 7035.
- Connecting the cables: upstream or downstream up to 250 A then downstream only.
- The auxiliary contacts are wired to terminal blocks.
- Material: 2 mm-thick XC steel.
- Coating: epoxy varnish.
- Mounting: 4 wall mounting brackets, not mounted \leq 400 A, floor standing feet $>$ 630 A
- Door: solid with hinges.
- Door lock: 3 mm double-bar lock (key included)

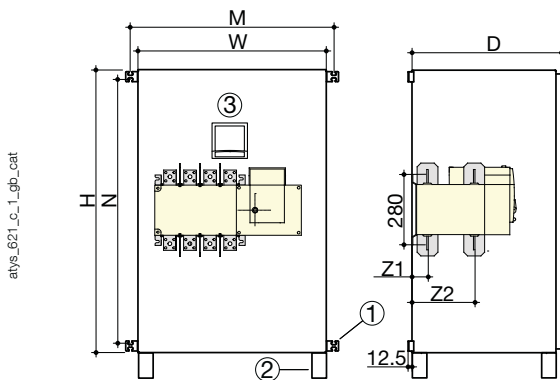
References

| Rating (A) | No. of poles | ATyS d Reference | ATyS p Reference |
|------------|--------------|------------------|------------------|
| 125 | 4 P | 1723 4012 | 1763 4012 |
| 160 | 4 P | 1723 4016 | 1763 4016 |
| 250 | 4 P | 1723 4025 | 1763 4025 |
| 400 | 4 P | 1723 4040 | 1763 4040 |
| 630 | 4 P | 1723 4063 | 1763 4063 |
| 800 | 4 P | 1723 4080 | 1763 4080 |
| 1000 | 4 P | 1723 4100 | 1763 4100 |
| 1250 | 4 P | 1723 4120 | 1763 4120 |
| 1600 | 4 P | 1723 4160 | 1763 4160 |
| 2000 | 4 P | 1723 4200 | 1763 4200 |
| 2500 | 4 P | 1723 4250 | 1763 4250 |
| 3200 | 4 P | 1723 4320 | 1763 4320 |



conf_3006_b_1

Dimensions



atys_621_Lc_1_gp_cat

- (1) Wall mounting brackets supplied up to 400 A.
 (2) Floor standing feet from 630 A (add 200 mm for to H dimension feet).
 (3) D10 or D20 interfaces (optional).

| Rating (A) | Max. Cu cable cross-section (mm ²) | H (mm) | W (mm) | D (mm) | M (mm) | N (mm) | Z1 (mm) | Z2 (mm) | Weight (kg) |
|------------|--|--------|--------|--------|--------|--------|---------|---------|-------------|
| 125 | 50 | 650 | 400 | 300 | 448 | 608 | 38 | 134 | 25 |
| 160 | 70 | 650 | 400 | 300 | 448 | 608 | 38 | 134 | 25 |
| 250 | 120 | 1000 | 650 | 475 | 698 | 958 | 39.5 | 134.5 | 45 |
| 400 | 240 | 1000 | 650 | 475 | 698 | 958 | 39.5 | 134.5 | 50 |
| 630 | 2 x 185 | 1000 | 650 | 475 | | | 53 | 190 | 70 |
| 800 | 2 x 240 | 1200 | 800 | 660 | | | 66.5 | 253.5 | 135 |
| 1000 | 4 x 150 | 1200 | 800 | 660 | | | 66.5 | 253.5 | 140 |
| 1250 | 4 x 185 | 1600 | 1000 | 830 | | | 66.5 | 253.5 | 270 |
| 1600 | 4 x 240 | 1600 | 1000 | 830 | | | 67.5 | 253.5 | 375 |
| 2000 | 8 x 150 | 2000 | 1000 | 1000 | | | | | 400 |
| 2500 | 8 x 185 | 2000 | 1000 | 1000 | | | | | 400 |
| 3200 | 8 x 240 | 2000 | 1000 | 1000 | | | | | 400 |

ATyS range

ATyS r, ATyS d, ATyS t, ATyS g, ATyS p

from 125 to 3200 A

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⁾ |
| 415 VAC | AC-21 A / AC-21 B | 125/125 | 160/160 | 200/200 | 250/250 | 315/315 | 400/400 | 500/500 |
| 415 VAC | AC-22 A / AC-22 B | 125/125 | 160/160 | 200/200 | 250/250 | 315/315 | 400/400 | 500/500 |
| 415 VAC | AC-23 A / AC-23 B | 125/125 | 160/160 | 200/200 | 200/200 | 315/315 | 400/400 | 500/500 |
| 500 VAC | AC-21 A / AC-21 B | 125/125 | 160/160 | 200/200 | 250/250 | 315/315 | 400/400 | 500/500 |
| 500 VAC | AC-22 A / AC-22 B | 125/125 | 160/160 | 200/200 | 200/250 | 200/315 | 200/400 | 500/500 |
| 500 VAC | AC-23 A / AC-23 B | 80/80 | 80/80 | 80/80 | 200/200 | 200/200 | 200/200 | 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 |
| 690 VAC ⁽³⁾ | AC-22 A / AC-22 B | 125/125 | 125/125 | 125/125 | 160/160 | 160/160 | 160/160 | 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 |
| 220 VDC | DC-21 A / DC-21 B | 125/125 | 160/160 | 200/200 | 250/250 | 250/250 | 250/250 | 500/500 |
| 220 VDC | DC-22 A / DC-22 B | 125/125 | 160/160 | 200/200 | 250/250 | 250/250 | 250/250 | 500/500 |
| 220 VDC | DC-23 A / DC-23 B | 125/125 | 125/125 | 125/125 | 200/200 | 200/200 | 200/200 | 500/500 |
| 440 VDC ⁽²⁾ | DC-21 A / DC-21 B | 125/125 | 125/125 | 125/125 | 200/200 | 200/200 | 200/200 | 500/500 |
| 440 VDC ⁽²⁾ | DC-22 A / DC-22 B | 125/125 | 125/125 | 125/125 | 200/200 | 200/200 | 200/200 | 500/500 |
| 440 VDC ⁽²⁾ | DC-23 A / DC-23 B | 125/125 | 125/125 | 125/125 | 200/200 | 200/200 | 200/200 | 500/500 |
| 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 |
| 415 VAC | AC-32 B | | | | 200 | 315 | 400 | 500 |
| 415 VAC | AC-33 B | | | | 200 | 200 | 200 | 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 |
| Prospective fuse protected short-circuit withstand at 690 VAC(kA rms) | | | | | 50 | 50 | 50 | 50 |
| Associated fuse rating (A) | | 125 | 160 | 200 | 250 | 315 | 400 | 500 |
| 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⁾ |
| Rated short-time withstand current 1s I_{cw} at 415 VAC (kA rms) | | 7 | 7 | 7 | 8 ⁽⁴⁾ | 8 ⁽⁴⁾ | 8 ⁽⁴⁾ | 11 ⁽⁴⁾ |
| Rated peak withstand current at 415 VAC (kA peak) | | 20 | 20 | 20 | 30 | 30 | 30 | 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 as per IEC 60947-1 (mm ²) | | 35 | 35 | 50 | 95 | 120 | 185 | 2 x 95 |
| Recommended Cu busbar cross-section (mm ²) | | | | | | | | 2 x 32 x 5 |
| Maximum Cu cable cross-section (mm ²) | | 50 | 95 | 120 | 150 | 240 | 240 | 2 x 185 |
| Maximum Cu busbar width (mm) | | 25 | 25 | 25 | 32 | 32 | 32 | 50 |
| Min./max. tightening torque (Nm) | | 9/13 | 9/13 | 9/13 | 20/26 | 20/26 | 20/26 | 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 |
| I-0 or II-0 (s) | | 0.55 | 0.55 | 0.55 | 0.5 | 0.5 | 0.5 | 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 |
| 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 r, ATyS d | | 184/92 | 184/92 | 184/92 | 276/115 | 276/115 | 276/115 | 276/150 |
| Demand/rated power (VA) - ATyS t, g, p | | 206/114 | 206/114 | 206/114 | 298/137 | 298/137 | 298/137 | 298/172 |
| Mechanical specifications | | | | | | | | |
| Durability (number of operating cycles) | | 10,000 | 10,000 | 10,000 | 8,000 | 8,000 | 8,000 | 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 |
| Weight ATyS d 3 P / 4 P (kg) | | 6.3/ 7.5 | 6.3/ 7.5 | 6.3/ 7.5 | 7.2/ 8.0 | 7.3/ 8.4 | 7.3/ 8.4 | 12.0/ 13.9 |
| Weight ATyS t, 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 |

(1) Category with index A = frequent operation - Category with index B = infrequent operation. (3) Interphase barriers must be installed on the products.

(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".

(4) Values given at 690 VAC.

4-pole device with 2 poles in series by polarity.

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⁾ |
| 415 VAC | AC-21 A / AC-21 B | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2500 |
| 415 VAC | AC-22 A / AC-22 B | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/2000 | -/2500 |
| 415 VAC | AC-23 A / AC-23 B | 800/800 | 1000/1000 | 1250/1250 | 1250/1250 | -/1600 | -/1600 |
| 500 VAC | AC-21 A / AC-21 B | 800/800 | 1000/1000 | 1250/1250 | 1600/1600 | -/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 |
| 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 |
| 415 VAC | AC-32 B | 800 | 1000 | 1250 | 1250 | 2000 | 2000 |
| 415 VAC | AC-33 B | 800 | 1000 | 1000 | 1000 | 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_{sc} at 415 VAC (kA rms) | | 64 | 64 | 64 | 78 | 78 | 78 |
| Rated short-time withstand current 1s I_{sc} at 415 VAC (kA rms) | | 35 | 35 | 35 | 50 | 50 | 50 |
| Rated peak withstand current at 415 VAC (kA peak) | | 55 | 55 | 80 | 110 | 120 | 120 |
| Short-circuit withstand without protection as per IEC 60947-6-1 | | | | | | | |
| Rated short-time withstand current 30 ms I_{sc} at 415 VAC (kA rms) | | | | | | | |
| Rated short-time withstand current 60 ms I_{sc} at 415 VAC (kA rms) | | 20 | 20 | 25 | 32 | 50 | 50 |
| 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 x 7 | 2 x 100 x 5 | 3 x 100 x 5 | 2 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 |
| Min./max. tightening torque (Nm) | | 9/13 | 9/13 | 20/26 | 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 |
| I-0 or II-0 (s) | | 1.4 | 1.4 | 1.4 | 1.4 | 1.8 | 1.8 |
| Contact transfer time ("black-out" I-II) minimum (s) | | 1.4 | 1.4 | 1.4 | 1.5 | 1 | 1 |
| Power supply | | | | | | | |
| Min./max. power (VAC) | | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 | 166/332 |
| Control supply power demand | | | | | | | |
| Demand/rated power (VA) - ATyS r, ATyS d | | 460/184 | 460/184 | 460/184 | 460/230 | 812/322 | 812/322 |
| Demand/rated power (VA) - ATyS t, g, p | | 482/206 | 482/206 | 482/206 | 482/252 | 834/344 | 834/344 |
| Mechanical specifications | | | | | | | |
| Durability (number of operating cycles) | | 4,000 | 4,000 | 4,000 | 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 |
| Weight ATyS d 3 P / 4 P (kg) | | 28.5/ 32.8 | 29.0/ 33.5 | 29.5/ 34.2 | 33.7/ 40.0 | 51.3/ 62.2 | 51.3/ 62.2 |
| Weight ATyS t, 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 |

(1) Category with index A = frequent operation - Category with index B = infrequent operation. (3) Interphase barriers must be installed on the products.

(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".

(4) Values given at 690 VAC.

4-pole device with 2 poles in series by polarity.

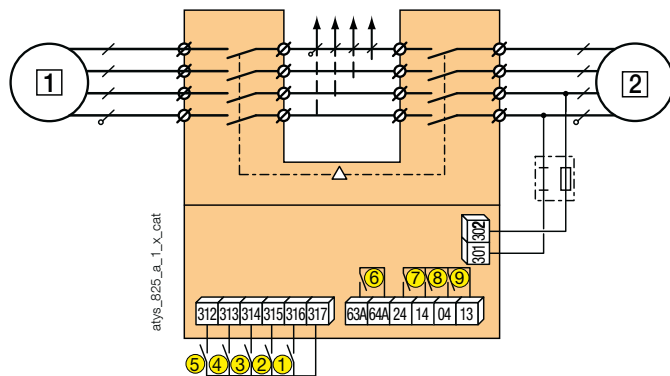
ATyS range

ATyS r, ATyS d, ATyS t, ATyS g, ATyS p

from 125 to 3200 A

Connections and terminals

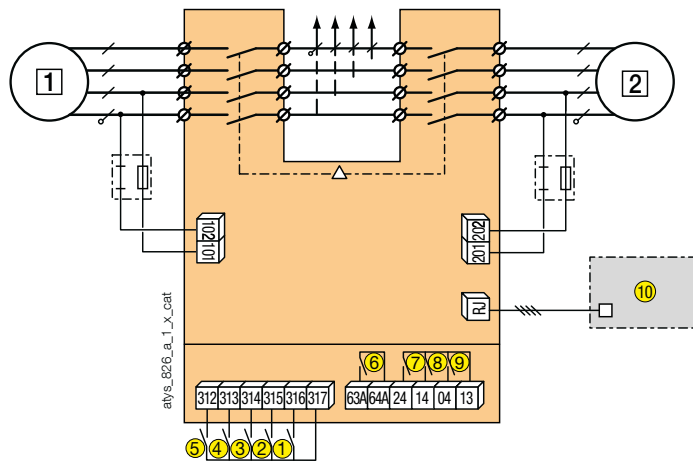
ATyS r



- 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 the switch is in position I
- 9: auxiliary contact - closed when the switch is in position 0

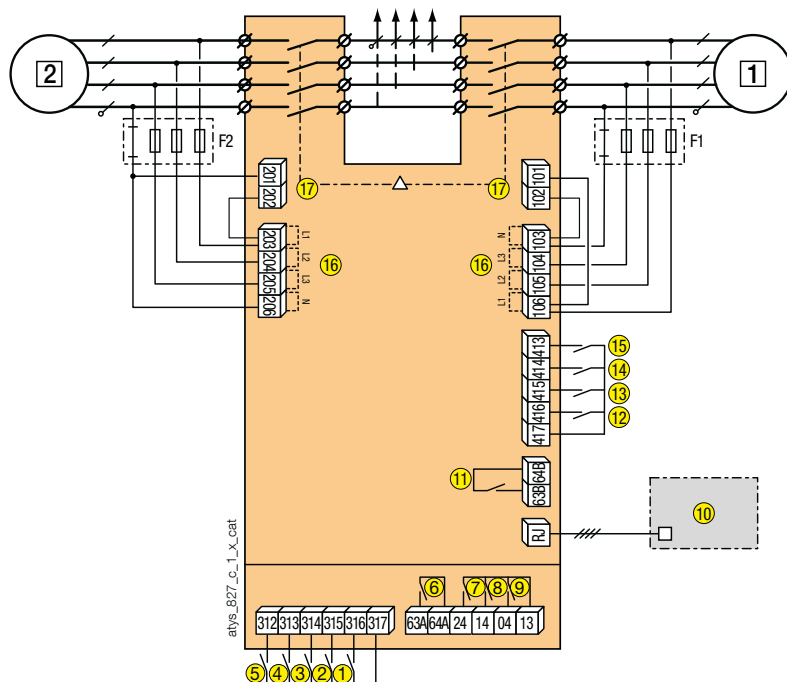
ATyS d



- 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

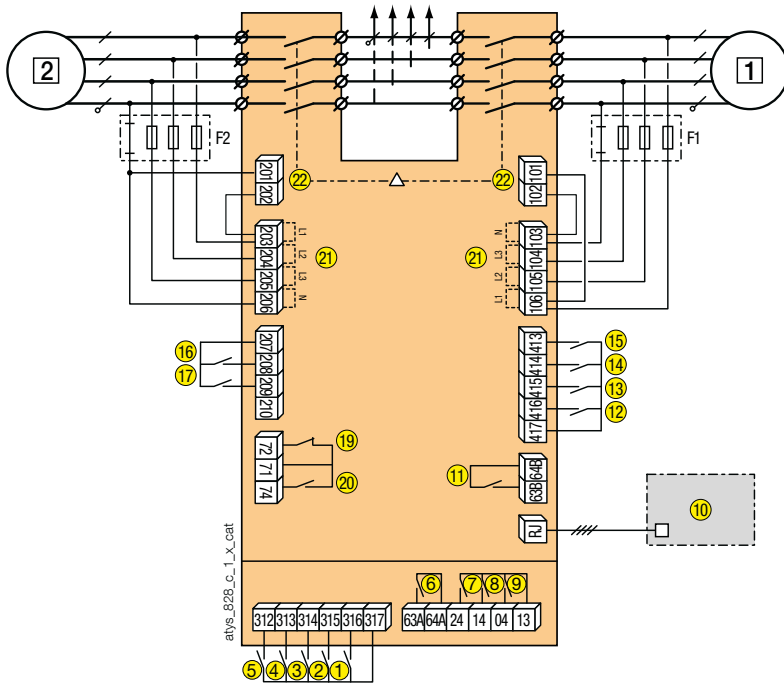
ATyS t



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

- 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: preferred source selection
- 15: function with or without priority
- 16: voltage inputs
- 17: power inputs

ATyS g



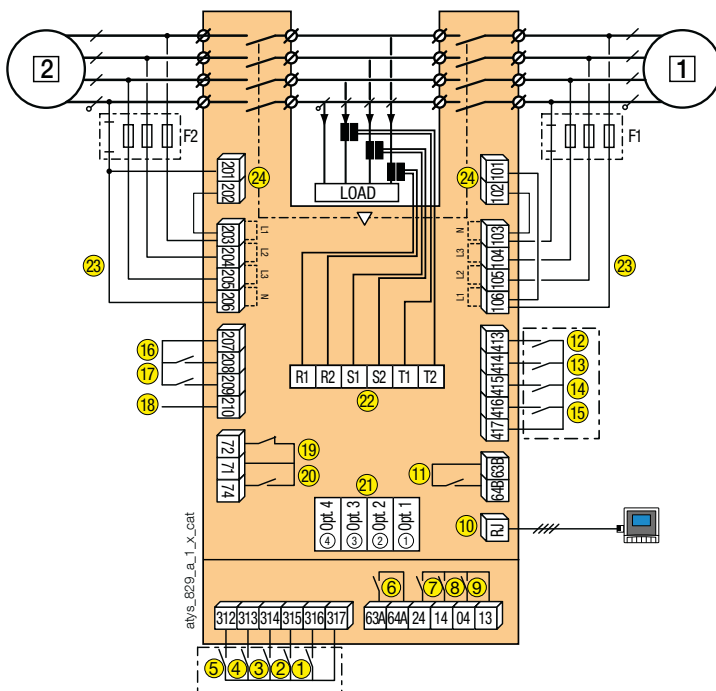
- 1** primary source (mains network)
- 2** backup source (genset or network)
- 1: position 0 control (contact or logic if closed)
- 2: position I control
- 3: position II control
- 4: primary control position 0
- 5: closing this contact allows position control commands
- 6: Motor unit availability relay
- 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

