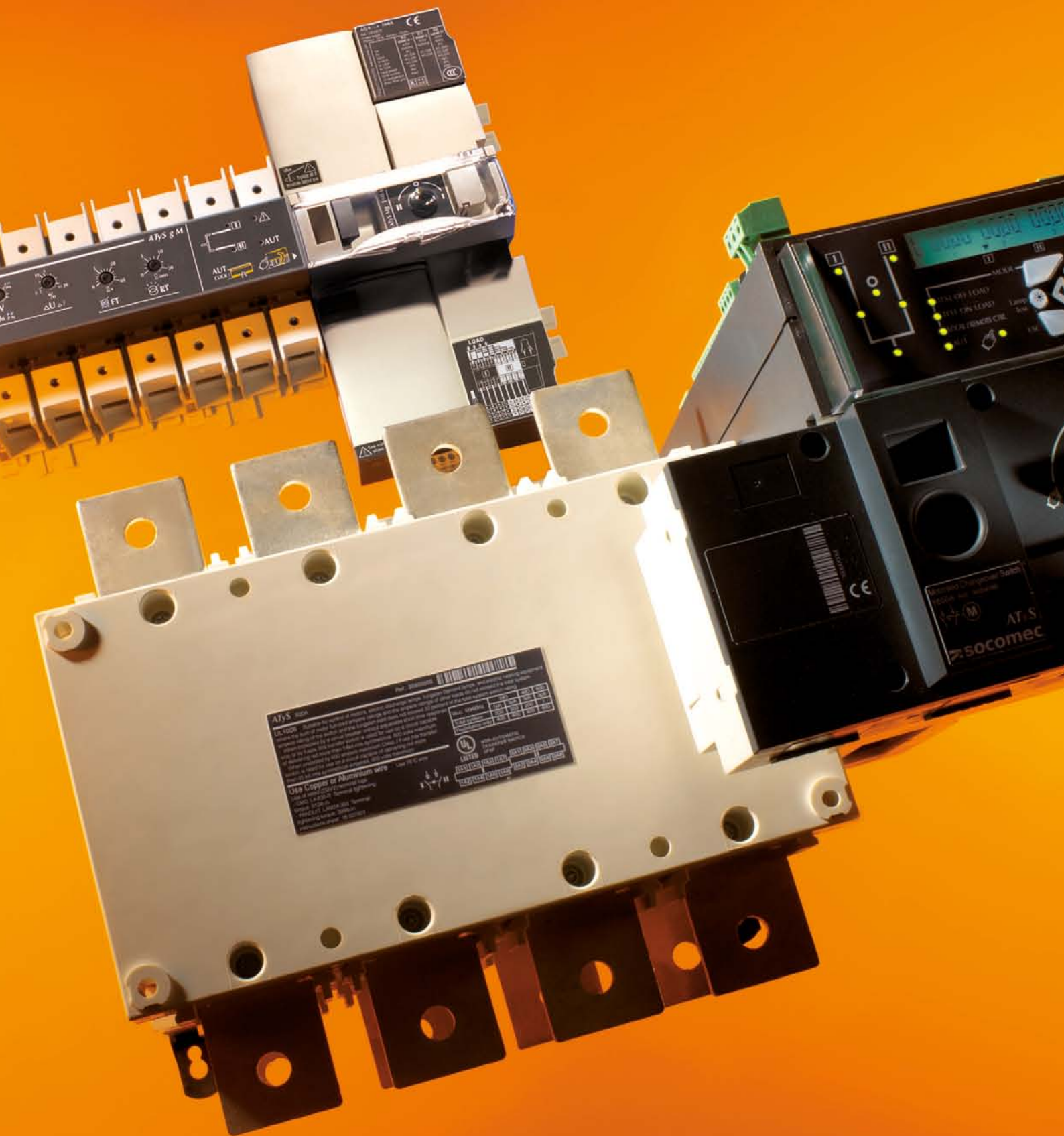


# Changeover Switching solutions

## Transfer Switching Equipment from 40 to 6300 A

2015





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## Manual transfer switches



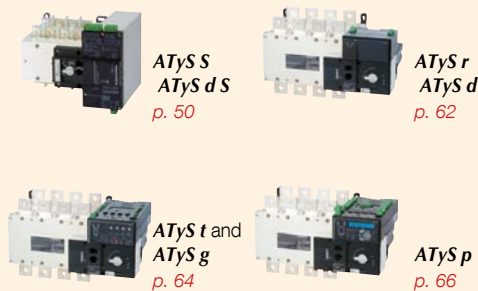
## Modular and motorised transfer switches

From 40 to 160 A



## Motorised transfer switches

From 40 to 3200 A



## Universal N/E controller

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



## UL product range



## 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.



## ATyS d H

> Remotely operated transfer switches for applications from 4000 to 6300 A. (p. 84)



# An independent manufacturer

## The benefit of a specialist

Founded in 1922, SOCOMEC is an industrial group with a workforce of 3000 people. Our core business - the availability, control and safety of low voltage electrical networks with increased focus on our customers' power performance.



CORPC 308 A

### The culture of independence

The SOCOMEC Group's independence ensures control over its own decision-making, respecting the values advocated by its own family shareholders and shared by its employees.

With around 30 subsidiaries located on all five continents, SOCOMEC pursues international development by targeting industrial and service applications where the quality of its expertise makes all the difference.

### The spirit of innovation

As undisputed specialists in UPS systems, mains supply changeover, power conversion and measurement, SOCOMEC dedicates nearly 10% of its turnover to R&D. As a result the Group can achieve its ambition of always being one technological step ahead.

### The vision of a specialist

As a manufacturer with complete control over its technological processes, SOCOMEC is quite unlike the more general providers. The Group is constantly improving its fields of expertise in order to offer its clients increasingly customised, appropriate solutions.

### A flexible manufacturing structure

Backed by two European centres of excellence (France and Italy), the Group also benefits from competitive production sites such as Tunisia and locations in the major emerging markets (India and China).

These sites have all implemented a system of continuous improvement based on Lean Management principles, and are therefore in a position to provide high levels of quality, and meet the deadlines and cost requirements expected by customers.

### The focus on service

Our manufacturer's expertise naturally extends to a complete range of services designed to facilitate the research, implementation and operation of our solutions. Our service teams have built their reputation on reassuring guidance, flexible skills and reactivity.

### Responsible growth

As a Group which is open to all cultures and firmly committed to human values, SOCOMEC promotes employee initiative and commitment. Working relationships are based on the idea of partnerships and respect for shared ethics. Through the company's commitment to achieving harmonious, lasting development, SOCOMEC fully embraces its responsibilities not only towards its shareholders, employees, customers and partners, but also towards society as a whole and its environment.

SOCOMECE has been a signatory to the Global Compact since 2003.



# Four key applications: the know-how of a specialist



## Critical Power

**Ensuring the availability of high-quality power for critical applications.**

Thanks to the company's wide range of continuously evolving products, solutions and services, SOCOMEC are experts in the three essential technologies that can ensure the high availability of supply to critical facilities and buildings i.e.:

- uninterruptible power supplies (UPS) that provide high-quality power and reduce

distortion and interruptions to the mains supply due to their power storage backup,

- changeover of high availability sources to transfer supply to an operational backup source,
- continuous monitoring of installation facilities to prevent failures and reduce operating losses.



SITE 025A



## Power Control & Safety

**Managing power and protecting individuals and property.**

SOCOMECS expertise in this domain is unquestionable; the company is an undisputed leader in power switching and changeover functions, and has been a specialist manufacturer of electrical equipment since 1922. The company has long defended the benefits of fuse protection for individuals and

property, and has become a major player in cutting-edge technology such as the monitoring and detection of insulation defects. SOCOMEC guarantees solutions and services which are both relevant and efficient.



APPLI 5/5A



## Solar Power

**Guaranteeing the safety and durability of photovoltaic (PV) facilities.**

As experts in the solar energy equipment field, SOCOMEC has all the specialist know-how for implementing key strategic functions in on-grid and off-grid PV facilities, including:

- safety, through specially designed switch disconnectors to cut the DC current generated by solar panels regardless of the facility configuration and operating conditions,
- the reliability of DC facilities thanks to solutions preventing the degradation

of insulation and electric arc failure in DC current,

- control of very high-efficiency energy conversion, via PV inverters, to transform all energy generated by the solar panels into power to be consumed locally or re-injected into the national grid,
- PV production and energy storage solutions for on-grid and off-grid applications.



SITE 441A



## Energy Efficiency

**Improving building and facility energy efficiency.**

SOCOMECS solutions, ranging from sensors to the wide choice of innovative, modular software packages, are driven by experts in energy efficiency. They meet the essential requirements of managers or operators of tertiary, industrial or local authority buildings, and make it possible to:

- measure power consumption, identify sources of excess consumption, and raise occupant awareness,

- limit reactive energy and prevent associated tariff penalties,
- use the best tariffs, check supplier invoicing and accurately distribute energy bills amongst consumer entities.



APPLI 5/5A

# Services & Technical Assistance

the manufacturer's guarantee

Over several decades, SOCOMEC Systems have acquired a distinguished reputation in the control, safety and performance of low voltage electrical distribution equipment. Our manufacturer's expertise naturally extends to a complete offer of services designed to help you select, implement and get the most out of our solutions.



APPLI 586 A

## Specialised skills

Our service team consists of field personnel specialising in our specific domains and experienced in the maintenance of industrial electrical systems. This means you benefit from a dual skills base:

- technical expertise relating to the products that have been installed,
- practical knowledge of your usage needs.

## Reassuringly close at hand

Our geographical coverage means that we are close to each user and can respond quickly to all requests. We can provide a complete service from the technical diagnostics before repair right up to implementation of the most suitable solutions for your installation.

## Customer-oriented service

True to our own principles, we encourage direct and friendly contact. Our interventions offer solutions targeted to a single problem: Yours. Our engineers are always very attentive to your needs, to ensure that we provide the most relevant technical support and advice. So you can plan your investments with confidence.

## Customised support...

### Assessment and sizing

Depending on your requirements, our experts collect and analyse all the relevant data in order to recommend the system best adapted to your installation.

### Commissioning

Installation of your equipment is carried out by a specialist, and is totally compatible with and adapted to your use.

### Maintenance

A wide range of preventive or corrective maintenance options designed to suit your installation and its environment, and to ensure continuity of service of your electrical networks.

### Training

You will receive training, specially adapted to your needs, in order to familiarise yourself with our equipment and enable you to use it to your best advantage.



## ... to ensure you a successful project

### ■ Source inversion in complete safety

Changeover switches are strategic components that ensure continuity of service of supplies. In order to guarantee **complete operational safety**, we will implement our range of innovative source transfer solutions.

### ■ Your energy consumption efficiently and comprehensively managed

Monitoring of energy consumption within a production unit is one of your primary operational considerations. From the preliminary assessment of your installation to the adaptation of the software, dedicated SOCOMEC experts are on hand to assist you throughout the entire energy performance process.

### ■ Effective insulation monitoring for your electrical installation

To ensure that your fault monitoring and location system operates to its optimum capacity, our team of specialists perform all operations on site.

This means that you benefit from renowned expertise, as well as solutions tailored to the specific monitoring requirements of your electrical installation.

### ■ The control of reactive energy on your electricity bill

In terms of power factor correction, **the support of a specialist is essential to appropriately size your system** and meet the desired efficiency.

SOCOMEK will help you to make the right choices and therefore to benefit from a long-term solution. A real return on investment.

For more information, please see pages "Reactive energy power factory correction".



CORPO 164 A



APPLI 540 A

# A cutting-edge laboratory

## The backing of an expert

Since 1965, the Pierre Siat test laboratory has used its expertise to guarantee the reliability and conformity of SOCOMEC products and solutions. Our customers are also welcome...



COFRAC 342 A

### A decisive link

Located at the Company's headquarters in Benfeld (France), the Pierre Siat test laboratory is one of SOCOMEC's main quality pillars: its contribution to the development, qualification and certification phases plays a decisive role in the process leading to the creation of a product or solution.

### Global scale

This totally independent laboratory is recognised by the major certification bodies worldwide: a member of the ASEFA<sup>(1)</sup> and the LOVAG<sup>(2)</sup>, it is accredited by COFRAC<sup>(3)</sup>, UL (CTDP<sup>(4)</sup>), CSA (shared certification) and KEMA (SMT/WMT<sup>(5)</sup>). It also works in partnership with numerous international certification organisations<sup>(6)</sup>. The quality and safety requirements specific to each country are therefore fully taken into account.

### Specialist facilities

With its 100 MVA (I<sub>dc</sub> 100 kA rms 1 s) short-circuit platform, three 10 kA overload platforms and numerous other test instruments in facilities covering 1500 m<sup>2</sup>, the Pierre Siat laboratory is currently the 2<sup>nd</sup> French power laboratory. It combines expertise in electricity and mechanics, pneumatics and computing.

### Ongoing commitment

To adapt to the increasingly demanding standards and ever more innovative and high-performance products, the Pierre Siat laboratory is permanently extending the scope of its tests, investing whenever necessary in new equipment.

### A vast range of tests

The laboratory submits all SOCOMEC products and solutions (including those in enclosures) to numerous tests in the following fields:

- functional: component resistance and operating tests,
- dielectric: immunity to interference, dielectric insulation, overvoltage, overcurrent,
- mechanical: endurance and mechanical shocks, etc.,
- environment: functional or electrical tests under extreme conditions (temperatures, salt spray, etc.), vibrations,
- AC/DC endurance: in operation and under controlled temperatures (arcs, LV/HV power cuts, etc.),
- temperature rise,
- electromagnetic compatibility (EMC),
- metrology,
- safety: flammability, etc.

Conducted during the design and production phases, these tests guarantee the long-term reliability of the equipment sold.

### Customized services

These test facilities and expertise are also available to our partners who require assistance with the qualification and certification of their products or equipment.



*We issue certificates of conformity and performance declarations upon request.*

For more information, visit our web site:  
[www.socomec.com/testing-laboratory\\_en.html](http://www.socomec.com/testing-laboratory_en.html)

- (1) Association des Stations d'Essais Françaises d'Appareils électriques basse tension (French association of low voltage electrical equipment test stations)
- (2) Low Voltage Agreement Group
- (3) Comité Français d'Accréditation (French accreditation body)
- (4) Client test data programme
- (5) Supervised Manufacturer's testing/Witnessed manufacturer's testing
- (6) KEMA, CEBEC, UL, CSA, ASTA, Lloyd's Register of Shipping, Bureau Veritas, BBJ-SEP, EZU, GOST-R, etc.







- 1 Find out about products, services and systems meeting the requirements of applications for which we have a real expertise
- 2 Download documentations, pictures, logos and CAD files
- 3 Find and contact the nearest Socomec contact
- 4 Find answers to technical questions (FAQ)
- 5 Find out about our job offers
- 6 Get informed about our news: products, events and advice



Find out more on



## 100% mobility

Access multimedia contents from your smartphone by scanning the codes available in our catalogues or documentations.

How?

### 1. Download

a QR code application from your mobile phone (QR Code Scanner Pro, Mobiletag, ScanLife flashcode, etc.).

### 2. Scan



### 3. Browse!

A few examples:



Flash banner for ATyS transfer switch

FLCD\_URL\_048\_A\_GB



Download section on the Socomec website

FLCD\_URL\_004\_A\_GB

**Banners** Software  
**Selection guides** **Photos**  
**Brochures** Videos  
 User guides **Tutorials**



# Safety and reliability for your switching applications

Transfer switches

A world-renowned manufacturer and undisputed leader in changeover switching technology, SOCOMEC constantly innovates to ensure ever more efficient continuity in electrical distribution.

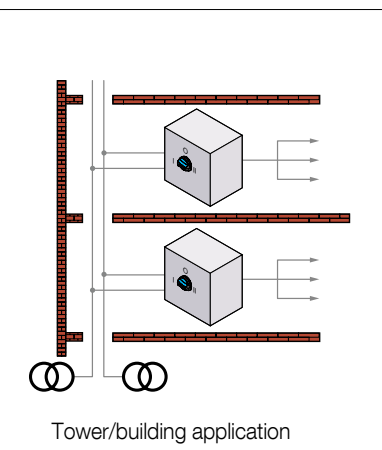
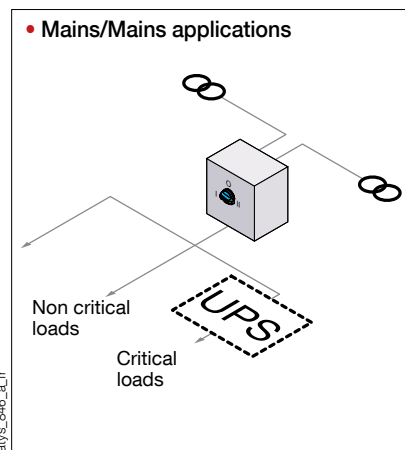
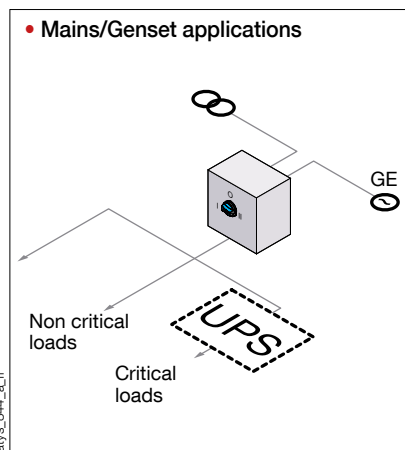
From the 'small' COMO C manual transfer switch (from 25 A) to the ATyS p automatic transfer switch (up to 3200 A), our standard range of transfer switches covers most applications.

## Services & Technical Assistance

Our Services & Technical Assistance department will assess and define your installation, commission selected equipment and train personnel in charge of its use.

For more information, please get in touch with your usual SOCOMEC contact.

## Secure switching for all your applications



## Enclosed solutions

All our transfer switches are available in enclosed versions.



## The complete ATS Bypass solution

From 40 to 3200 A, this solution enables the automatic transfer switch to be completely isolated while guaranteeing the continuity of the installation's power supply.



## A specific need?









The experience we have gained from different projects has led us to develop numerous special products (make-before-break contacts or mixed pole motorised transfer switches, specific software, etc.). Please contact us if you have any special requirements.

**Trust the experts with all your applications - even the most critical.**

# ATyS range: Three ranges of automatic transfer switches for an adapted solution to your application







## RTSE

According to standard IEC 60947-6-1, **RTSE** products are Remotely operated Transfer Switching Equipment. They consequently require an **external controller** to transmit switching controls.

Type of power supply	Single DC power supply	Single AC power supply	Dual AC power supply
<b>ATyS M range</b> 40 - 160 A: modular	-	-	 <b>ATyS d M</b> p. 36
<b>ATyS S range</b> 40 - 125 A: back to back	 <b>ATyS S</b> p. 52	 <b>ATyS S</b> p. 52	 <b>ATyS d S</b> p. 52
<b>ATyS range</b> 125 - 3200 A: back to back	-	 <b>ATyS r</b> p. 62	 <b>ATyS d</b> p. 62

## ATSE

According to standard IEC 60947-6-1, **ATSE** products are Automatic Transfer Switching Equipment. Contrary to RTSE products, they have an integrated controller. This means these products can monitor the availability of source, start the genset if required and can also automatically transfer the load to the available power supply source.

Application type	Mains/Mains	Mains/Genset	Enhanced applications
<b>ATyS M range</b> 40 - 160 A: modular	 <b>ATyS t M</b> p. 38	 <b>ATyS g M</b> p. 38	 <b>ATyS p M</b> p. 40
<b>ATyS range</b> 125 - 3200 A: back to back	 <b>ATyS t</b> p. 64	 <b>ATyS g</b> p. 64	 <b>ATyS p</b> p. 66



# Selection guide







## Remotely operated and automatic transfer switches

### 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. 52	<i>ATyS d S</i> p. 52	<i>ATyS d M</i> p. 36	<i>ATyS r</i> p. 62	<i>ATyS d</i> p. 62	<i>ATyS d H</i> p. 84

#### 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	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>
Mains-Genset	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>
Genset/Genset	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>

#### Configuration

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

#### Functions

Contact for product availability				•	•	
Fixed functions 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





# SIRCORDER

Manual transfer switches  
from 125 to 3200 A

Transfer switches



svr\_151\_a

**SIRCORDER**  
250 A



svr\_125\_a\_1\_cat

**Bypass ATS**  
500 A

## The solution for

- > Manufacturing industry
- > Power distribution



## Strong points

- > A complete range
- > Easy connections
- > Stable positions

## Conformity to standards

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



## Approvals and certifications<sup>(1)</sup>



<sup>(1)</sup> Product reference on request.

## Function

**SIRCORDER AC** are manual multipolar transfer switches with positive break indication.

The family includes three ranges:

- **SIRCORDER AC** for open transition switching (I-0-II),
- **SIRCORDER** for overlapping contact switching (I-I+II-II), and
- **SIRCORDER Bypass**. This version is a combination of three interlocked switches enabling use with 3 + 6 poles or 4 + 8 poles.

They provide switching, source inversion and transfer under load for two low voltage power circuits, as well as their safety isolation by double breaking per pole.

## Advantages

### A complete product range

Three versions of the SIRCORDER are available to ensure compatibility with the maximum number of applications: SIRCORDER AC (I-0-II) with improved on load switching characteristics and isolation position, SIRCORDER with overlapping contacts (I-I+II-II) and a BYPASS version.

### Easy connections

A copper bar connection kit is available for 2000 to 3200 A ratings. It enables various types of connection: flat or edgewise connection with top or bottom bridging.