ATyS p



- 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

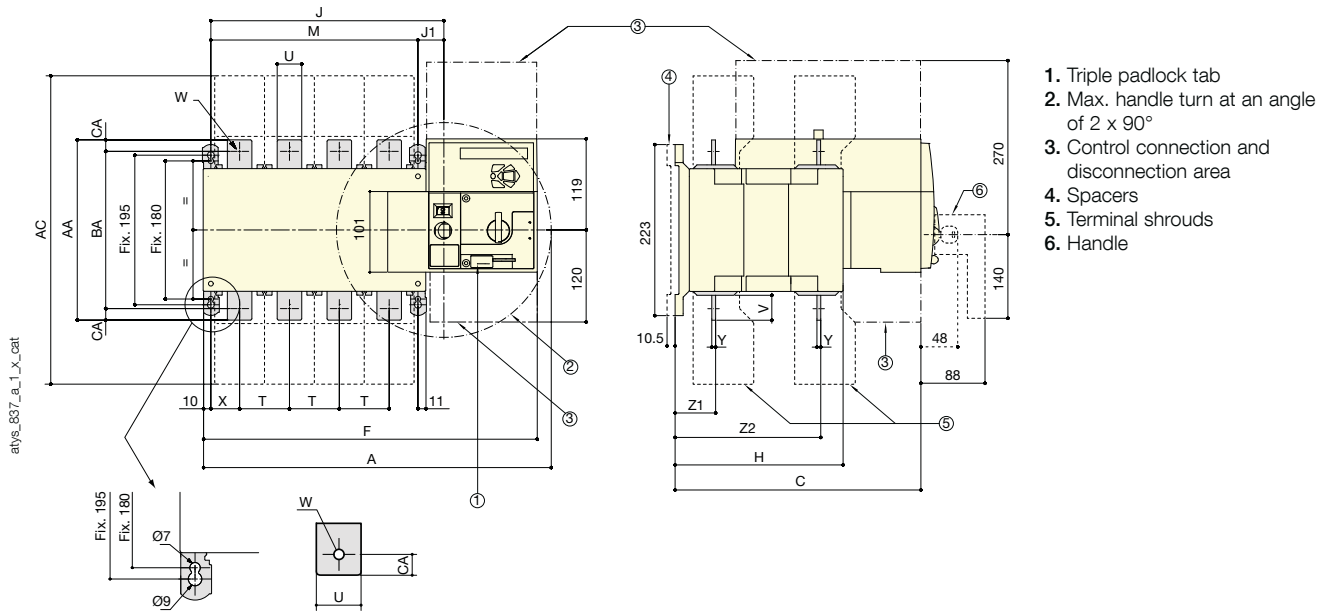
ATyS range

ATyS r, ATyS d, ATyS t, ATyS g, ATyS p

from 125 to 3200 A

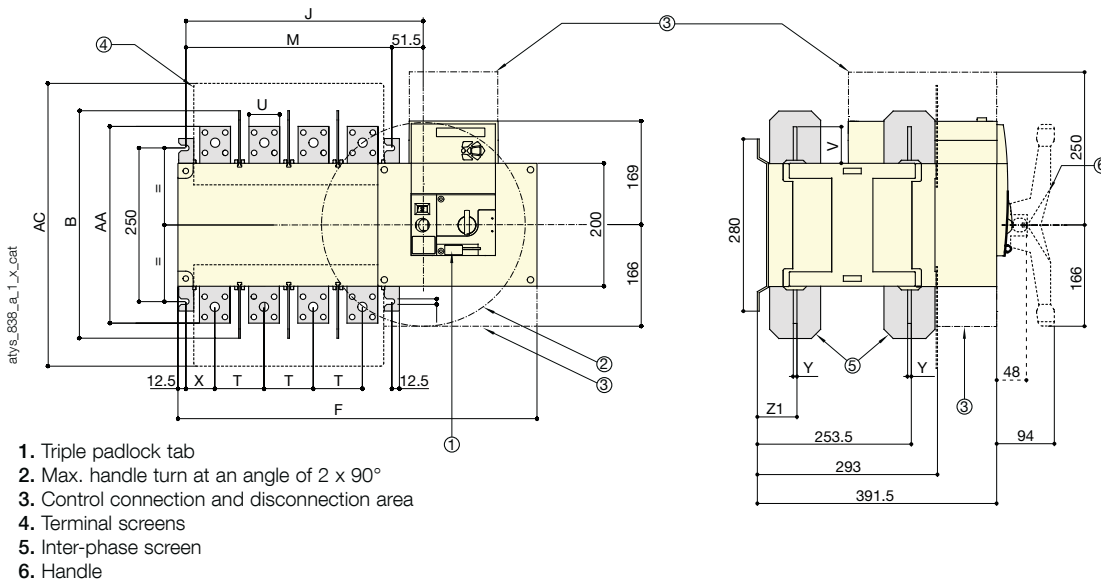
Dimensions

125 to 630 A / B3 to B5



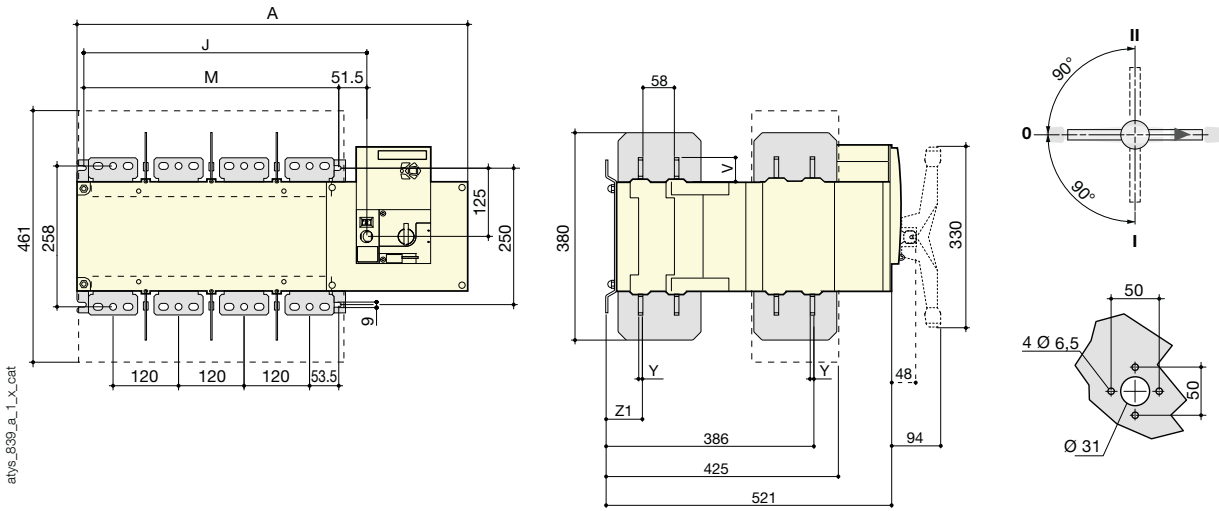
| Rating (A) / Frame size | Overall dimensions | | | Terminal shrouds | | Switch body | | | | Switch mounting | | | | Connection | | | | | | | | | | |
|----------------------------|--------------------|-------|-------|------------------|-------|-------------|-----|-------|-------|-----------------|-------|-------|----|------------|----|----|-------|-------|-----|------|-------|-----|-----|----|
| | A 3p. | 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 | AC |
| 125 / B3 | 304 | 334 | 244 | 233 | 286.5 | 317 | 151 | 154 | 184 | 34 | 120 | 150 | 36 | 20 | 25 | 9 | 28 | 22 | 3.5 | 38 | 134 | 135 | 115 | 10 |
| 160 / B3 | 304 | 334 | 244 | 233 | 286.5 | 317 | 151 | 154 | 184 | 34 | 120 | 150 | 36 | 20 | 25 | 9 | 28 | 22 | 3.5 | 38 | 134 | 135 | 115 | 10 |
| 200 / B3 | 304 | 334 | 244 | 233 | 286.5 | 317 | 151 | 154 | 184 | 34 | 120 | 150 | 36 | 20 | 25 | 9 | 28 | 22 | 3.5 | 38 | 134 | 135 | 115 | 10 |
| 250 / B4 | 345 | 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 | 345 | 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 |
| 400 / B4 | 345 | 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 | 394 | 454 | 320.5 | 402 | 377 | 437 | 221 | 244 | 304 | 34 | 210 | 270 | 65 | 32 | 50 | 14 | 42.5 | 37.5 | 5 | 53 | 190 | 260 | 220 | 15 |
| 630 / B5 | 394 | 454 | 320.5 | 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



| 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 | 306.5 | 386.5 | 255 | 335 | 80 | 50 | 60.5 | 47.5 | 7 | 66.5 | 321 | | | |
| 1000 / B6 | 370 | 461 | 504 | 584 | 306.5 | 386.5 | 255 | 335 | 80 | 50 | 60.5 | 47.5 | 7 | 66.5 | 321 | | | |
| 1250 / B6 | 370 | 461 | 504 | 584 | 306.5 | 386.5 | 255 | 335 | 80 | 60 | 65 | 47.5 | 7 | 66.5 | 330 | | | |
| 1600 / B7 | 380 | 531 | 596 | 716 | 398.5 | 518.5 | 347 | 467 | 120 | 90 | 44 | 53 | 8 | 67.5 | 288 | | | |

2000 to 3200 A / B8

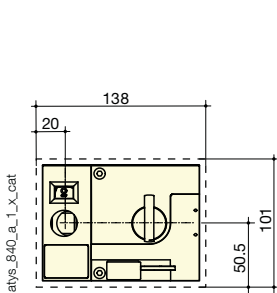


| Rating (A) | Overall dimensions B | Terminal shrouds AC | Switch body | | | | Switch mounting | | | | Connection | | | | |
|---------------|-------------------------|------------------------|-------------|-------|-------|-------|-----------------|-------|-----|----|------------|----|---|------|-----|
| | | | A 3p. | A 4p. | J 3p. | J 4p. | M 3p. | M 4p. | T | U | V | X | Y | Z1 | AA |
| 2000 ... 3200 | 380 | 531 | 596 | 716 | 399 | 519 | 347 | 467 | 120 | 90 | 44 | 53 | 8 | 67.5 | 288 |

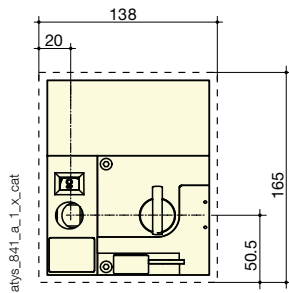
Door cutout

125 to 630 A / B3 to B5

ATyS r

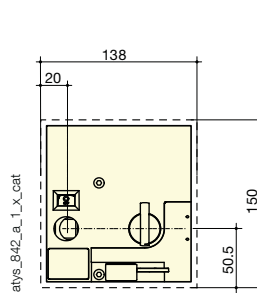


ATyS d, t, g, p

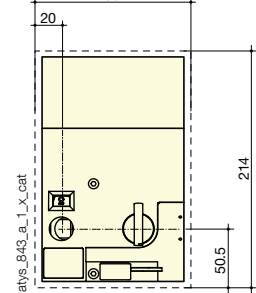


800 to 1600 A / B6 to B7

ATyS r

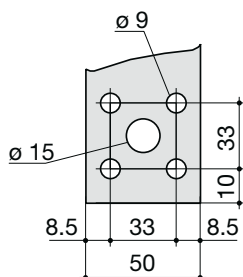


ATyS d, t, g, p

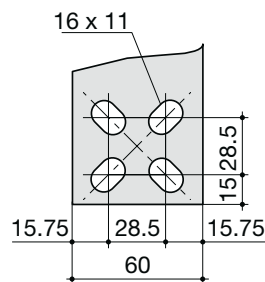


Connection terminals

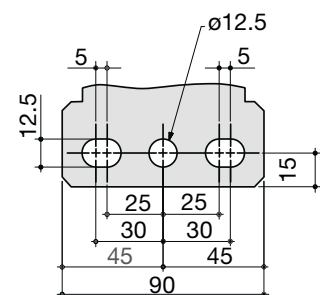
800 to 1000 A / B6



1250 A / B6



1600 to 3200 A / B7 to B8





ATyS d H

Remotely operated Transfer Switching Equipment from 4000 to 6300 A

Transfer switches



atyS_0665_a

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 and GB 14048-11 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 as it is available as a fixed or completely withdrawable type of transfer switch. 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 ($6 \times I_n \cos \phi 0.5$) 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.

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
- > GB 14048-11



Approvals and certifications



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 C20/C30/C40 controller with a door mounted external display.

References

ATyS d H

| Rating (A) | Type | Number of poles | ATyS d H IEC Reference | ATyS d H CCC Reference | Control relay Reference | |
|------------|--------------|-----------------|------------------------|------------------------|-------------------------|-----------------------|
| 4000 A | Fixed | 3 P | 9533 3400 | 9533 3400 CN | ATyS C20 1599 3020 | |
| | | 4 P | 9533 4400 | 9533 4400 CN | | |
| | Withdrawable | 3 P | 9533 3401 | 9533 3401 CN | | |
| | | 4 P | 9533 4401 | 9533 4401 CN | | |
| 5000 A | Fixed | 3 P | 9533 3500 | 9533 3500 CN | | ATyS C30 1599 3030 |
| | | 4 P | 9533 4500 | 9533 4500 CN | | |
| | Withdrawable | 3 P | 9533 3501 | 9533 3501 CN | | |
| | | 4 P | 9533 4501 | 9533 4501 CN | | |
| 6300 A | Fixed | 3 P | 9533 3630 | 9533 3630 CN | ATyS C40 1599 3040 | |
| | | 4 P | 9533 4630 | 9533 4630 CN | | |
| | Withdrawable | 3 P | 9533 3631 | 9533 3631 CN | | |
| | | 4 P | 9533 4631 | 9533 4631 CN | | |

Characteristics according to IEC 60947-6-1

4000 to 6300 A

| 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_o (A), at 660 VAC - AC32B | 4000 | 5000 | 6300 |
| Rated operational current I_o (A), at 660 VAC - AC33iB (6xln 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 |
| Weight (kg) - Plug-in 3/4P model | 300 / 400 | 300 / 400 | 300 / 400 |

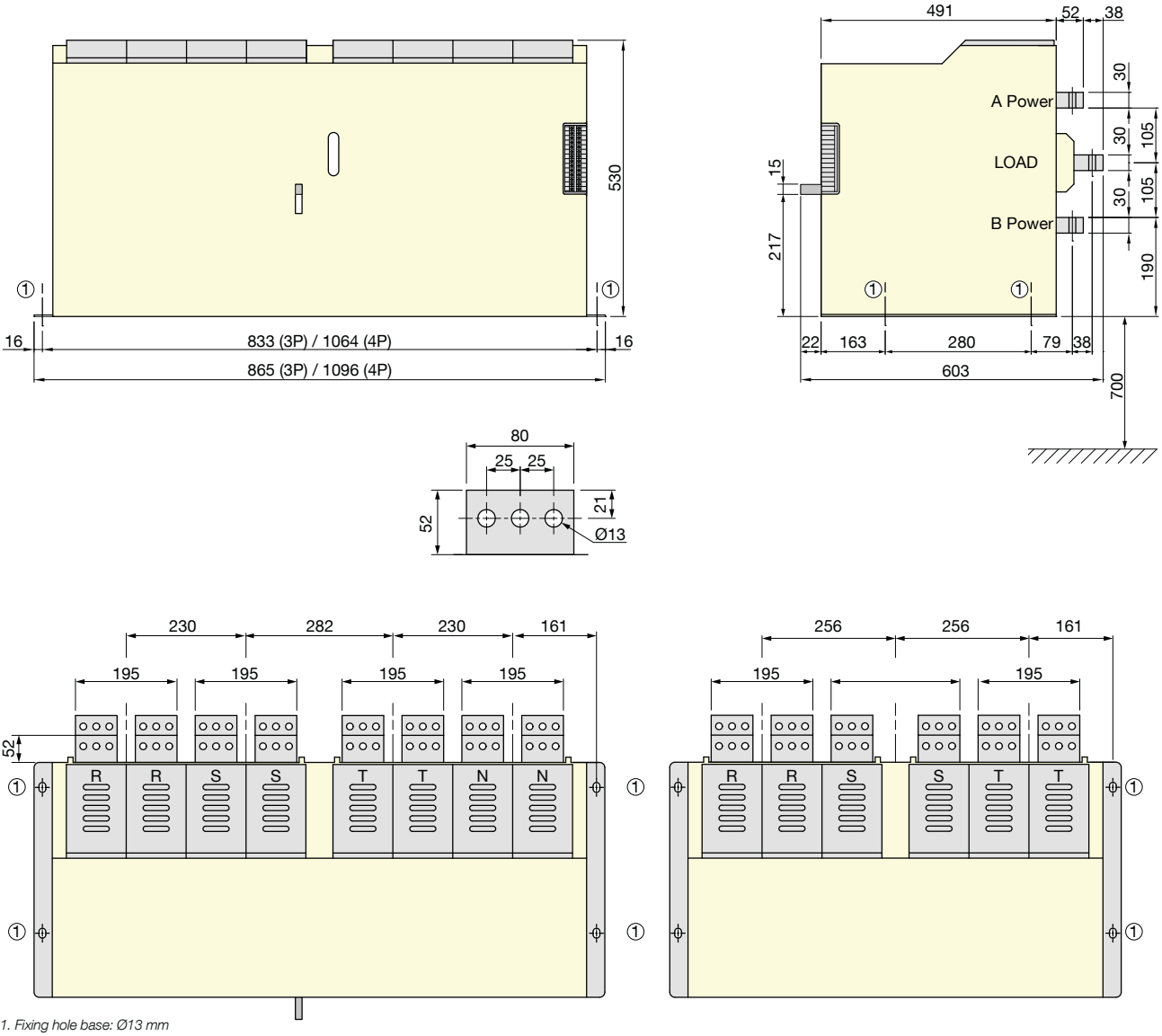
(1) Instantaneous value. For a complete operation, power should be available during 0.5 s.

ATyS d H

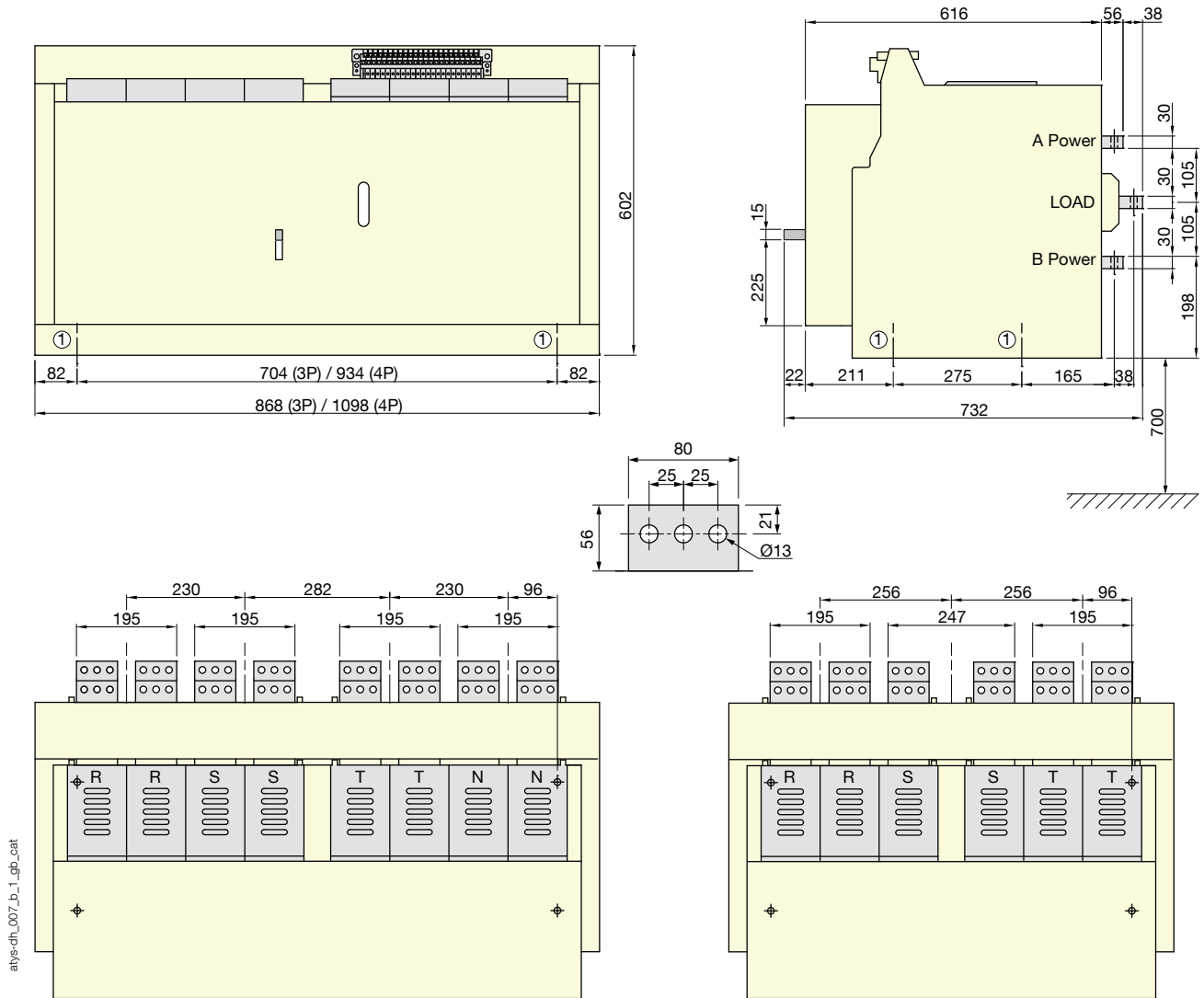
Remotely operated Transfer Switching Equipment
from 4000 to 6300 A

Dimensions

Dimensions for fixed models



Dimensions for drawout models



atys-dh_007_b_1_gb_cat

1. Fixing hole base: Ø13 mm



ATyS C20/C30/C40

Control relays

Transfer switches



ATyS C20 controller

ATYS_451A



ATyS C30 controller

ATYS_448_B



ATyS C40 controller

ATYS_589_C

The solution for

- > Power and control separation
- > Genset/Genset applications



Strong points

- > Auxiliary power supply
- > Modular device
- > Extended compatibility of use

Conformity to standards

- > IEC 61010-1
- > IEC 61000-4-x
- > IEC 60068-2-x



Function

ATyS C20/C30/C40 are modular control relays. They ensure the automatic control of remotely controlled transfer switches, ATyS, ATyS S and ATyS M, as well as contactors, circuit breakers or other motorised switches.

General characteristics

ATyS C20/C30

- Inputs for auxiliary contact position information.
- 3U measurement on network 1 and 1U on network 2.
- 2 programmable inputs for the following functions: test on/off load, manual retransfer, start/stop transfer cycle.
- Up to 2 programmable outputs for the following functions: source availability information and circuit breaker control.
- 1 relay output for genset control.
- D10 or D20 remote interfaces are available for transferring data or control to the front panel (only on C30 version).

ATyS C40

- Dual genset controller with a redundant genset application cycle (basic cycle).
- 1U and F measurement on each source - genset 1 & genset 2.
- 3 programmable inputs for the following functions: test on/off load, manual retransfer, start/stop transfer cycle.
- 1 programmable output for the following functions : source availability information and circuit breaker control.
- 2 genset control contacts (Gen1 & Gen2).

Advantages

Auxiliary power supply

Two versions of the ATyS C30 are available. One version with an AC supply via the measurement inputs and another with a DC auxiliary supply.

Modular device

The ATyS C20, C30 and C40 are modular products (6 modules, 105 mm wide) which can be DIN-rail mounted.

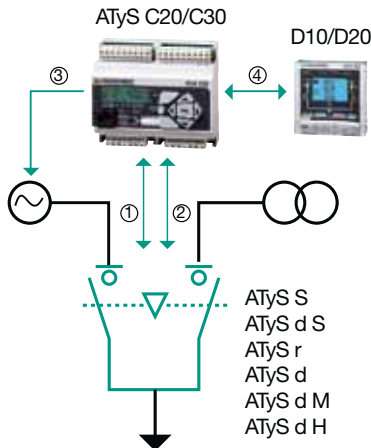
Extended compatibility of use

The product is used with Socomec transfer switches, or those using identical technology. It is also compatible with contactor and circuit breaker technologies.

Configurations

ATyS C20/C30:

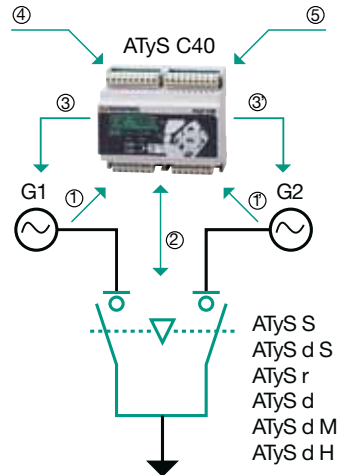
Mains/mains and mains/genset applications



1. Measurement and power supply
2. Control and position information feedback
3. Genset start / stop control
4. ATyS display/interface connection (only on C30 version)

ATyS C40:

Genset/genset applications



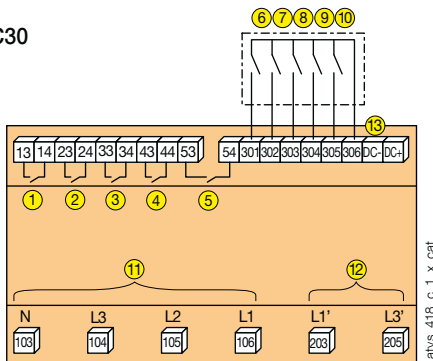
- 1 and 1'. 1U and F measurement for each genset
2. Control and position information feedback
- 3 and 3'. Genset "start/stop" control
4. External "start/stop" command for basic cycle
5. DC power supply

Electrical characteristics

| | |
|-----------------------------------|--------------------------|
| Supplied from measurement circuit | 110 ... 400 VAC |
| DC power supply | 9 ... 30 VDC |
| Measurement range | 110 ... 400 VAC / ± 10 % |
| Frequency | 50/60 Hz |
| Accuracy | ± 1 % |

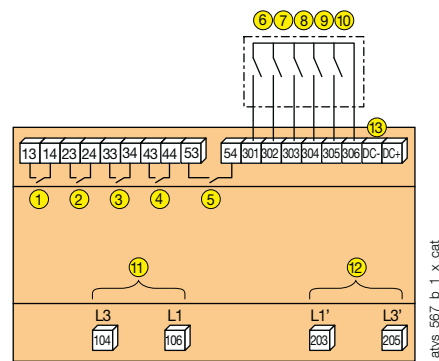
Terminals

ATyS C20/C30



1. Genset start / stop control
2. Position 1: power control
3. Position 2: power control
4. O1: programmable output
5. O2: programmable output
6. AC1: auxiliary contact position 1
7. AC0: auxiliary contact position 0
8. AC2: auxiliary contact position 2
9. I1: programmable input
10. I2: programmable input
11. Source 1 : 3 U network measurement and power supply
12. Source 2 : 1 U network measurement and power supply
13. DC power supply 9-30 VDC (version 1599 3031)

ATyS C40



1. Genset G1 start / stop control
2. Position 1: power control
3. Position 2: power control
4. O1: programmable output
5. Genset G2 start / stop control
6. AC1: auxiliary contact position 1
7. I3: programmable input
8. AC2: auxiliary contact position 2
9. I1: programmable input
10. I2: programmable input
11. Genset G1: 1U measurement
12. Genset G2: 1U measurement
13. DC power supply 9-30 VDC

References

| Type | ATyS C20 Reference | ATyS C30 Reference | ATyS C40 Reference |
|-----------------------------------|--------------------|--------------------|--------------------|
| Supplied from measurement circuit | 1599 3020 | 1599 3030 | |
| DC power supply | | 1599 3031 | 1599 3040 |



Enclosed transfer switch solutions

ATyS Bypass “no-break” solution

ATSE* - Automatic equipment from 40 to 3200 A

Transfer switches



tablo_006_a_1_cat



tablo_005_a_1_cat

The solution for

- > Data centres
- > Power production
- > Healthcare buildings
- > High-rise buildings
- > Banking and Insurance
- > Transportation



Strong points

- > No-break load transfer in Bypass mode
- > Solution certified by a manufacturer
- > Optional accessories available

Conformity to standards

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



Function

- Automatic transfer between two sources to ensure continuity of supply to critical loads such as sprinklers, fire lifts, water pumps...
- Guaranteed continuity of the power supply during maintenance and test operations.
- Complete isolation of the Automatic Transfer Switch ensuring maintenance safety.
- The association of an ATyS along with a remote interface **D20**, enables configuration, exploitation and visualisation of the data shown on the front of the equipment (timer settings, hysteresis, start/stop of the genset...).

General characteristics

- From 40 to 3200 A - 4 poles.
- 230/400 VAC \pm 20%, 50/60 Hz, self-powered from incoming sources.
- Normal/Emergency logic control sequence.
- Voltage and frequency checking of networks I and II.
- Control of phase rotation.
- 1 configurable output relay for generator start/stop command.
- Position I, 0, II control by external dry contact.
- Manual emergency operation.
- Auxiliary contacts.
- MODBUS communication (supplied as standard).
- AUTO / MANU selector.
- Equipment protection degree: IP41 as standard - Other IP upon request.
- Hinged door.
- Wall mounting brackets supplied up to 160 A.
- Floor standing feet from 250 to 3200 A.
- Easy extraction of ATyS from 160 A.
- Phase identification.
- Mimic panel (3 LEDs; source availability (1 and 2) and load; 16 LED mimic panel optional).
- Integral protection against direct contact on each functional unit.
- Steel enclosure.
- Colour: RAL 7035.

Expert Services

Study, definition, advice, implementation, maintenance and training...

Our Expert Services team offers customised support to make your project a success.



* ATSE: Automatic Transfer Switching Equipment

Enclosed transfer switch solutions

ATyS Bypass "no-break" solution

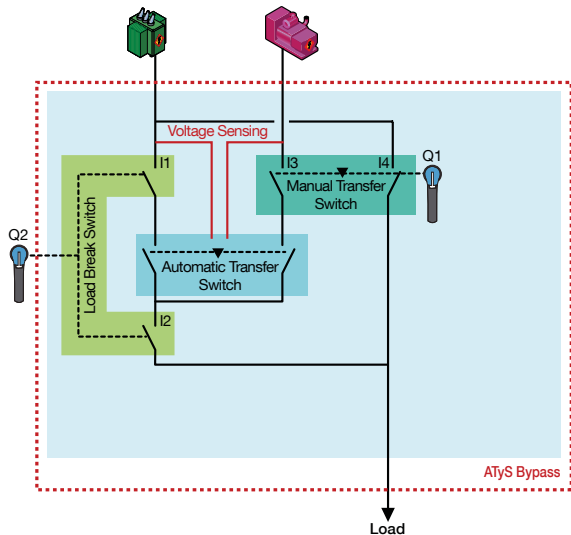
ATSE - Automatic equipment from 40 to 3200 A

2 versions

ATyS Bypass Single Line

- It consists of 2 functions: an automatic transfer switch and a single Bypass line connected to the preferred supply source.

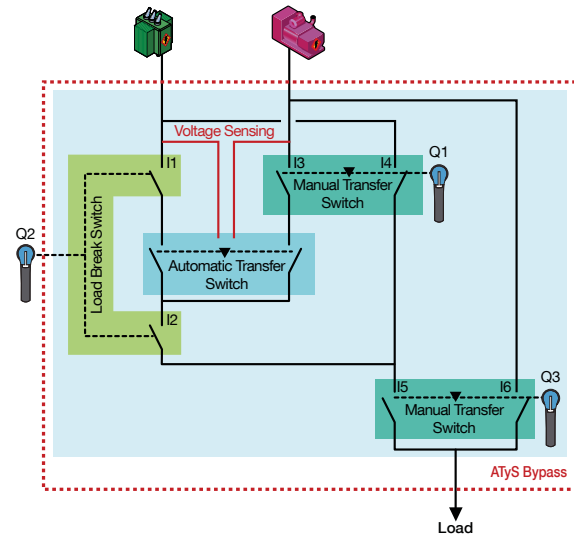
ATyS Bypass - SINGLE LINE



ATyS Bypass Double Line

- It consists of 3 functions: an automatic transfer switch, an ATyS Bypass and a facility for selecting between supply sources when in Bypass.

ATyS Bypass - DOUBLE LINE



Use

Normal Position:

- The load is supplied by the supply defined as the preferred source. In case of primary source failure, the ATyS automatically transfers the load to the alternate source when available.

Bypass position:

- Manually switch Q1 to bypass mode without interrupting supply to the load. Then open switch Q2 to completely isolate the ATyS for inspection.

Test Position:

- From the Bypass position, switch Q2 can be closed to supply the ATyS and achieve operational checks, without jeopardizing the supply to the load. Transfer to the normal position can then be achieved.

References

Standard product - 230 VAC for ATyS p M

| Rating (A) | No. of poles | 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 |

Standard product- 230 VAC for ATyS p

| Rating (A) | No. of poles | 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 |

Enclosed transfer switch solutions

ATyS Bypass "no-break" solution

ATSE - Automatic equipment from 40 to 3200 A

Accessories

Customer fit

| Description | Reference |
|---|--------------------------|
| 2 inputs / 2 outputs module (ATyS p only) | 1599 2001 ⁽¹⁾ |

(1) Up to 3 can be fitted.

Extension cabinet

Use

From 1250 to 3200 A, the standard enclosed ATyS Bypass is supplied with connections to allow for Bottom/Bottom or Bottom/Top cable entry.

In order to facilitate the wiring, we propose the use of an extension cabinet, which can be mounted to the side of the standard ATyS Bypass enclosure, when utilising all other types of connections (TT/TB/BT). The extension cabinet also enables any necessary future adaptation.



kdrys_504_a_2_cat

| Rating (A) | Reference |
|---------------|-----------|
| 1250 ... 2000 | 1599 9004 |
| 2500 ... 3200 | 1599 9005 |

Protection against overvoltages

Use

In order to ensure protection of the equipment against overvoltages, type 1 and 2 surge protection is available.

For more information, please see our general catalogue.



sgys_069_a_1_cat

| Rating (A) | Reference |
|--------------|-----------|
| 40 ... 125 | 1599 9016 |
| 250 ... 400 | 1599 9017 |
| 630 ... 3200 | 1599 9018 |

Multifunction meter

Use

Multifunction meters are available for the display and monitoring of all the electrical parameters.

For more information, please see our general catalogue.



diris_750_a_1_cat

Engine Exerciser

Use

The enclosed ATyS Bypass up to 125 A can be supplied with a genset exerciser (configure generator Start/Stop times, enable/disable routines, etc.).



access_276_a_1_cat

| Description | Reference |
|------------------|-----------|
| Engine Exerciser | 1599 9006 |

Tinned Busbars

Use

Tinned busbar option for severe environmental conditions.

| Rating (A) | Reference |
|---------------|-----------|
| 250 | 1599 9007 |
| 400 | 1599 9008 |
| 630 | 1599 9009 |
| 800 | 1599 9010 |
| 1000 | 1599 9011 |
| 1250 ... 1600 | 1599 9013 |
| 2000 | 1599 9014 |
| 2500 ... 3200 | 1599 9015 |

Enclosed transfer switch solutions

ATyS Bypass "no-break" solution

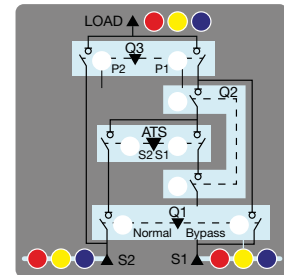
ATSE - Automatic equipment from 40 to 3200 A

Signalling

Use

To get a global overview of the system status, an optional 17 LED mimic panel is available (voltage availability per phase and device positions).

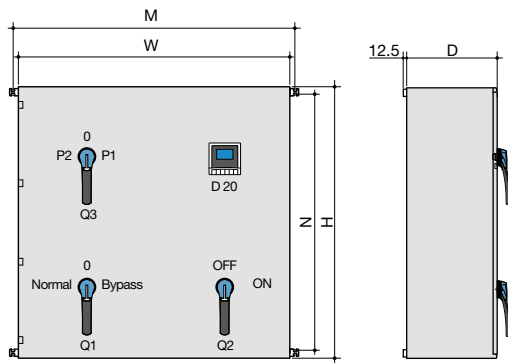
| Rating (A) | Mimic panel | |
|-------------|-----------------------|-----------------------|
| | Single Line Reference | Double Line Reference |
| 40 ... 3200 | 1599 9033 | 1599 9034 |



access_2715_b_1_x_cat

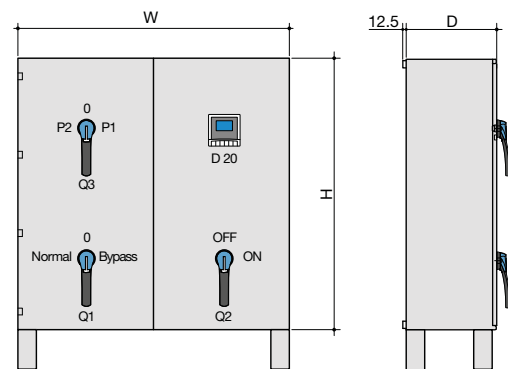
Dimensions

40 to 160 A



atys_749_d_1_gb_cat

≥ 250 A



atys_759_d_1_gb_cat

Wall mounting - Bottom

| Rating (A) | Recommended connection cross-section (mm ²) | H (mm) | W (mm) | D (mm) | M (mm) | N (mm) | Weight (kg) |
|------------|---|--------|--------|--------|--------|--------|-------------|
| 40 | 10 | 800 | 800 | 300 | 848 | 752 | 80 |
| 63 | 16 | 800 | 800 | 300 | 848 | 752 | 80 |
| 80 | 25 | 800 | 800 | 300 | 848 | 752 | 80 |
| 100 | 35 | 1000 | 800 | 300 | 848 | 752 | 80 |
| 125 | 50 | 1000 | 800 | 300 | 848 | 752 | 80 |
| 160 | 70 | 1000 | 800 | 400 | 848 | 752 | 160 |

Floor fixing - Bottom

| Rating (A) | Recommended connection cross-section (mm ²) | H (mm) | W (mm) | D (mm) | Weight (kg) |
|------------|---|---------------------|--------|--------|-------------|
| 250 | 120 | 1200 ⁽¹⁾ | 1000 | 550 | 180 |
| 400 | 240 | 1200 ⁽¹⁾ | 1000 | 550 | 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 |
| 3200 | 8 x 240 | 2000 ⁽⁴⁾ | 2200 | 1000 | 2500 |

(1) Add 200 mm for feet.

(2) Add 100 mm for feet.

(3) Add 125 mm for feet.

(4) Add 120 mm for feet.

Connection (input / output)



- From 40 to 125 A (B/B or T/B or T/T or B/T),
- From 160 to 400 A (B/B or B/T),
- 630 A (B/B),
- ≥ 800 A (Consult us).



The UL product range

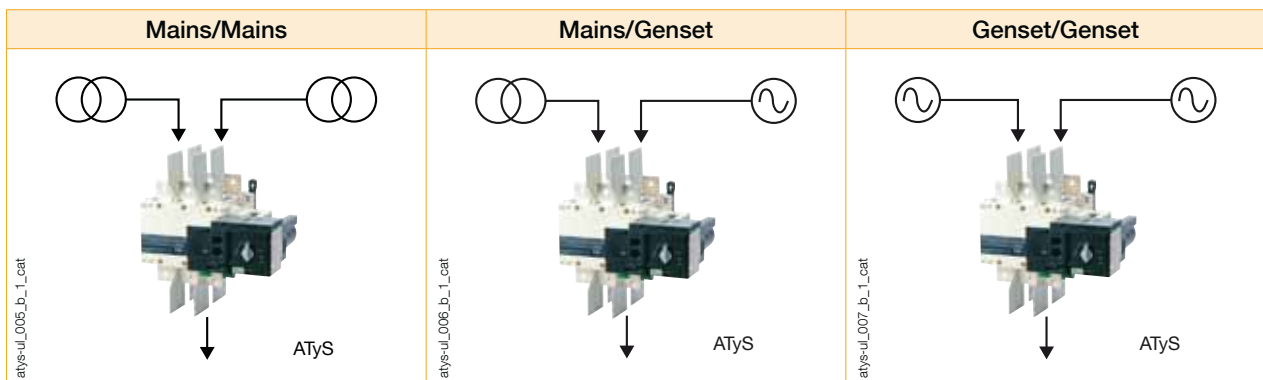
Transfer switches

A range of manual or remotely operated transfer switches up to 1200 A

| MTSE (Manual) | RTSE (Remotely operated) |
|--|---|
|  <p>SIRCOVER UL1008</p> <p>Manual Transfer Switching Equipment</p> |  <p>ATyS UL1008</p> <p>Motorised Transfer Switching Equipment</p> |

Typical applications

The ATyS UL 1008 range provides safe transfer for mains/genset and genset/genset applications.



Function

ATYS and SIRCOVER UL 1008 transfer switching equipment ensure:

- Maintenance free transfer switching equipment with a robust and reliable design.
- Power control and safety between a normal and an alternate source.
- Integrated and robust switch disconnection.
- A stable OFF position with integrated padlocking to facilitate safe downstream maintenance.
- Positive break indication with clear visible position indication I - 0 - II.
- An inherent failsafe mechanical interlock prevents asynchronous paralleling of the two sources.
- Stable positions (I - 0 - II) non-affected by typical vibration and shock.
- Constant pressure on the contacts non affected by network voltage perturbation.
- Quick, easy and extremely safe manual operation.

Further to the above the ATyS also includes:

- A simple and secure motorisation remote controls interface.
- Integrated switch position auxiliary contacts.
- An active "product availability" status feedback.
- Compatibility with virtually any make of ATS, AMF and Genset controller provided with volt-free contacts.

Power supply continuity for most electrically controlled total system optional standby power applications.

SOCOMEK UL products

The ATYS UL is a full load break transfer switch where the main switching components are from proven technology devices (SIRCOVER - Manual Transfer Switches) also fulfilling requirements in UL 98 and IEC 60947-3 standards. The transfer is done in open transition with a minimum supply interruption during transfer ensuring full compliance with UL 1008 and IEC 60947-6-1 international TSE standards.

As a stand-alone product, the ATyS is a non-automatic power transfer switch (an electrically operated transfer switch that is not self-acting), generally used in applications where the load is non-emergency, does not require automatic transfer and where operating persons can be made available to initiate the transfer.

The electrical control of the ATyS UL may be direct through push-buttons and dry contacts fitted onto the enclosure door or through a dedicated local or remote ATS controller.

Your preferred brand of ATS controller, genset / AMF controller or power / building management system, may easily be paired with the ATyS to provide a complete automatic transfer switch to suit your needs.

ATyS have three stable positions (I-0-II) which can be selected remotely, via volt-free contacts, or directly, through use of the emergency operation handle; emergency operation requires no supply to be present. The OFF position provides disconnection of both supplies ensuring downstream isolation for safe maintenance.

UL Applications

ATYS UL 1008 transfer switches are rated from 100 to 400 A and designed for use in total system optional standby power applications for the safe transfer of a load supply between a normal and an alternate source.

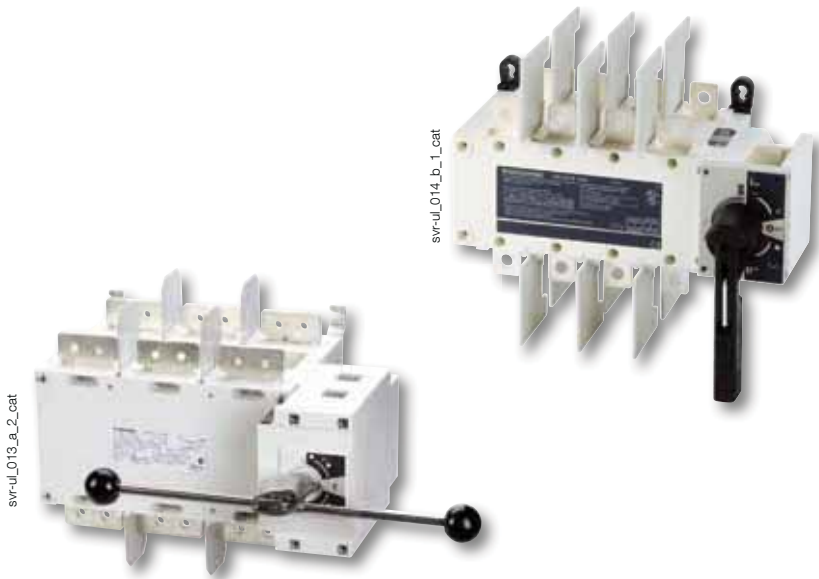
Optional standby systems are those systems installed to provide an alternate source of power for structures for which a power outage could cause discomfort or interruption or damage to products or processes.



SIRCOPER UL1008

Manually operated Transfer Switching Equipment from 100 to 1200 A

Transfer switches



The solution for

- > Manufacturing industry
- > Power distribution
- > Domestic



Strong points

- > Stable positions
- > Compact design
- > On-load switching
- > Reliability

Conformity to standards

- > UL 1008, Guide WPYV, file 317092
- > UL 98, Guide WHTY, file 201138
- > CSA 22.2#4, Class 4651-02



UL 98 and CSA from 600-1200 A with 100-400 A on request with a specific reference.

Enclosed solutions

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



Enclosed
SIRCOPER

Function

SIRCOPER UL1008/98 are heavy duty manual transfer switches. They ensure switching transfer of sources or transfer of two low voltage circuits on load as well as their safe disconnection.

These switches are extremely durable and are tested and approved for use in the most demanding applications, such as resistive load or total system applications.

Advantages

Stable positions

SIRCOPERs have three stable positions which are not affected by voltage drops or vibrations, thus protecting your load against network interference.

Compact design

The SIRCOPER are based on a back-to-back switching technology, providing a compact solution.

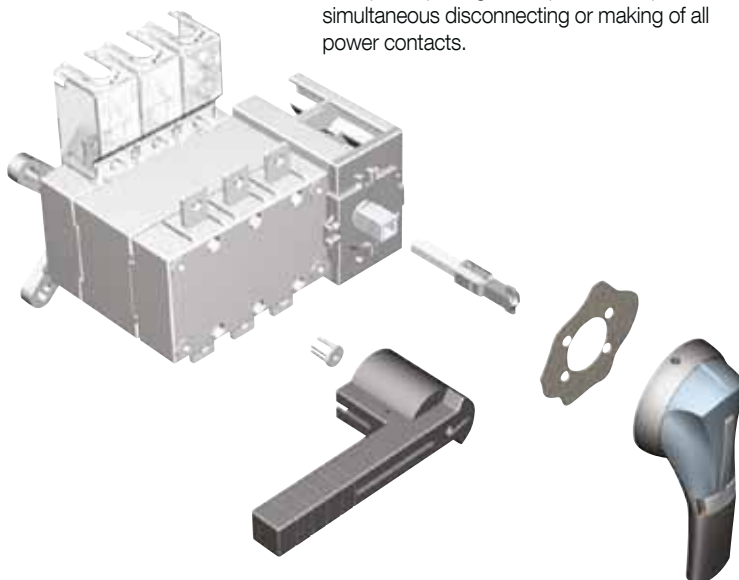
On-load switching

The SIRCOPER UL enables secure and reliable switching, without the need for pre-breaking upstream.

Reliability

The SIRCOPER has double breaking per pole achieved through its sliding bar contacts system.

The quick opening and rapid closure provides simultaneous disconnecting or making of all power contacts.

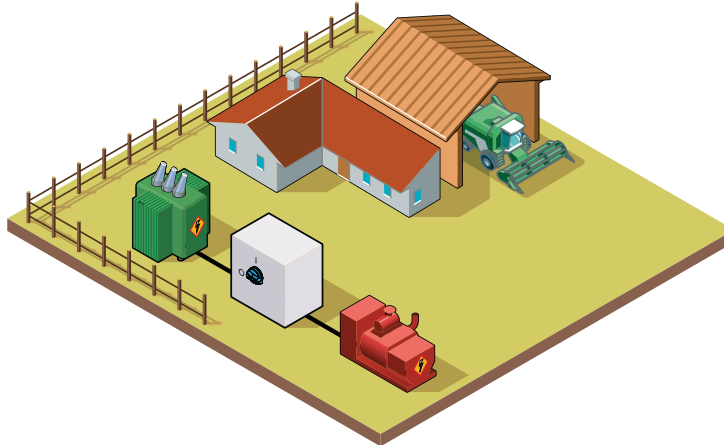


svr_136_a_2_cat

Typical application

The SIRCOVER UL 1008 range provides safe transfer and disconnection at all levels within your LV installation. They can be used for changing motor phase for rotation control or equipment grounding as well.

Normal power supply to genset transfer
 The source transfer will be operated safely even under on-load or over-load conditions



svr-ul_017_a

SOCOMEc solution up to 1200 A



svr-ul_014_b_2_cat



UL 1008 Manual Transfer Switch
 From 100 to 400 A for resistive and total systems applications.
 UL 98 versions on request



svr-ul_019_a_2_cat



UL 1008 and UL 98 Manual Transfer Switch
 From 600 to 1200 A for resistive and total systems applications.
 Has UL 98/CSA 22.2#4 certification

IEC solution up to 3200 A

The SIRCOVER UL 1008 is part of a large range that includes an IEC products of standalone or enclosed manual transfer switches and manual bypass switches with overlapping options. Contact us for further information on our complete range.