### Stable positions

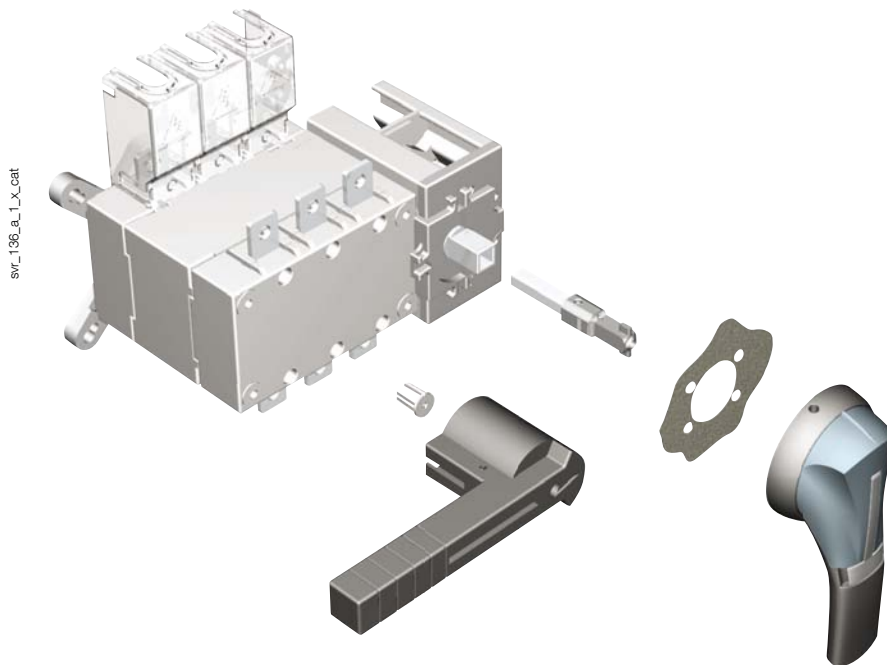
SIRCORDERs have three stable positions which are not affected by voltage drops or vibrations, thus protecting your load against network interference.

### Improved on load switching

Thanks to its AC-23 and AC-33 characteristics, which are tested in accordance with standards IEC 60947-3 and IEC 60947-6-1, the SIRCORDER AC enables secure and reliable switching on all types of load, without the need for pre-breaking upstream.

## What you need to know

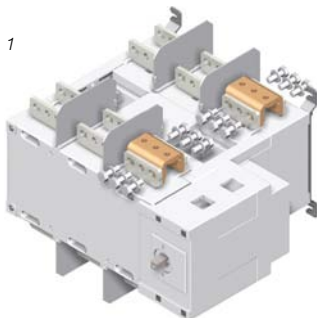
- SIRCOVER (I-0-II) switches have **3 stable positions**, and are available as 3 or 4 pole devices from 125 to 3200 A. They are available enclosed in a steel or polyester enclosure from 125 to 1600 A.
- SIRCOVER switches with **overlapping contacts** (I-I+II-II) are available as 3 or 4 pole devices from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



- **Copper bar connection kits** enable the connection between the two power terminals of the same pole (fig.1 & fig.2) and the bridging of the poles on the top or bottom side of the switch (fig.3), for ratings 2000, 2500 and 3200 A.

Fig. 1

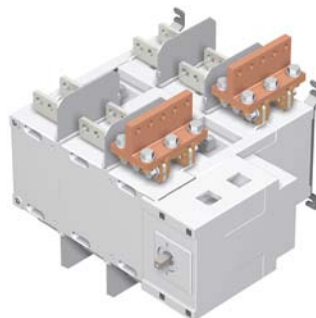
access\_226\_c\_2\_cat



Top or bottom **flat connection**

Fig. 2

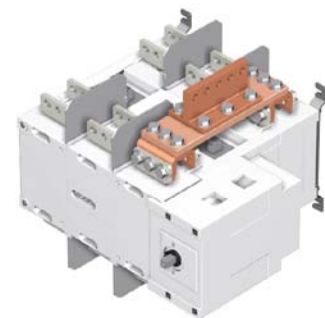
access\_229\_b\_2\_cat



Edgewise connection  
Top or bottom

Fig. 3

access\_231\_a\_1\_cat



Top or bottom **bridging connection**

# SIRCOVER

Manual transfer switches

from 125 to 3200 A

## References

### SIRCOVER AC 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 <sup>(1)</sup>	200 mm 1400 1020 320 mm 1400 1032 <sup>(1)</sup>	3 P 4109 3019 4 P 4109 4019	1 <sup>st</sup> /2 <sup>nd</sup> contact NO/NC 4109 0021 <sup>(2)</sup>	3 P 2694 3014 <sup>(3)(4)</sup> 4 P 2694 4014 <sup>(3)(4)</sup>	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	C1 type Black 27997052	S4 type Black IP65 1443 3113	200 mm 1401 1520 320 mm 1401 1532 <sup>(1)</sup>	3 P 4109 3080 4 P 4109 4080	1 <sup>st</sup> /2 <sup>nd</sup> contact NO/NC 4109 0021 <sup>(2)</sup>	3 P 2694 3051 <sup>(3)(4)</sup> 4 P 2694 4051 <sup>(3)(4)</sup>	3 P 1509 3063 <sup>(5)</sup> 4 P 1509 4063 <sup>(5)</sup>							
	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								S5 type Black 2799 7042	S5 type Black IP65 1453 8113	200 mm 2799 3015 320 mm 2799 3018 <sup>(1)</sup> 450 mm 2799 3019	3 P 4109 3160 4 P 4109 4160	1 <sup>st</sup> /2 <sup>nd</sup> contact NO/NC included	3 P 1509 3160 <sup>(5)</sup> 4 P 1509 4160 <sup>(5)</sup>	3 P 1509 3080 <sup>(5)</sup> 4 P 1509 4080 <sup>(5)</sup>
	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 pieces: one for position I and one for position II.

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

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

(5) 2 pieces: one for top side and another for bottom side.

(6) See "Copper bar connection kits" page 20.



## Also available

### SIRCOVER AC I-I+II-II

From 125 to 1600 A, these manual transfer switches are used for switching from one normal source to a backup in open transition

conditions. However both sources must be synchronous.

Reference: 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

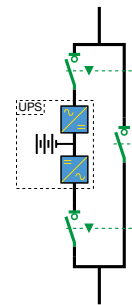
### SIRCOVER AC BY-PASS

From 125 up to 1600 A, these manual transfer switches enable the isolation and the bypassing of the backup source, using an uninterruptible power supply for instance, thanks to 3 compact interlocked switches in a single product.

Two bypass versions are available, one with open transition and the second one with overlapping contacts.

Reference: 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



commut\_064\_a\_1\_x\_cat

# SIRCOVER

## Manual transfer switches

from 125 to 3200 A

### Accessories

#### Direct operation handle

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

SIRCOVER AC BYPASS				
Rating (A)	Frame size	Handle colour	Handle type	Reference
125 ... 200	B3	Blue	J2 type	1122 <b>1111</b>
250 ... 630	B4 ... B5	Black	C1 type	2799 <b>7052</b>
800 ... 1600	B6 ... B7	Black	C2 type	2799 <b>7012</b> <sup>(1)</sup>



#### External operation handle

##### Use

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

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

<sup>(1)</sup> IP: protection degree according to IEC 60529 standard.

<sup>(2)</sup> Double lever handle.

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

<sup>(1)</sup> IP: protection degree according to IEC 60529 standard.

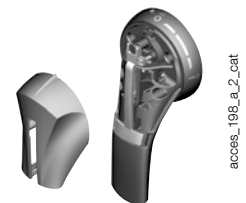


#### Alternative S type handle cover colours

##### Use

For single lever handles S1, S2, S3 type and for double lever handle S4 type.  
Other colours: please consult us.

Colour	To be ordered in multiples of	Handle	Reference
Light grey	50	S2, S3 type	1401 <b>0001</b>
Dark grey	50	S2, S3 type	1401 <b>0011</b>
Light grey	50	S4 type	1401 <b>0031</b>
Dark grey	50	S4 type	1401 <b>0041</b>



#### S type handle adapter

##### Use

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

##### Dimensions

Adds 12 mm to the depth.

Colour	To be ordered in multiples of	External IP <sup>(1)</sup>	Reference
Black	1	IP65	1493 <b>0000</b>

<sup>(1)</sup> IP: protection degree according to IEC 60529 standard.



## Shaft guide for external operation

### Use

To guide the shaft extension into the external handle.

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

Required for shaft lengths over 320 mm.

Description	Reference
Shaft guide	1429 0000



access\_260\_a\_2\_cat

## Shaft for external handle

### Use

Standard lengths:

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

Other lengths: please consult us.

SIRCOVER AC I-0-II and I-I-II-II				
Rating (A)	Frame size	Length (mm)	Dimension 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

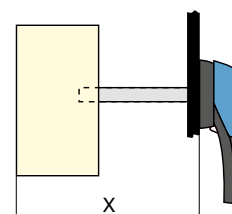


access\_369\_a\_1\_cat



access\_144\_b\_1\_cat

SIRCOVER AC BYPASS				
Rating (A)	Frame size	Length (mm)	Dimension 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	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

### SIRCOVER AC I-0-II and SIRCOVER I-I-II-II

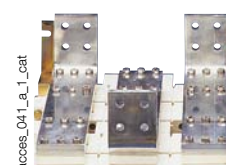


access\_205\_a\_2\_cat

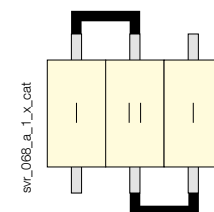
### SIRCOVER BYPASS



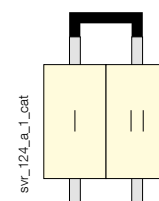
access\_208\_a\_2\_cat



access\_041\_a\_1\_cat



svr\_088\_a\_1\_x\_cat



svr\_124\_a\_1\_cat

# SIRCOVER

## Manual transfer switches

from 125 to 3200 A

### Accessories (continued)

#### Copper bar connection kits from 2000 to 3200 A - SIRCOVER

##### Use

Enables:

- connection between the two power terminals of the same pole for 2000 to 3200 A ratings (Fig. 1 and Fig 2)
- top or bottom bridging connection (Fig. 3).

For 3200 A rating, the connection pieces (part A) are delivered bridged from factory. Bolt sets must be ordered separately.

Further details for these specific accessories are available in the user guide downloadable from [www.socomec.com](http://www.socomec.com).

Fig. 1

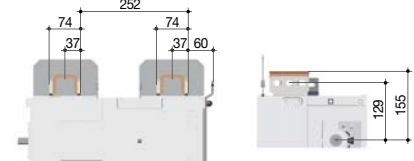
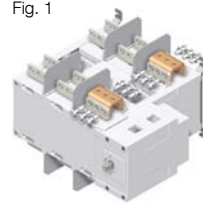


Fig. 2

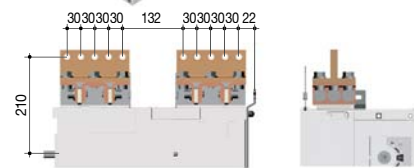
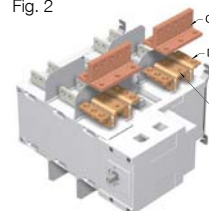
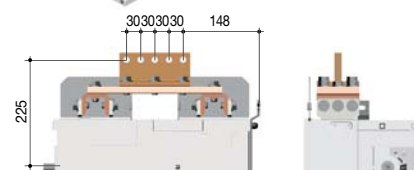
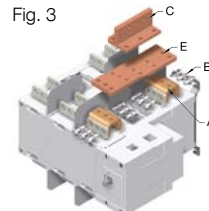


Fig. 3



access\_228\_b\_1\_x\_cat

access\_232\_a\_1\_cat

access\_228\_b\_1\_x\_cat

access\_233\_a\_1\_cat

access\_230\_b\_1\_x\_cat

access\_234\_a\_1\_cat

svr\_056\_a\_1\_cat

access\_065\_a\_1\_cat

##### Top or bottom flat connection - Fig. 1

Rating (A)	Frame size	Piece	Quantity to order per pole <sup>(1)</sup>	Reference
2000 ... 2500	B8	Connection - part A	2	2619 <b>1200</b>
2000 ... 2500	B8	Bolt set - part B	2	2699 <b>1200</b>
3200	B8	Connection - part A		included
3200	B8	Bolt set - part B	2	2699 <b>1200</b>

(1) Example for 3 pole device equipped upstream only: Order 3 times the indicated quantities.

##### Top or bottom edgewise connection - Fig. 2

Rating (A)	Frame size	Piece	Quantity to order per pole <sup>(1)</sup>	Reference
2000 ... 2500	B8	Connection - part A	2	2619 <b>1200</b>
2000 ... 2500	B8	T piece - part C	2	2629 <b>1200<sup>(2)</sup></b>
2000 ... 2500	B8	Bracket - part D	2	2639 <b>1200<sup>(2)</sup></b>
3200	B8	Connection - part A		included
3200	B8	T piece - part C	2	2629 <b>1200<sup>(2)</sup></b>
3200	B8	Bracket - part D	2	2639 <b>1200<sup>(2)</sup></b>

(1) Example for 3 pole device equipped upstream only: Order 3 times the indicated quantities.

(2) Bolt set is provided with the accessories.

##### Top or bottom bridging connection - Fig. 3

Rating (A)	Frame size	Piece	Quantity to order per pole <sup>(1)</sup>	Reference
2000 ... 2500	B8	Connection - part A	2	2619 <b>1200</b>
2000 ... 2500	B8	Bolt set - part B	2	2699 <b>1200</b>
2000 ... 2500	B8	Bar - part E	1	4109 <b>0320<sup>(2)</sup></b>
2000 ... 2500	B8	T piece - part C	1	2629 <b>1200<sup>(2)</sup></b>
3200	B8	Connection - part A		included
3200	B8	Bolt set - part B	2	2699 <b>1200</b>
3200	B8	Bar - part E	1	4109 <b>0320<sup>(2)</sup></b>
3200	B8	T piece - part C	1	2629 <b>1200<sup>(2)</sup></b>

(1) Example for 3 pole device equipped upstream only: Order 3 times the indicated quantities.

(2) Bolt set is provided with the accessories.

### Auxiliary contact

##### Use

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

Low level auxiliary contacts: please consult

US.

##### Connection to the control circuit

By 6.35 mm fast-on terminal.

##### Electrical characteristics

30 000 operations.



access\_065\_a\_1\_cat

##### Characteristics

Rating (A)	Frame size	Nominal current (A)	Operating current I <sub>o</sub> (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 <sup>st</sup> /2 <sup>nd</sup>	4109 <b>0021</b>
2000 ... 3200	B8	1 <sup>st</sup> /2 <sup>nd</sup>	included

## 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 <b>3014</b> <sup>(1)(2)</sup>
125 ... 200	B3	4 P	top / bottom / front (I) / rear (II)	2694 <b>4014</b> <sup>(1)(2)</sup>
250 ... 400	B4	3 P	top / bottom / front (I) / rear (II)	2694 <b>3021</b> <sup>(1)(2)</sup>
250 ... 400	B4	4 P	top / bottom / front (I) / rear (II)	2694 <b>4021</b> <sup>(1)(2)</sup>
500 ... 630	B5	3 P	top / bottom / front (I) / rear (II)	2694 <b>3051</b> <sup>(1)(2)</sup>
500 ... 630	B5	4 P	top / bottom / front (I) / rear (II)	2694 <b>4051</b> <sup>(1)(2)</sup>



access\_206\_a\_2\_cat

(1) To shroud front switch top and bottom 4 references required for a SIRCOVER and 6 references for a SIRCOVER Bypass.  
(2) To shroud front switch top and bottom 2 references required for a SIRCOVER and a SIRCOVER Bypass.

## Terminal screens

### Use

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

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



access\_207\_a\_2\_cat

## Inter-phase barrier

### Use

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

### Accessories (continued)

#### 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 <b>2813</b>

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 <b>1006</b> <sup>(1)</sup>
	250 ... 630 / B4 ... B5	direct	3	please consult us
800 ... 1600 / B6 ... B7	800 ... 1600 / B6 ... B7	direct	3	4109 <b>1004</b> <sup>(2)</sup>
2000 ... 3200 / B8		direct	3	4109 <b>2007</b> <sup>(2)</sup>
125 ... 630 / B3 ... B5	125 ... 630 / B3 ... B5	external	4	1499 <b>7701</b> <sup>(2)</sup>
2000 ... 3200 / B8	800 ... 1600 / B6 ... B7	external	4	2799 <b>7002</b> <sup>(2)</sup>

(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 <b>1002</b> <sup>(1)</sup>
	250 ... 630 / B4 ... B5	direct	3	please consult us
800 ... 1600 / B6 ... B7	800 ... 1600 / B6 ... B7	direct	3	4109 <b>1004</b> <sup>(2)</sup>
2000 ... 3200 / B8		direct	3	4109 <b>2007</b> <sup>(2)</sup>
125 ... 630 / B3 ... B5	125 ... 630 / B3 ... B5	external	4	1499 <b>7701</b> <sup>(2)</sup>
2000 ... 3200	800 ... 1600 / B6 ... B7	external	4	2799 <b>7002</b> <sup>(2)</sup>

(1) Specific handle included.

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

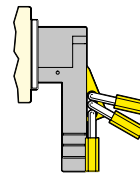
Locking using 230 VAC undervoltage coil in position (factory fitted)				
SIRCOVER Rating (A) / Frame size	SIRCOVER Bypass Rating (A) / Frame size	Operation	Figure	Reference
800 ... 3200 / B6 ... B8	800 ... 1600 / B6 ... B7	direct	3	please consult us

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

#### Use

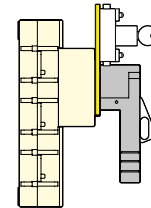
- Using padlock (not supplied). This device is factory mounted in the direct or external operation handle and allows the use of up to 3 padlocks.
- Locking:
  - using lock (not supplied)
  - using undervoltage coil.
- The interlocking positions are either determined as standard or configured by the user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

Fig. 1



access\_061\_a\_1\_x\_cat

Fig. 2



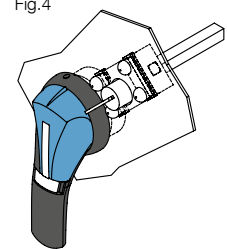
access\_001\_la\_1\_x\_cat

Fig. 3



access\_132\_a\_1\_x\_cat

Fig. 4



access\_189\_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.

## Enclosed transfer switch solutions

### General characteristics

- Adapted to mechanical risk and dust hazard.
- Operation handle: S-type black handle padlockable in position 0.
- Protection degree: IP54
- Colour: RAL 7035 up to 630 A, above RAL 7035 and RAL 9001 for casing and door.
- Cable gland plate: top and bottom
- Material: XC steel, thickness 1.5 mm.
- Coating: epoxy polyester powder (ratings < 630 A), polyester powder (ratings ≥ 630 A)
- Wall mounting: 4 fixing lugs supplied loose.
- Door: solid with hinges.
- Door lock: 3 mm double bar key (ratings < 630 A), 8 mm square key (ratings ≥ 630 A), key supplied.
- Miscellaneous: 2 earth connection points, double door locking.

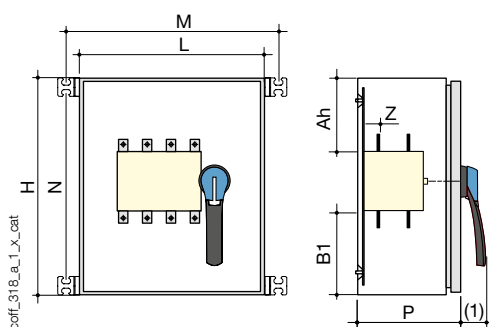
### References

Rating (A)	Number of poles	Top/Bottom connection I - 0 - 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 ... 1600 A: 74 mm.

Rating (A)	No. of poles	H x W x D (mm)	Max. connection cross-section (mm <sup>2</sup> )	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	24	465	465	78
1 250	3/4 P	1200 x 700 x 500	4 x 185	740	1152	24	465	465	88
1 600	3/4 P	1200 x 700 x 500	4 x 300	740	1152		470	470	94

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

### 125 to 630 A / B3 to B5

Thermal current $I_{th}$ at 40°C	125 A	160 A	200 A	250 A	315A	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 <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-31 A / AC-31 B	125	160	200	250	315	400	500	630
415 VAC	AC-32 A / AC-32 B				200	315	400	500	500
415 VAC	AC-33 A / AC-33 B				200	200	200	400	400

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

Rated voltage	Utilisation category	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-20 A / AC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-23 A / AC-23 B	125/125	160/160	200/200	200/200	315/315	400/400	500/500	630/630
500 VAC	AC-20 A / AC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
500 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
500 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	200/250	200/315	200/400	500/500	500/500
500 VAC	AC-23 A / AC-23 B	80/80	80/80	80/80	200/200	200/200	200/200	400/400	400/400
690 VAC <sup>(7)</sup>	AC-20 A / AC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
690 VAC <sup>(7)</sup>	AC-21 A / AC-21 B	125/125	160/160	200/200	200/200	200/200	200/200	500/500	500/500
690 VAC <sup>(7)</sup>	AC-22 A / AC-22 B	125/125	125/125	125/125	160/160	160/160	160/160	400/400	400/400
690 VAC <sup>(7)</sup>	AC-23 A / AC-23 B	63/80	63/80	63/80	125/125	125/125	125/125	400/400	400/400
220 VDC	DC-20 A / DC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
220 VDC	DC-21 A / DC-21 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC	DC-22 A / DC-22 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC	DC-20 A / DC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
440 VDC	DC-21 A / DC-21 B	125 <sup>(2)</sup> /125 <sup>(2)</sup>	125 <sup>(2)</sup> /125 <sup>(2)</sup>	125 <sup>(2)</sup> /125 <sup>(2)</sup>	200 <sup>(2)</sup> /200 <sup>(2)</sup>	200 <sup>(2)</sup> /200 <sup>(2)</sup>	200 <sup>(2)</sup> /200 <sup>(2)</sup>	500 <sup>(2)</sup> /500 <sup>(2)</sup>	630 <sup>(2)</sup> /630 <sup>(2)</sup>
440 VDC	DC-22 A / DC-22 B	125 <sup>(2)</sup> /125 <sup>(2)</sup>	125 <sup>(2)</sup> /125 <sup>(2)</sup>	125 <sup>(2)</sup> /125 <sup>(2)</sup>	200 <sup>(2)</sup> /200 <sup>(2)</sup>	200 <sup>(2)</sup> /200 <sup>(2)</sup>	200 <sup>(2)</sup> /200 <sup>(2)</sup>	500 <sup>(2)</sup> /500 <sup>(2)</sup>	630 <sup>(2)</sup> /630 <sup>(2)</sup>
440 VDC	DC-23 A / DC-23 B	125 <sup>(3)</sup> /125 <sup>(3)</sup>	125 <sup>(3)</sup> /125 <sup>(3)</sup>	125 <sup>(3)</sup> /125 <sup>(3)</sup>	200 <sup>(3)</sup> /200 <sup>(3)</sup>	200 <sup>(3)</sup> /200 <sup>(3)</sup>	200 <sup>(3)</sup> /200 <sup>(3)</sup>	500 <sup>(3)</sup> /500 <sup>(3)</sup>	500 <sup>(3)</sup> /500 <sup>(3)</sup>

### Operational power in AC-23 (kW)

At 400 VAC without pre-break in AC <sup>(3)</sup>	63/63	80/80	80/80	132/132	132/132	280/280	280/280	450/450
At 690 VAC without pre-break in AC <sup>(3)</sup>	55/75	55/75	55/75	90/110	90/110	150/185	150/185	185/220

### Reactive power (kvar)

At 415 VAC	55	75	90	115	145	185	230	290
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### Fuse protected short-circuit withstand as per IEC 60947-3 at 690 VAC

Prospective short-circuit current (kA rms)	100 <sup>(5)</sup>	100 <sup>(5)</sup>	50 <sup>(5)</sup>	50	50	50	50	50
Associated fuse rating (A)	125	160	200	250	315	400	500	630

### Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s<sup>(4)</sup>

Rated short-time withstand current 0.3s $I_{cw}$ (kA rms)	12 <sup>(5)</sup>	12 <sup>(5)</sup>	12 <sup>(5)</sup>	15	15	15	17	17
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### Short-circuit withstand without protection as per IEC 60947-3 at 690 VAC

Rated short-time withstand current 1s $I_{cw}$ (kA rms)	7 <sup>(5)</sup>	7 <sup>(5)</sup>	7 <sup>(5)</sup>	8	8	8	10	10
Rated peak withstand current (kA peak)	20	20	20	30	30	30	45	45
Rated short-time withstand current 60ms $I_{cw}$ (kA rms) as per IEC 60947-6-1 at 415 VAC				10 <sup>(6)</sup>	10 <sup>(6)</sup>	10 <sup>(6)</sup>	10	12.6

### Connection

Minimum Cu cable cross-section (mm <sup>2</sup> )	35	50	70	95	150	185	240	2 x 150
Minimum Cu busbar cross-section (mm <sup>2</sup> )								2 x 30 x 5
Maximum Cu cable cross-section (mm <sup>2</sup> )	50	95	120	150	240	240	2 x 185	2 x 300
Maximum Cu busbar width (mm)	25	25	25	32	32	32	50	50
Tightening torque mini / maxi (Nm)	9/13	9/13	9/13	20/26	20/26	20/26	20/26	20/26

### Mechanical characteristics

Durability (number of operating cycles)	10 000	10 000	10 000	8 000	8 000	5 000	5 000	5 000
Weight of 3 P switch (kg)	2.9	2.9	2.9	3.8	3.9	3.9	8.6	9.1
Weight of 4 P switch (kg)	4.1	4.1	4.1	4.6	4.9	4.9	10.4	11.1

(1) Category with index A = frequent operation -

Category with index B = infrequent operation.