SIRCOVER UL1008

Manually operated Transfer Switching Equipment
from 100 to 1200 A

References

SIRCOVER UL 1008

| Rating (A) | Frame size | No. of poles | Switch body | Direct handle | External handle | Shaft for external handle | Bridging bars | Auxiliary contacts | Terminal screens |
|------------|------------|--------------|-------------|--|--|--|--|--|--|
| 100 A | B4 | 2 P | 4150 2012 | Black 4199 4012 | S2 type Black I - 0 - II 4, 4X 142D 2113 Padlockable in all 3 positions 142D 2813 | S2 type 200 mm 7.9 inches 1400 1020 320 mm 12.6 inches 1400 1032 400 mm 15.7 inches 1400 1040 | 2 P 4159 2021 3 P 4159 3021 4 P 4159 4021 | Contact NO/NC 4159 0021 Low level 4159 0022 | 2 / 3 P 4158 3021 4 P 4158 4021 |
| | | 3 P | 4150 3012 | | | | | | |
| | | 4 P | 4150 4012 | | | | | | |
| 2 P | | 4150 2022 | | | | | | | |
| 3 P | | 4150 3022 | | | | | | | |
| 4 P | | 4150 4022 | | | | | | | |
| 200 A | B5 | 2 P | 4150 2026 | S2 type Black I - 0 - II 4, 4X 142D 2113 S3 type Black I - 0 - II 4, 4X 143D 3113 | S3, S4 type 200 mm 7.9 inches 1401 1520 320 mm 12.6 inches 1401 1532 | 2 P 4159 2041 3 P 4159 3041 4 P 4159 4041 | Contact NO/NC 4159 0021 Low level 4159 0022 | 2 / 3 P 4158 3041 4 P 4158 4041 | |
| 3 P | | 4150 3026 | | | | | | | |
| 4 P | | 4150 4026 | | | | | | | |
| 2 P | | 4150 2042 | | | | | | | |
| 3 P | | 4150 3042 | | | | | | | |
| 4 P | | 4150 4042 | | | | | | | |
| 260 A | B6 | 3 P | 4150 3060 | Black 4199 7012 | S3 type Black I - 0 - II 4, 4X 143D 3113 | 320 mm 12.6 inches 1401 1532 400 mm 15.7 inches 1401 1540 | 3 P 4159 3063 4 P 4159 4063 | Contact NO/NC as standard | 3 P 1609 3063 4 P 1609 4063 |
| 4 P | | 4150 4060 | | | | | | | |
| 400 A | B7 | 3 P | 4150 3080 | Black 4199 7062 | S4 type Black I - 0 - II 4, 4X 144D 3813 ⁽¹⁾ | 320 mm 12.6 inches 1401 1532 400 mm 15.7 inches 1401 1540 | 3 P 4159 3080 4 P 4159 4080 | Contact NO/NC as standard | 3 P 1609 3080 4 P 1609 4080 |
| 800 A | | 4 P | 4150 4080 | | | | | | |
| | | 3 P | 4150 3120 | | | | | | |
| | | 4 P | 4150 4120 | | | | | | |
| 1200 A | | | | | | | | | |

Accessories

Direct handle

| Rating (A) | Type | Colour | Handle type | Reference |
|--------------|------|--------|-------------|-----------|
| 100 ... 400 | B3 | Black | 1 lever | 4199 4012 |
| 600 | C2 | Black | 2 lever | 4199 7012 |
| 800 ... 1200 | V1 | Metal | 2 lever | 4199 7062 |



External handle

| Rating (A) | Handle type | Colour | Nema type | Lockable in 3 positions | Reference |
|--------------|-------------|------------|--------------------------|-------------------------|-----------|
| 100 ... 200 | S2 | Black | 4, 4X | no | 142D 2113 |
| 100 ... 200 | S2 | Red/Yellow | 4, 4X | no | 142E 2113 |
| 100 ... 200 | S2 | Black | 1, 3R, 12 | no | 142F 2113 |
| 100 ... 200 | S2 | Red/Yellow | 1, 3R, 12 | no | 142G 2113 |
| 100 ... 200 | S2 | Black | 4, 4X | yes | 142D 2813 |
| 100 ... 200 | S2 | Red/Yellow | 4, 4X | yes | 142E 2813 |
| 100 ... 200 | S2 | Black | 1, 3R, 12 | yes | 142F 2813 |
| 100 ... 200 | S2 | Red/Yellow | 1, 3R, 12 | yes | 142G 2813 |
| 260 ... 600 | S3 | Black | 4, 4X | no | 143D 3113 |
| 260 ... 600 | S3 | Red/Yellow | 4, 4X | no | 143E 3113 |
| 260 ... 600 | S3 | Black | 1, 3R, 12 | no | 143F 3113 |
| 260 ... 600 | S3 | Red/Yellow | 1, 3R, 12 | no | 143G 3113 |
| 260 ... 600 | S3 | Black | 4, 4X | yes | 143D 3813 |
| 260 ... 600 | S3 | Red/Yellow | 4, 4X | yes | 143E 3813 |
| 260 ... 600 | S3 | Black | 1, 3R, 12 | yes | 143F 3813 |
| 260 ... 600 | S3 | Red/Yellow | 1, 3R, 12 | yes | 143G 3813 |
| 800 ... 1200 | S4 | Black | 4, 4X | no | 144D 3113 |
| 800 ... 1200 | S4 | Black | 1, 3R, 12 | no | 144E 3113 |
| 800 ... 1200 | S4 | Black | 1, 3R, 12 | no | 144F 3113 |
| 800 ... 1200 | S4 | Red/Yellow | 1, 3R, 12 | no | 144G 3113 |
| 800 ... 1200 | S4 | Black | 4, 4X | yes | 144D 3813 |
| 800 ... 1200 | S4 | Red/Yellow | 4, 4X | yes | 144E 3813 |
| 800 ... 1200 | S4 | Black | 1, 3R, 12 | yes | 144F 3813 |
| 800 ... 1200 | S4 | Red/Yellow | 1, 3R, 12 | yes | 144G 3813 |
| 800 ... 1200 | S5 | Black | 1, 3R, 12 ⁽¹⁾ | no | 1453 8113 |
| 800 ... 1200 | S5 | Red/Yellow | 1, 3R, 12 ⁽¹⁾ | no | 1454 8113 |
| 800 ... 1200 | V1 | Black | 1, 3R, 12 ⁽¹⁾ | no | 4199 7149 |

(1) For 4, 4X please consult us.

Use

The handle interlocking function prevents the user from opening the door of the enclosure when the switch is in the "ON" position.

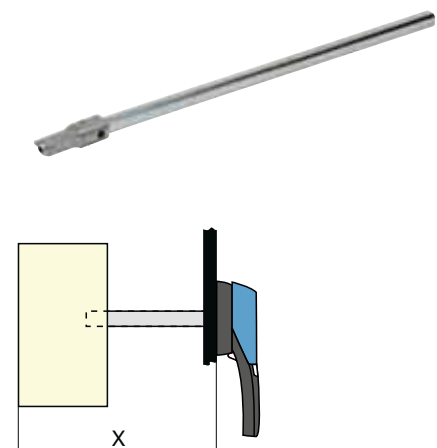
Opening the door when the switch is in the "ON" position is possible by defeating the interlocking function (not S5 and V handles) with the use of a tool (authorised persons only).

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



Shaft for external handle

| Rating (A) | Handle type | Length | | Dimension | | Reference |
|--------------|-------------|--------|------|-------------|-------------|-----------|
| | | (in) | (mm) | (in) | (mm) | |
| 100 ... 200 | S2 | 7.9 | 200 | 10 ... 14.3 | 254 ... 362 | 1400 1020 |
| 100 ... 200 | S2 | 12.6 | 320 | 10 ... 19 | 254 ... 482 | 1400 1032 |
| 100 ... 200 | S2 | 15.7 | 400 | 10 ... 22.1 | 254 ... 562 | 1400 1040 |
| 260 ... 400 | S3 | 7.9 | 200 | 12 ... 18.4 | 305 ... 467 | 1401 1520 |
| 260 ... 400 | S3 | 12.6 | 320 | 12 ... 23.1 | 305 ... 587 | 1401 1532 |
| 260 ... 400 | S3 | 15.7 | 400 | 12 ... 26.3 | 305 ... 667 | 1401 1540 |
| 260 ... 400 | S3 | 7.9 | 200 | 20 ... 23.4 | 508 ... 594 | 1401 1520 |
| 260 ... 400 | S3 | 12.6 | 320 | 20 ... 28.1 | 508 ... 714 | 1401 1532 |
| 260 ... 400 | S3 | 15.7 | 400 | 20 ... 31.3 | 508 ... 794 | 1401 1540 |
| 800 ... 1200 | S4 | 7.9 | 200 | 20 ... 23.4 | 508 ... 594 | 1401 1520 |
| 800 ... 1200 | S4 | 12.6 | 320 | 20 ... 28.1 | 508 ... 714 | 1401 1532 |
| 800 ... 1200 | S4 | 15.7 | 400 | 20 ... 31.3 | 508 ... 794 | 1401 1540 |
| 800 ... 1200 | V1 / S5 | 12.6 | 320 | 20 ... 28.1 | 508 ... 714 | 4199 3018 |
| 800 ... 1200 | V1 / S5 | 15.7 | 400 | 20 ... 31.3 | 508 ... 794 | 4199 3019 |



SIRCOVER UL1008

Manually operated Transfer Switching Equipment
from 100 to 1200 A

Accessories (continued)

Bridging bars

Use

Creation of a common point, above or below the switch, between positions I and II.

| Rating (A) | No. bridging bar | Reference |
|--------------|------------------|-----------|
| 100 ... 200 | 2 | 4159 2021 |
| 100 ... 200 | 3 | 4159 3021 |
| 100 ... 200 | 4 | 4159 4021 |
| 260 ... 400 | 2 | 4159 2041 |
| 260 ... 400 | 3 | 4159 3041 |
| 260 ... 400 | 4 | 4159 4041 |
| 600 | 3 | 4159 3063 |
| 600 | 4 | 4159 4063 |
| 800 ... 1200 | 3 | 4159 3080 |
| 800 ... 1200 | 4 | 4159 4080 |



access_205_a_1_cat

Terminal protection screen

Use

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

| Rating (A) | No. of poles | Reference |
|--------------|--------------|-----------|
| 100 ... 200 | 2P / 3P | 4158 3021 |
| 100 ... 200 | 4 P | 4158 4021 |
| 260 ... 400 | 2P / 3P | 4158 3041 |
| 260 ... 400 | 4 P | 4158 4041 |
| 600 | 6 P | 1609 3063 |
| 600 | 4 P | 1609 4063 |
| 800 ... 1200 | 3 P | 1609 3080 |
| 800 ... 1200 | 4 P | 1609 4080 |



access_207_a_1_cat

Auxiliary contacts

Use

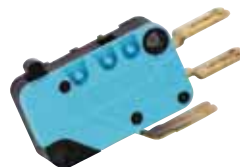
Pre-break and signalisation of positions .
For low level ACs and other ACs contact us.

Electrical characteristics

A300.

NO/NC auxiliary contact

| Rating (A) | Contact (s) | Reference |
|--------------|-------------------------------------|-----------|
| 100 ... 400 | NO/NC on position 1 and 2 | 4159 0021 |
| 100 ... 400 | Low level NO/NC on position 1 and 2 | 4159 0022 |
| 600 ... 1200 | NO/NC on position 1 and 2 | included |



access_065_a_1_cat

access_065_a_1_cat

Terminal lugs

Use

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

| Rating (A) | Wires range | No wires per lug | Lugs per kit | Wires | Reference |
|-----------------------------|--------------------|------------------|--------------|---------|-----------|
| 100 ... 200 | 6 - 300MCM | 1 | 2 | Cu / Al | 3954 2020 |
| 100 ... 200 | 6 - 300MCM | 1 | 3 | Cu / Al | 3954 3020 |
| 100 ... 200 | 6 - 300MCM | 1 | 4 | Cu / Al | 3954 4020 |
| 260 ... 400 | 4 - 600MCM | 1 | 2 | Cu / Al | 3954 2040 |
| 260 ... 400 | 4 - 600MCM | 1 | 3 | Cu / Al | 3954 3040 |
| 260 ... 400 | 4 - 600MCM | 1 | 4 | Cu / Al | 3954 4040 |
| 600 | 2x (#2 - 600MCM) | 2 | 3 | Cu / Al | 3954 3060 |
| 600 | 2x (#2 - 600MCM) | 2 | 4 | Cu / Al | 3954 4060 |
| 800 ... 1200 ⁽¹⁾ | 2x 2x(#2 - 600MCM) | 2 | 6 | Cu / Al | 3954 3120 |
| 800 ... 1200 ⁽¹⁾ | 2x 2x(#2 - 600MCM) | 2 | 8 | Cu / Al | 3954 4120 |



ul_032_a

(1) To be used to connect 4 wires on one terminal. In such a case, 2 lugs are placed side-by-side on one terminal. Please refer to dimensions diagram

Characteristics

Characteristics according to UL 1008

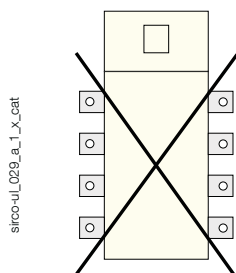
| General use rating (A) | 100 A | 200 A | 260 A | 400 A | 600 A | 800 A | 1200 A |
|---|-----------|---------|---------------------|---------------------|-----------|-----------|------------|
| Frame size | B4 | | B5 | | B6 | B7 | |
| Operation voltage 2 P - 3/4 P | 240/600 | 240/600 | 240/600 | 240/600 | -/600 | -/600 | -/600 |
| Short circuit rating at 600 VAC with fuses (kA) | | | | | | | |
| Short circuit rating at 600 VAC (kA) | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Type of fuse | J | J | J | J | L | L | L |
| Short circuit rating at 600 VAC with "Specific Circuit Breaker" (kA) | | | | | | | |
| Square D JJ breaker 250 A - 2 P 240 VAC - 3/4 P 480 VAC | 65 | 65 | - | - | - | - | - |
| Schneider Electric NSX-F 160 A - 3/4 P 480 VAC | 35 | - | - | - | - | - | - |
| Short circuit rating at 600 VAC with "Any Breaker" (kA) | | | | | | | |
| Short circuit rating (kA) | 10 | 10 | 14 | 14 | 35 | 35 | 35 |
| Short circuit capacity (ms) | 25 | 25 | 50 | 50 | 50 | 50 | 50 |
| Rated operational current | | | | | | | |
| 240 VAC "Total System" (A) | 100 | 200 | 260 | 400 | 400 | 700 | 700 |
| 240 VAC resistive load (A) | 100 | 200 | 260 | 400 | 600 | 800 | 1200 |
| 480 VAC "Total System" (A) | 100 | 100 | 260 | 400 | 350 | 600 | 600 |
| 480 VAC resistive load (A) | 100 | 200 | 260 | 400 | 600 | 800 | 1200 |
| 600 VAC "Total System" (A) | 100 | 100 | 200 | 200 | - | - | - |
| 600 VAC resistive load (A) | 100 | 200 | 260 | 400 | 600 | 800 | 1200 |
| Mechanical endurance | | | | | | | |
| Endurance (number of operating cycles) | 6050 | 6050 | 6050 | 4050 | 3050 | 3050 | 3050 |
| Connection terminals | | | | | | | |
| Min. connection section / AWG | #6 | #6 | #4 / 2 X 1 / 0 | #4 / 2 X 1 / 0 | 2 x #2 | 2 x #2 | 4 x #2 |
| Max. connection section / AWG | 300MCM | 300MCM | 600MCM / 2 X 250MCM | 600MCM / 2 X 250MCM | 2x 600MCM | 2x 600MCM | 4 x 600MCM |

Characteristics according to UL 98/CSA 22.2#4

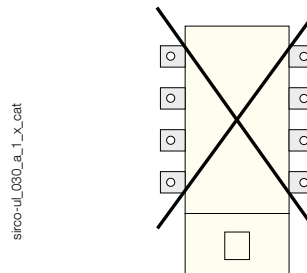
| General use rating at 600 VAC and 250 VDC (A) | Specific reference upon request | | | | 600 A | 800 A | 1200 A |
|---|---------------------------------|------|------|------|-----------|-----------|----------|
| Frame size | | | | | B6 | B7 | |
| Short-circuit rating at 600 VAC (kA) | - | - | - | - | 200 | 100 | 100 |
| Type of fuse | - | - | - | - | J | L | L |
| Max. fuse rating (A) | - | - | - | - | 600 | 800 | 1200 |
| Max. motor, hp / FLA 3 ph motor max. | | | | | | | |
| 220-240 VAC | - | - | - | - | 200 / 480 | - | - |
| 440-480 VAC | - | - | - | - | 400 / 477 | - | - |
| 600 VAC | - | - | - | - | 500 / 472 | - | - |
| Mechanical characteristics | | | | | | | |
| Endurance (number of operating cycles) | - | - | - | - | 5000 | 3500 | 2500 |
| Operating torque (lbs.in/Nm) | - | - | - | - | 327.5/37 | 442.5/50 | 442.5/50 |
| Auxiliary contacts | | | | | | | |
| Electrical characteristics | A300 | A300 | A300 | A300 | A300 | A300 | A300 |

Mounting orientation

100 to 400 A / B4 - B5



600 to 1200 A / B6 - B7

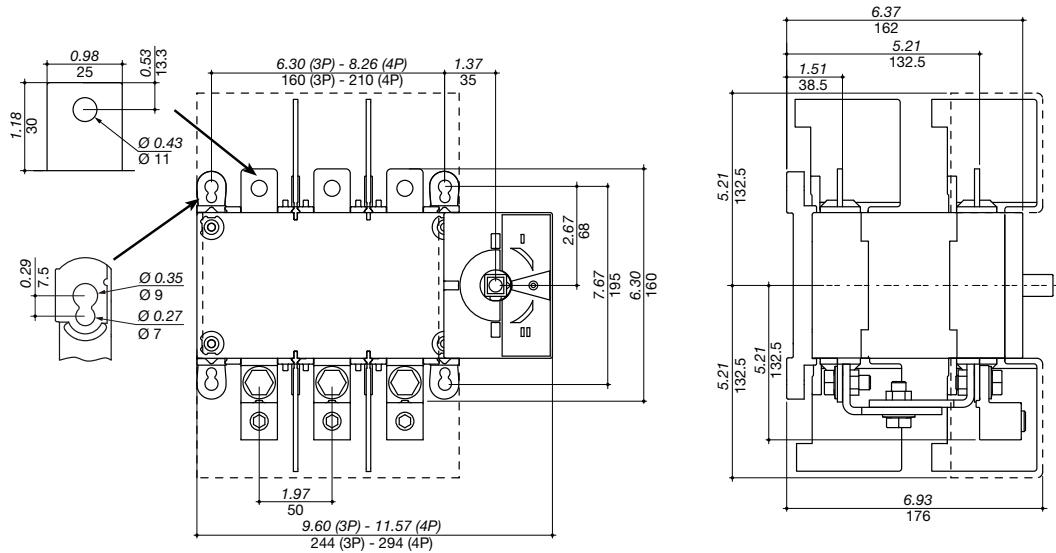


SIRCOVER UL1008

Manually operated Transfer Switching Equipment
from 100 to 1200 A

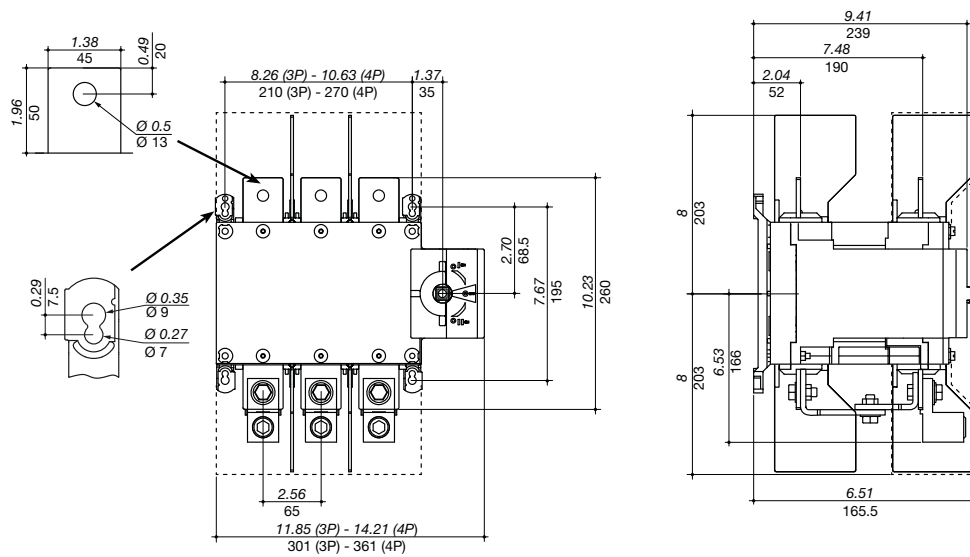
Dimensions (in/mm)

100 to 200 A / B4



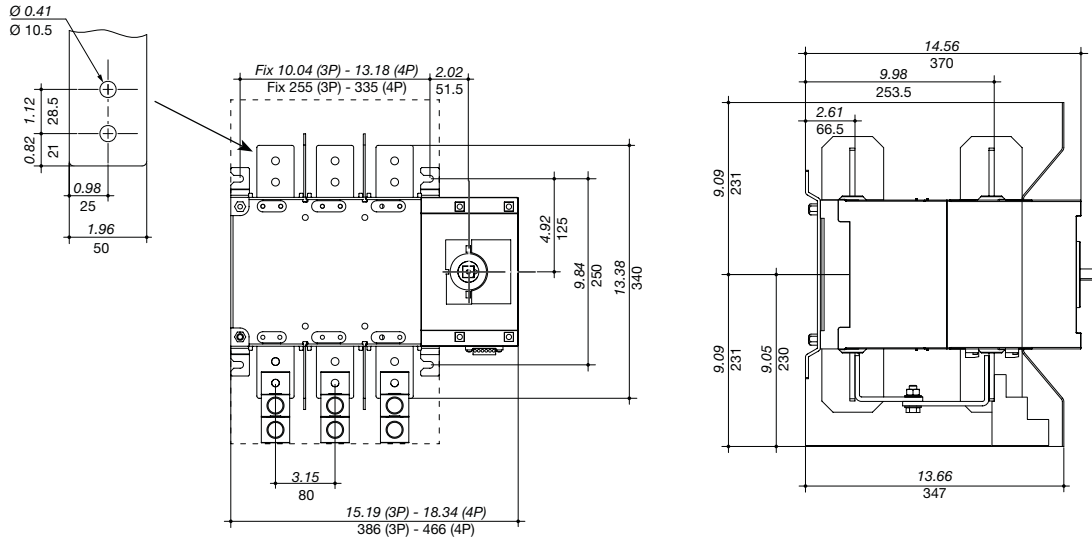
svr-ul015_o1_ix_cat

260 to 400 A / B5



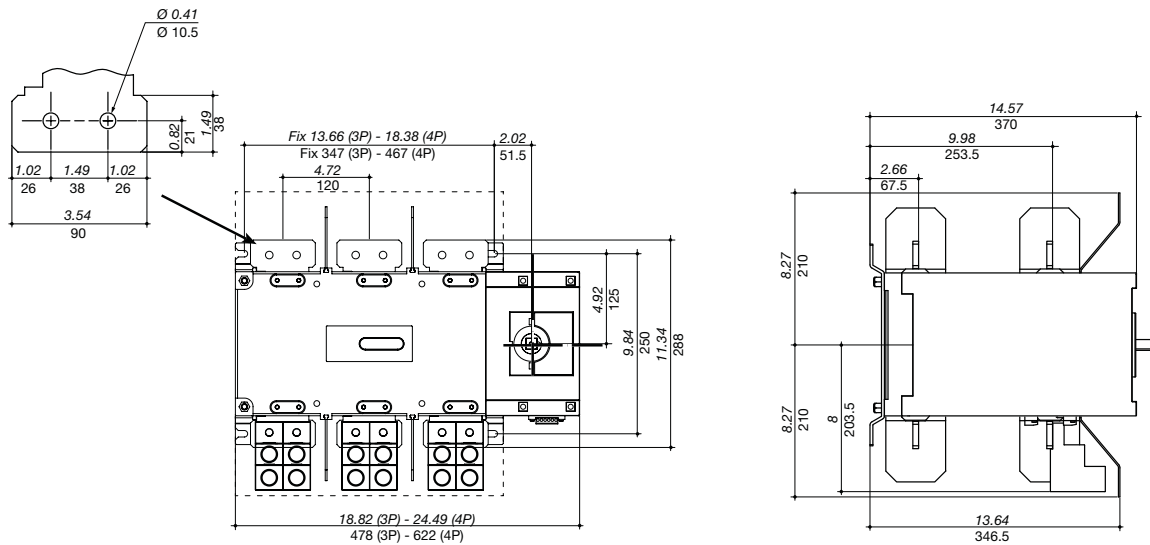
svr-ul016_b1_ix_cat

600 A / B6



svr-ul_003_b_1_x_cat

800 to 1200 A / B7



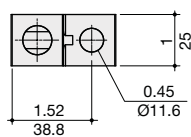
svr-ul_004_d_1_x_cat

SIRCOVER UL1008

Manually operated Transfer Switching Equipment
from 100 to 1200 A

Terminal lugs (in/mm)

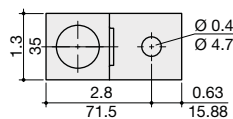
100 to 200 A / B4



300 kcmil

sirco_115_b_1_us_cat

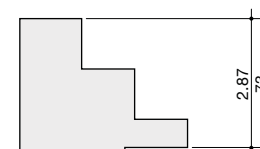
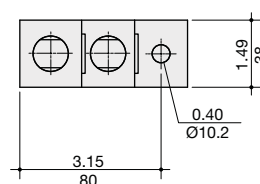
260 to 400 A / B5



600 kcmil

sirco-ul_010_a_1_us_cat

600 to 1200 A / B6 - B7



2 x 600 kcmil

sirco_116_b_1_us_cat

External handles dimensions (in/mm)

100 and 200 A / B4

| Handle type | Front operation Direction of operation | Door drilling |
|------------------------|---|---------------|
| S2 type | | |

poign_067_a_1_us_cat

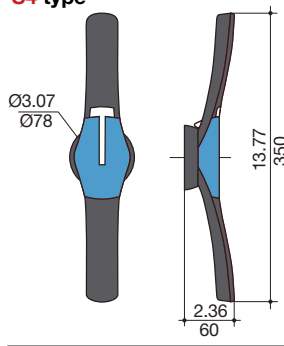
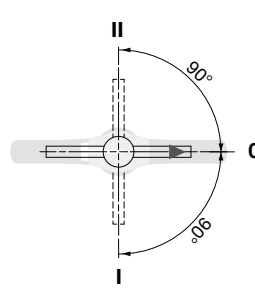
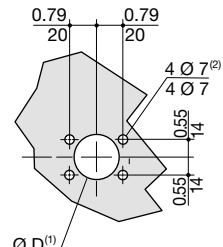
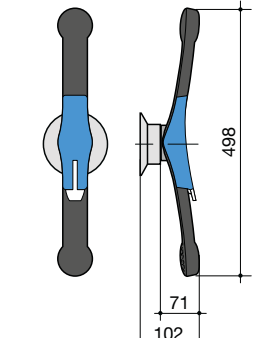
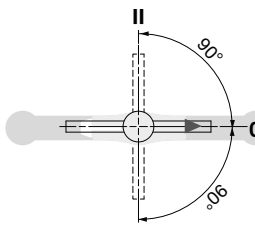
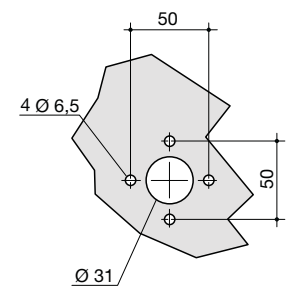
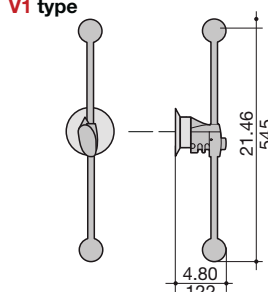
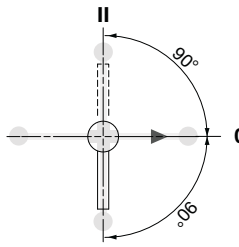
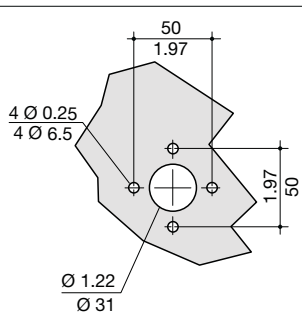
260 and 600 A / B5 - B6

| Handle type | Front operation Direction of operation | Door drilling |
|------------------------|---|---------------|
| S3 type | | |

poign_064_a_1_fr_cat

External handles dimensions (in/mm) (continued)

800 to 1200 A / B7

| Handle type | Front operation Direction of operation | Door drilling |
|--|---|---|
| <p>S4 type</p>  |  |  |
| <p>S5 type with V Escutcheon</p>  |  |  |
| <p>V1 type</p>  |  |  |

poign_065_a_1_gb_cat

poign_047_a_1_gb_cat

poign_066_a_1_us_cat



ATyS UL1008

Remotely operated transfer switching equipment
from 100 to 1200 A

Transfer switches



atys-ul1008_a_1_cat

The solution for

- > Commercial
- > Light Industry
- > Residential applications



Strong points

- > Robust and reliable design
- > Compatible with virtually any ATS controller
- > On-load manual operation
- > Maintenance free

Conformity to standards

- > UL 1008, Guide WPYV, file 317092



Product reference on request.

Your choice of ATS controls

- > Your preferred brand of ATS controller, genset/AMF controller or power/building management system, may easily be paired with the ATyS to provide a complete automatic transfer switch that perfectly suits your needs.

Function

ATyS non-automatic transfer switches are designed for use in total system optional standby applications for the safe transfer between a normal and an alternate power source.

The changeover is done in open transition and with minimum supply interruption during transfer ensuring full compliance with UL 1008 and IEC 60947-6-1. The ATyS is a full on-load disconnecter where the main components are based on proven technology also meeting requirements in UL 98 and IEC 60947-3 standards.

Advantages

Robust and Reliable design

ATyS is a remotely operated transfer switch tested in full compliance with UL 1008. The design integrates a failsafe mechanical interlock to ensure that the main source is never inadvertently connected to the alternate. The stable position design ensures that the switch is unaffected by vibration or network voltage perturbation. The ATyS also includes a removable handle for on load manual operation. This is extremely safe and easy to use. The ATyS also includes a fully rated switched neutral pole.

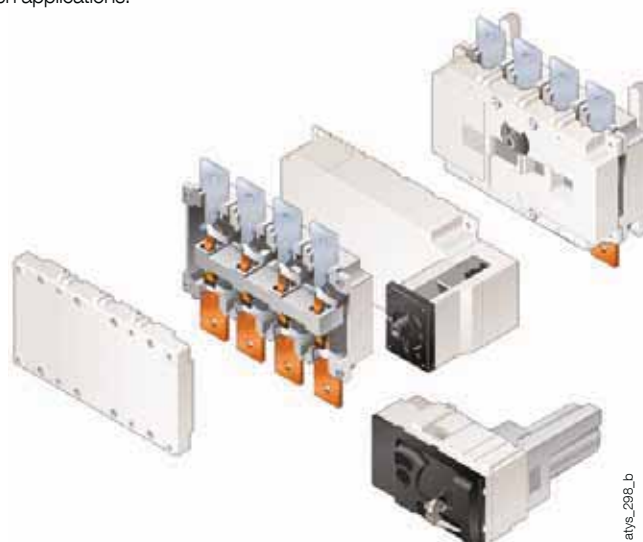
Maintenance free

The self-cleaning contacts of the ATyS allow the power section to be maintenance free. For safe downstream maintenance the ATyS includes a facility for isolation and padlocking in the zero position.

In the unlikely event of a motorisation failure, the ATyS is designed in a way that the motorisation can be replaced easily and very quickly. Furthermore, the ATyS remains manually operational with or without the motorisation in place.

Compatible with virtually any ATS controls

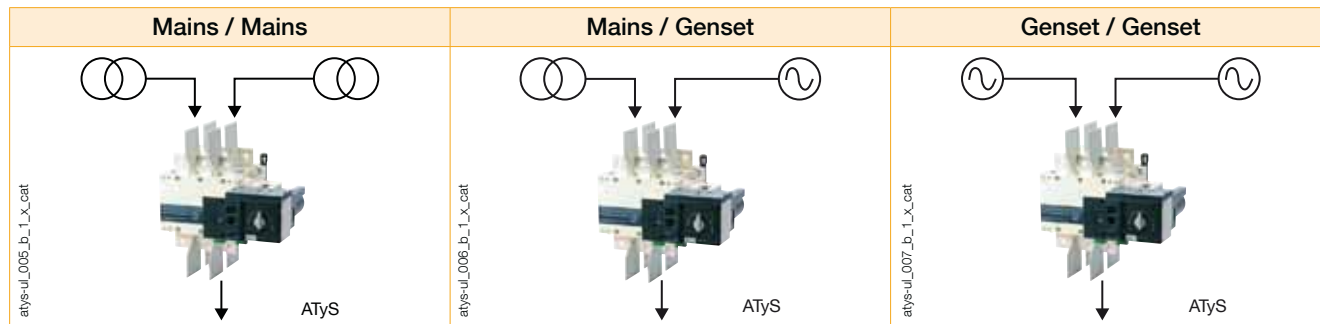
The ATyS is directly compatible with virtually any transfer switching control solution that provides volt free contacts. This allows the ATyS to be combined with most ATS controls available on the market and then used in automatic transfer switch applications.



atys_2008_b

Typical applications

The ATyS UL 1008 range provides safe transfer for mains/mains, mains/genset and genset/genset applications.



Part of a globally recognised range

The ATyS UL 1008 is part of a large family of products including a complete range of remotely operated and fully automatic transfer switches that comply to IEC and GB standards.

The ATyS range is a world renowned product family trusted by some of the largest manufacturers in the genset industry.

The key to success has been through reliable power availability provided by products that are safe and easy to use.

| ATyS r | ATyS d | ATyS t | ATyS g | ATyS p |
|--|--|--|--|--|
| <ul style="list-style-type: none"> UL IEC CCC | <ul style="list-style-type: none"> IEC CCC | <ul style="list-style-type: none"> IEC CCC | <ul style="list-style-type: none"> IEC CCC | <ul style="list-style-type: none"> IEC CCC |
| Remote Transfer Switch | Dual power supply | Automatic controller to manage mains/mains applications | Automatic controller to manage mains/genset applications | Functions for energy management Communication options |

WEB SERVER OPTION

Please don't hesitate to contact SOCOMEC with any questions regarding the IEC ATyS range of products above rated from 125 to 3200 A.

ATyS UL1008

Remotely operated transfer switching equipment
from 100 to 1200 A

References

ATYS UL 1008

| Rating (A) | Frame size | No. of poles | ATyS | Bridging bars | Terminal screens | Auxiliary contact | Lug kits | | |
|------------|------------|--------------|-----------|-------------------------|-----------------------------|------------------------------|--|--|---------------------------------|
| 100 A | B4 | 2 P | 9723 2010 | 2 P 4159 2021 3 P | 2 / 3 P 4158 3021 4 P | NO/NC 4159 0021 | 2 P 3954 2020 ⁽¹⁾ 3 P | | |
| | | 3 P | 9723 3010 | | | | | | |
| | | 4 P | 9723 4010 | | | | | | |
| 200 A | | 2 P | 9723 2020 | 41593021 4 P | 4158 4021 | | 4 P 3954 4020 ⁽¹⁾ 4 P | | |
| | | 3 P | 9723 3020 | 4159 4021 | | | | | |
| | | 4 P | 9723 4020 | | | | | | |
| 260 A | B5 | 2 P | 9723 2026 | 2 P 4159 2041 3 P | 2 / 3 P 4158 3041 4 P | Low level 4159 0022 | 2 P 3954 2040 ⁽¹⁾ 3 P | | |
| | | 3 P | 9723 3026 | | | | | | |
| | | 4 P | 9723 4026 | | | | | | |
| 400 A | | 2 P | 9723 2040 | 41593041 4 P | 4158 4041 | | 4 P 3954 4040 ⁽¹⁾ 4 P | | |
| | | 3 P | 9723 3040 | 4159 4041 | | | | | |
| | | 4 P | 9723 4040 | | | | | | |
| 600 A | B6 | 3 P | 9723 3060 | 4159 3063 | 1609 3063 | Contact NO/NC as Standard | 3954 3060 ⁽³⁾ | | |
| | | 4 P | 9723 4060 | 4159 4063 | 1609 4063 | | 3954 4060 ⁽³⁾ | | |
| 800 A | | 3 P | 9723 3080 | 3 P 4159 3080 4 P | 3 P 1609 3080 4 P | | 3 P 1609 3080 4 P | 3 P 3954 3120 ⁽⁴⁾ 4 P | |
| | | 4 P | 9723 4080 | | | | | | |
| 1200 A | | B7 | 3 P | 9723 3120 | 4 P 4159 4080 | | | 1609 4080 | 4 P 3954 4120 ⁽⁴⁾ |
| | | | 4 P | 9723 4120 | | | | | |

(1) 1x #6-300MCM.

(2) 1x #4-600MCM

(3) 2x(#2-600MCM)

(4) 2x 2x(#2-600MCM)

Accessories

Terminal screens

| Rating (A) | No. of poles | Reference |
|--------------|--------------|-----------|
| 100 ... 200 | 2 / 3 P | 4158 3021 |
| 100 ... 200 | 4 P | 4158 4021 |
| 260 ... 400 | 2 / 3 P | 4158 3041 |
| 260 ... 400 | 4 P | 4158 4041 |
| 600 | 6 P | 1609 3063 |
| 600 | 4 P | 1609 4063 |
| 800 ... 1200 | 3 P | 1609 3080 |
| 800 ... 1200 | 4 P | 1609 4080 |

Use

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



access_207_a_2_cat

Bridging bars

| Rating (A) | No. bridging bar | Reference |
|--------------|------------------|-----------|
| 100 ... 200 | 2 | 4159 2021 |
| 100 ... 200 | 3 | 4159 3021 |
| 100 ... 200 | 4 | 4159 4021 |
| 260 ... 400 | 2 | 4159 2041 |
| 260 ... 400 | 3 | 4159 3041 |
| 260 ... 400 | 4 | 4159 4041 |
| 600 | 3 | 4159 3063 |
| 600 | 4 | 4159 4063 |
| 800 ... 1200 | 3 | 4159 3080 |
| 800 ... 1200 | 4 | 4159 4080 |

Use

For bridging power terminals on the top or bottom side of the switch. When ordering one reference is required per switch.



access_205_a_2_cat

Auxiliary contacts

Use

Pre-break and signalling of positions I and II: each reference provides 1 NO/NC auxiliary contact for positions I and II. ATyS are supplied with 1 NO auxiliary contact for all three positions as standard.

| Rating (A) | Contact (s) | Reference |
|--------------|-------------------------------------|-------------|
| 100 ... 400 | NO/NC on position 1 and 2 | 4159 0021 |
| 100 ... 400 | Low level NO/NC on position 1 and 2 | 4159 0022 |
| 600 ... 1200 | NO/NC on position 1 and 2 | as standard |

A maximum of 2 Aux contacts per position may be added.



access_065_a_1_cat



access_065_a_1_cat

Terminal lugs

Use

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

| Rating (A) | Wires range | No wires per lug | Lugs per kit | Wires | Reference |
|-----------------------------|--------------------|------------------|--------------|---------|-----------|
| 100 ... 200 | 6 - 300MCM | 1 | 2 | Cu / Al | 3954 2020 |
| 100 ... 200 | 6 - 300MCM | 1 | 3 | Cu / Al | 3954 3020 |
| 100 ... 200 | 6 - 300MCM | 1 | 4 | Cu / Al | 3954 4020 |
| 260 ... 400 | 4 - 600MCM | 1 | 2 | Cu / Al | 3954 2040 |
| 260 ... 400 | 4 - 600MCM | 1 | 3 | Cu / Al | 3954 3040 |
| 260 ... 400 | 4 - 600MCM | 1 | 4 | Cu / Al | 3954 4040 |
| 600 | 2x (#2 - 600MCM) | 2 | 3 | Cu / Al | 3954 3060 |
| 600 | 2x (#2 - 600MCM) | 2 | 4 | Cu / Al | 3954 4060 |
| 800 ... 1200 ⁽¹⁾ | 2x 2x(#2 - 600MCM) | 2 | 6 | Cu / Al | 3954 3120 |
| 800 ... 1200 ⁽¹⁾ | 2x 2x(#2 - 600MCM) | 2 | 8 | Cu / Al | 3954 4120 |

(1) To be used to connect 4 wires on one terminal. In such a case, 2 lugs are placed side-by-side on one terminal. Please refer to dimensions diagram



ul_032_a

ATyS UL1008

Remotely operated transfer switching equipment
from 100 to 1200 A

Spares

Motorisation module

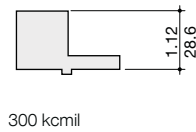
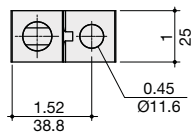
| Rating (A) | No. of poles | Frame size | Used for ATyS reference | Motorisation module References |
|------------|--------------|------------|-----------------------------------|--------------------------------|
| 100 | 2 / 3 / 4 P | B4 | 9723 2010 - 9723 3010 - 9723 4010 | 9709 5010 |
| 200 | 2 / 3 / 4 P | | 9723 2020 - 9723 3020 - 9723 4020 | 9709 5020 |
| 260 | 2 / 3 / 4 P | B5 | 9723 2026 - 9723 3026 - 9723 4026 | 9709 5026 |
| 400 | 2 / 3 / 4 P | | 9723 2040 - 9723 3040 - 9723 4040 | 9709 5040 |
| 600 | 3 / 4 P | B6 | 9723 3060 - 9723 4060 | 9709 5060 |
| 800 | 3 / 4 P | B7 | 9723 3080 - 9723 4080 | 9709 5080 |
| 1200 | 3 / 4 P | | 9723 3120 - 9723 4120 | 9709 5120 |



atys_b71_a_1_cat.eps

Terminal lugs (in/mm)

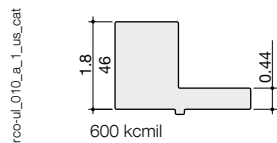
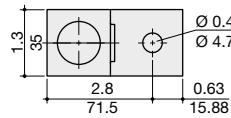
100 and 200 A / B4



300 kcmil

siroco_115_b_1_us_cat

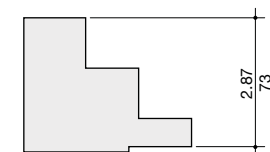
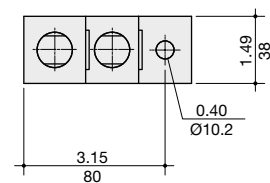
260 and 400 A / B5



600 kcmil

siroco-ul_010_a_1_us_cat

600 to 1200 A / B6 - B7



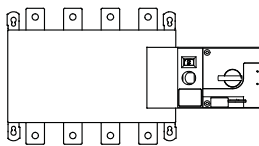
2 x 600 kcmil

siroco_116_b_1_us_cat

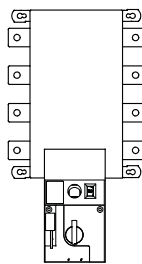
Mounting orientation

100 to 400 A / B4 - B5

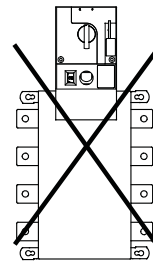
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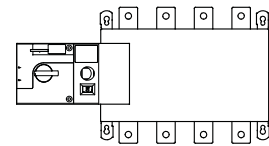
Recommended