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

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

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

(6) 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.

(5) Data at 415 VAC

(6) Data at 30ms

(7) With terminal shrouds or phase barrier.



800 to 3200 A / B6 to B8

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 <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-31 A / AC-31 B	800	1000	1250	1600	2000	2500	3200
415 VAC	AC-32 A / AC-32 B	800	1000	1250	1600	2000	2000	2000
415 VAC	AC-33 A / AC-33 B	800	800	800	1000	1250	1250	1250

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

Rated voltage	Utilisation category	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-20 A / AC-20 B	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
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-20 A / AC-20 B	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
500 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
500 VAC	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1600/1600			
500 VAC	AC-23 A / AC-23 B	400/400	630/630	800/800	1000/1000			
690 VAC <sup>(6)</sup>	AC-20 A / AC-20 B	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
690 VAC <sup>(6)</sup>	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
690 VAC <sup>(6)</sup>	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1000/1000			
690 VAC <sup>(6)</sup>	AC-23 A / AC-23 B	400/400	630/630	800/800	800/800			
220 VDC	DC-20 A / DC-20 B	800/800	1000/1000	1250/1250	1600/1600			
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	DC-20 A / DC-20 B	800/800	1000/1000	1250/1250	1600/1600			
440 VDC	DC-21 A / DC-21 B	800 <sup>(3)</sup> /800 <sup>(3)</sup>	1000 <sup>(3)</sup> /1000 <sup>(3)</sup>	1250 <sup>(3)</sup> /1250 <sup>(3)</sup>	1250/1250			
440 VDC	DC-22 A / DC-22 B	800 <sup>(3)</sup> /800 <sup>(3)</sup>	1000 <sup>(3)</sup> /1000 <sup>(3)</sup>	1250 <sup>(3)</sup> /1250 <sup>(3)</sup>	1250/1250			
440 VDC	DC-23 A / DC-23 B	800 <sup>(3)</sup> /800 <sup>(3)</sup>	1000 <sup>(3)</sup> /1000 <sup>(3)</sup>	1250 <sup>(3)</sup> /1250 <sup>(3)</sup>	1250/1250			

Operational power in AC-23 (kW)

At 400 VAC without pre-break in AC <sup>(3)</sup>	710/710	710/710	710/710	710/710	710/710			
At 690 VAC without pre-break in AC <sup>(3)</sup>	185/220	475/475	475/475	750/750	750/750			

Reactive power (kvar)

At 400 VAC <sup>(5)</sup>	365	460	575					
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Fuse protected short-circuit withstand as per IEC 60947-3 at 415 VAC

Prospective short-circuit current (kA rms)	50	100	100	100				
Associated fuse rating (A)	800	1000	1250	2 x 800				

Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s<sup>(4)</sup>

Rated short-time withstand current 0.3s $I_{cw}$ (kA rms)	47	64	64	78	78	78	78	
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Short-circuit withstand without protection as per IEC 60947-3 at 415 VAC

Rated short-time withstand current 1s $I_{sw}$ (kA rms)	26	35	35	50	50	50	50	
Rated peak withstand current (kA peak)	55	55	80	110	110	110	120	
Rated short-time withstand current 60ms $I_{sw}$ (kA rms) as per IEC 60947-6-1 at 415 VAC	16	20	25	32	40	50	50	

Connection

Minimum Cu cable cross-section (mm <sup>2</sup> )	2 x 185	2 x 240						
Minimum Cu busbar cross-section (mm <sup>2</sup> )	2 x 40 x 5	2 x 50 x 5	2 x 60 x 5	2 x 80 x 5	2 x 100 x 10	2 x 100 x 10	2 x 100 x 10	
Maximum Cu cable cross-section (mm <sup>2</sup> )	2 x 300	4 x 185	4 x 185	6 x 185				
Maximum Cu busbar width (mm)	63	63	63	100	100	100	100	
Tightening torque min (Nm)	20/26	20/26	20/26	40/45	40/45	40/45	40/45	

Mechanical characteristics

Durability (number of operating cycles)	4 000	4 000	4 000	3 000	3 000	3 000	3 000	
Weight of a 3 pole device (kg)	20.5	21.0	21.6	25.7	42.0	42.0	52.3	
Weight of a 4 pole device (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 "+" and 1 pole for the "-".

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

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

(6) 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.

(5) Data at 415 VAC.

(6) With terminal shrouds or phase barrier.

# SIRCOVER

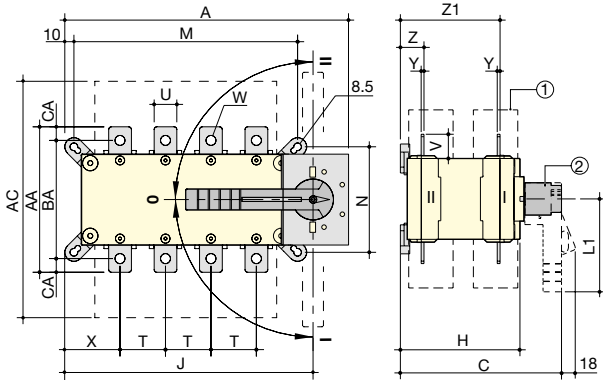
Manual transfer switches

from 125 to 3200 A

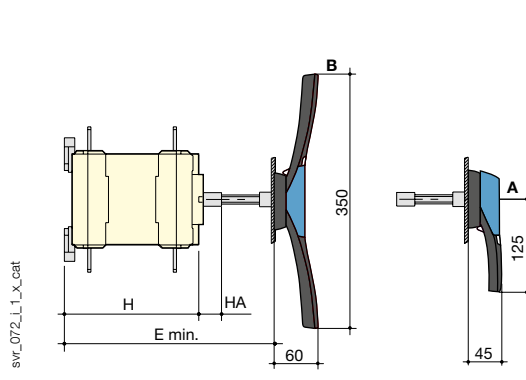
## Dimensions

125 to 1600 A / B3 to B7

Direct front operation



External front operation



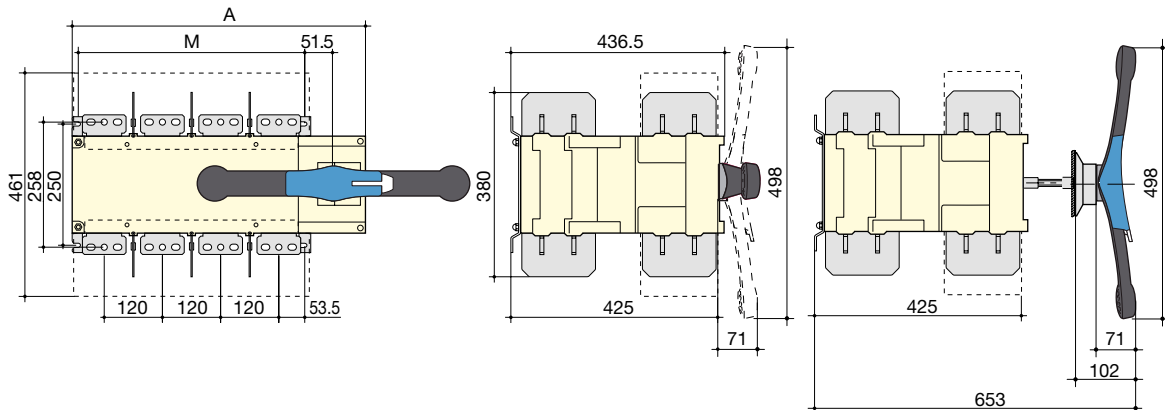
A. S2 type handle for external operation: 125 to 630 A  
 B. S4 type handle for external operation: 800 to 1600 A

1. Terminal shrouds  
 2. Direct handle operation:  
 - 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 à 3200 A / B8

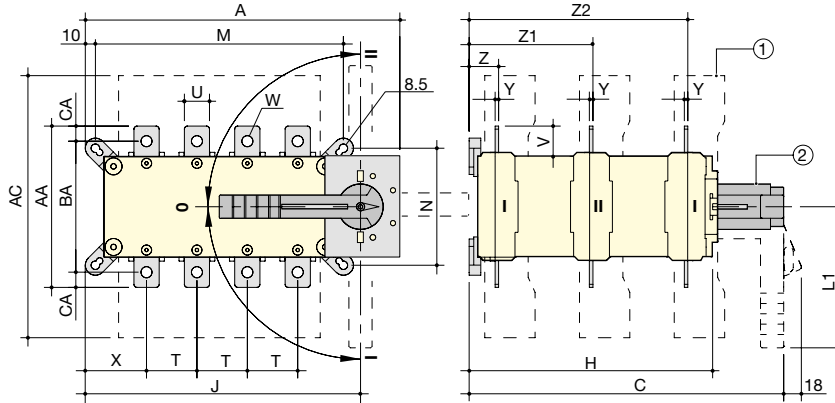
Direct front operation



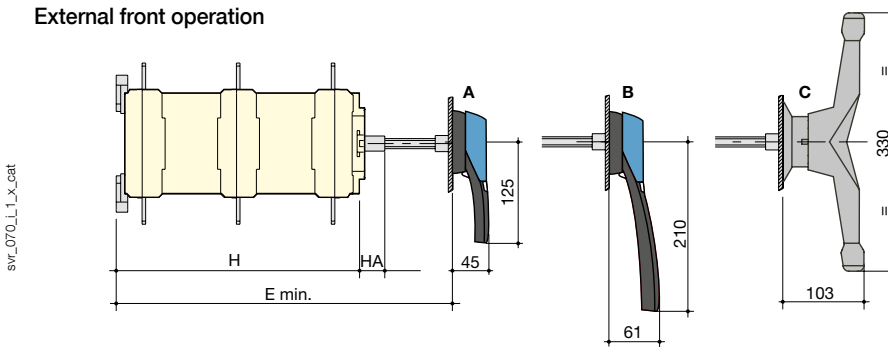
Rating (A) / Frame size	Overall dimensions		Switch mounting	
	A 3p.	A 4p.	M 3p.	M 4p.
2000 ... 3200 / B8	478	598	347	467

SIRCOVER Bypass 125 to 1600 A / B3 to B7

Direct front operation



External front operation



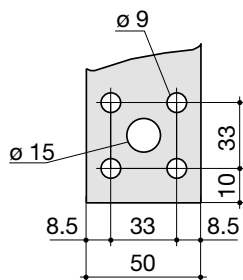
- A. S2 type handle for external operation: 125 to 200 A
- B. S3 type handle for external operation: 250 to 630 A
- C. External double lever handle: 800 to 1600 A

- 1. Terminal shrouds
- 2. Direct handle operation:
  - 125 to 200 A: L1 = 140 mm,
  - 250 to 630 A: L1 = 210 mm,
  - 800 to 1600 A: L1 = Ø 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+6 p.	J 4+8 p.	M 3+6 p.	M 4+8 p.	N	T	U	V	W	X 3+6p.	X 4+8p.	Y	Z	Z1	Z1	AA	BA	CA
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

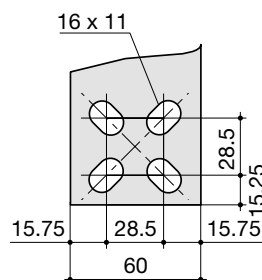
Connection terminals

SIRCOVER and SIRCOVER Bypass 800 A / B6



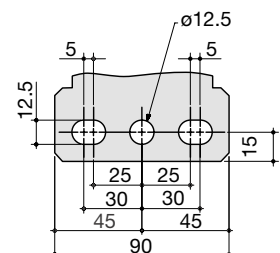
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SIRCOVER and SIRCOVER Bypass 1250 A / B6



svr\_078\_b\_1\_x\_cat

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



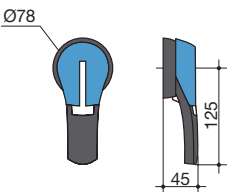
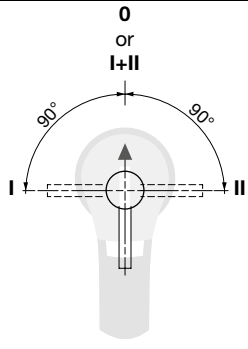
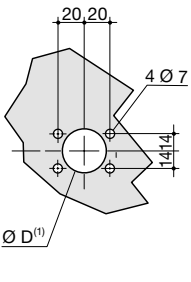
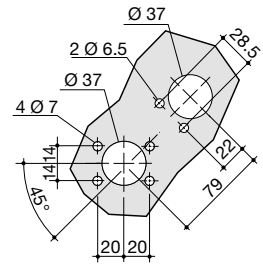
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# SIRCOVER

Manual transfer switches  
from 125 to 3200 A

## Dimensions for external handles

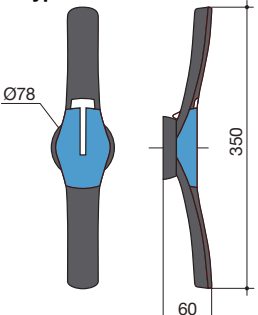
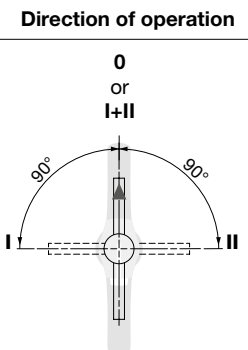
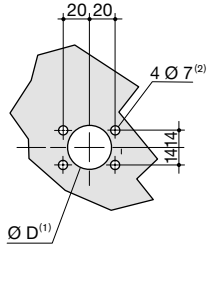
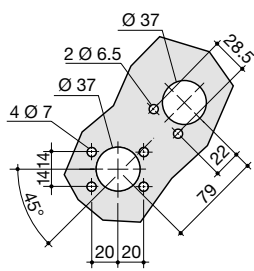
### SIRCOVER 125 to 630 A / B3 to B5

Handle type	Direction of operation	Front operation	
		Door drilling	
<b>S2 type</b> 			

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

poign\_030\_a\_1\_gb\_cat

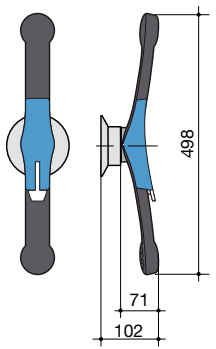
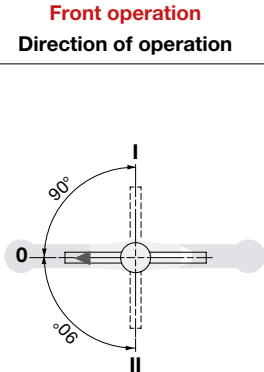
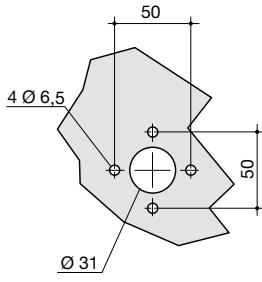
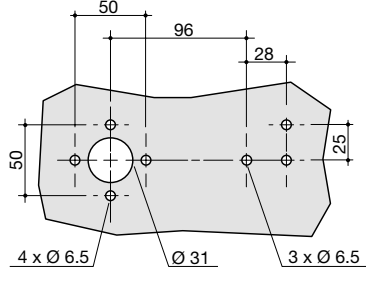
### SIRCOVER 800 to 1600 A / B6 to B7

Handle type	Direction of operation	Front operation	
		Door drilling	
<b>S4 type</b> 			

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

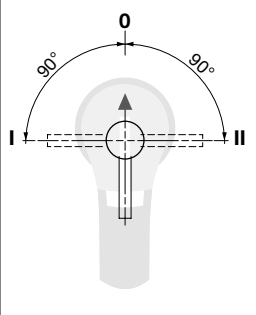
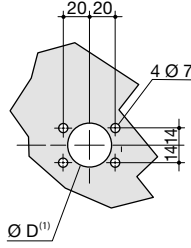
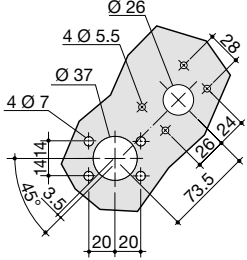
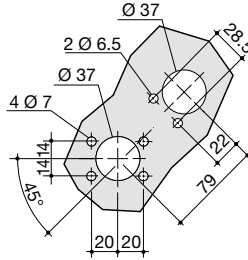
poign\_031\_a\_1\_gb\_cat

### SIRCOVER 2000 to 3200 A / B8

Handle type	Direction of operation	Front operation	
		Door drilling	
<b>S5 type</b> with V Escutcheon 			

poign\_023\_a\_1\_gb\_cat

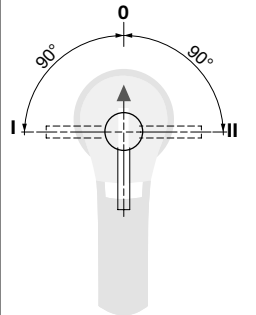
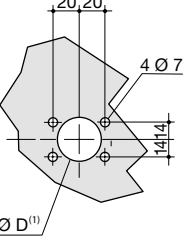
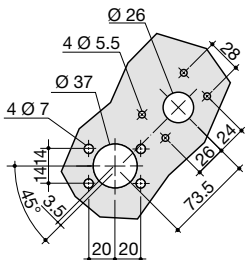
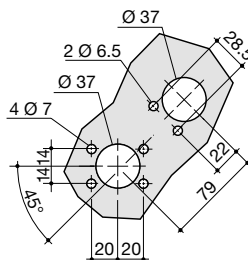
SIRCOVER Bypass 125 to 200 A / B3

Handle type	Front operation Direction of operation	Door drilling	
<b>S2 type</b>			<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.

poign\_032\_a\_1\_gb\_cat

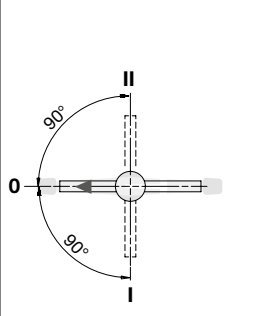
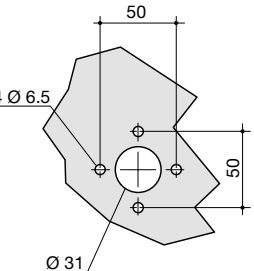
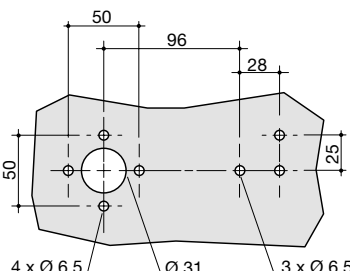
SIRCOVER Bypass 250 to 630 A / B4 to B5

Handle type	Front operation Direction of operation	Door drilling	
<b>S3 type</b>			<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.

poign\_033\_a\_1\_gb\_cat

SIRCOVER Bypass 800 to 1600 A / B6 to B7

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

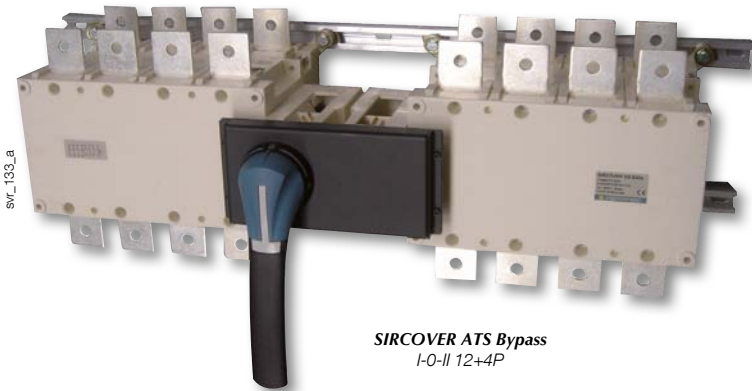
poign\_022\_a\_1\_gb\_cat



# SIRCOVER ATS Bypass

Manual transfer switches  
from 125 to 1600 A

Transfer  
switches



SIRCOVER ATS Bypass  
I-O-II 12+4P

## The solution for

- > Industry
- > Healthcare buildings



## Strong points

- > Stable positions
- > Secured breaking
- > On load switching
- > A complete solution

## Conformity to standards

- > IEC 60947-3



## Function

SIRCOVER ATS Bypass switches are manual four pole transfer switches with positive break indication. They are designed to isolate ATS type electrical equipment (automatic transfer switch) or UPS, with minimum interruption to the load supply. Integrating a SOCOMEC transfer switch into the installation enables source selection when in Bypass (see operating principle below).