OK



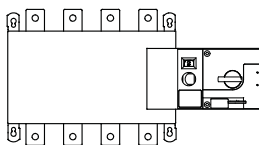
Not Allowed



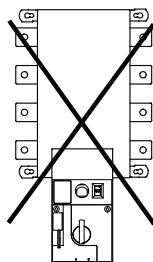
OK

600 to 1200 A / B6 - B7

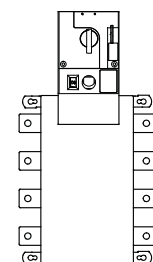
atys-ul_013 ... 014_a_1_x_cat



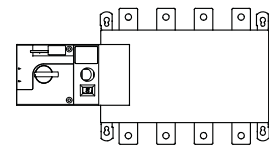
Recommended



Not Allowed



OK



OK

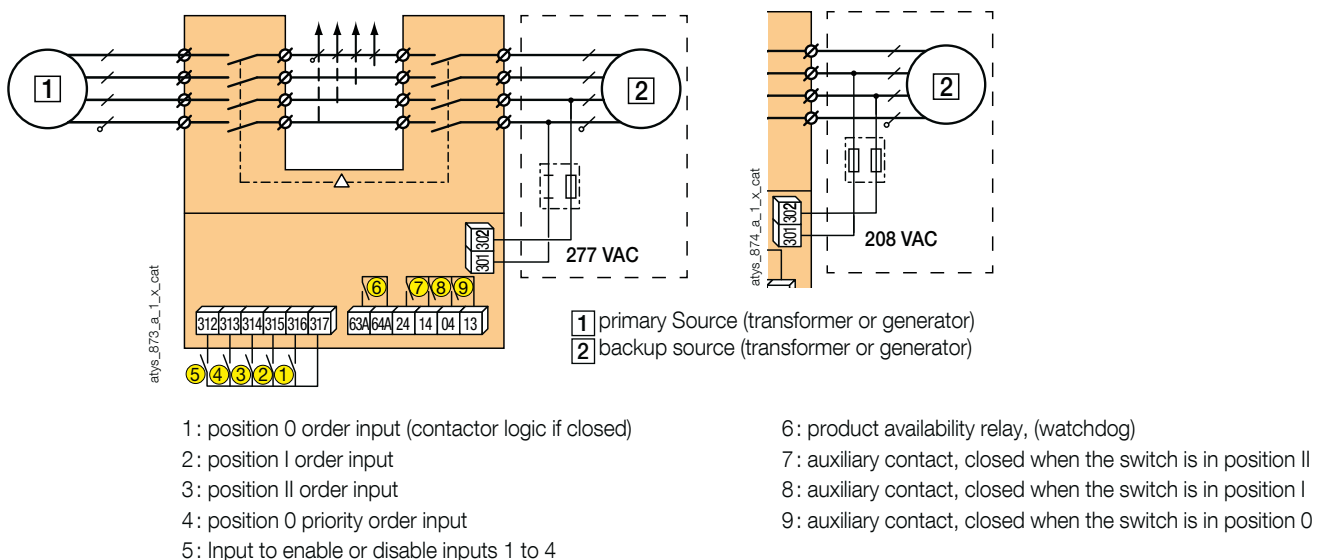
Characteristics

Characteristics according to UL 1008 (Optional standby)

| General use rating (A) | 100 A | 200 A | 260 A | 400 A | 600 A | 800 A | 1200 A |
|---|-------------|---------|---------------------|---------------------|-----------|-----------|------------|
| Frame size | B4 | | B5 | | B6 | B7 | |
| Operation voltage 2 P - 3/4 P | 240/600 | 240/600 | 240/600 | 240/600 | -/600 | -/600 | -/600 |
| Short circuit rating at 600 VAC with fuses (kA) | | | | | | | |
| Short circuit rating at 600 VAC (kA) | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Type of fuse | J | J | J | J | L | L | L |
| Short circuit rating at 600 VAC with "Specific Circuit Breaker" (kA) | | | | | | | |
| Square D JJ breaker 250 A - 2 P 240 VAC - 3/4 P 480 VAC | 65 | 65 | - | - | - | - | - |
| Schneider Electric NSX-F 160 A - 3/4 P 480 VAC | 35 | - | - | - | - | - | - |
| Short circuit rating at 600 VAC with "Any Breaker" (kA) | | | | | | | |
| Short circuit rating (kA) | 10 | 10 | 14 | 14 | 35 | 35 | 35 |
| Short circuit capacity (ms) | 25 | 25 | 50 | 50 | 50 | 50 | 50 |
| Rated operational current | | | | | | | |
| 240 VAC "Total System" (A) | 100 | 200 | 260 | 400 | 400 | 700 | 700 |
| 240 VAC resistive load (A) | 100 | 200 | 260 | 400 | 600 | 800 | 1200 |
| 480 VAC "Total System" (A) | 100 | 100 | 260 | 400 | 350 | 600 | 600 |
| 480 VAC resistive load (A) | 100 | 200 | 260 | 400 | 600 | 800 | 1200 |
| 600 VAC "Total System" (A) | 100 | 100 | 200 | 200 | - | - | - |
| 600 VAC resistive load (A) | 100 | 200 | 260 | 400 | 600 | 800 | 1200 |
| Mechanical endurance | | | | | | | |
| Endurance (number of operating cycles) | 6050 | 6050 | 6050 | 4050 | 3050 | 3050 | 3050 |
| Connection terminals | | | | | | | |
| Min. connection section / AWG | #6 | #6 | #4 / 2 X 1 / 0 | #4 / 2 X 1 / 0 | 2 x #2 | 2 x #2 | 4 x #2 |
| Max. connection section / AWG | 300MCM | 300MCM | 600MCM / 2 X 250MCM | 600MCM / 2 X 250MCM | 2x 600MCM | 2x 600MCM | 4 x 600MCM |
| Power supply | | | | | | | |
| Supply voltage VAC 50/60 Hz | 208-277 VAC | | | | | | |
| Switching time | | | | | | | |
| I - II or II - I (s) | 1.3 | | | | 3.2 | | |
| I - 0 or 0 - II (s) | 0.85 | | | | 1.8 | | |
| Duration of electrical blackout (s) | 0.6 | | | | 1.6 | | |

Terminals and connections

Typical wiring for 277/480 VAC and 120/208 VAC networks



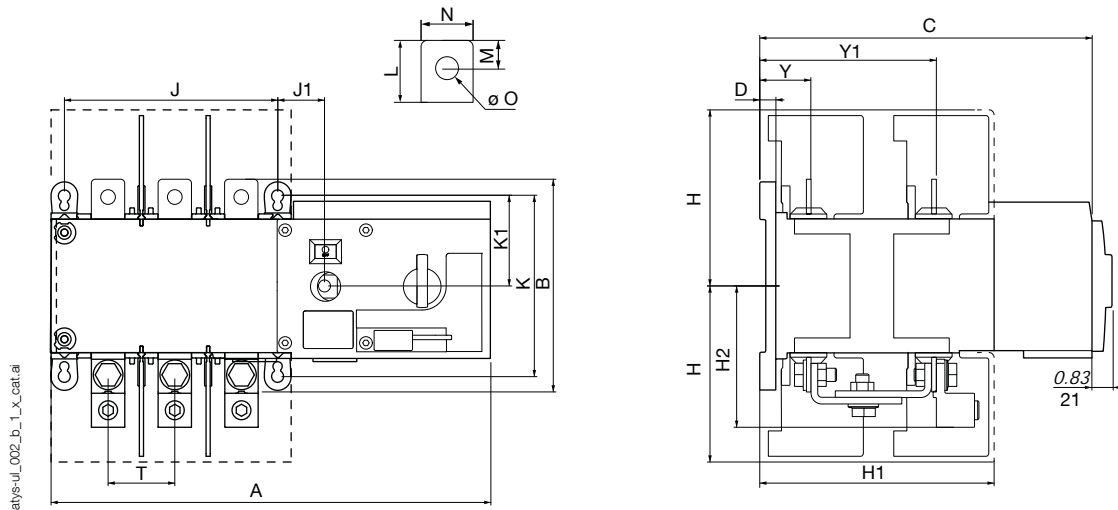
ATyS UL1008

Remotely operated transfer switching equipment
from 100 to 1200 A

Dimensions (in/mm)

100 to 400 A / B4 - B5

Transfer switch dimensions

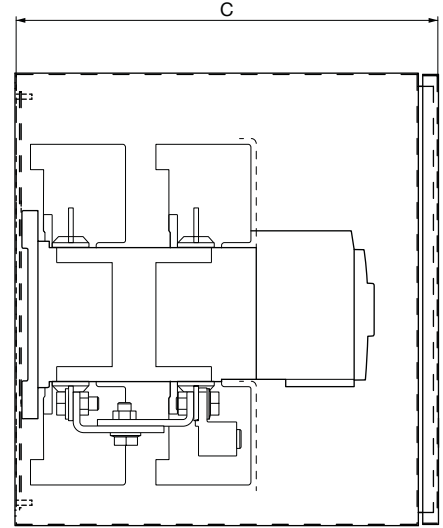
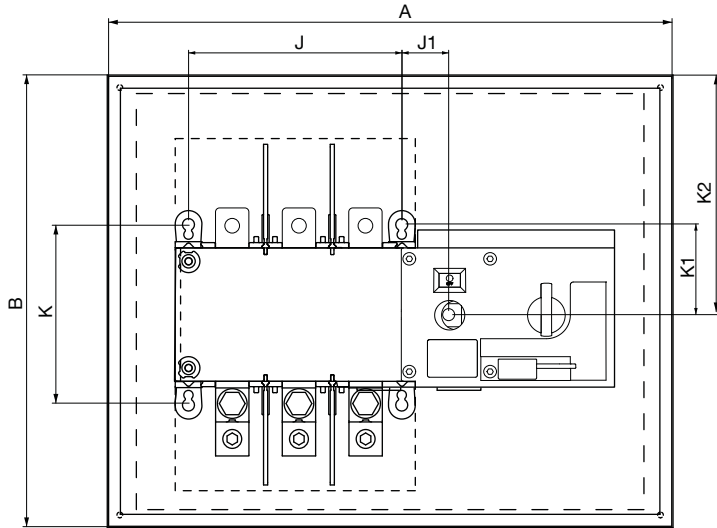


| Rating (A) | Frame size | Reference | No. of poles | A | | B | | C | | D | | H | | H1 | | H2 | | Y | | Y1 | | |
|------------|------------|-----------------------|--------------|-------|-----|-------|-----|-------|-------|------|------|------|-----|------|-------|------|-----|------|------|------|-------|--|
| | | | | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| 100 - 200 | B4 | 9723 2010 - 9723 2020 | 2 P | 12.91 | 328 | 6.30 | 160 | 9.60 | 244 | 0.41 | 10.5 | 5.08 | 129 | 6.93 | 176 | 4.21 | 107 | 1.51 | 38.5 | 5.21 | 132.5 | |
| | | 9723 3010 - 9723 3020 | 3 P | | | | | | | | | | | | | | | | | | | |
| | | 9723 4010 - 9723 4020 | 4 P | 14.88 | 378 | | | | | | | | | | | | | | | | | |
| 260 - 400 | B5 | 9723 2026 - 9723 2040 | 2 P | 14.84 | 377 | | | | | | | | | | | | | | | | | |
| | | 9723 3026 - 9723 3040 | 3 P | | | 10.23 | 260 | 12.62 | 320.5 | 0.41 | 10.5 | 8 | 203 | 6.51 | 165.5 | 6.53 | 166 | 2.04 | 52 | 7.48 | 190 | |
| | | 9723 4026 - 9723 4040 | 4 P | 17.20 | 437 | | | | | | | | | | | | | | | | | |

| Rating (A) | Frame size | Reference | No. of poles | J | | J1 | | K | | K1 | | L | | M | | N | | O | | T | | |
|------------|------------|-----------------------|--------------|-------|-----|------|----|------|-----|------|------|------|----|------|------|------|----|------|----|-----|----|--|
| | | | | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| 100 - 200 | B4 | 9723 2010 - 9723 2020 | 2 P | 6.30 | 160 | 1.37 | 35 | 7.67 | 195 | 3.84 | 97.5 | 1.18 | 30 | 0.53 | 13.3 | 0.98 | 25 | 0.43 | 11 | 2 | 50 | |
| | | 9723 3010 - 9723 3020 | 3 P | | | | | | | | | | | | | | | | | | | |
| | | 9723 4010 - 9723 4020 | 4 P | 8.26 | 210 | | | | | | | | | | | | | | | | | |
| 260 - 400 | B5 | 9723 2026 - 9723 2040 | 2 P | 8.26 | 210 | | | | | | | | | | | | | | | | | |
| | | 9723 3026 - 9723 3040 | 3 P | | | 1.37 | 35 | 7.67 | 195 | 3.84 | 97.5 | 1.96 | 50 | 0.49 | 20 | 1.38 | 45 | 0.51 | 13 | 2.6 | 65 | |
| | | 9723 4026 - 9723 4040 | 4 P | 10.63 | 270 | | | | | | | | | | | | | | | | | |

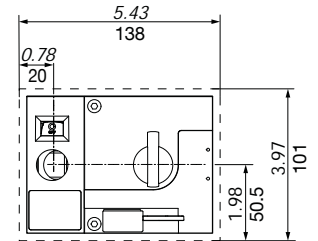
100 to 400 A / B4 - B5

Minimum enclosure dimensions



atys-ul_009_b_1_x_cat.ai

Door cut-out for front panel



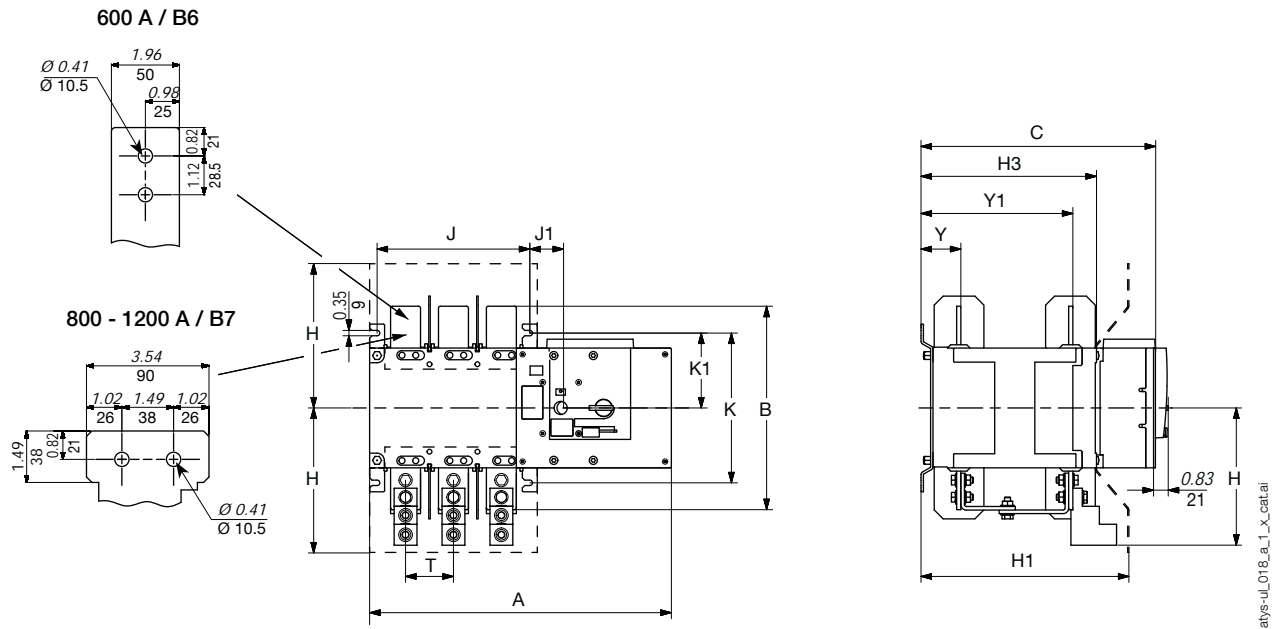
atys-ul_017_a_1_x_cat.ai

| Rating (A) | Frame size | Reference | No. of poles | A | | B | | C | | J | | J1 | | K | | K1 | | K2 | |
|------------|------------|-----------------------|--------------|----|-----|----|-----|----|-----|-------|-----|------|----|------|-----|------|------|----|-----|
| | | | | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 100 - 200 | B4 | 9723 2010 - 9723 2020 | 2 P | 24 | 610 | 24 | 610 | 12 | 305 | 6.30 | 160 | 1.37 | 35 | 7.67 | 195 | 2.67 | 68 | 12 | 305 |
| | | 9723 3010 - 9723 3020 | 3 P | | | | | | | 8.26 | 210 | | | | | | | | |
| 260 - 400 | B5 | 9723 2026 - 9723 2040 | 2 P | | | | | | | 8.26 | 210 | 1.37 | 35 | 7.67 | 195 | 3.84 | 97.5 | 15 | 381 |
| | | 9723 3026 - 9723 3040 | 3 P | 32 | 813 | 32 | 813 | 16 | 406 | | | | | | | | | | |
| | | 9723 4026 - 9723 4040 | 4 P | | | | | | | 10.63 | 270 | | | | | | | | |

Dimensions (in/mm) (continued)

600 to 1200 A / B6 - B7

Transfer switch dimensions

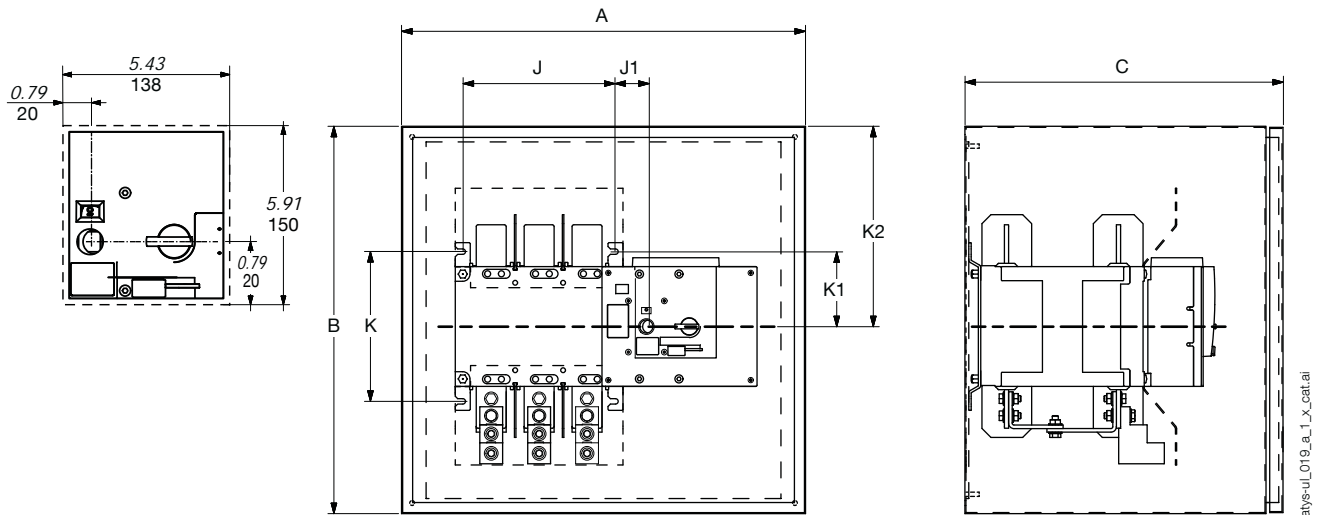


| Rating (A) | Frame size | Reference | No. of poles | A | | B | | C | | H | | H1 | | H2 | | H3 | |
|------------|------------|-----------------------|--------------|-------|-----|-------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|
| | | | | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 600 | B6 | 9723 3060 | 3 P | 19.8 | 504 | 13.38 | 340 | 15.4 | 392 | 9.09 | 231 | 13.7 | 347 | 9.05 | 230 | 11.5 | 293 |
| | | 9723 4060 | 4 P | 22.99 | 584 | | | | | | | | | | | | |
| 800 - 1200 | B7 | 9723 3080 - 9723 3120 | 3 P | 23.5 | 596 | 11.34 | 288 | 15.4 | 392 | 8.30 | 211 | 13.7 | 347 | 8.03 | 204 | 11.5 | 293 |
| | | 9723 4080 - 9723 4120 | 4 P | 28.2 | 716 | | | | | | | | | | | | |

| Rating (A) | Frame size | Reference | No. of poles | J | | J1 | | K | | K1 | | T | | Y | | Y1 | |
|------------|------------|-----------------------|--------------|------|-----|------|------|------|-----|------|-----|------|-----|------|------|------|-----|
| | | | | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 600 | B6 | 9723 3060 | 3 P | 10 | 255 | 2.02 | 51.5 | 9.84 | 250 | 4.92 | 125 | 3.15 | 80 | 2.61 | 66.5 | 9.98 | 254 |
| | | 9723 4060 | 4 P | 13.2 | 335 | | | | | | | | | | | | |
| 800 - 1200 | B7 | 9723 3080 - 9723 3120 | 3 P | 13.7 | 347 | 2.02 | 51.5 | 9.84 | 250 | 4.92 | 125 | 4.72 | 120 | 2.65 | 67.7 | 9.98 | 254 |
| | | 9723 4080 - 9723 4120 | 4 P | 18.4 | 467 | | | | | | | | | | | | |

600 to 1200 A / B6 - B7

Minimum enclosure dimensions



atys-ul1018_a_1_x_cat.ai

| Rating (A) | Frame size | Reference | No. of poles | A | | B | | C | | J | | J1 | | K | | K1 | | K2 | |
|------------|------------|-----------------------|--------------|----|-----|----|------|----|-----|-------|-----|------|------|------|-----|------|-----|----|-----|
| | | | | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| 600 | B6 | 9723 3060 | 3 P | 36 | 915 | 48 | 1220 | 20 | 508 | 10.04 | 255 | 2.02 | 51.5 | 9.84 | 250 | 4.92 | 125 | 24 | 610 |
| | | 9723 4060 | 4 P | | | | | | | 12.18 | 355 | | | | | | | | |
| 800 - 1200 | B7 | 9723 3080 - 9723 3120 | 3 P | 36 | 915 | 60 | 1524 | 20 | 508 | 13.66 | 347 | 2.02 | 51.5 | 9.84 | 250 | 4.92 | 125 | 30 | 762 |
| | | 9723 4080 - 9723 4120 | 4 P | | | | | | | 18.38 | 467 | | | | | | | | |

U = RI

TSE technical guide

| | |
|-----------------------------------|---------------|
| The applications | <i>p. 116</i> |
| Types of transfer switching | <i>p. 117</i> |
| The sources | <i>p. 118</i> |
| The loads | <i>p. 118</i> |
| Typical electrical diagrams | <i>p. 119</i> |
| Automatic transfer | <i>p. 130</i> |
| Specific applications | <i>p. 132</i> |
| IEC 60947-6-1 standard | <i>p. 133</i> |

Transfer Switching Equipment (TSE) in LV installations

The applications

Introduction

The word transfer is applied to any application requiring a switching operation from one power circuit to another.

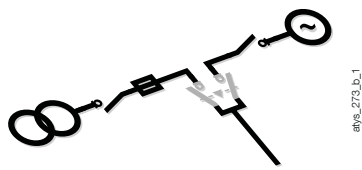
The transfer concept is mainly applied to two sources requiring changeover, one considered as a main power supply and the other one as an alternate source or backup supply.

The expression 'normal/emergency' is used to name this backup function. The most useful transfer application concerns installations requiring switching to an alternate power supply in case of loss of the main's network (electricity provider, hospital,...).

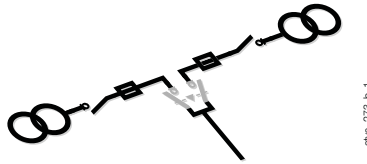
Another typical application is "Genset/Genset", and this is when the load is supplied by two generators.

Normal/emergency applications

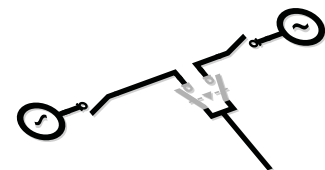
Mains/Genset application



Mains/Mains application



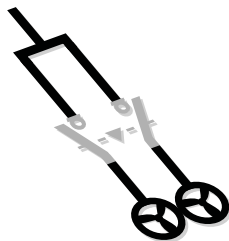
Genset/Genset application



'Normal/emergency' applications are dedicated to safety installations. They ensure continuity in the supply to the loads and facilitate evacuation of the building for security matters. Typical safety equipment include lighting, alarm systems (fire...), smoke extraction systems, fire pumps, air compressors, sprinkler systems, lifts, ...

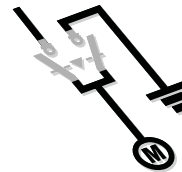
Other typical applications

Switching between loads



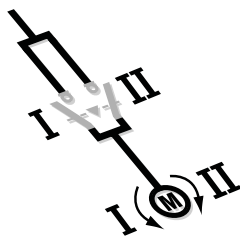
Switching the power supply from one load to another generates redundancy with a balanced operating time for the two loads.

Earthing



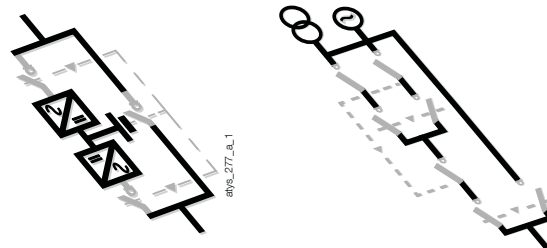
Safely isolating a load from the supply whilst earthing equipment such as motors or electrical lines. This enables work to be carried out downstream of the transfer switch in total safety.

Phase and rotation inversion on motors



Inversion between two out of three phases supplying a motor in order to modify the direction of rotation. This application requires a delay in the off position to prevent damage to the equipment.

Bypass



Isolation of the a transfer switch, a UPS or other equipment for scheduled maintenance or tests. This is done by safely disconnecting upstream and downstream circuits, whilst continuing to supply the load via a parallel circuit referred to as a Bypass circuit.