## Advantages

### Stable positions

SIRCOVER ATS Bypass switches have 3 stable positions which are not affected by voltage drops or vibrations.

### On load switching

Thanks to its AC-22 characteristics, tested in accordance with standard IEC 60947-3, the SIRCOVER ATS Bypass enables on load switching.

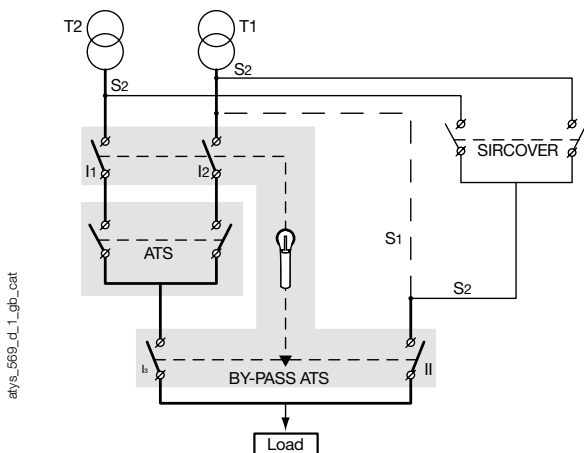
### Secured breaking

Simultaneous upstream and downstream isolation and fully visualised breaking.

### A complete solution

The SIRCOVER ATS Bypass is a single product offering a genuine solution incorporating both an equipment isolation function and a switching function.

## Operating principle



### In Bypass position:

- Without SIRCOVER: The load is supplied directly by one of the two power sources (transformer T1 for example).
- With a SIRCOVER: The supply source can be selected.

## References

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Bridging bars	Auxiliary contact	Terminal shrouds	Terminal screens
125 A	12 + 4 P	4100 <b>9813</b>	S3 type Black IP65 I - O - II 1433 <b>3113</b>	S3 type Black IP65 I - O - II 1433 <b>3113</b>	200 mm 1401 <b>1520</b>	4 P 4109 <b>4019</b>	1 <sup>st</sup> contact NO/NC included 2 <sup>nd</sup> contact NO/NC 4109 <b>0021</b> <sup>(1)</sup>	4 P 2694 <b>4014</b> <sup>(2)(3)</sup>	4 P 1509 <b>4012</b> <sup>(4)</sup>
160 A	12 + 4 P	4100 <b>9816</b>				4 P 4109 <b>4025</b>			
250 A	12 + 4 P	4100 <b>9825</b>				4 P 4109 <b>4039</b>			
400 A	12 + 4 P	4100 <b>9840</b>				4 P 4109 <b>4063</b>			
630 A	12 + 4 P	4100 <b>9863</b>				Black 2799 <b>7062</b>			
800 A	12 + 4 P	4100 <b>9880</b>	4 P 4109 <b>4088</b>						
1000 A	12 + 4 P	4100 <b>9881</b>	4 P 4109 <b>4160</b>						
1250 A	12 + 4 P	4100 <b>9882</b>							
1600 A	12 + 4 P	4100 <b>9886</b>							

(1) 2 pieces: one for position I and one for position II.

(2) To fully shroud front, rear, top and bottom 3 references required.

(3) To shroud front switch top and bottom 4 references required.

(4) For complete front protection, order the reference twice.

## Accessories

### Key handle interlocking system

#### Locking in position 0 with RONIS EL11AP (lock not supplied)

Rating (A)	Operation	Figure	Reference
125 ... 630	direct	1	4109 <b>1006</b> <sup>(1)</sup>
125 ... 630	external	3	<b>1499 7701</b>
800 ... 1600	direct and external	2	Please consult us

(1) Specific handle included.

#### Locking in positions I, 0, II with RONIS EL11AP (lock not supplied)

Rating (A)	Operation	Figure	Reference
125 ... 630	direct	1	4109 <b>1002</b> <sup>(1)</sup>
800 ... 1600	direct	2	Please consult us

(1) Specific handle included.

#### Locking with CASTELL K type lock (lock not supplied)

Rating (A)	Operation	Figure	Reference
125 ... 630	external	3	<b>1499 7702</b>
800 ... 1600	external		Please consult us

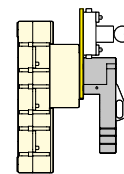


Fig. 1



Fig. 2

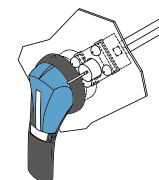


Fig. 3

access\_001\_a\_1\_x\_cat

access\_132\_a\_1\_x\_cat

access\_156\_a\_1\_x\_cat

# SIRCOVER ATS Bypass

Manual changeover switches

from 125 to 1600 A

## Characteristics according to IEC 60947-3

125 to 1600 A

Thermal current $I_{th}$ at 40°C	125 A	160 A	250 A	400 A	630 A	800 A	1000 A	1250 A	1600 A
Rated insulation voltage $U_i$ (V)	800	800	800	800	1000	1000	1000	1000	1000
Rated impulse withstand voltage $U_{imp}$ (kV)	8	8	8	8	12	12	12	12	12

### Rated operational currents $I_e$ (A)

Rated voltage	Utilisation category	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-20 A / AC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600
415 VAC	AC-21 A / AC-21 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600
415 VAC	AC-22 A / AC-22 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600
415 VAC	AC-23 A / AC-23 B	125/125	160/160	250/250	250/250	500/500	800/800	1000/1000	1250/1250	1250/1250
690 VAC <sup>(2)</sup>	AC-20 A / AC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600
690 VAC <sup>(2)</sup>	AC-21 A / AC-21 B	125/125	160/160	200/250	200/250	500/500	800/800	800/800	800/800	1000/1000
690 VAC <sup>(2)</sup>	AC-22 A / AC-22 B	125/125	125/125	125/160	125/160	315/315	800/800	800/800	800/800	1000/1000
690 VAC <sup>(2)</sup>	AC-23 A / AC-23 B	63/80	63/80	100/125	100/125	160/200	200/250	200/250	200/250	500/500
220 VDC	DC-20 A / DC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000/1000	1250/1250	1600/1600
220 VDC	DC-21 A / DC-21 B	125/125	160/160	250/250	250/250	630/630	800/800	1000/1000	1250/1250	1250/1250
220 VDC	DC-22 A / DC-22 B	125/125	160/160	250/250	250/250	500/500	800/800	1000/1000	1250/1250	1250/1250
220 VDC	DC-23 A / DC-23 B	125/125	125/125	200/200	200/200	500/500	800/800	1000/1000	1250/1250	1250/1250
440 VDC	DC-20 A / DC-20 B	125/125	160/160	250/250	400/400	630/630	800/800	1000 <sup>(4)</sup> /1000 <sup>(4)</sup>	1250/1250	1600/1600
440 VDC	DC-21 A / DC-21 B	125 <sup>(3)</sup> /125 <sup>(3)</sup>	125 <sup>(3)</sup> /125 <sup>(3)</sup>	200 <sup>(3)</sup> /200 <sup>(3)</sup>	200 <sup>(3)</sup> /200 <sup>(3)</sup>	500 <sup>(3)</sup> /500 <sup>(3)</sup>	800 <sup>(4)</sup> /800 <sup>(4)</sup>	1000 <sup>(4)</sup> /1000 <sup>(4)</sup>	1250 <sup>(4)</sup> /1250 <sup>(4)</sup>	1250 <sup>(4)</sup> /1250 <sup>(4)</sup>
440 VDC	DC-22 A / DC-22 B	125 <sup>(3)</sup> /125 <sup>(3)</sup>	125 <sup>(3)</sup> /125 <sup>(3)</sup>	200 <sup>(3)</sup> /200 <sup>(3)</sup>	200 <sup>(3)</sup> /200 <sup>(3)</sup>	500 <sup>(3)</sup> /500 <sup>(3)</sup>	800 <sup>(4)</sup> /800 <sup>(4)</sup>	1000 <sup>(4)</sup> /1000 <sup>(4)</sup>	1250 <sup>(4)</sup> /1250 <sup>(4)</sup>	1250 <sup>(4)</sup> /1250 <sup>(4)</sup>
440 VDC	DC-23 A / DC-23 B	125 <sup>(4)</sup> /125 <sup>(4)</sup>	125 <sup>(4)</sup> /125 <sup>(4)</sup>	200 <sup>(4)</sup> /200 <sup>(4)</sup>	200 <sup>(4)</sup> /200 <sup>(4)</sup>	500 <sup>(4)</sup> /500 <sup>(4)</sup>	800 <sup>(4)</sup> /800 <sup>(4)</sup>	1000 <sup>(4)</sup> /1000 <sup>(4)</sup>	1250 <sup>(4)</sup> /1250 <sup>(4)</sup>	1250 <sup>(4)</sup> /1250 <sup>(4)</sup>

### Operational power in AC-23 (kW)

At 400 VAC without pre-break in AC <sup>(1)(5)</sup>	63/63	80/80	132/132	132/132	280/280	450/450	710/710	710/710	710/710
At 690 VAC without pre-break in AC <sup>(1)(5)</sup>	55/75	55/75	90/110	90/110	150/185	185/220	185/220	185/220	475/475

### Reactive power (kvar)

At 400 VAC <sup>(5)</sup>	55	75	115	185	290	365	575	575	
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### Fuse protected short-circuit withstand (kA rms prospective)

Prospective short-circuit (kA rms) <sup>(6)</sup>	100	100	50	18	70	50	100	100	100
Associated fuse rating (A) <sup>(6)</sup>	125	160	250	400	630	800	1000	1250	2 x 800

### Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s<sup>(7)</sup>

Rated short-time withstand current 0.3s $I_{sc}$ (kA rms)	15	15	17	17	25	50	65	65	100
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### Short-circuit capacity (without protection)

Thermal current $I_{th}$ at 40°C	125 A	160 A	250 A	400 A	630 A	800 A	1000 A	1250 A	1600 A
Rated short-time withstand current 1s $I_{sc}$ (kA rms)	8	8	9	9	14	27	36	36	50
Rated short-circuit making capacity								75	75

### Connection

Minimum Cu cable cross-section (mm <sup>2</sup> )	35	50	95	185	2 x 150	2 x 185			
Minimum Cu busbar cross-section (mm <sup>2</sup> )					2 x 30 x 5	2 x 40 x 5	2 x 60 x 5	2 x 60 x 5	2 x 80 x 5
Maximum Cu cable cross-section (mm <sup>2</sup> )		50	95	150	240	2 x 300	2 x 300	2 x 300	4 x 185
Maximum Cu busbar width (mm)	25	25	32	32	50	63	63	63	100
Tightening torque min (Nm)	9	9	20	20	20	20	20	20	40

### Mechanical characteristics

Durability (number of operating cycles)	10000	10000	10000	10000	5000	3000	3000	3000	3000
Weight of 3 P switch (kg)	8.3	8.3	10	10.3	20.7	44.3	45.4	46.4	54.7
Weight of 4 P switch (kg)	10.6	10.6	11.7	12.4	24.8	53	54.4	55.8	67.3

(1) Category with index A = frequent operation

Category with index B = infrequent operation.

(2) With terminal shrouds.

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

(4) 4-pole device with 2 poles in series per polarity.

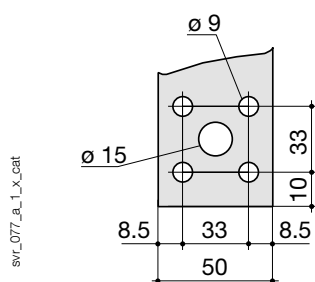
(5) The power value is given for information only, the current values vary from one manufacturer to another.

(6) For a rated operational voltage  $U_n = 400$  VAC.

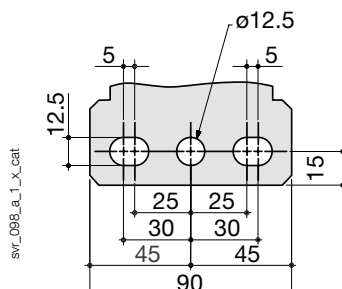
(7) Value for coordination with any circuit breaker that ensures tripping in less than 0.3s. For coordination with specific circuit-breaker references, higher short-circuit current values are available. Please consult us.

## Connection terminals

### SIRCOVER ATS Bypass 800 to 1000 A



### SIRCOVER ATS Bypass 1250 to 1600 A

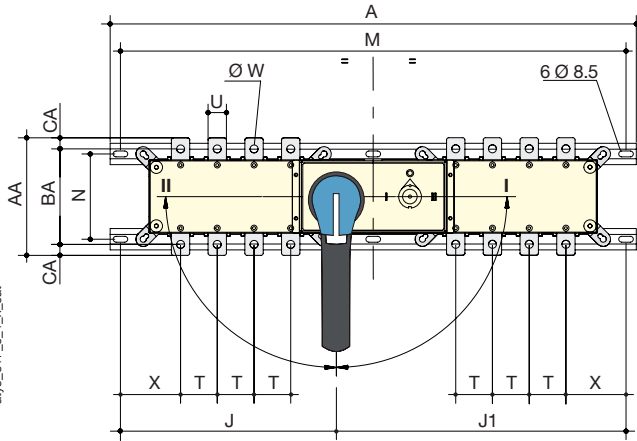




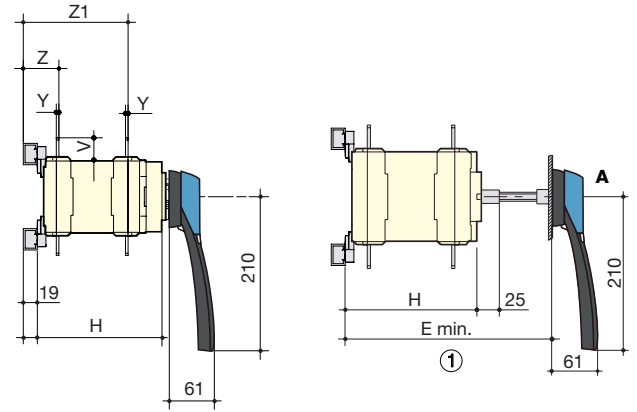
## Dimensions

### SIRCOVER ATS Bypass 125 to 630 A

Direct front operation



External front operation

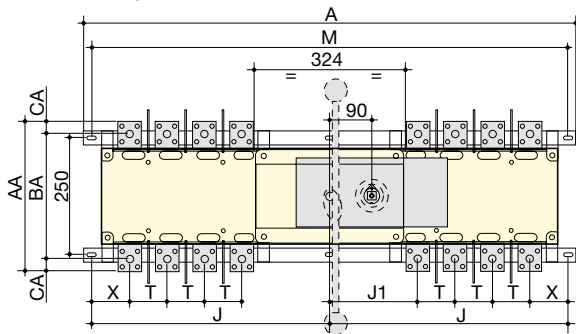


A. S3 type handle for external front operation: 125 to 630 A.  
1. Max length with shaft extension: E min + 50 mm.

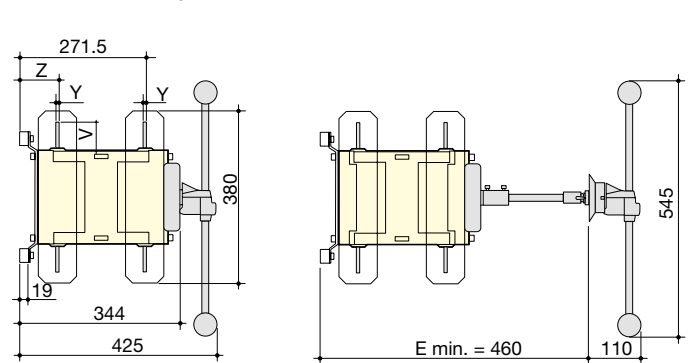
Rating (A)	Overall dimensions		Switch body				Switch mounting			Connection								
	A 8p.	E min	H	J 8p.	J1 8p.	M 8p.	N	T	U	V	W	X 8p.	Y	Z	Z1	AA	BA	AC
125	610	260±1	193	238	338	576	101	36	20	25	8.5	76	3.5	47	143	135	115	10
160	610	260±1	193	238	338	576	101	36	20	25	8.5	76	3.5	47	143	135	115	10
250	725	260±1	193	295	396	691	116	50	25	30	11	83.5	3.5	49	143	160	130	10
400	725	260±1	193	295	396	691	116	50	35	35	11	83.5	3.5	49	143	170	140	15
630	850	337±1	270	358	458	816	176	65	45	50	13	91.5	5	62	199	235	220	20

### SIRCOVER ATS Bypass 800 to 1600 A

Direct front operation



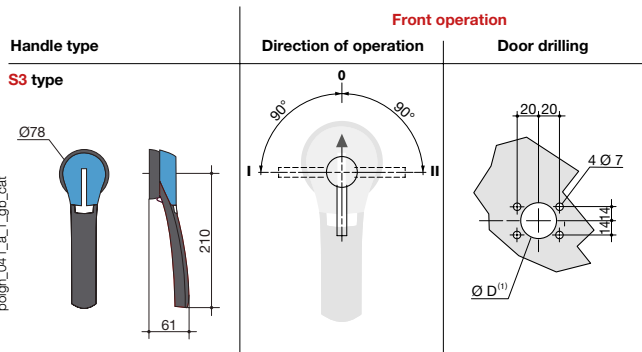
External front operation



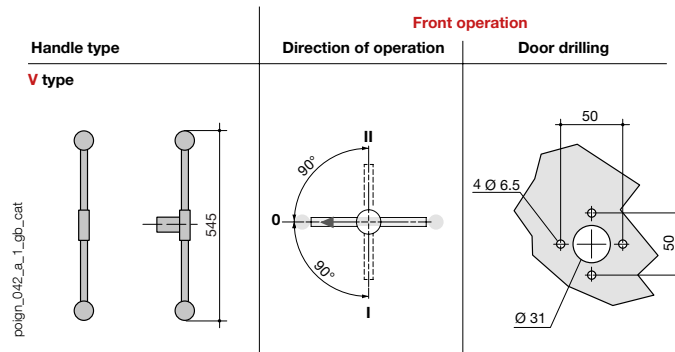
Rating (A)	Overall dimensions		Switch body			Switch mounting		Connection					
	A 8p.	J 8p.	J1 8p.	M 8p.	T	V	X 8p.	Y	Z	AA	BA	AC	
800	1 055	510.5	189	1 021	80	60.5	81.5	7	84.5	321	268	26.5	
1000	1 055	510.5	189	1 021	80	60.5	81.5	7	84.5	321	268	26.5	
1250	1 320	643	195	1 286	120	44	88	8	85.5	288	258	15	
1600	1 320	643	195	1 286	120	44	88	8	85.5	288	258	15	

## Dimensions for external handles

### SIRCOVER ATS Bypass 125 to 630 A



### SIRCOVER ATS Bypass 800 to 1600 A

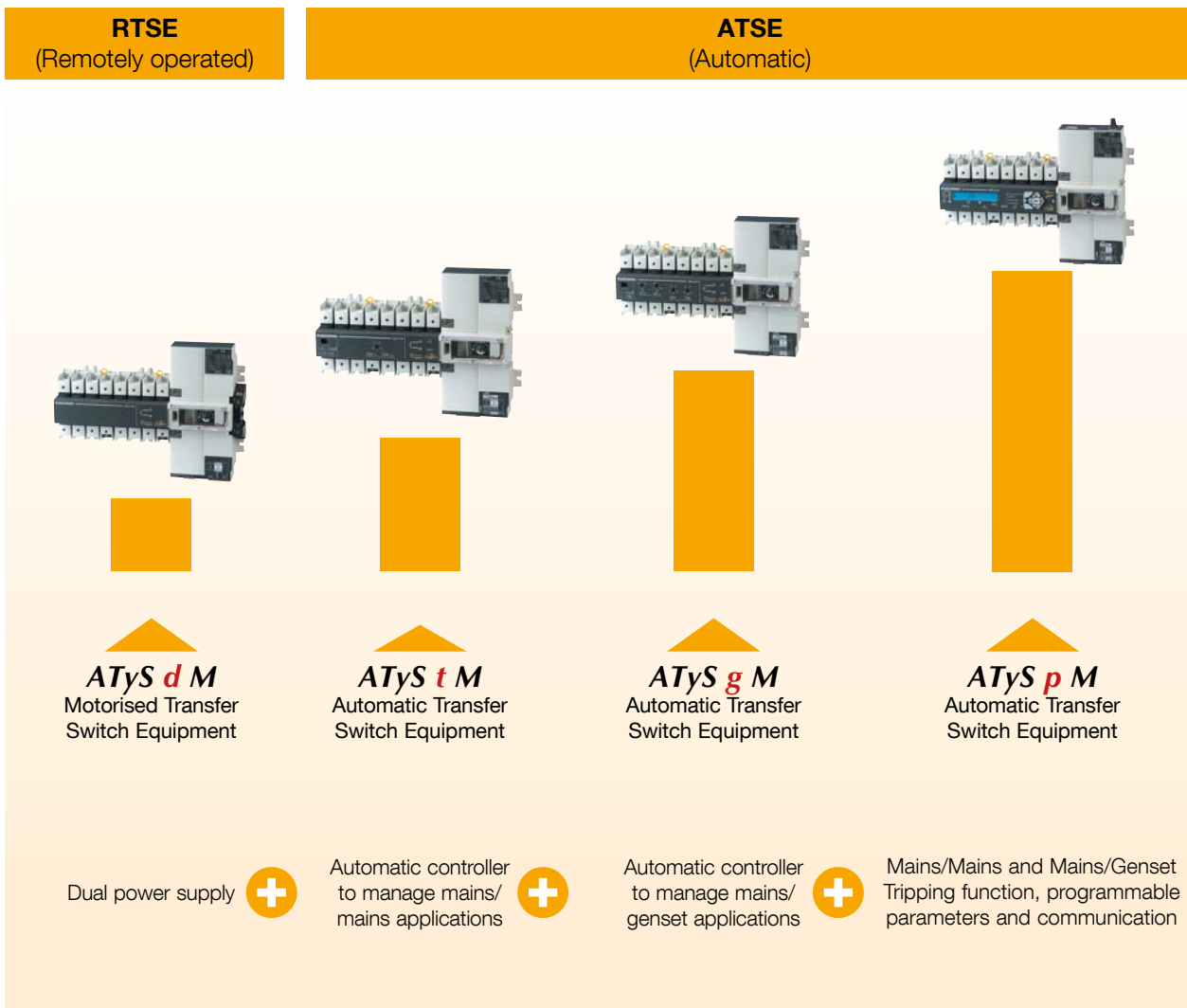




# **new** The new *ATyS M* range: safe and reliable solutions

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 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 (motor installed or removed).
- 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 (a product with a very low depth).
- Quick and easy mounting on a DIN rail or mounting plate.
- Simplified wiring thanks to the cage terminals and dedicated bridging bars that allows to create a common outgoing connection whilst retaining the cage terminal connections.

### Performance

#### IEC 60947-6-1 / GB 14048-11

- > AC 32B - up to 160A
- > AC 33B - up to 125A
- > AC 33iB - up to 160A

#### IEC 60947-3

- > AC 23B - up to 160A



# ATyS d M

## Remotely operated Transfer Switching Equipment from 40 to 160 A

Transfer switches

**new**

atys-md\_002\_b\_1\_cat



ATyS d M  
I-O-II 4P

### The solution for

- > Applications with an external ATS/AMF controller
- > Building Management Systems (BMS)



### Strong points

- > Secure operation
- > High performance
- > Fast transfer times
- > Immune to network voltage fluctuations

### Conformity to standards

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



### Approvals and certifications



### Function

ATyS d M are single-phase or three-phase 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 operation

ATyS M products provide electrical and mechanical interlocks for optimum safety. The product also provides positive break indication, confirming switch position with dual mechanical indicators for increased safety.

#### Fast transfer

ATyS d M are based on coil and technology with rotative contacts, therefore ensuring an extremely short black-out duration (< 90ms).

#### High performance

ATyS M are compliant with IEC 60947-6-1, the standard governing transfer switches. The AC 33B characteristic up to 125 A makes it possible to use the same product for resistive and inductive loads.

#### Immune to network 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.

### Modes of operation



ATySm\_014\_c

Easy selection of AUTO/  
MANUAL mode



ATySm\_015\_c\_1\_cat

Back-up manual operation



ATySm\_016\_c\_1\_cat

Padlocking facility

### What you need to know

#### Electrical control

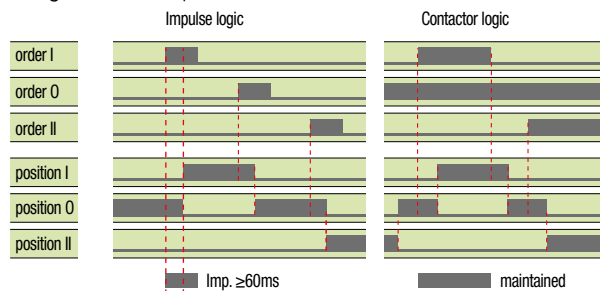
The positions are controlled by volt-free contacts which may come from an external automatic ATS controller (such as the ATyS C30), PLC, BMS or even simply using pushbuttons.

The power section switch positions are stable, with or without a supply present.

#### Control logic

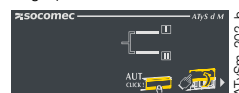
Two types of control logic are available:

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



ATySm\_042\_b\_1\_gb\_cat

Single-phase interface



Three-phase interface



ATySm\_029\_c

#### Power supply

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

These two power supplies may be and are intended to 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 uninterrupted power supply module, provides the full security of the 3 position commands with the availability of any supply.

In this case, both supply inputs must be connected in parallel in order to be supplied.

### References

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

<sup>(1)</sup> The three-phase version (4 P), for upstream and downstream protection, please order the reference twice. For the single-phase version (2 P) please order the reference once.

<sup>(2)</sup> 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

new



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

### Function

ATyS t M and ATyS g M are three-phase (4P) automatic transfer switches with positive break indication. The ATyS g M is also available in 2P for single phase applications.

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

### Advantages

#### Fast commissioning

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: specifically designed for mains/genset applications

The ATyS g M integrated controller has been designed to provide specific functions for these applications (genset startup, tests on load...) together with the monitoring of the voltage and frequency of both sources for three-phase and single-phase networks.

#### ATyS t M: specifically designed for 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.

#### Secured configuration settings

In order to prevent any risk of unintended change to the configured settings, a sealable cover is available as an accessory.

### The solution for

- > High Rise Buildings
- > Data centre
- > Healthcare buildings



### Strong points

- > Fast commissioning
- > ATyS d M functions plus an integrated ATS controller dedicated to mains/mains or mains/genset applications
- > Secured configuration settings

### Conformity to standards

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



### Approvals and certifications<sup>(1)</sup>



<sup>(1)</sup> Product reference on request.

<sup>(1)</sup> Only on two pole versions

## 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 <i>t</i> M	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contact block	Sealable cover
40 A	4P	230/400	9344 <b>4004</b>	4 P 1309 <b>4006</b>	2 pieces 1399 <b>4006</b>	2 pieces 2294 <b>4016</b> <sup>(1)</sup>	1 piece	1359 <b>0000</b>
63 A	4P	230/400	9344 <b>4006</b>				Separate common points 1309 <b>0001</b> <sup>(2)</sup> Linked common points 1309 <b>0011</b> <sup>(2)</sup>	
80 A	4P	230/400	9344 <b>4008</b>					
100 A	4P	230/400	9344 <b>4010</b>					
125 A	4P	230/400	9344 <b>4012</b>					
160 A	4P	230/400	9344 <b>4016</b>					

(1) The three-phase version (4 P), for upstream and downstream protection, please order the reference twice. For the single-phase version (2 P) please order the reference once.  
(2) 1 NO/NC contact block for positions I, 0 and II.

### ATyS *g* M

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

(1) The three-phase version (4 P), for upstream and downstream protection, please order the reference twice. For the single-phase version (2 P) please order the reference once.  
(2) 1 NO/NC contact block for positions I, 0 and II.  
(3) For 127/230 VAC networks, please contact your SOCOMEC office.



# ATyS p M

## Automatic Transfer Switching Equipment from 40 to 160 A

Transfer switches

**new**



atyS-mp\_001\_b\_1\_cat

ATyS p M  
I-0-II 4P

### The solution for

- > High Rise Buildings
- > Data centre
- > Healthcare buildings
- > Banking and Insurance
- > Transportation (Airports, tunnels...)



### Strong points

- > Flexible programming
- > Trip function
- > Modbus communication and configuration software
- > 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 automatic transfer switches with positive break indication.

Functions include ATyS t M and ATyS g M capability, with additional programmable parameters and a triggering 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 provides a function for transferring the load to the 0 position in case of loss of both power supply sources (tripping). In this way the load is protected 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.

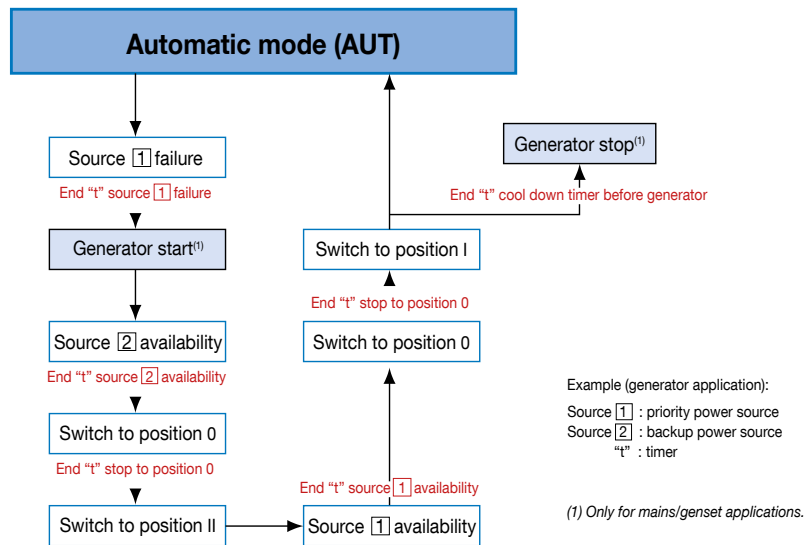
#### Remote control interface

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.



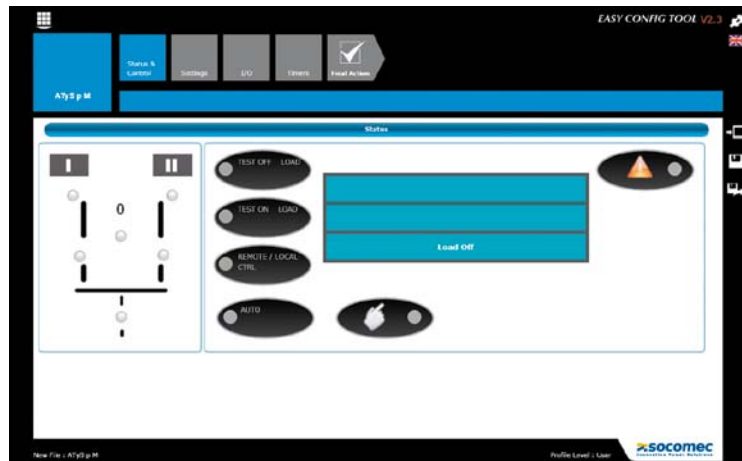
atys\_028\_h\_2\_gb\_cat

## Easyconfig

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

Typical parameters that can be set:

- the application type,
- voltage/frequency thresholds,
- timers,
- inputs/outputs...



## ATyS p M

Rating (A)	No. of poles	Network (VAC) <sup>(3)</sup>	ATyS p M	ATyS p M + com	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contact block	Remote interface
40 A	4P	230/400	9364 4004	9384 4004	4 P 1309 4006	2 pieces 1399 4006	2 pieces 2294 4016 <sup>(1)</sup>	1 piece	D10 9599 2010  D20 9599 2020
63 A	4P	230/400	9364 4006	9384 4006				Separate common points 1309 0001 <sup>(2)</sup>	
80 A	4P	230/400	9364 4008	9384 4008				Linked common points 1309 0011 <sup>(2)</sup>	
100 A	4P	230/400	9364 4010	9384 4010					
125 A	4P	230/400	9364 4012	9384 4012					
160 A	4P	230/400	9364 4016	9384 4016	1309 4016				

(1) The three-phase version (4 P), for upstream and downstream protection, please order the reference twice.

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

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

# ATyS M range

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

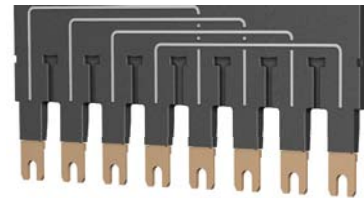
from 40 to 160 A

## Accessories

### Bridging bars

#### Use

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



atysm\_025\_a

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

### Voltage sensing and power supply tap

#### Use

It allows connection of  $2x \leq 1.5 \text{ mm}^2$  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.



atysm\_026\_a

Rating (A)	Pack	Reference
40 ... 160	2 pieces	1399 <b>4006</b>

### Terminal shrouds

#### Use

Protection against direct contact with terminals or connecting parts.

#### Advantages of the terminal shrouds

Perforations built in to the terminal shrouds allow remote thermographic inspection without the need to remove the shrouds. Tamper-proof seals can be fitted for increased security.

#### Mounting

For upstream and downstream protection of three-phase products (4 P), please order the reference twice. For the single-phase products (2 P) please order the reference once.



atysm\_027\_a

Rating (A)	Position	Reference
40 ... 160	top and bottom	2294 <b>4016</b> <sup>(1)</sup>

(1) Reference composed of 2 pieces (4P).

### Auxiliary contact

#### Use

Auxiliary contacts for position indication. A maximum of two auxiliary contact blocks can be fitted to each product.

Each auxiliary contact block integrates 3 NO/NC auxiliary contacts, one per position (I, O, II).

The ATyS *d* M s is supplied with one auxiliary contact block fitted as standard; This A/C block has separate common points.

#### Characteristics:

250 VAC / 5 A maximum.  
24 VDC / 2 A maximum.

Rating (A)	Type	Reference
40 ... 160	Separate common connection	1309 <b>0001</b>
40 ... 160	Linked common connection	1309 <b>0011</b>



access\_383\_a



access\_388\_a

## Sealable cover

### Use

Prevents access to the ATyS *t* M and *g* M configuration panel (seals and screws are included).

Rating (A)	No. of poles	Reference
40 ... 160	2 P	1359 <b>2000</b>
40 ... 160	4 P	1359 <b>0000</b>



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 <b>9006</b>



atysm\_036\_b\_1\_cat

## Extension box for polycarbonate enclosure

### Use

Combined with the polycarbonate enclosure, the extension unit provides additional space in order to connect 70 mm<sup>2</sup> cables to the ATyS M with ease.

Rating (A)	Reference
40 ... 160	1309 <b>9007</b>



atysm\_039\_a\_1\_x\_cat

# ATyS M range

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

from 40 to 160 A

## Accessories (continued)

### Residential enclosure

#### Use

Dedicated to the implementation of a single-phase ATyS M, this 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 <b>9056</b>



atysm\_196\_a\_1\_cat

### Auto-transformer

#### Use

For use with ATyS M in 400 VAC three-phase applications that does not have a distributed neutral. The ATyS M includes integrated sensing and power supply circuits, therefore a neutral connection is required for 400 VAC three-phase applications. When no neutral connection is available this autotransformer (400/230 VAC, 400 VA) provides the 230 VAC required for the ATyS to function.

Rating (A)	Reference
40 ... 160	1599 <b>4121</b>



trafo\_165\_b\_1

### Double power supply - DPS

#### Use

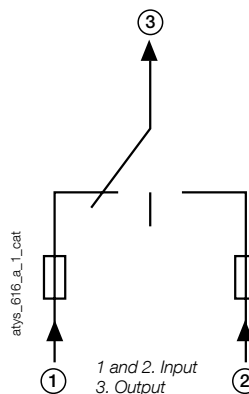
Allows an ATyS *d* M to be supplied by two 230 VAC, 50/60 Hz networks to have full control in terms of transfer to and from any position with any one of the power supplies available.

#### 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 mm<sup>2</sup>.
- Modular device: 4 module width.

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

Description of accessories	Reference
DPS	1599 <b>4001</b>



atys\_616\_a\_1\_cat

## Remote interfaces for ATyS p M

### Use

To remotely display source availability and position indication typically used 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

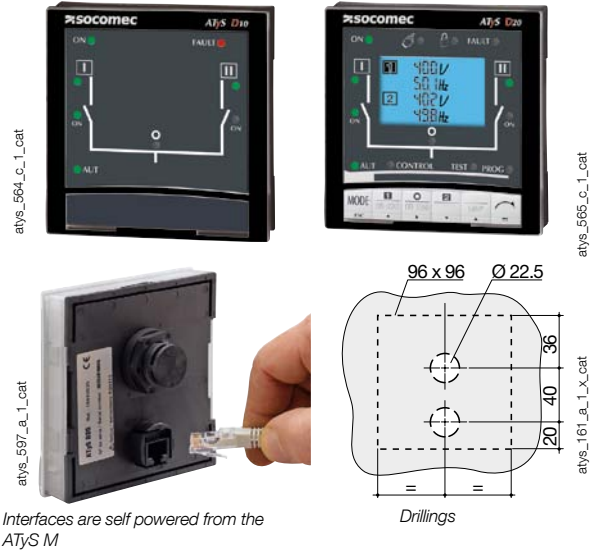
In addition to the functions of the ATyS D10, the D20 displays measurements and enables control and configuration from the front of the display panel.

Protection degree: IP21

### Door mounting

2 holes Ø 22.5.

ATyS M connection via RJ45 cable, not isolated. Cable not provided



Interfaces are self powered from the ATyS M

Description of accessories	Reference
D10	9599 2010
D20	9599 2020

## Connection cable for remote interfaces

### Use

To connect between a remote interface (type D10 or D20) and an ATyS p M.

### Characteristics:

RJ45 8 wire straight-through, non isolated cable. Length 3m.



Type	Length	Reference
RJ45 cable	3 m	1599 2009

## Power connection terminals

### Use

The power connection terminals allow conversion of the cage terminals into bolt-on type connection terminals, enabling connection of up to two 35mm<sup>2</sup> cables or one 70mm<sup>2</sup> cable. Compatible with aluminium terminals. Each power connection terminal is provided with separation screens.

Rating (A)	Reference
40 ... 160	1399 4017 <sup>(1)</sup>

*For complete conversion, order 3 times the reference.*



# ATyS M range

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

from 40 to 160 A

## Enclosed transfer switch solutions

### 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: steel, thickness 1.2 mm.
- Coating: epoxy polyester powder.
- Wall mounting: 4 fixing lugs supplied loose.
- Door: hinged metal door, front door cut out 327.4x47.6 mm.
- Door lock: 3 mm double bar key (included).

### References

#### ATyS d M

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

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

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



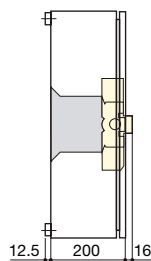
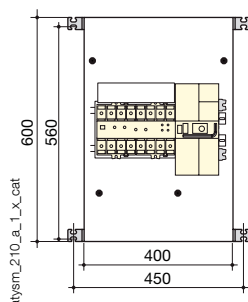
conf\_386\_LB

### Accessories

#### Customer fit

Description	Reference
Solid neutral	1309 9008
Kit IP54	1399 4016

### Dimensions

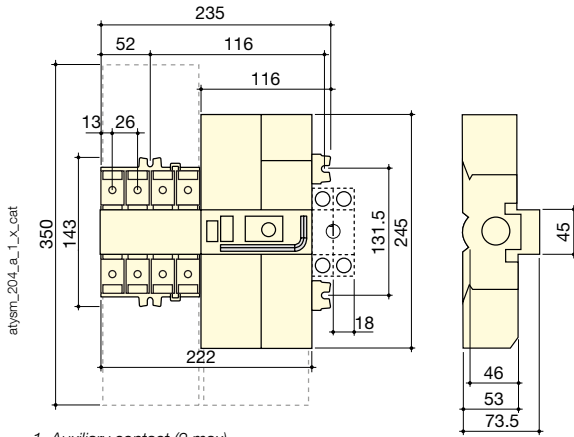


- Weight (excluding accessories): 15 kg.
- Connection (without power connection terminals): min. Cu 10 mm<sup>2</sup>, max. 70 mm<sup>2</sup>.

## Dimensions

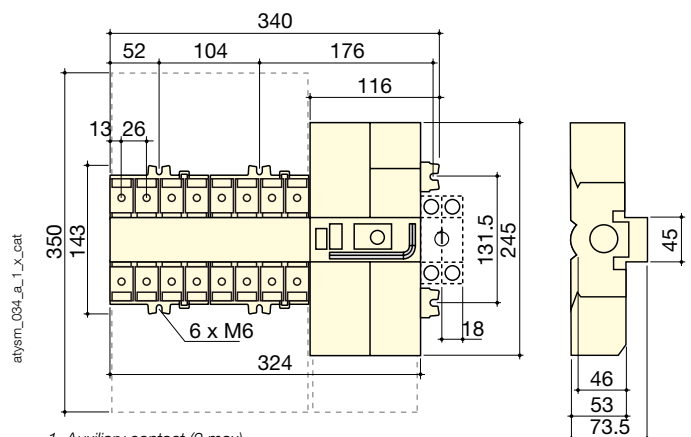
### ATyS M 40 to 160 A

#### Single-phase ATyS M



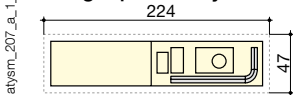
1. Auxiliary contact (2 max).

#### Three-phase ATyS M

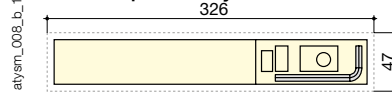


1. Auxiliary contact (2 max).

#### Single-phase ATyS M - Door cut-out



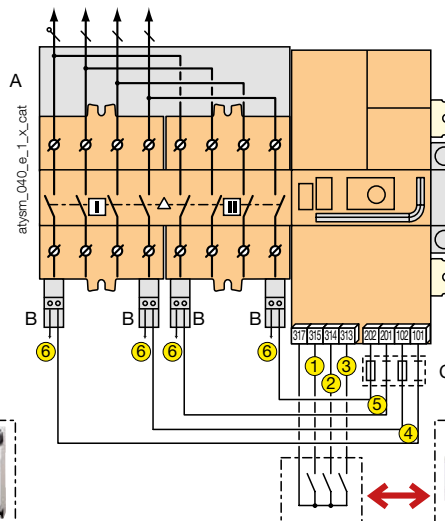
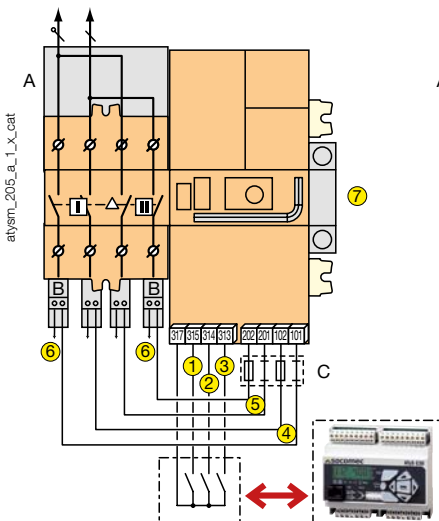
#### Three-phase ATyS M - Door cut-out



## Terminals and connections

### Single-phase ATyS d M

### Three-phase ATyS d M



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

- A: bridging bar (accessories)
- B: single-phase voltage sensing tap (accessories)
- C: F1 / F2 = fuse 10 A gG

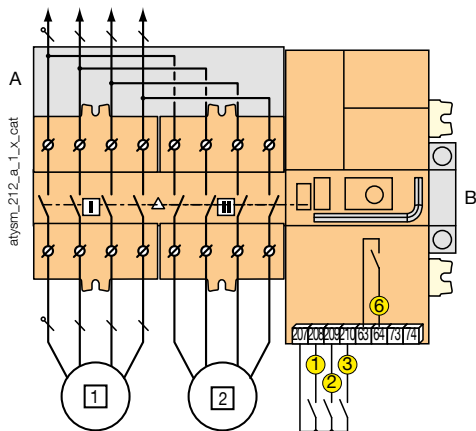
# ATyS M range

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

from 40 to 160 A

## Terminals and connections

### Three-phase ATyS t M

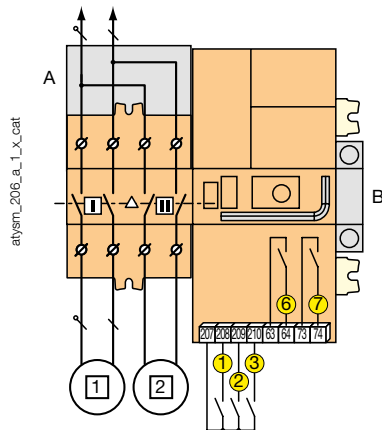


- 1 preferred source (network)
- 2 alternate source (network)

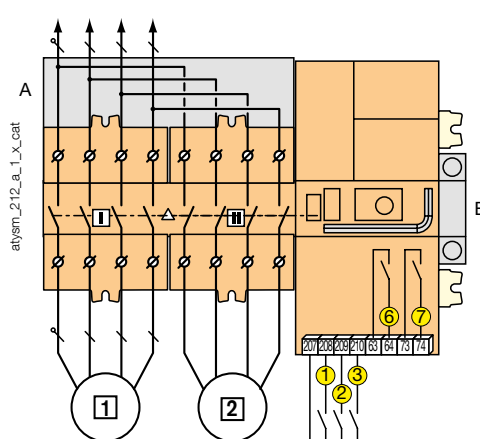
- 1: position 0 control
- 2: preferred source selection
- 3: automatic mode inhibition
- 6: availability S1 or S2

A: bridging bar (accessories)  
 B: auxiliary contact block - 1 NO/NC contact per position I, 0, II (accessories)

### Single-phase ATyS g M



### Three-phase ATyS g M

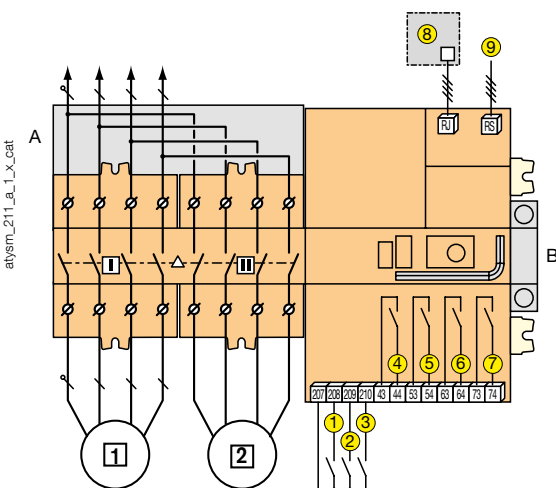


- 1 preferred source
- 2 alternate source

- 1: manual retransfer / priority change
- 2: test on load
- 3: automatic mode inhibition
- 6: product availability relay
- 7: genset start / stop control

A: bridging bar (accessories)  
 B: auxiliary contact block - 1 NO/NC contact per position I, 0, II (accessories)

### Three-phase ATyS p M



- 1 preferred source
- 2 alternate source

- 1 - 2 - 3: programmable inputs
- 4 - 5 - 6: programmable outputs
- 7: genset start / stop control
- 8: RJ 45 for connecting a D10/D20 remote interface
- 9: RS485 for communication on versions with COM.