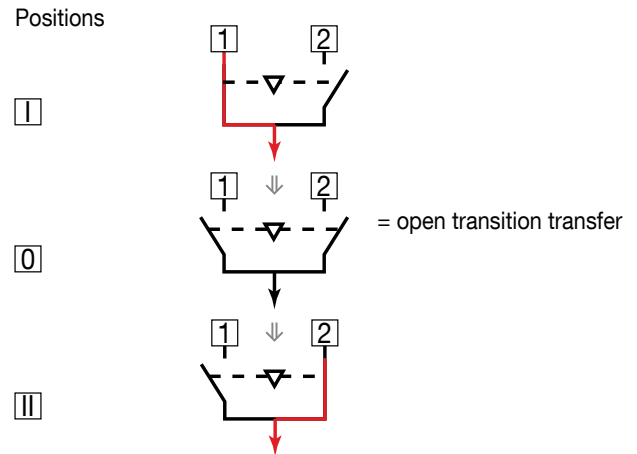
Types of transfer switching

Break before make (Open Transition)

The transfer from one source to a second source goes through a 0 position to ensure that the main and alternate source do not overlap. An off time can be counted down to allow the load residual voltage to decrease below a non critical value before transferring. Transferring the load too quickly to another source can lead to power transfers between the load and the supply, which often cause damage. This can potentially damage sensitive equipment and cause protection devices to trip. The 0 position is a stable safe off position, which enables work to be carried out downstream of the transfer switch in safely once padlocked. The off time delay setting should be configured according to the equipment installed. The international standard IEC 60947-6-1, dedicated to transfer switching equipment, states that any time delay or off-time provided in the total operating transfer time, from the normal to the alternative or the alternative to the normal supply, shall not be less than 50 ms. For applications that require a faster transfer time it is recommended to include adequate measurement and protection in the installation. Typically sync check relays. If this time is not respected, then the installation must have adapted synchronisation and protection functions.

SOCOMEc transfer switching equipment is designed as open transition that meets the requirements for most applications.

In fact for most applications the backup supply is rarely a hot standby (example a genset needs to be started) whilst critical loads are usually supplied through a UPS.



Closed transition (Synchronous transfer)

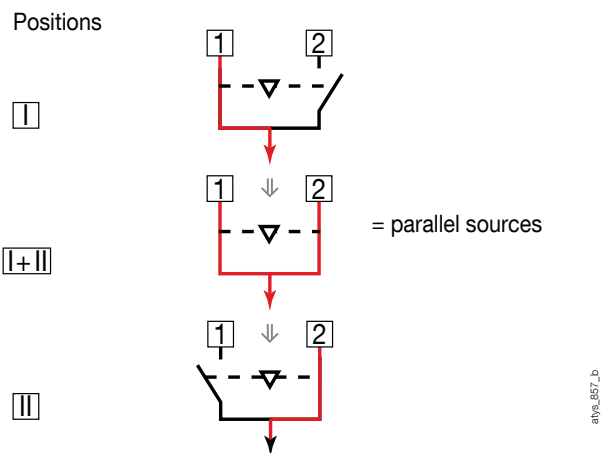
Depending on the local network regulations the normal and the alternative source may temporarily run in parallel for a period of <100ms. This is typically used for scheduled transfers, for example returning to the Normal source from the alternative source.

To allow a synchronised transfer the two sources must be in sync to allow the transfer:

- Their phases angles must be in phase (less than a 5° difference).
- Their frequency and amplitudes are virtually identical (less than 0.2Hz and 5%V).

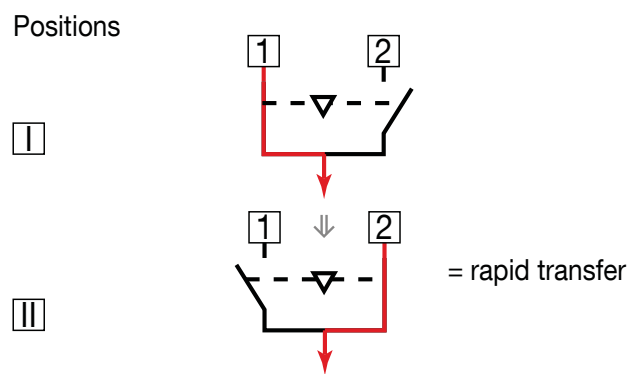
When synchronised within these limits a scheduled or return to normal supply transfer may take place without a blackout time allowing continuity of service.

When the Normal source is lost, or the power supplies cannot be synchronised (out of limits explained above) the transfer is carried out in open transition.



Asynchronous Transfer

This type of transfer mode is typically applicable to applications with large asynchronous motor loads. A fast open transition transfer is used to allow a direct transfer without having to stop the motor. This transfer time is usually less than 50 ms and achievable safely when using a transfer switch coupled with a sync check relay. Although the transfer is carried out in open transition without overlapping contacts, the same conditions (in terms of voltage, phase angle and phase angle) as with closed transition apply.



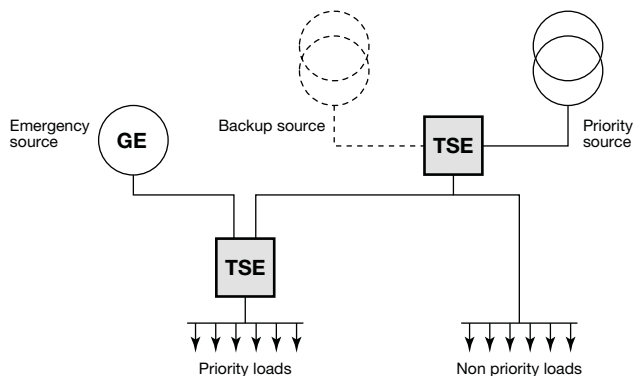
Transfer Switching Equipment (TSE) in LV installations

The sources

Types of sources

The source supplies can be described as follows:

- One source considered as priority (normal source): a power grid/network through one or several transformers in parallel. Possible source redundancy can be achieved using an alternative source to ensure continuity of power in case of the normal supply failure.
- One alternative (backup source): a power generating plant (gensets, turbines, fuel cells, UPS, wind farms, ...)



Classification of safety power supplies

In accordance with the standard NFC 15-100, governing Low voltage electrical installations, a safety power supply allows devices critical for personal safety to be kept in operational condition. This type of power supply is categorised as follows:

| Category | Transfer time |
|-----------------|-------------------------|
| No shutdown | Continuous power supply |
| Short shutdown | ≤ 0.5s |
| Medium shutdown | ≤ 10s |
| Long shutdown | > 10s |

The loads

The transfer mode and the type of emergency sources to use are linked to the loads available.

Load criticality and sensitivity

Loads can generally be classified by two main criteria; their criticality, i.e. whether or not they require backup power, and their sensitivity, i.e. the blackout time permitted.

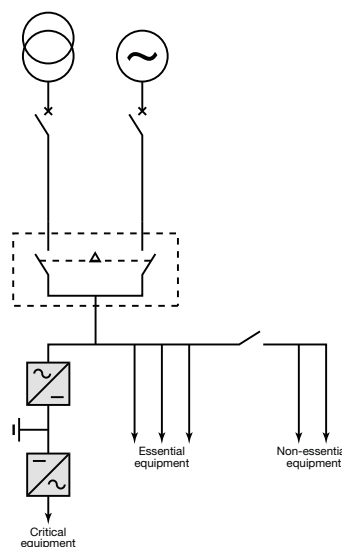
Various categories have been identified:

- Critical equipment that can not accept shutdown. They are supplied by a UPS to ensure service continuity in case of main's supply shutdown. Their power capacity is limited and depends on the load's consumption, the battery level of charge and maintenance.
- Essential equipment: a fast return of power is required (from a few seconds to several minutes).
- Non-essential equipment: only powered back on after the normal supply returns and transfer back from the alternative to the main supply is done.

Example of load criticality: NFC 15 211

Installations in medical premises

| | Shutdown |
|---|------------------|
| Level 1: Surgical room, intensive care... | None |
| Level 2: Postsurgical Monitoring ... | <15 sec |
| Level 3: Radiology ... | 15 sec to 30 min |



Transfer Switching Equipment (TSE) in LV installations

Typical electrical diagrams

The following diagrams offer technical solutions based on SOCOMEC transfer switches, in order to meet most of the ATS installation diagrams made with others technologies.

Choosing the right changeover switch

Socomec changeover switches aim at ensuring ever more efficient ways to guarantee the continuity of distribution and, therefore, the rate of availability of your energy.

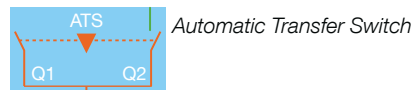
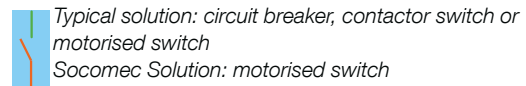
Those changeover switches can be used not just for Normal/Backup operation, but also for managing the switching of loads or the connection of equipment to earth.

In addition to the rating and the related electrical breaking specifications, the selection criteria are:

- type of control
- installation restrictions inside the enclosure

Furthermore, these solutions based on open transition switching and integrating interlocking, guarantee there will be no overlapping between the Normal source and the alternative source.

Glossary

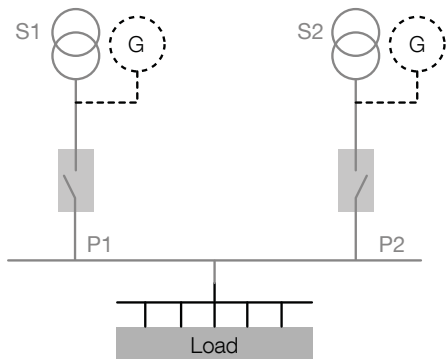


Transfer Switching Equipment (TSE) in LV installations

Transfer between 2 sources - 1 busbar

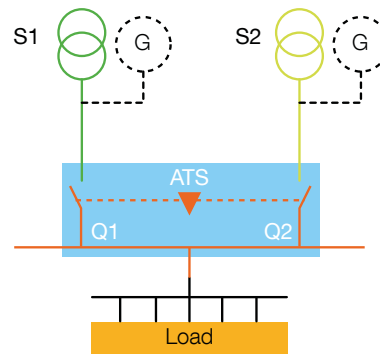
$$S1 \text{ (kVA)} = S2 \text{ (kVA)}$$

Typical solution



COMUT 041 A FR

SOCOMEK solution



COMUT 042 A FR

Truth table

| S1 | S2 | Typical solution | SOCOMEK | Load |
|----|----|------------------|---------|--------------|
| 0 | 0 | X: | X: | Not supplied |
| 0 | 1 | P2 | Q2 | Supplied |
| 1 | 0 | P1 | Q1 | Supplied |
| 1 | 1 | * | * | Supplied |

* depends on the preferred source

Advantages of the Socomec solution

Operation

- Only one emergency handle
- Secured padlocking system

Implementation

- Only one product (built-in solution)
- Compact design
- Plug and Play
- Mechanical and electrical interlocking are built-in

SOCOMEK products

Mains/Mains - Mains/Genset:

- ATyS or ATyS M, models t, g or p



ATyS_MP 001 LB - ATyS-1 001 A

Genset/Genset

- ATyS d M, ATyS r or ATyS d, ATyS S + C40



ATySM 018 B - ATyS 836 A
ATyS 599 C

- ATyS d M, ATyS r or ATyS d, ATyS S + C20 or C30



ATyS_MJ 001 B - ATyS 836 A
ATyS 443 B

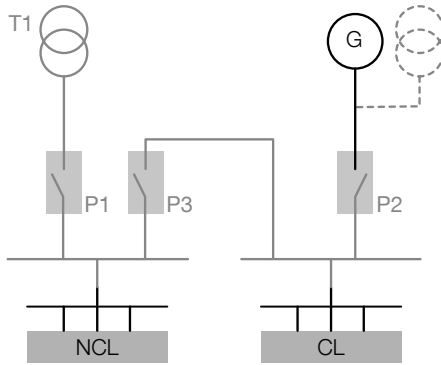
Transfer Switching Equipment (TSE) in LV installations

Transfer between 2 sources - 2 busbars

1) Sources are usually 1 transformer and 1 genset:
loads are split between critical and non critical

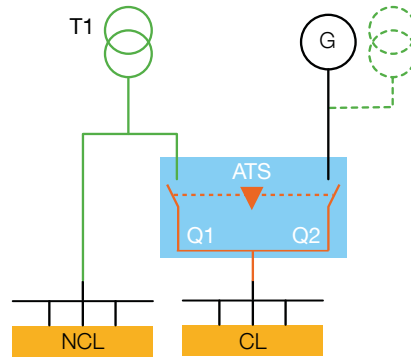
First type of architecture: $S1 \text{ (kVA)} > SG \text{ (kVA)}$

Typical solution



COMUT 043 A

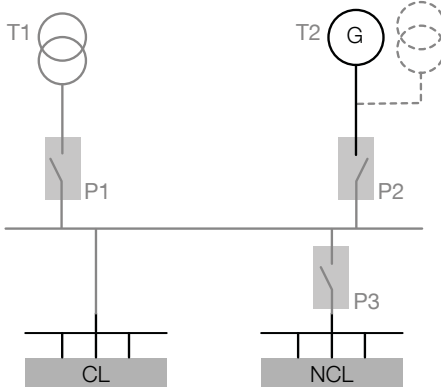
SOCOMEc solution



COMUT 044 A

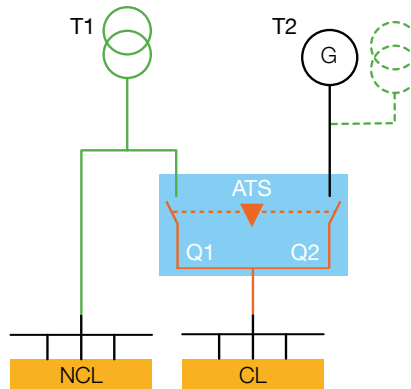
Second type of architecture: $S1 \text{ (kVA)} > S2 \text{ (kVA)}$

Typical solution



COMUT 045 A

SOCOMEc solution



COMUT 046 A

Truth table

| T1 | G | Typical solution | SOCOMEc | NCL | CL |
|----|---|------------------|---------|--------------|--------------|
| 0 | 0 | X: | X: | Not supplied | Not supplied |
| 0 | 1 | P2 | Q2 | Not supplied | Supplied |
| 1 | 0 | P1 + P3 | Q1 | Supplied | Supplied |

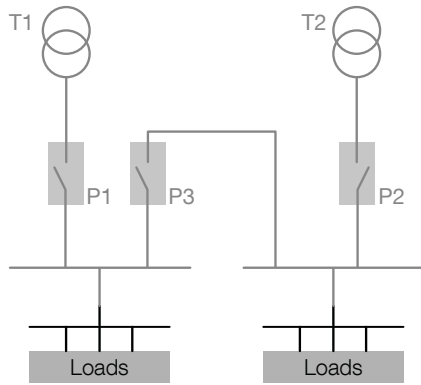
Transfer Switching Equipment (TSE) in LV installations

Transfer between 2 sources - 2 busbars (continued)

2) Sources are 2 transformers: loads are not differentiated

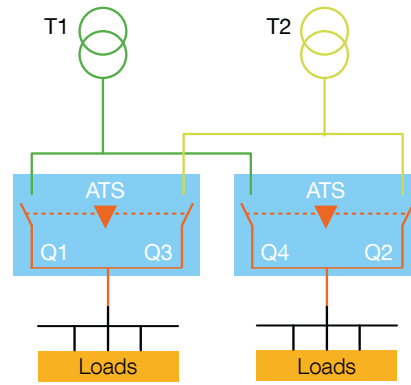
$$S1 \text{ (kVA)} = S2 \text{ (kVA)}$$

Typical solution



COMUT 047 A FR

SOCOMEK solution



COMUT 048 A FR

Truth table

| T1 | T2 | Typical solution | SOCOMEK | Loads |
|----|----|------------------|---------|--------------|
| 0 | 0 | X: | X: | Not supplied |
| 0 | 1 | P2 + P3 | Q2 + Q3 | Supplied |
| 1 | 0 | P1 + P3 | Q1 + Q4 | Supplied |
| 1 | 1 | P1 + P2 | Q1 + Q2 | Supplied |

Advantages of the Socomec solution

Operation

- Only one emergency handle (2 in the last case)
- Secured padlocking system
- In the first case (between transformer and genset), a motorised switch can be added on the Non Critical Loads for optional disconnection

Implementation

- Fewer products
- Compact design
- Plug and Play
- Mechanical and electrical interlocking are built-in

SOCOMEK products

Mains/Mains - Mains/Genset:

- ATyS or ATyS M, models t, g or p



ATyS_MP 001 B - ATyS+001 A

Motorised switch as an option on Non Critical Loads

- SIRCO MOT AT



SIRCO 310 B

- ATyS d M, ATyS r or ATyS d, ATyS S + C20 or C30



ATyS_MD 001 B - ATyS 838 A
ATyS 448 B

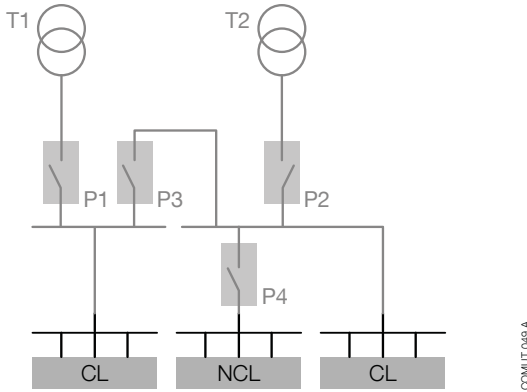
Transfer Switching Equipment (TSE) in LV installations

Transfer between 2 sources - 3 busbars

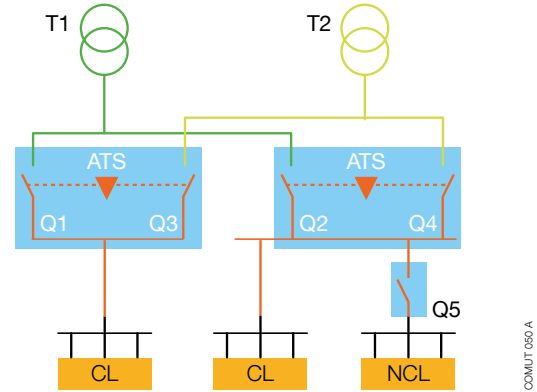
1) Sources are 2 transformers

$$S1 \text{ (kVA)} = S2 \text{ (kVA)}$$

Typical solution



SOCOMEc solution



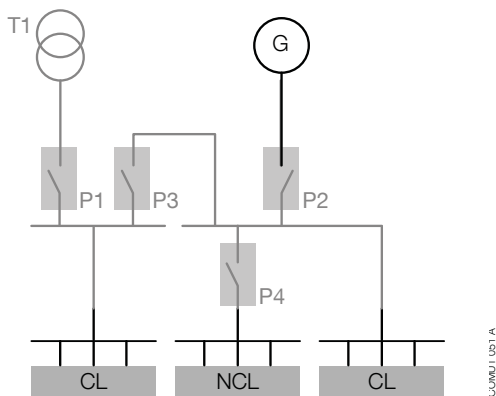
Truth table

| T1 | T2 | Typical solution | SOCOMEc | CL | NCL |
|----|----|------------------|--------------|--------------|--------------|
| 0 | 0 | X: | X: | Not supplied | Not supplied |
| 0 | 1 | P2 + P3 | Q3 + Q4 | Supplied | Not supplied |
| 1 | 0 | P1 + P3 | Q1 + Q2 | Supplied | Not supplied |
| 1 | 1 | P1 + P2 + P4 | Q1 + Q4 + Q5 | Supplied | Supplied |

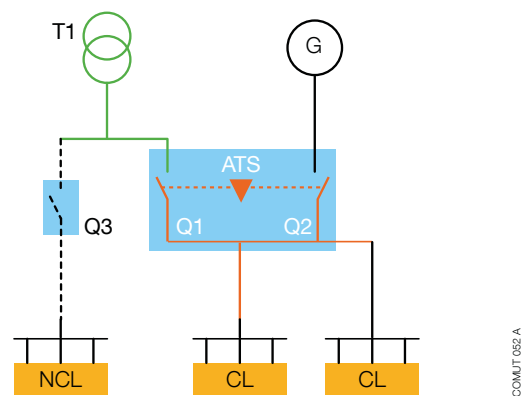
2) Sources are 1 transformer and 1 genset:

$$S1 \text{ (kVA)} > S2 \text{ (kVA)}$$

Typical solution



SOCOMEc solution



Truth table

| T1 | G | Typical solution | SOCOMEc | CL | NCL |
|----|---|------------------|---------|--------------|--------------|
| 0 | 0 | X: | X: | Not supplied | Not supplied |
| 0 | 1 | P2 + P3 | Q2 | Supplied | Not supplied |
| 1 | 0 | P1 + P3 + P4 | Q1 + Q3 | Supplied | Supplied |

Transfer Switching Equipment (TSE) in LV installations

Transfer between 2 sources - 3 busbars (continued)

Advantages of the Socomec solution

Operation

- Only 2 or 3 emergency handles instead of 4
Redundancy of P3
- Secured padlocking system
- In the second case (between transformer and genset),
a motorised switch can be added on the Non Critical
Loads for optional disconnection

Implementation

- Fewer products
- Compact design
- Plug and Play
- Mechanical and electrical interlocking are built-in

SOCOMEc products

Mains/Mains - Mains/Genset:

- ATyS or ATyS M, models t, g or p



Motorised switch as an option on Non Critical Loads

- SIRCO MOT AT



- ATyS d M, ATyS r or ATyS d, ATyS S + C20 or C30



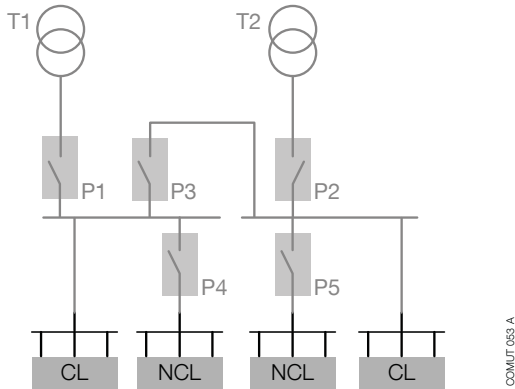
Transfer Switching Equipment (TSE) in LV installations

Transfer between 2 sources - 4 busbars

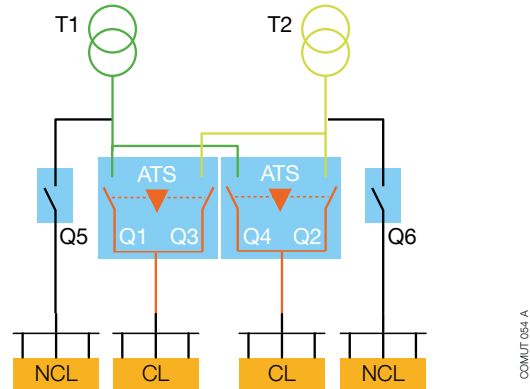
1) Sources are 2 transformers

$$S1 \text{ (kVA)} = S2 \text{ (kVA)}$$

Typical solution



SOCOMEC solution



Truth table

| T1 | T2 | Typical solution | SOCOMEC | CL | NCL |
|----|----|-------------------|-------------------|--------------|--------------|
| 0 | 0 | X: | X: | Not supplied | Not supplied |
| 0 | 1 | P2 + P3 | Q2 + Q3 | Supplied | Not supplied |
| 1 | 0 | P1 + P3 | Q1 + Q4 | Supplied | Not supplied |
| 1 | 1 | P1 + P2 + P4 + P5 | Q1 + Q2 + Q5 + Q6 | Supplied | Supplied |