A: bridging bar (accessories)  
 B: auxiliary contact block - 1 NO/NC contact per position I, 0, II (accessories)



## 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) (operation circuit)	300	300	300	300	300	300
Rated impulse withstand voltage $U_{imp}$ (kV) (operation circuit) - ATyS d M	4	4	4	4	4	4
Rated impulse withstand voltage $U_{imp}$ (kV) (operation 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 <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
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 <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
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 <sup>(5)</sup>	AC-21 A / AC-21 B	40/40	63/63	80/80	100/100	125/125	160/160
690 VAC <sup>(5)</sup>	AC-22 A / AC-22 B	40/40	63/63	80/80	80/80	100/125	100/125
690 VAC <sup>(5)</sup>	AC-23 A / AC-23 B	40/40	63/63	63/63	80/80	80/80	80/80

#### Fuse protected short-circuit withstand (kA rms prospective)

Prospective short-circuit current (kA rms)	50	50	50	50	50	40
Associated fuse rating (A)	40	63	80	100	125	160

#### Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s<sup>(4)</sup>

Rated short-time withstand current 0.3s $I_{cw}$ (kA rms)	7	7	7	7	7	7
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#### Short-circuit capacity (without protection)

Rated short-time withstand current 1 s. $I_{CW}$ (kA rms)	4	4	4	4	4	4
Rated peak withstand current (kA peak) <sup>(2)</sup>	17	17	17	17	17	17

#### Connection

Minimum Cu cable cross-section (mm <sup>2</sup> )	10	10	10	10	10	10
Maximum Cu cable cross-section (mm <sup>2</sup> )	70	70	70	70	70	70
Tightening torque (Nm)	5	5	5	5	5	5

#### Switching time<sup>(5)</sup>

I - 0 or II - 0 (ms) <sup>(3)</sup>	45	45	45	45	45	45
I - II or II - I (ms) <sup>(3)</sup>	180	180	180	180	180	180
Duration of "electrical blackout" I - II (ms) minimum	90	90	90	90	90	90

#### Power supply

Power supply 230 VAC mini / maxi (VAC) (ATyS d M, t M and g M)	176/288	176/288	176/288	176/288	176/288	176/288
Power supply voltage 230 VAC min / max (VAC) (ATyS p M)	160/305	160/305	160/305	160/305	160/305	160/305

#### Control supply power demand

Nominal power (VA)	6	6	6	6	6	6
Max current under 230 VAC (A) - ATyS d M, t M and g M	30	30	30	30	30	30
Max current under 230 VAC (A) - ATyS p M	20	20	20	20	20	20

#### Mechanical characteristics

Durability (number of operating cycles)	10 000	10 000	10 000	10 000	10 000	10 000
Weight of single-phase versions - without packaging (kg)	2.8	2.8	2.8	2.8	2.8	2.8
Weight of single-phase versions - with packaging (kg)	3.5	3.5	3.5	3.5	3.5	3.5
Weight of three-phase versions - without packaging (kg)	3.5	3.5	3.5	3.5	3.5	3.5
Weight of three-phase versions - with 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  $U_n = 400$  VAC.

(3) Between the command given and reaching of position at  $U_n$  (under nominal conditions).

(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 consult us.

(5) At rated voltage - excluding time delays and loss of source detection time when applicable.




# new The **ATyS S** range: A robust solution

Transfer switches


A range of transfer switches from 40 to 125 A

**RTSE**  
(Remotely operated)



**ATyS S**

Motorised Transfer Switch Equipment

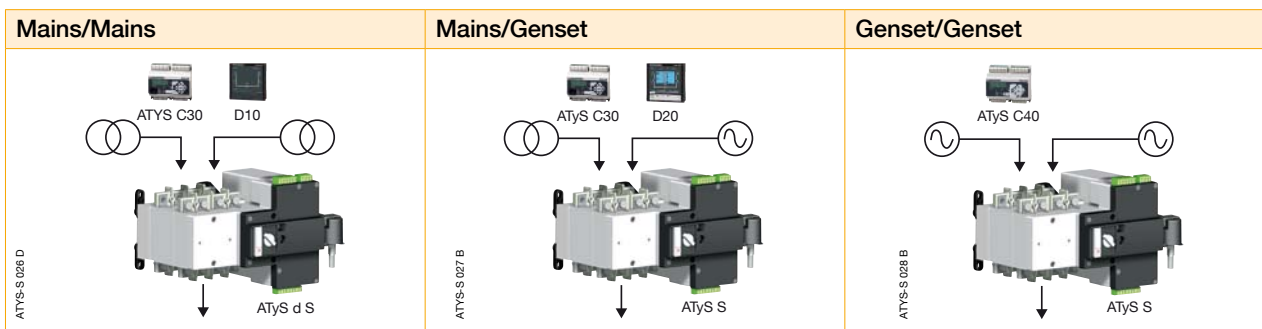


**ATyS d S**  
Motorised Transfer Switch Equipment

Dual power supply

+ (plus sign icon)

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 2x230 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.

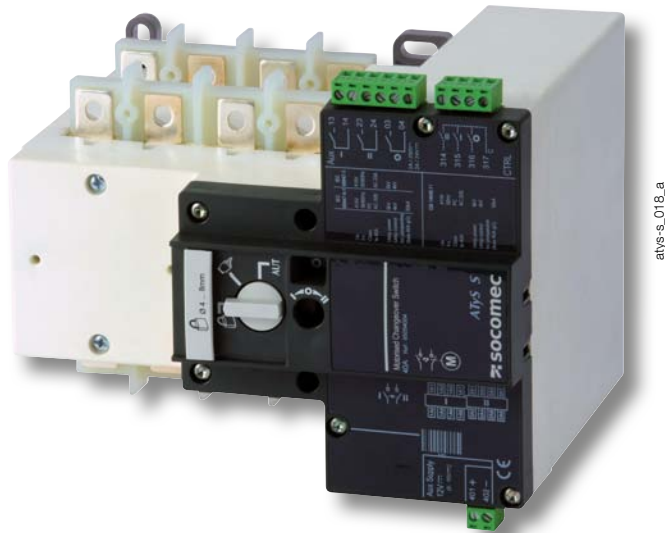


# ATyS S - ATyS d S

## Remotely operated Transfer Switching Equipment from 40 to 125 A

Transfer switches

**new**



### Function

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

### Advantages

#### Extensive power supply range

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

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

#### Safety and reliability

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

#### Easy integration

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

#### Simplified maintenance

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

#### ATyS d S: Dual power supply

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

### The solution for

- > Genset <90kVA
- > 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



## 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 <b>4004</b>	4 P 9509 <b>4013</b>	Source side 2 pieces 9594 <b>4012</b>  Load side 2 pieces 9594 <b>9012</b>	9599 <b>4001</b>	2 pieces 9599 <b>4003</b>	4 modules 9599 <b>4002</b>
	4 P	12 VDC	9505 <b>4004</b>					
	4 P	230 VAC	9503 <b>4004</b>					
63 A	4 P	24/48 VDC	9506 <b>4006</b>					
	4 P	12 VDC	9505 <b>4006</b>					
	4 P	230 VAC	9503 <b>4006</b>					
80 A	4 P	24/48 VDC	9506 <b>4008</b>					
	4 P	12 VDC	9505 <b>4008</b>					
	4 P	230 VAC	9503 <b>4008</b>					
100 A	4 P	24/48 VDC	9506 <b>4010</b>					
	4 P	12 VDC	9505 <b>4010</b>					
	4 P	230 VAC	9503 <b>4010</b>					
125 A	4 P	24/48 VDC	9506 <b>4012</b>					
	4 P	12 VDC	9505 <b>4012</b>					
	4 P	230 VAC	9503 <b>4012</b>					

### 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 <b>4004</b>	4 P 9509 <b>4013</b>	Source side 2 pieces 9594 <b>4012</b>  Load side 2 pieces 9594 <b>9012</b>	9599 <b>4001</b>	2 pieces 9599 <b>4003</b>	4 modules 9599 <b>4002</b>
63 A	4 P	2 x 230 VAC	9513 <b>4006</b>					
80 A	4 P	2 x 230 VAC	9513 <b>4008</b>					
100 A	4 P	2 x 230 VAC	9513 <b>4010</b>					
125 A	4 P	2 x 230 VAC	9513 <b>4012</b>					

# 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. One piece required per pole.

Rating (A)	No. of poles	Reference
40 ... 125	4 P	9509 <b>4013</b>



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 <b>4001</b>



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 <b>4003</b>



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 <b>4012</b>

#### Terminal shrouds for the load side

Rating (A)	Pack	Reference
40 ... 125	2 pieces	9594 <b>4012</b>



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 <b>4004</b>

### 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 <b>4002</b>



## 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 <b>5004</b>	9506 <b>5004</b>	9503 <b>5004</b>	9513 <b>5004</b>
63	9505 <b>5006</b>	9506 <b>5006</b>	9503 <b>5006</b>	9513 <b>5006</b>
80	9505 <b>5008</b>	9506 <b>5008</b>	9503 <b>5008</b>	9513 <b>5008</b>
100	9505 <b>5010</b>	9506 <b>5010</b>	9503 <b>5010</b>	9513 <b>5010</b>
125	9505 <b>5012</b>	9506 <b>5012</b>	9503 <b>5012</b>	9513 <b>5012</b>



### Switching unit

**Use**

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

Rating (A)	References
40	9509 <b>1004</b>
63	9509 <b>1006</b>
80	9509 <b>1008</b>
100	9509 <b>1010</b>
125	9509 <b>1012</b>



### Manual emergency operation handle

**Use**

This handle can be used on the product whether the motor unit is mounted or not.

Rating (A)	References
40 ... 125	9599 <b>5012</b>



### 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)	References
40 ... 125	9509 <b>0002</b>



# ATyS S - ATyS d S

Remotely operated Transfer Switching Equipment

from 40 to 125 A

## Enclosed transfer switch solutions

### General characteristics

#### 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
- Door lock: 3 mm double bar key (included).
- 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.



conf\_418\_a

#### References

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

### Accessories

#### Factory fitted

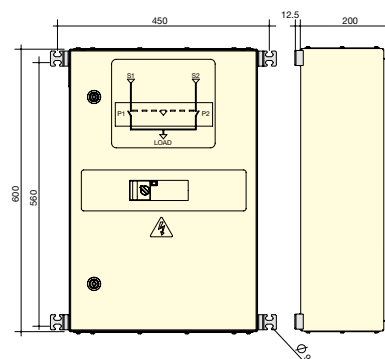
Description	Reference
LEDs indicating if voltage is present	9599 <b>0005</b>
LEDs for position indication	9599 <b>0006</b>
TESTS/AUTO modes selection (with C30 option)	9599 <b>0007</b>
Priority selection (with C30 option)	9599 <b>0008</b>
Surge arresters for enclosure (SURGYS D40)	9599 <b>0010</b>
Three-phase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

#### Customer fit

Description	Reference
Copper bar connection kit	9599 <b>0018</b>
Kit IP54	9599 <b>0020</b>
IPXXB protection screen (door open)	9599 <b>0021</b>

### Dimensions

Rating (A)	Connection cross-section (mm <sup>2</sup> )	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



conf\_423\_a\_1\_cat



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

### 40 to 125 A

<b>Thermal current <math>I_{th}</math> at 40°C</b>		<b>40 A</b>	<b>63 A</b>	<b>80 A</b>	<b>100 A</b>	<b>125 A</b>
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

<b>Rated operational currents <math>I_e</math> (A) according to IEC 60947-6-1</b>						
<b>Rated voltage</b>	<b>Utilisation category</b>	<b>A/B</b>	<b>A/B</b>	<b>A/B</b>	<b>A/B</b>	<b>A/B</b>
415 VAC	AC-31 B	40	63	80	100	125
415 VAC	AC-32 B	40	63	80	80	80

<b>Rated operational currents <math>I_e</math> (A) according to IEC 60947-3</b>						
<b>Rated voltage</b>	<b>Utilisation category</b>	<b>A/B</b>	<b>A/B</b>	<b>A/B</b>	<b>A/B</b>	<b>A/B</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

<b>Fuse protected short-circuit withstand (kA rms prospective)</b>						
Prospective short-circuit current (kA rms)		50	50	50	25	15
Associated fuse rating (A)		40	63	80	100	125

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

<b>Short-circuit capacity as per IEC 60947-6-1</b>						
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	-

<b>Short-circuit capacity as per IEC 60947-3 (without protection)</b>						
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

<b>Connection</b>						
Maximum Cu cable cross-section (mm <sup>2</sup> )		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

<b>Switching time (Standard setting)</b>						
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

<b>Power supply</b>						
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

<b>Control supply power demand</b>						
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

<b>Mechanical characteristics</b>						
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.

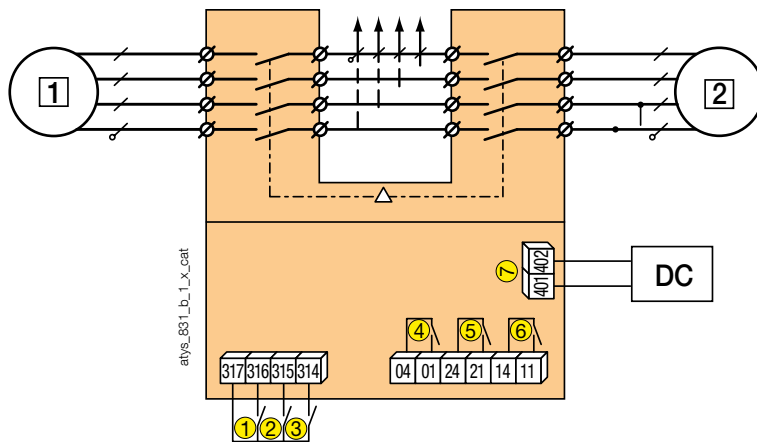
# ATyS S - ATyS d S

Remotely operated Transfer Switching Equipment

from 40 to 125 A

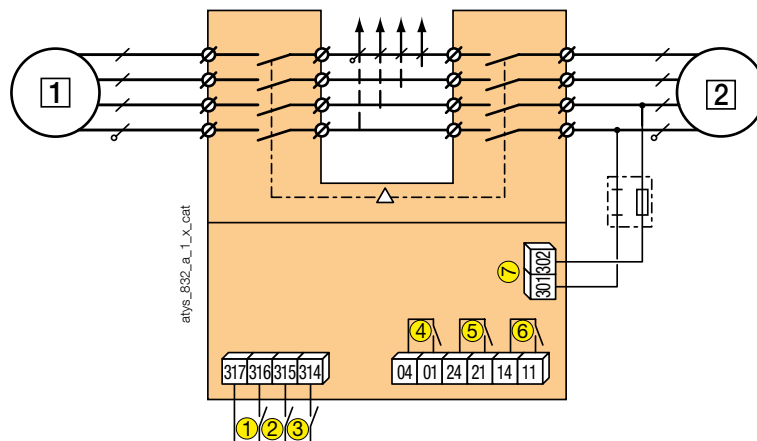
## Terminals and connections

### ATyS S DC version



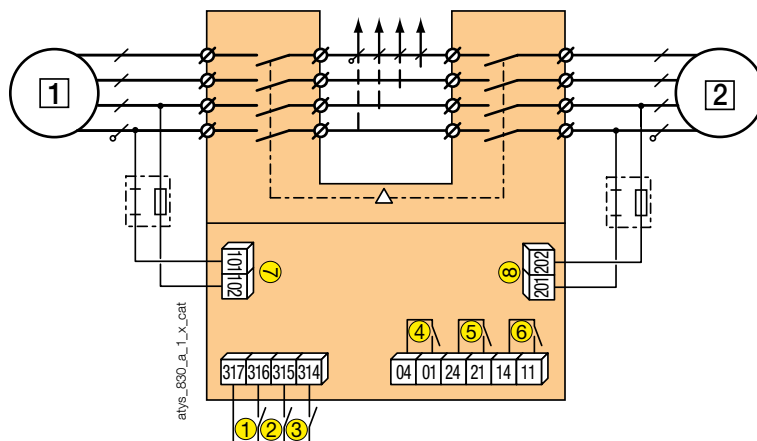
- 1 preferred source
- 2 alternate source
- 1: position 0 control
- 2: position I control
- 3: position II control
- 4: auxiliary contact, closed when the switch is in position 0
- 5: auxiliary contact, closed when the switch is in position II
- 6: auxiliary contact, closed when the switch is in position 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



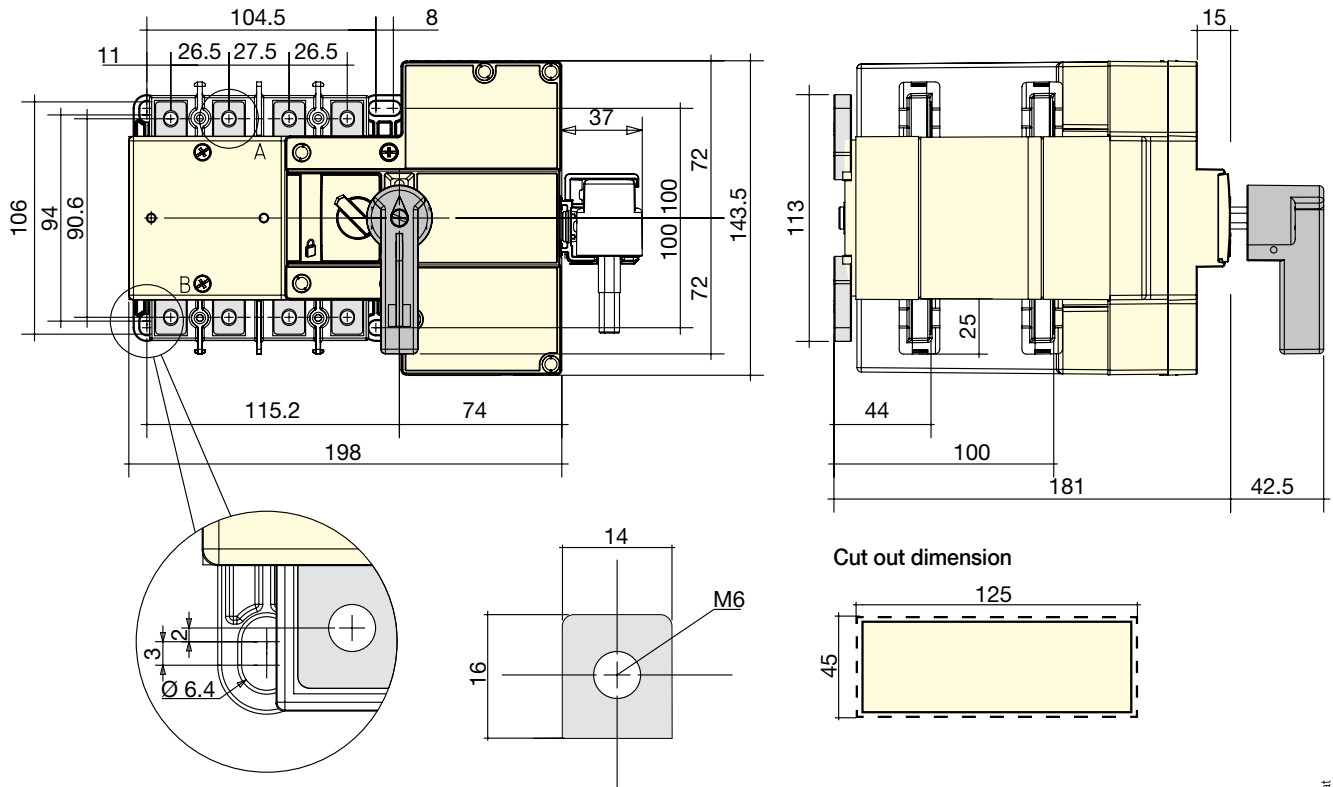
- 1 preferred source
- 2 alternate source
- 1: position 0 control
- 2: position I control
- 3: position II control
- 4: auxiliary contact, closed when the switch is in position 0
- 5: auxiliary contact, closed when the switch is in position II
- 6: auxiliary contact, closed when the switch is in position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

### ATyS d S: 2 x 230 VAC



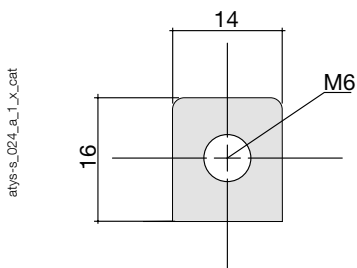
- 1 preferred source
- 2 alternate source
- 1: position 0 control
- 2: position I control
- 3: position II control
- 4: auxiliary contact, closed when the switch is in position 0
- 5: auxiliary contact, closed when the switch is in position II
- 6: auxiliary contact, closed when the switch is in position 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\_024\_a\_1\_x\_cat

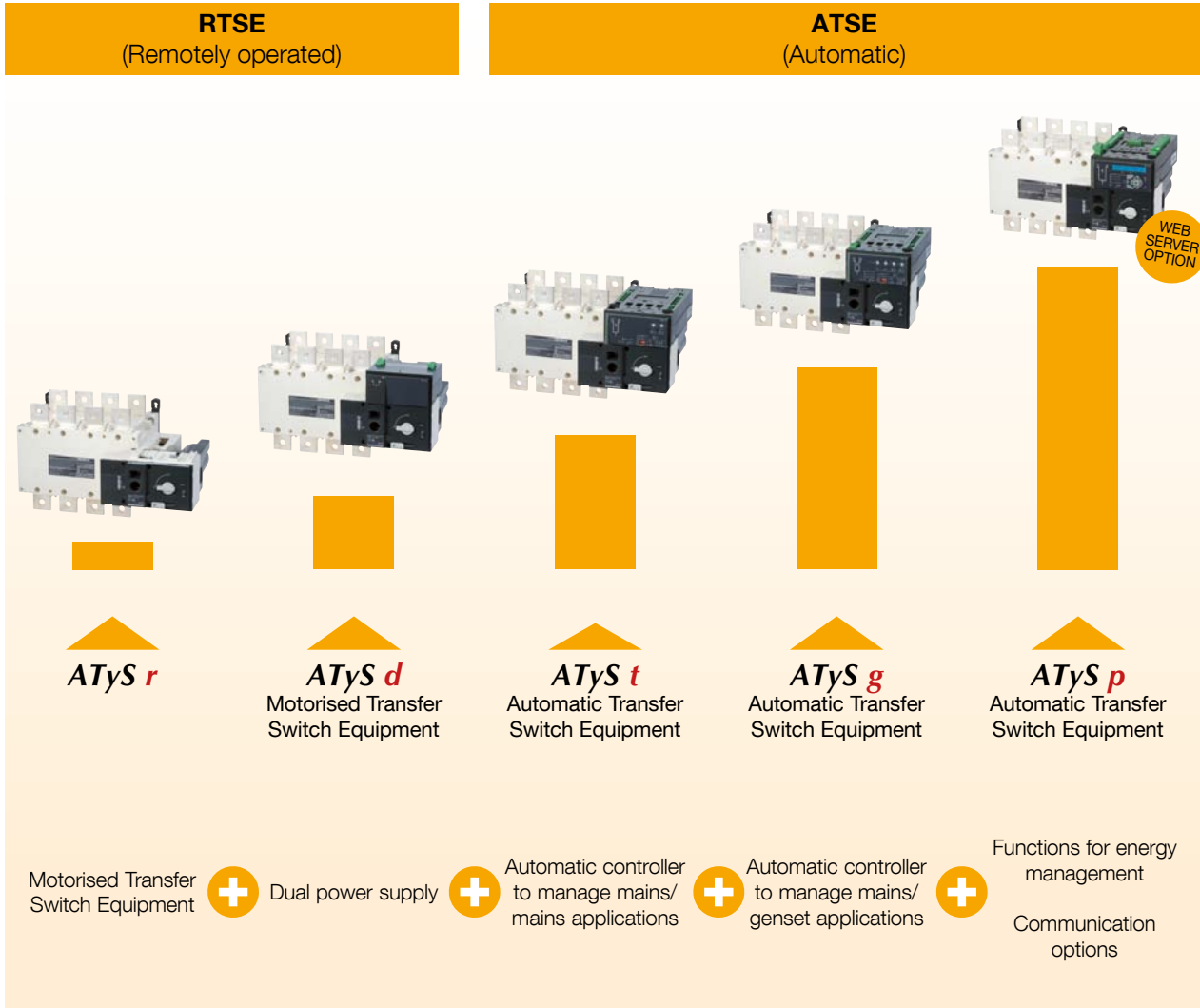


# The **ATyS**range: intuitive, reliable and robust solutions

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.



## 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



# ATyS *r* - ATyS *d*

Remotely operated Transfer Switching Equipment  
from 125 to 3200 A

Transfer switches



## 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



## 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 three-phase remotely operated motorised transfer switches, 3 or 4 poles, 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  $\pm$  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

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	3 P 2694 3014 <sup>(2)</sup> 4 P	3 P 1509 3012 4 P			
	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			1599 0002 <sup>(4)</sup>	9599 0003 <sup>(4)</sup>	
	4 P	9523 4025	9533 4025						
315 A / B4	3 P	9523 3031	9533 3031	3 P 4109 3039 4 P	3 P 2694 3021 <sup>(2)</sup> 4 P	3 P 1509 3025 4 P			
	4 P	9523 4031	9533 4031						
400 A / B4	3 P	9523 3040	9533 3040	3 P 4109 4039 4 P					
	4 P	9523 4040	9533 4040						
500 A / B5	3 P	9523 3050	9533 3050	3 P 4109 3050 4 P	3 P 2694 3051 <sup>(2)</sup> 4 P	3 P 1509 3063 <sup>(3)</sup> 4 P			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	3 P 2694 4051 <sup>(2)</sup> 4 P	3 P 1509 4063 <sup>(3)</sup> 4 P			
	4 P	9523 4063	9533 4063						
800 A / B6	3 P	9523 3080	9533 3080	3 P 4109 3080 4 P					
	4 P	9523 4080	9533 4080						
1000 A / B6	3 P	9523 3100	9533 3100	3 P 4109 4080 4 P		3 P 1509 3080 <sup>(3)</sup> 4 P	1599 0032 <sup>(4)</sup>		
	4 P	9523 4100	9533 4100						
1250 A / B6	3 P	9523 3120	9533 3120	3 P 4109 3120 4 P					
	4 P	9523 4120	9533 4120						
1600 A / B7	3 P	9523 3160	9533 3160	3 P 4109 3160 4 P		3 P 1509 3160 <sup>(3)</sup> 4 P		9599 0004 <sup>(4)</sup>	
	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 <sup>(3)</sup> 4 P	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 kits" page 71.

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

To shroud front switch top and bottom 2 references required.

(3) 2 pieces: one for top side and another for bottom side.

(4) Factory mounting only.

### Technical information

- > Accessories: see page 70.
- > 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

new



## 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



## Function

**ATyS t and g** are three-phase automatic transfer switches, 3 or 4 poles, with positive break indication. They incorporate all the functions offered by the ATyS d, as well as functions intended for **mains/mains** application (ATyS t) and **mains/genset** applications (ATyS g). In automatic mode they enable the monitoring of, and the on load changeover switching 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). Thanks 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 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 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.



## References

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 4013 <sup>(1)</sup>	3 P 2694 3014 <sup>(3)</sup> 4 P 2694 4014 <sup>(3)</sup>	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	3 P 4109 3025 4 P 4109 4025	3 P 1559 3025 4 P 1559 4026 <sup>(2)</sup>	3 P 2694 3021 <sup>(3)</sup> 4 P 2694 4021 <sup>(3)</sup>	3 P 1509 3025 4 P 1509 4025	1599 0002 <sup>(5)</sup>
	4 P	9543 4025	9553 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 4041 <sup>(2)</sup>	3 P 2694 3021 <sup>(3)</sup> 4 P 2694 4021 <sup>(3)</sup>	3 P 1509 3025 4 P 1509 4025	
	4 P	9543 4031	9553 4031					
400 A / B4	3 P	9543 3040	9553 3040	3 P 4109 3039 4 P 4109 4039	3 P 1559 3040 4 P 1559 4041 <sup>(2)</sup>	3 P 2694 3021 <sup>(3)</sup> 4 P 2694 4021 <sup>(3)</sup>	3 P 1509 3025 4 P 1509 4025	
	4 P	9543 4040	9553 4040					
500 A / B5	3 P	9543 3050	9553 3050	3 P 4109 3050 4 P 4109 4050	3 P 1559 3063 4 P 1559 4064 <sup>(2)</sup>	3 P 2694 3051 <sup>(3)</sup> 4 P 2694 4051 <sup>(3)</sup>	3 P 1509 3063 <sup>(4)</sup> 4 P 1509 4063 <sup>(4)</sup>	
	4 P	9543 4050	9553 4050					
630 A / B5	3 P	9543 3063	9553 3063	3 P 4109 3063 4 P 4109 4063	3 P 1559 3063 4 P 1559 4064 <sup>(2)</sup>	3 P 2694 3051 <sup>(3)</sup> 4 P 2694 4051 <sup>(3)</sup>	3 P 1509 3063 <sup>(4)</sup> 4 P 1509 4063 <sup>(4)</sup>	
	4 P	9543 4063	9553 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 4081 <sup>(2)</sup>	3 P 2694 3051 <sup>(3)</sup> 4 P 2694 4051 <sup>(3)</sup>	3 P 1509 3080 <sup>(4)</sup> 4 P 1509 4080 <sup>(4)</sup>	1599 0032 <sup>(5)</sup>
	4 P	9543 4080	9553 4080					
1000 A / B6	3 P	9543 3100	9553 3100	3 P 4109 3080 4 P 4109 4080	3 P 1559 3080 4 P 1559 4081 <sup>(2)</sup>	3 P 2694 3051 <sup>(3)</sup> 4 P 2694 4051 <sup>(3)</sup>	3 P 1509 3080 <sup>(4)</sup> 4 P 1509 4080 <sup>(4)</sup>	
	4 P	9543 4100	9553 4100					
1250 A / B6	3 P	9543 3120	9553 3120	3 P 4109 3120 4 P 4109 4120	3 P 1559 3120 4 P 1559 4121 <sup>(2)</sup>	3 P 2694 3051 <sup>(3)</sup> 4 P 2694 4051 <sup>(3)</sup>	3 P 1509 3080 <sup>(4)</sup> 4 P 1509 4080 <sup>(4)</sup>	
	4 P	9543 4120	9553 4120					
1600 A / B7	3 P	9543 3160	9553 3160	3 P 4109 3160 4 P 4109 4160	3 P 1559 3160 4 P 1559 4161 <sup>(2)</sup>	3 P 2694 3051 <sup>(3)</sup> 4 P 2694 4051 <sup>(3)</sup>	3 P 1509 3160 <sup>(4)</sup> 4 P 1509 4160 <sup>(4)</sup>	
	4 P	9543 4160	9553 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 4201 <sup>(2)</sup>		3 P 1509 3200 <sup>(4)</sup> 4 P 1509 4200 <sup>(4)</sup>	d'origine
	4 P	9543 4250	9553 4250					
3200 A / B8	3 P	9543 3320	9553 3320					
	4 P	9543 4320	9553 4320					

(1) Neutral on the left for neutral on the right, see page 71.

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

(3) 2 pieces: one for top side and another for bottom side.

(4) Factory mounting only.

### Technical information

- > Accessories: see page 70.
- > 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\_Lb



### 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



### 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 three-phase automatic transfer switches, 3 or 4 poles, 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 switching between, two power supply sources, in accordance with the parameters configured via an LCD display or via the 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 the communication system.

#### Optional communication modules

The ATyS p offers communication functions thanks to the addition of optional modules, such as the RS485 module for Modbus communication or the Ethernet module, which includes a Webserver.

#### Configuration software

Software (Easyconfig) is available enabling the ATyS p parameters to be easily configured and the existing configuration to be saved.

#### Power measurements

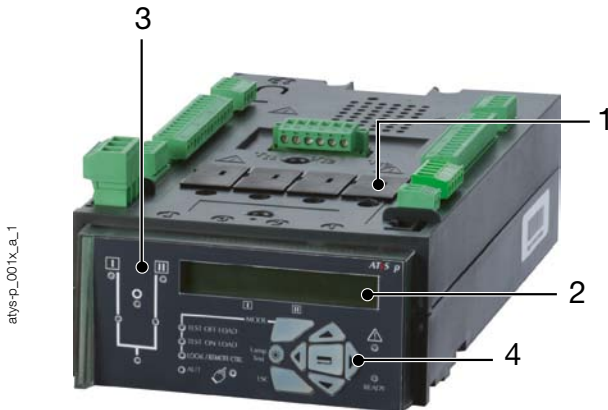
ATyS p products are particularly suited to energy management and monitoring.

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 the programmed 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.

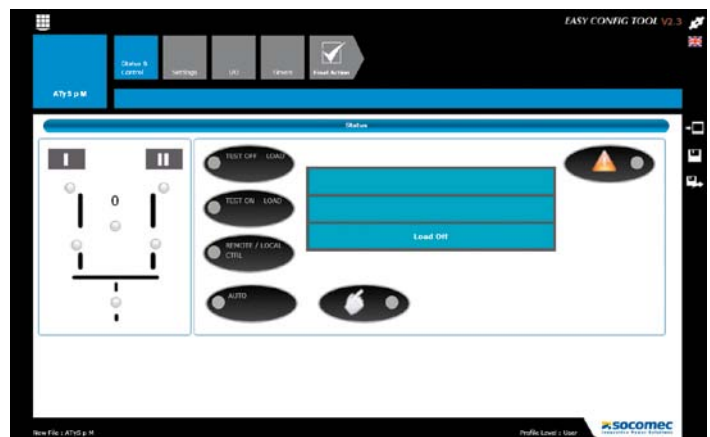
## Communication and configuration

### Easyconfig

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

Typical parameters that can be set:

- the application type,
- voltage/frequency thresholds,
- timers,
- inputs/outputs...



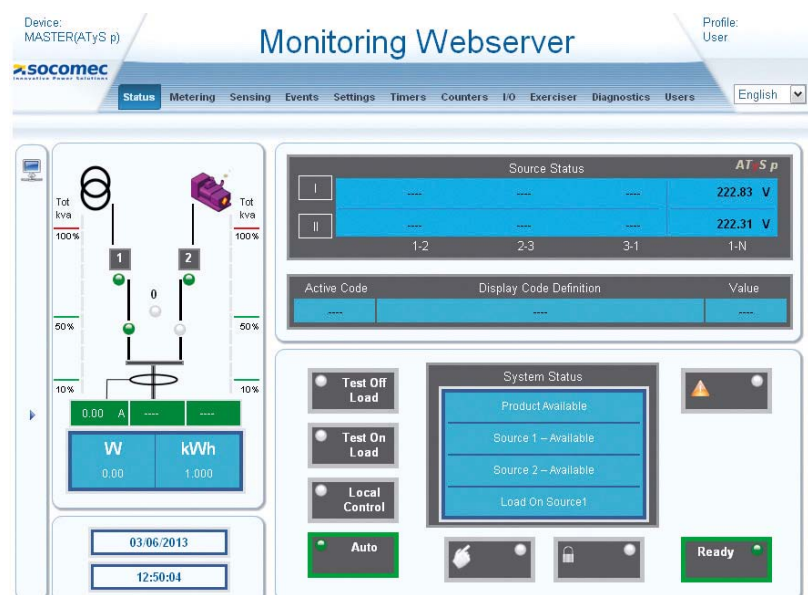
### Web Server

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 set,
- access to the list of logged events.



### References

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 <sup>(2)</sup>	3 P 1509 3012		
	4 P	9573 4016	4 P 4109 4019	4 P 1559 4013 <sup>(1)</sup>	4 P 2694 4014 <sup>(2)</sup>	4 P 1509 4012		
200 A / B3	3 P	9573 3020						
	4 P	9573 4020						
250 A / B4	3 P	9573 3025	4109 3025					
	4 P	9573 4025	4109 4025					
315 A / B4	3 P	9573 3031		3 P 1559 3025	3 P 2694 3021 <sup>(2)</sup>	3 P 1509 3025		1599 0002 <sup>(4)</sup>
	4 P	9573 4031		4 P 1559 4026 <sup>(1)</sup>				
400 A / B4	3 P	9573 3040	3 P 4109 3039	3 P 1559 3040	3 P 2694 4021 <sup>(2)</sup>	3 P 1509 4025	RS485 MODBUS communication 4825 0092	
	4 P	9573 4040	4 P 4109 4039				4 P 1559 4041 <sup>(1)</sup>	
500 A / B5	3 P	9573 3050	4109 3050	3 P 1559 3063	3 P 2694 3051 <sup>(2)</sup>	3 P 1509 3063 <sup>(3)</sup>	Ethernet communication 4825 0203	
	4 P	9573 4050	4109 4050					
630 A / B5	3 P	9573 3063	4109 3063	3 P 1559 4064 <sup>(1)</sup>	3 P 2694 4051 <sup>(2)</sup>	3 P 1509 4063 <sup>(3)</sup>	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				
	4 P	9573 4080						
1000 A / B6	3 P	9573 3100	4 P 4109 4080	3 P 1559 4081 <sup>(1)</sup>		3 P 1509 3080 <sup>(3)</sup>	Analogue outputs 4825 0093	
	4 P	9573 4100						
1250 A / B6	3 P	9573 3120	4109 3120	3 P 1559 3120				1599 0032 <sup>(4)</sup>
	4 P	9573 4120	4109 4120	4 P 1559 4121 <sup>(1)</sup>				
1600 A / B7	3 P	9573 3160	4109 3160	3 P 1559 3160		1509 3160 <sup>(3)</sup>		
	4 P	9573 4160	4109 4160	4 P 1559 4161 <sup>(1)</sup>		1509 4160 <sup>(3)</sup>		
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 <sup>(3)</sup>		included
	4 P	9573 4250		4 P 1559 4201 <sup>(1)</sup>		4 P 1509 4200 <sup>(3)</sup>		
3200 A / B8	3 P	9573 3320						
	4 P	9573 4320						

(1) Neutral on the left (for neutral on the right, see page 72).

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

To shroud front switch top and bottom 2 references required.

(3) 2 pieces: one for top side and another for bottom side.

(4) Factory mounting only.

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

(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 <b>3014</b> <sup>(1)(2)</sup>
125 ... 200	B3	4 P	top / bottom / front (I) / rear (II)	2694 <b>4014</b> <sup>(1)(2)</sup>
250 ... 400	B4	3 P	top / bottom / front (I) / rear (II)	2694 <b>3021</b> <sup>(1)(2)</sup>
250 ... 400	B4	4 P	top / bottom / front (I) / rear (II)	2694 <b>4021</b> <sup>(1)(2)</sup>
500 ... 630	B5	3 P	top / bottom / front (I) / rear (II)	2694 <b>3051</b> <sup>(1)(2)</sup>
500 ... 630	B5	4 P	top / bottom / front (I) / rear (II)	2694 <b>4051</b> <sup>(1)(2)</sup>



access\_206\_a\_2\_cat

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

### Terminal screens

#### Use

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

For upstream and downstream protection, order the reference once.

Rating (A)	Frame size	No. of poles	Position	Reference
125 ... 200	B3	3 P	top / bottom	1509 <b>3012</b>
125 ... 200	B3	4 P	top / bottom	1509 <b>4012</b>
250 ... 400	B4	3 P	top / bottom	1509 <b>3025</b>
250 ... 400	B4	4 P	top / bottom	1509 <b>4025</b>
500 ... 630	B5	3 P	top / bottom	1509 <b>3063</b>
500 ... 630	B5	4 P	top / bottom	1509 <b>4063</b>
800 ... 1250	B6	3 P	top / bottom	1509 <b>3080</b>
800 ... 1250	B6	4 P	top / bottom	1509 <b>4080</b>
1600	B7	3 P	top / bottom	1509 <b>3160</b>
1600	B7	4 P	top / bottom	1509 <b>4160</b>
2000 ... 3200	B8	3 P	top / bottom	1509 <b>3200</b>
2000 ... 3200	B8	4 P	top / bottom	1509 <b>4200</b>



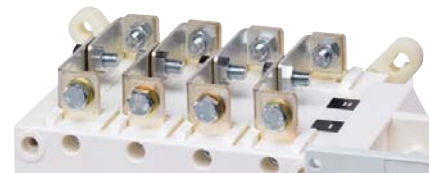
access\_207\_a\_2\_cat

### Bridging bars

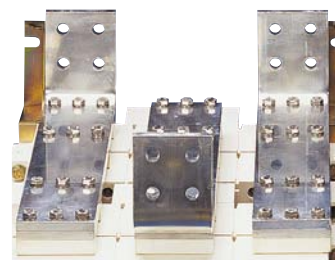
#### Use

For bridging power terminals on the top or bottom side of the switch.  
One piece required per pole.

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



access\_208\_a\_2\_cat



access\_041\_a\_1\_cat

## Copper bar connection kits

### Use

Enables:

- connection between the two power terminals of the same pole for 2000 to 3200 A ratings (Fig. 1 and Fig. 2)
- top or bottom bridging connection (Fig. 3).  
 For 3200 A rating, the connection pieces (part A) are delivered bridged from factory.

Bolt sets must be ordered separately. The user manual for these specific accessories can be downloaded from [www.socomec.com](http://www.socomec.com).