Advantages of the Socomec solution

Operation

- Only 4 emergency handles instead of 5
- Redundancy of P3
- Secured padlocking system

Implementation

- Fewer products
- Compact design
- Plug and Play
- Mechanical and electrical interlocking are built-in

SOCOMEC products

Mains/Mains - Mains/Genset:

- ATyS or ATyS M, models t, g or p



- ATyS d M, ATyS r or ATyS d, ATyS S + C20 or C30



Motorised switch as an option on Non Critical Loads

- SIRCO MOT AT

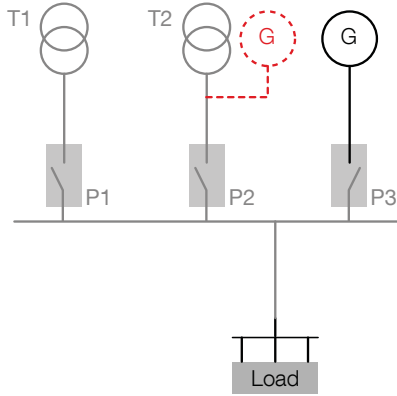


Transfer Switching Equipment (TSE) in LV installations

Transfer between 3 sources - 1 busbar

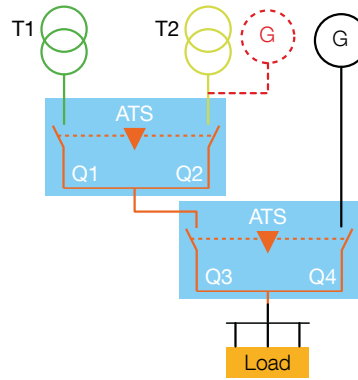
$$S1 \text{ (kVA)} = S2 \text{ (kVA)} = SG \text{ (kVA)}$$

Typical solution



COMUT 058 A FR

SOCOMEK solution



COMUT 058 A FR

Truth table

Standard solution

| T1 | T2 | G | Typical solution | SOCOMEK | Load |
|----|----|---|------------------|---------|--------------|
| 0 | 0 | 0 | X: | X: | Not supplied |
| 1 | 0 | 0 | P1 | Q1 + Q3 | Supplied |
| 0 | 1 | 0 | P2 | Q2 + Q3 | Supplied |
| 0 | 0 | 1 | P3 | Q4 | Supplied |

Advantages of the Socomec solution

Operation

- Only 2 emergency handles instead of 3
- Secured padlocking system

Implementation

- Compact design
- Plug and Play
- Mechanical and electrical interlocking are built-in

SOCOMEK products

Mains/Mains - Mains/Genset:

- ATyS or ATyS M, models t, g or p



ATyS_MP 001 B - ATyS-t 001 A

Genset/Genset

- ATyS d M, ATyS r or ATyS d, ATyS S + C40



ATyS_MD 001 B - ATyS 836 A
ATyS 448 B

- ATyS d M, ATyS r or ATyS d, ATyS S + C20 or C30



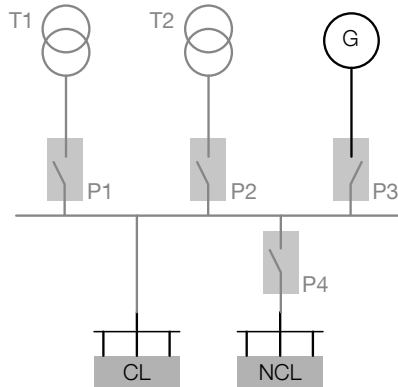
ATyS_MD 001 B - ATyS 836 A
ATyS 448 B

Transfer Switching Equipment (TSE) in LV installations

Transfer between 3 sources - 2 busbars

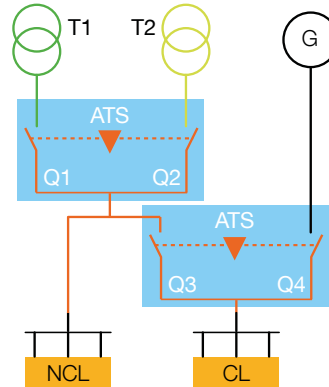
First type of architecture: $S1 \text{ (kVA)} = S2 \text{ (kVA)} > SG \text{ (kVA)}$

Typical solution



COMJUT 057 A

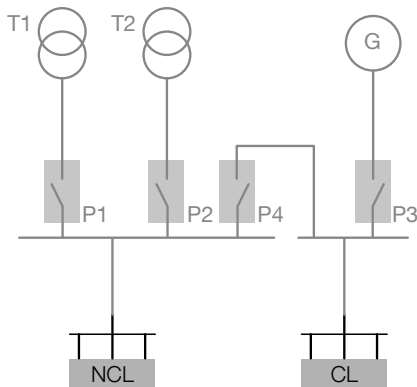
SOCOMEK solution



COMJUT 058 A

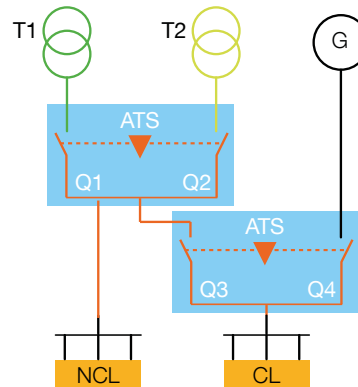
Second type of architecture: $S1 \text{ (kVA)} = S2 \text{ (kVA)} > SG \text{ (kVA)}$

Typical solution



COMJUT 061 A

SOCOMEK solution



COMJUT 062 A

Truth table

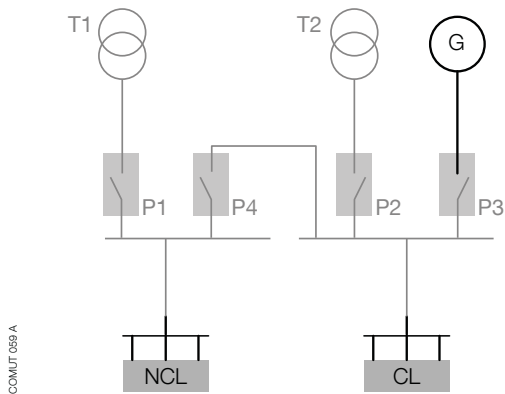
| T1 | T2 | G | Typical solution | SOCOMEK | CL | NCL |
|----|----|---|------------------|---------|--------------|--------------|
| 0 | 0 | 0 | X: | X: | Not supplied | Not supplied |
| 1 | 0 | 0 | P1 + P4 | Q1 + Q3 | Supplied | Supplied |
| 0 | 1 | 0 | P2 + P4 | Q2 + Q3 | Supplied | Supplied |
| 0 | 0 | 1 | P3 | Q4 | Supplied | Not supplied |

Transfer Switching Equipment (TSE) in LV installations

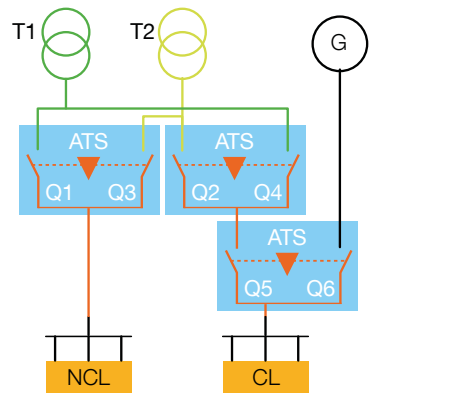
Transfer between 3 sources - 2 busbars (continued)

Third type of architecture: $S1 \text{ (kVA)} = S2 \text{ (kVA)} > SG \text{ (kVA)}$

Typical solution



SOCOMEK solution

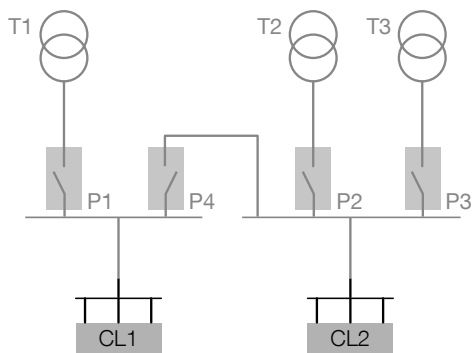


Truth table

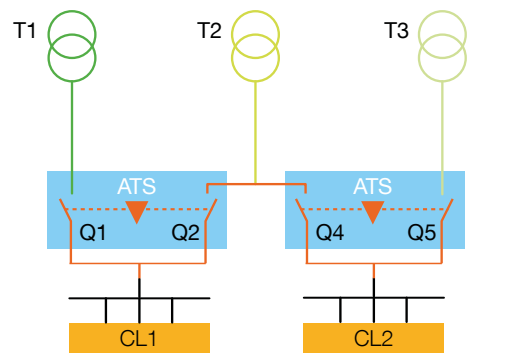
| T1 | T2 | G | Typical solution | SOCOMEK | CL | NCL |
|----|----|---|------------------|--------------|--------------|--------------|
| 0 | 0 | 0 | X: | X: | Not supplied | Not supplied |
| 1 | 0 | 0 | P1 + P4 | Q1 + Q4 + Q5 | Supplied | Supplied |
| 0 | 1 | 0 | P2 + P4 | Q3 + Q2 + Q5 | Supplied | Supplied |
| 0 | 0 | 1 | P3 | Q6 | Supplied | Not supplied |
| 1 | 1 | 0 | P1 + P2 | Q1 + Q2 + Q5 | Supplied | Supplied |

Fourth type of architecture: $S2 \text{ (kVA)} > S1 \text{ (kVA)}$ et $S2 \text{ (kVA)} > S3 \text{ (kVA)}$

Typical solution



SOCOMEK solution



Truth table

| T1 | T2 | T3 | Typical solution | SOCOMEK | CL1 | CL2 |
|----|----|----|------------------|---------|--------------|--------------|
| 0 | 0 | 0 | X: | X: | Not supplied | Not supplied |
| 1 | 0 | 0 | P1 | Q1 | Supplied | Not supplied |
| 0 | 1 | 0 | P2 + P4 | Q2 + Q4 | Supplied | Supplied |
| 0 | 0 | 1 | P3 | Q5 | Not supplied | Supplied |
| 1 | 0 | 1 | P1 + P3 | Q5 + Q1 | Supplied | Supplied |

Transfer Switching Equipment (TSE) in LV installations

Transfer between 3 sources - 2 busbars (continued)

Advantages of the Socomec solution

Operation

- Only 2 or 3 emergency handles instead of 4 or 5
- A motorized switch can be added to the Non Critical Loads for optional disconnection
- Secured padlocking system

Implementation

- Compact design
- Plug and Play
- Mechanical and electrical interlocking are built-in

SOCOMEc products

Mains/Mains - Mains/Genset:

- ATyS or ATyS M, models t, g or p



Motorised switch as an option on Non Critical Loads

- SIRCO MOT AT



- ATyS d M, ATyS r or ATyS d, ATyS S + C20 or C30



Transfer Switching Equipment (TSE) in LV installations

Automatic transfer

Introduction

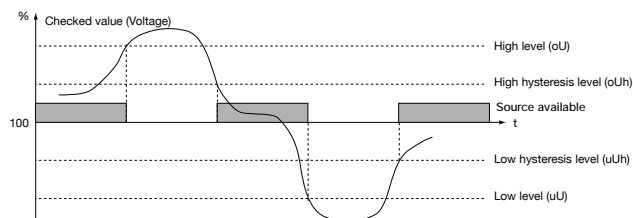
The automatic transfer, commonly known as the "ATS Controller", can be either external to the transfer switching equipment, or integrated in the product. The main functions of these controllers, are listed below.

Monitoring of voltages and frequency

Usually, controllers include at least the monitoring of voltages and frequencies.

Monitoring these values enable:

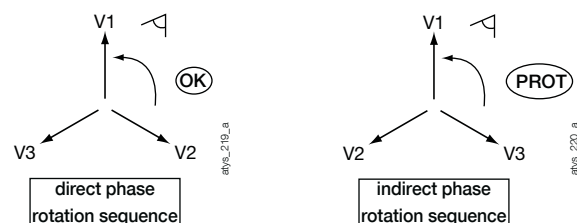
- A problem with the source to be detected if the voltage or frequency are outside of the limits (whether these are set by the controller or adjusted to customer requirements). The source will then be declared unavailable, and the sequence for transferring to the secondary source will be started.
- Validate the presence of the backup source to allow the transfer.



High and low thresholds with time delay define the stable power supply range of the load. High and low hysteresis levels are generally associated with a new stable condition.

Monitoring of the phase rotation sequence

For certain applications, particularly rotating machine loads on three-phase networks, it may be recommended that the direction of phase rotation is monitored. This monitoring will ensure that the direction of rotation of the two sources is consistent. If not consistent, the source will not be declared available.

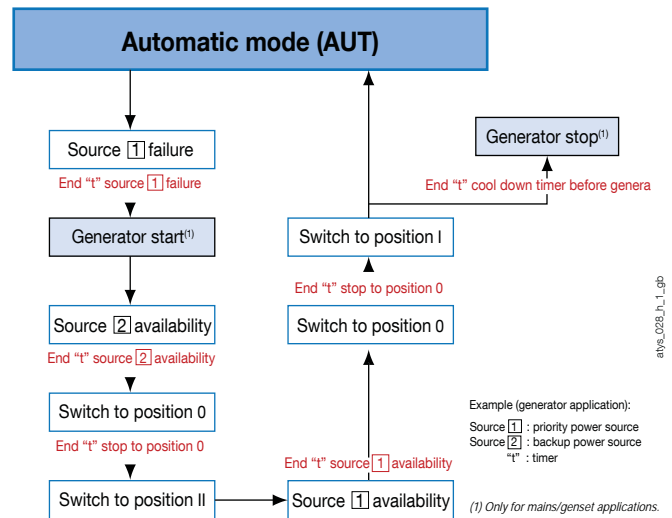


Transfer Switching Equipment (TSE) in LV installations

Automatic transfer cycles

Loss and return of the priority source

- Starting the cycle: the product is in the stable position on the priority source, and the latter is present.
- If the priority source has disappeared (end of the time delay):
 - If the secondary source is a transformer, the availability of this source is verified, then the transfer is initiated.
 - If the secondary source is a generator, the generator starting order is sent before its availability is verified. Then the transfer is initiated.
- If the priority source returns, the controller checks whether it is actually deemed to be present before initiating the transfer back to it.
- If a generator is used as the secondary source, the generator starting contact is only stopped after a time delay has elapsed. This time delay starts counting after the product returns to the priority position. This allows for an a slow cooling down of the genset.

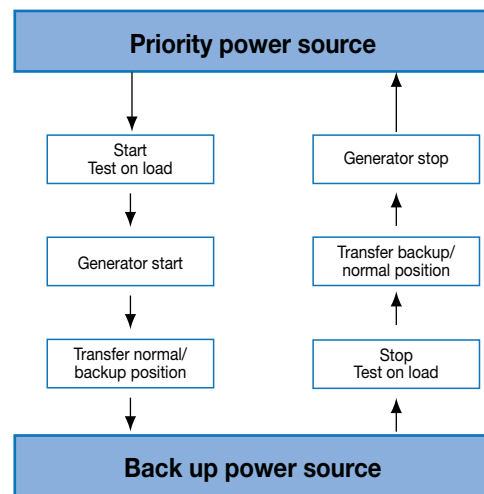


Test cycles

Test On Load

Many standards and circulars now require periodic tests to be carried out on electrical installations and equipment. Healthcare establishments are required by circular DHOS/E4 to have monthly tests of the normal and backup installations carried out and standard IEC 60364-7-710 requires annual operating tests of the changeover switches (standard dedicated to "Electrical installations of buildings - Requirements for special installations or locations - Medical locations").

With the ATS automated control, it is possible to run a test cycle on the transfer switching equipment. This test, commonly known as the test on load, simulates the loss of the priority network, starts the backup source and initiates the transfer sequence.



Test Off Load

It is also possible to run a test cycle on the generator. This test, commonly known as the test off load, consists of sending a starting order to the generator, without switching the load.

Engine Exerciser (Programmed periodic startup)

This function is used to programme on load or off load tests to a scheduled frequency (daily, monthly, annually), typically for scheduled maintenance. In addition, it is common that the test is activated periodically, by communication or via an external contact.

Transfer Switching Equipment (TSE) in LV installations

Specific applications

Automatic transfer inhibition

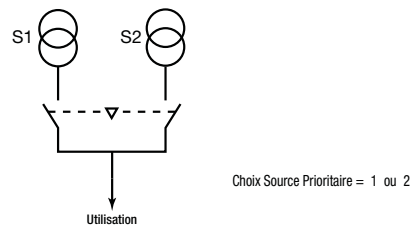
During normal operation, the controller takes over the product and manages the automation. In certain cases, (for example if a protection is triggered off upstream), it may be necessary to remotely intervene and prevent automatic operation. This is possible by activating a programmable contact on the ATS controller that is dedicated to the inhibition function to pause the automation.

Changing to priority Source

The transfer applications between two transformers may require periodic reallocation of the priority source. It is preferential in this case to try and preserve the same lifetime on both transformers and to determine the preferred source, based on the power consumption of the load together with the power capacity of the source.

This change in priority may be carried out locally via the product interface, remotely via a potential-free contact or via the communication.

Specific time and cycle sequences remain the same. Only the position considered as having priority is modified.

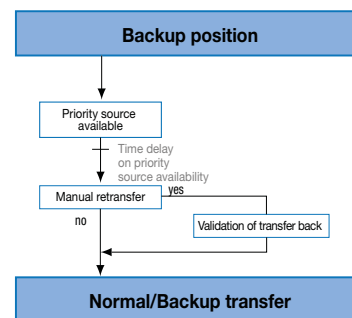


Changing to priority Source

Controlled transfer

Following a return to the priority source, the transfer back to it from the backup source may be initiated automatically or manually.

The latter option enables controlled switching of the load. Therefore, the transfer remains blocked (load supplied by the backup source) whilst awaiting the external transfer order. The automatic sequence remains operational and initiates the transfer in case of loss of the emergency source.



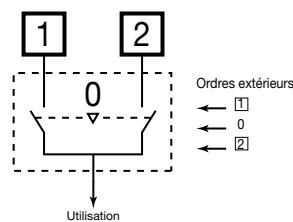
Controlled transfer

External Control of the positions

The Transfer system allows autonomous operation of the system. However, position of the switch can be activated remotely or via user handling. This control mode externally overrides the switch positions (I, 0, II), whilst taking over control of automatic operation.

Return to position 0

In certain cases, depending on the type of switching equipment used, the controller may suggest a function returning to position 0 with no power supply (tripping). This function is used to protect the load in the event of an unstable source and to prevent on-load starting, if there are concerns about the generator.



External Control of the positions

Load shedding

Normal and emergency supplies feeding the load are generally of a different type: Mains (transformer) or Generator (genset).

Operation in emergency mode can authorise a partial feed back of connected loads (strategic loads only) and enable the backup source to have a lower power capacity than the nominal capacity of the Normal source.

A specific contact can be closed just before transferring the load to the emergency source, to enable previous load shedding. This contact is open after re-transfer from the backup source to the Normal source. The time delay from contact closure to transfer (load shedding timer) can be modified.

Transfer Switching Equipment (TSE) in LV installations

IEC 60947-6-1 standard

IEC 60947-6-1 International standard "Low-voltage switchgear and controlgear - Multiple function equipment - Transfer switching equipment" is dedicated to transfer switches.

This standard applies to all open transition transfer switching equipment (TSE) for power systems rated up to 1 000 Vac. or 1 500 Vdc. It covers:

- Manually operated transfer switching equipment (MTSE),
- Remotely operated transfer switching equipment (RTSE),
- Automatic transfer switching equipment (ATSE).

Transfer switching equipment is classified according to:

- The method of controlling the transfer: MTSE – RTSE – ATSE
- Their short-circuit capability
 - Class PC: TSE that is capable of making and intended for withstanding short-circuit currents with and without a SCPD. Not intended for breaking short-circuit currents. (Contactors can only be used in class PC if they fulfill Class PC test req. (lcm ; lcv).
 - Class CB: TSE that is capable of making withstanding and breaking short-circuit currents. Intended for breaking short-circuit currents.
 - Class CC: TSE that is capable of making and withstanding short-circuit currents with a SCPD only. Not intended for breaking short-circuit currents.

The standard also defines some utilisation categories for TSE in compliance with the application needs:

| Nature of current | Utilisation category | | Typical applications |
|---------------------|----------------------|-------------|---|
| | Operation A | Operation B | |
| Alternating current | AC-31A | AC-31B | Non-inductive or slightly inductive loads |
| | AC-32A | AC-32B | Switching of mixed resistive and inductive loads, including moderate overloads |
| | AC-33A | AC-33B | Motor loads or mixed loads including motors, resistive loads and up to 30% of incandescent lamp loads |

TSE assigned any utilisation category shall comply with the rated making and breaking capacity and the electrical and mechanical operational performance requirements corresponding to the assigned utilisation.

The designation of utilisation categories is completed by the suffix A or B, according to the number of operations required by the application.

To sum up:

- This standard is dedicated to transfer switching equipment and therefore guarantees that the products are «designed and tested» specifically for source changeover applications.
- Transfer switching equipment may come from different technologies that fall under their specific IEC standards:
 - Circuit breakers: IEC 60947-2
 - Switch disconnects: IEC 60947-3
 - Contactor switch: IEC 60947-4-1
- The product markings on the sticker must make reference to the IEC standard for TSE: IEC 60947-6-1.

| | | | |
|------------------------------------|----------------------|--------------------|--------------------|
| ATyS d M 40A | | | |
| Ref.: 92234004 | | | |
| Power supply: 230Va.c. | | | |
| CE | | | |
| PRODUCT PATENTED www.socomec.com | IEC 60947-6-1 | IEC 60947-3 | GB 14048.11 |
| | Ue 415V | 415V | 415V |
| | Fn 50/60Hz | 50/60Hz | 50Hz |
| | Class PC | PC | PC |
| Ie 40A | AC-33B | AC-23A | AC-33B |
| Ie 40A | AC-32A | | AC-32A |
| Uimp power 6kV | | | 6kV |
| Uimp control 4kV | | | 4kV |
| Icc prospective (fuse 40A gG) 50kA | | | 50kA |

atys-dm_003_a

References list

| References | Pages | References | Pages | References | Pages | References | Pages |
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| 1443 3114 | 19 | 2799 3xxx | 18, 20 | 9509 5xxx | 74 | 9723 302x | 106, 108, 110, 111 |
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| 144F xxxx | 97 | 2799 705x | 18, 19 | 9533 30xx | 61 | 9723 31xx | 106, 108, 112, 113 |
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- Tunisia
- India
- China (x2)

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- Poland • Romania • Singapore
- Slovenia • Spain • Switzerland • Thailand
- Tunisia • Turkey • UK • USA

80 countries

where our brand is distributed

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