Fig. 1

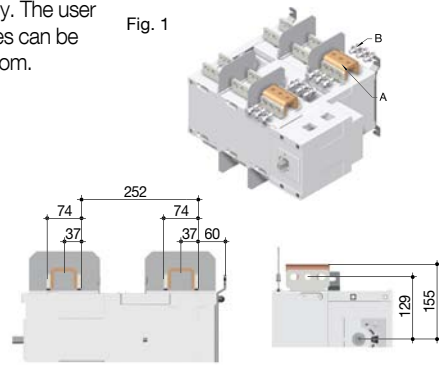


Fig. 2

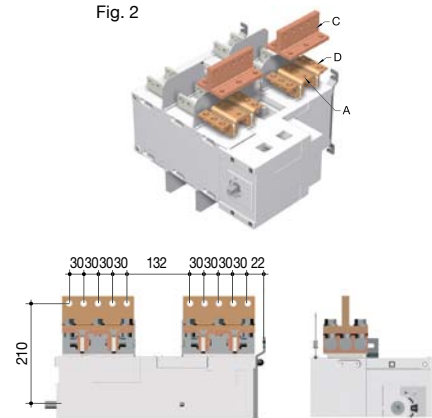
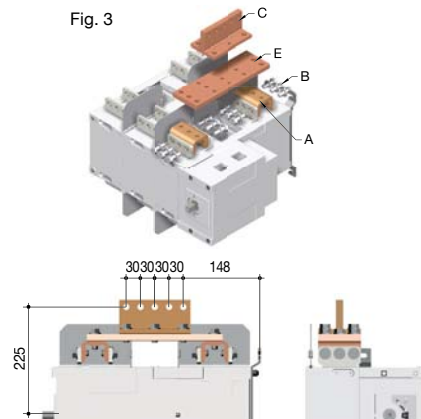


Fig. 3



Top or bottom flat connection - Fig. 1				
Rating (A)	Frame size	Piece	Quantity to order per pole <sup>(1)</sup>	Reference
2000 ... 2500	B8	Connection - part A	2	2619 <b>1200</b>
2000 ... 2500	B8	Bolt set - part B	2	2699 <b>1200</b>
3200	B8	Connection - part A		included
3200	B8	Bolt set - part B	2	2699 <b>1200</b>

Top or bottom edgewise connection - Fig. 2				
Rating (A)	Frame size	Piece	Quantity to order per pole <sup>(1)</sup>	Reference
2000 ... 2500	B8	Connection - part A	2	2619 <b>1200</b>
2000 ... 2500	B8	T piece - part C	2	2629 <b>1200</b> <sup>(2)</sup>
2000 ... 2500	B8	Bracket- part D	2	2639 <b>1200</b> <sup>(2)</sup>
3200	B8	Connection - part A		included
3200	B8	T piece - part C	2	2629 <b>1200</b> <sup>(2)</sup>
3200	B8	Bracket- part D	2	2639 <b>1200</b> <sup>(2)</sup>

Top or bottom bridging connection - Fig. 3				
Rating (A)	Frame size	Piece	Quantity to order per pole <sup>(1)</sup>	Reference
2000 ... 2500	B8	Connection - part A	2	2619 <b>1200</b>
2000 ... 2500	B8	Bolt set - part B	2	2699 <b>1200</b>
2000 ... 2500	B8	Bar - part E	1	4109 <b>0320</b> <sup>(2)</sup>
2000 ... 2500	B8	T piece - part C	1	2629 <b>1200</b> <sup>(2)</sup>
3200	B8	Connection - part A		included
3200	B8	Bolt set - part B	2	2699 <b>1200</b>
3200	B8	Bar - part E	1	4109 <b>0320</b> <sup>(2)</sup>
3200	B8	T piece - part C	1	2629 <b>1200</b> <sup>(2)</sup>

(1) Example for 3 pole device equipped upstream only: Order 3 times the indicated quantities.  
 (2) Bolt set is provided with the accessories.

## Solid neutral

### Use

The connection kit enables the connection between the input and output neutrals, without any need to switch the neutral.

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

# ATyS range

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

from 125 to 3200 A

## Accessories (continued)

### Autotransformer 400/230 VAC

#### 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 <b>4064</b>

### 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 ... 3200	B3 ... B8	12 VDC / 230 VAC	1599 <b>5012</b>
125 ... 3200	B3 ... B8	24 VDC / 230 VAC	1599 <b>5112</b>

### Voltage sensing and power supply kit

#### Use

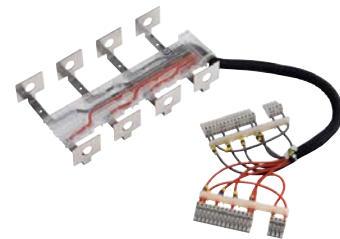
For power supply and voltage measurement (4 wire, three-phase) for the ATyS *t*, *g* and *p*.

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.

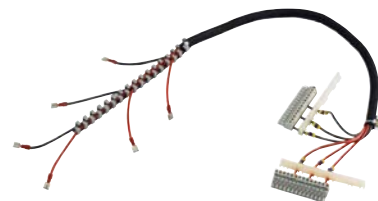
**Note: the 3-pole version does not integrate the power supply.**

From 125 to 630 A



atys\_606\_a\_1\_cat

From 800 to 3200 A



atys\_603\_a\_2\_cat

#### For ATyS *t*, *g* and *p* - 3 poles

Rating (A)	Frame size	Reference
125 ... 200	B3	1559 <b>3012</b>
250	B4	1559 <b>3025</b>
315 ... 400	B4	1559 <b>3040</b>
500 ... 630	B5	1559 <b>3063</b>
800 ... 1000	B6	1559 <b>3080</b>
1250	B6	1559 <b>3120</b>
1600	B7	1559 <b>3160</b>
2000 ... 3200	B8	1559 <b>3200</b>

#### For ATyS *t*, *g* and *p* - 4 poles

Rating (A)	Frame size	Neutral position	
		Neutral on the right	Neutral on the left
		Reference	Reference
125 ... 200	B3	1559 <b>4012</b>	1559 <b>4013</b>
250	B4	1559 <b>4025</b>	1559 <b>4026</b>
315 ... 400	B4	1559 <b>4040</b>	1559 <b>4041</b>
500 ... 630	B5	1559 <b>4063</b>	1559 <b>4064</b>
800 ... 1000	B6	1559 <b>4080</b>	1559 <b>4081</b>
1250	B6	1559 <b>4120</b>	1559 <b>4121</b>
1600	B7	1559 <b>4160</b>	1559 <b>4161</b>
2000 ... 3200	B8	1559 <b>4200</b>	1559 <b>4201</b>

### Voltage relay

#### Use

The ATyS DS is a voltage relay for monitoring a single three-phase power supply source

Rating (A)	Reference
DS	192X <b>0056</b>



atys\_762\_a\_1\_cat



## Door protective surround

### Use

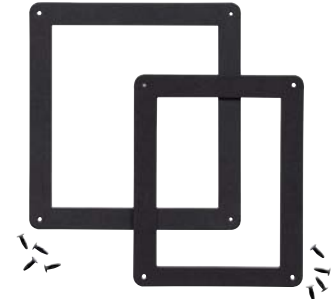
When direct access to the ATyS front face (mode selection, manual operation, display....) is required, the door surround can be utilised to provide a clean and safe finish to the panel's cut-out.

#### 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 breaking and signalling of positions I and II: each reference provides a single factory fitted NO/NC contact for both positions.

Low level auxiliary contacts: please consult us. 1 NO/NC contact per position is factory fitted.

Rating (A)	Frame size	Nominal current (A)	Operating current I <sub>o</sub> (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 <sup>(1)</sup>
125 ... 630	B3 ... B5	Factory fitted	1599 0002 <sup>(1)</sup>
800 ... 1600	B6 ... B7	Customer fit	1599 0532 <sup>(1)</sup>
800 ... 1600	B6 ... B7	Factory fitted	1599 0032 <sup>(1)</sup>
2000 ... 3200	B8	-	included

(1) Up to 2 auxiliary contacts can be ordered.



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 per spacer.

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 ATyS to be padlocked in the 3 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 EL11AP lock (factory fitted).

As standard, locking in position 0.

Optional padlocking in 3 positions: locking in position I, 0 or 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)

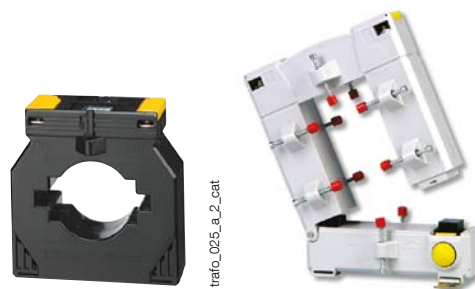
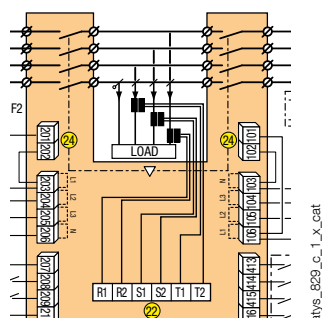
### Current transformers

#### Use - For ATyS p only

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

#### Reference

Please see our general catalogue or our website [www.socomec.com](http://www.socomec.com)



trafo\_077\_b\_1\_cat

### Plug-in optional modules







#### Use - For ATyS p only

Number of usable modules per product:

A maximum of four modules can be fitted to each ATyS p, however with the installation of either Ethernet communication module only two additional modules can be installed. Only one pulse output, one analogue output and one communication module can be installed.



atys\_016\_c\_1\_cat

	<p><b>RS485 MODBUS® communication</b></p> <ul style="list-style-type: none"> <li>• RS485 link with MODBUS® protocol (speed up to 38400 bauds).</li> </ul>
	<p><b>2 inputs - 2 outputs</b></p> <ul style="list-style-type: none"> <li>• Each module has 2 programmable inputs and 2 programmable outputs available.</li> </ul>
	<p><b>Ethernet communication</b></p> <ul style="list-style-type: none"> <li>• Ethernet link with MODBUS/TCP or MODBUS RTU over TCP.</li> <li>• Embedded Ethernet Webserver software.</li> </ul>
	<p><b>Ethernet communication with RS485 MODBUS gateway</b></p> <ul style="list-style-type: none"> <li>• Ethernet link with MODBUS/TCP or MODBUS RTU over TCP.</li> <li>• Connection of 1 to 247 RS485 MODBUS slaves.</li> <li>• Embedded Ethernet Webserver software.</li> </ul>
	<p><b>Analogue outputs</b></p> <ul style="list-style-type: none"> <li>• Outputs assignable to: 3I, In, 3V, 3U, F, ± ΣP, ± ΣQ, ΣS.</li> </ul>
	<p><b>Pulse outputs</b></p> <ul style="list-style-type: none"> <li>• 2 configurable pulse outputs (type, weight and duration) on ± kWh, ±kvarh and kVAh.</li> </ul>

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 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, t and 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 ATyS D10, the D20 displays measurements and enables control and configuration from the front of a panel.

Protection degree: IP21.

### Door mounting

2 holes Ø 22.5. ATyS transfer switch connection via RJ45 cable, not isolated.

Cable available as an accessory.

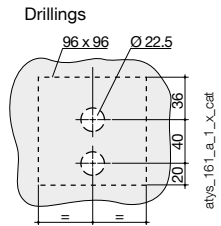


atys\_564\_d\_1\_cat

atys\_565\_d\_1\_cat



atys\_597\_a\_1\_cat



atys\_161\_a\_1\_x\_cat

Description of accessories	Reference
D10	9599 2010
D20	9599 2020

## Connection cable for remote interfaces

### Use

To connect between a remote interface (type D10 or D20) and an ATyS transfer switch (ATyS d, t, g or p).

RJ45 8 wire straight-through, non isolated cable. Length 3m.

### Characteristics

#### For ATyS d, t, g and p

Type	Length	Reference
RJ45 cable	3 m	1599 2009



access\_209\_a\_2\_cat

## Sealable cover

### Use - for ATyS t and g

Prevents access to the ATyS t and g configuration potentiometers and DIP switches (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, providing added security by preventing unauthorised use of product.

Rating (A)	Frame size	Reference
125 ... 3200	B3 ... B8	9599 1007



atys\_869\_a

## Double power supply - DPS

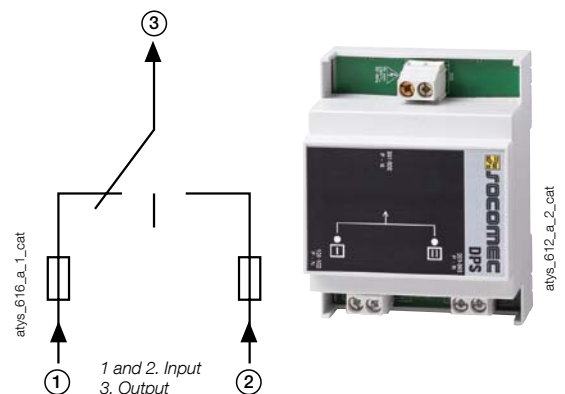
### Use

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 mm<sup>2</sup>.
- 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

## Spare parts

### Electronic module

The electronic module of ATyS d, t, g and p can be easily replaced in case of problems, even when the load is supplied.

Product model	References
ATyS d	9539 <b>2001</b>
ATyS t	9549 <b>2001</b>
ATyS g	9559 <b>2001</b>
ATyS p	9579 <b>2001</b>



atys\_021\_Lc\_1\_gb\_cat

### Motorisation module

The motorisation module of ATyS r, d, t, g and p can be easily replaced in case of problems, even when the load is supplied.

Rating	References
125 ... 200 A	9509 <b>5020</b>
250 ... 400 A	9509 <b>5040</b>
500 ... 630 A	9509 <b>5063</b>
800 ... 1250 A	9509 <b>5120</b>
1600 A	9509 <b>5160</b>
2000 ... 3200 A	9509 <b>5320</b>



atys\_071\_a

### Switching module

References to be used for replacing the switching module of ATyS r, d, t, g or p, correspond to the SIRCOVER AC references. Please refer to page 16.



svr\_151\_a

## Enclosed transfer switch solution

### General characteristics

#### ATyS d and ATyS p

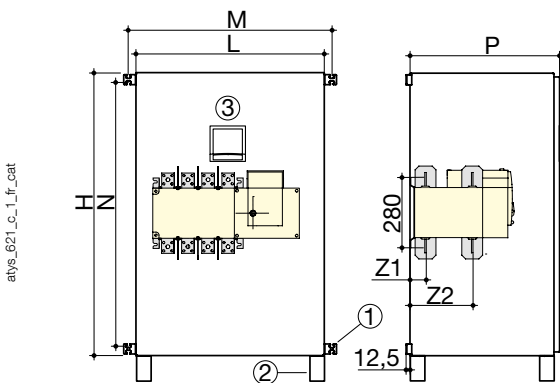
- Adapted to mechanical risk and dust hazard.
- Protection degree: IP54.
- Colour: RAL 7035.
- Connection of cables: top and bottom up to 250 A - bottom connections only for upper ratings.
- The auxiliary contacts are wired to a terminal block.
- Material: XC steel, thickness 2 mm.
- Coating: polyester epoxy paint.
- Wall mounting: 4 fixing lugs supplied loose  $\leq 400$  A, floor standing feet  $> 630$  A.
- Door: solid with hinges.
- Locking system: 3 mm double bar key (included).

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



conf\_3016\_b\_1

### Dimensions



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

Rating (A)	Recommended cable cross-section (mm <sup>2</sup> )	H (mm)	L (mm)	P (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	698	958	53	190	70
800	2 x 240	1200	800	660	660	660	66.5	253.5	135
1000	4 x 150	1200	800	660	660	660	66.5	253.5	140
1250	4 x 185	1600	1000	830	830	830	66.5	253.5	270
1600	4 x 240	1600	1000	830	830	830	67.5	253.5	375
2000	8 x 150	2000	1000	1000	1000	1000			400
2500	8 x 185	2000	1000	1000	1000	1000			400
3200	8 x 240	2000	1000	1000	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 / B3 to B5

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) (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) (operation circuit)	300	300	300	300	300	300	300	300
Rated impulse withstand voltage $U_{imp}$ (kV) (operation circuit)	4	4	4	4	4	4	4	4

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

Rated voltage	Utilisation category	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-31 B	125	160	200	250	315	400	500	630
415 VAC	AC-32 B				200	315	400	500	500
415 VAC	AC-33 B				200	200	200	400	400

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

Rated voltage	Utilisation category	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-20 A / AC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-23 A / AC-23 B	125/125	160/160	200/200	200/200	315/315	400/400	500/500	630/630
500 VAC	AC-20 A / AC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
500 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
500 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	200/250	200/315	200/400	500/500	500/500
500 VAC	AC-23 A / AC-23 B	80/80	80/80	80/80	200/200	200/200	200/200	400/400	400/400
690 VAC	AC-20 A / AC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
690 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	200/200	200/200	200/200	500/500	500/500
690 VAC	AC-22 A / AC-22 B	125/125	125/125	125/125	160/160	160/160	160/160	400/400	400/400
690 VAC	AC-23 A / AC-23 B	63/80	63/80	63/80	125/125	125/125	125/125	400/400	400/400
220 VDC <sup>(2)</sup>	DC-20 A / DC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
220 VDC <sup>(2)</sup>	DC-21 A / DC-21 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC <sup>(2)</sup>	DC-22 A / DC-22 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC <sup>(2)</sup>	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC <sup>(2)</sup>	DC-20 A / DC-20 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
440 VDC <sup>(2)</sup>	DC-21 A / DC-21 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC <sup>(2)</sup>	DC-22 A / DC-22 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC <sup>(2)</sup>	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630

### Fuse protected short-circuit withstand as per IEC 60947-3 at 690 VAC

Prospective short-circuit current (kA rms)	100 <sup>(3)</sup>	100 <sup>(3)</sup>	50 <sup>(3)</sup>	50	50	50	50	50
Associated fuse rating (A)	125	160	200	250	315	400	500	630

### Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s<sup>(4)</sup>

Rated short-time withstand current 0.3s $I_{cw}$ (kA rms)	12 <sup>(3)</sup>	12 <sup>(3)</sup>	12 <sup>(3)</sup>	15	15	15	17	17
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### Rated short-circuit withstand without protection

Rated short-time withstand current 60ms $I_{cw}$ (kA rms) as per IEC 60947-6-1 at 415 VAC				10 <sup>(5)</sup>	10 <sup>(5)</sup>	10 <sup>(5)</sup>	10	12.6
Rated short-time withstand current 1ms $I_{cw}$ (kA rms) as per IEC 60947-3 at 690 VAC	7 <sup>(3)</sup>	7 <sup>(3)</sup>	7 <sup>(3)</sup>	8	8	8	10	10
Rated peak withstand current (kA peak) as per IEC 60947-3 at 690 VAC	20	20	20	30	30	30	45	45

### Connection

Maximum Cu cable cross-section (mm <sup>2</sup> )	35	50	70	95	150	185	240	2 x 150
Minimum Cu busbar cross-section (mm <sup>2</sup> )								2 x 30 x 5
Maximum Cu cable cross-section (mm <sup>2</sup> )	50	95	120	150	240	240	2 x 185	2 x 300
Maximum Cu busbar width (mm)	25	25	25	32	32	32	50	50
Tightening torque mini / maxi (Nm)	9/13	9/13	9/13	20/26	20/26	20/26	20/26	20/26

### Switching time (Standard setting)

I - II or II - I (s)	0.75	0.75	0.75	1.3	1.3	1.3	1.3	1.3
I-0 or 0-II (s)	0.45	0.45	0.45	0.85	0.85	0.85	0.85	0.85
Duration of "electrical blackout" I - II (s)	0.3	0.3	0.3	0.6	0.6	0.6	0.6	0.6

### Power supply

min / max (VAC)	166/332	166/332	166/332	166/332	166/332	166/332	166/332	166/332
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### Control supply power demand

Power supply 230 VAC inrush / nominal (VA) - ATyS	184/92	184/92	184/92	276/115	276/115	276/115	276/150	276/150
Power supply 230 VAC inrush / nominal (VA) - ATyS d, t, g, p	206/114	206/114	206/114	298/137	298/137	298/137	298/172	298/172

### Mechanical characteristics

Durability (number of operating cycles)	10 000	10 000	10 000	8 000	8 000	8 000	5 000	5 000
Weight ATyS 3/4 P (kg)	5.7 / 6.9	5.7 / 6.9	5.7 / 6.9	6.6 / 7.4	6.7 / 7.8	6.7 / 7.8	11.4 / 13.3	11.9 / 14.0
Weight ATyS d 3/4 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	12.5 / 14.6
Weight ATyS r, t, g, p 3/4 P (kg)	6.8 / 8.0	6.8 / 8.0	6.8 / 8.0	7.7 / 8.5	7.8 / 8.9	7.8 / 8.9	12.5 / 14.4	13.0 / 15.1

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

(2) 3-pole device with 2 pole in series for the "+" and 1 pole for the "-". 4-pole device with 2 poles in series by polarity.

(3) At 415 VAC.

(6) 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.

(5) At 30ms.

800 to 3200 A / B6 to B8

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) (operation circuit)	300	300	300	300	300	300	300
Rated impulse withstand voltage $U_{imp}$ (kV) (operation circuit)	4	4	4	4	4	4	4

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

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

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

Rated voltage	Utilisation category	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>	A/B <sup>(1)</sup>
415 VAC	AC-20 A / AC-20 B	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
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-20 A / AC-20 B	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
500 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
500 VAC	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1600/1600			
500 VAC	AC-23 A / AC-23 B	400/400	630/630	800/800	1000/1000			
690 VAC	AC-20 A / AC-20 B	800/800	1000/1000	1250/1250	1600/1600	2000/2000	2500/2500	3200/3200
690 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
690 VAC	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1000/1000			
690 VAC	AC-23 A / AC-23 B	400/400	630/630	800/800	800/800			
220 VDC <sup>(2)</sup>	DC-20 A / DC-20 B	800/800	1000/1000	1250/1250	1600/1600			
220 VDC <sup>(2)</sup>	DC-21 A / DC-21 B	800/800	1000/1000	1250/1250	1250/1250			
220 VDC <sup>(2)</sup>	DC-22 A / DC-22 B	800/800	1000/1000	1250/1250	1250/1250			
220 VDC <sup>(2)</sup>	DC-23 A / DC-23 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC <sup>(2)</sup>	DC-20 A / DC-20 B	800/800	1000/1000	1250/1250	1600/1600			
440 VDC <sup>(2)</sup>	DC-21 A / DC-21 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC <sup>(2)</sup>	DC-22 A / DC-22 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC <sup>(2)</sup>	DC-23 A / DC-23 B	800/800	1000/1000	1250/1250	1250/1250			

Fuse protected short-circuit withstand as per IEC 60947-3 at 415 VAC

Prospective short-circuit current (kA rms)	50	100	100	100			
Associated fuse rating (A)	800	1000	1250	2x800			

Circuit breaker protected short-circuit withstand with any circuit breaker that ensures tripping in less than 0.3s<sup>(3)</sup>

Rated short-time withstand current 0.3s $I_{cw}$ (kA rms)	47	64	64	78	78	78	78
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Rated short-circuit withstand without protection

Rated short-time withstand current 60ms $I_{cw}$ (kA rms) as per IEC 60947-6-1 at 415 VAC	16	20	25	32	40	50	50
Rated short-time withstand current 1ms $I_{cw}$ (kA rms) as per IEC 60947-3 at 415 VAC	26	35	35	50	50	50	50
Rated peak withstand current (kA peak) as per IEC 60947-3 at 415 VAC	55	55	80	110	120	120	120

Connection

Maximum Cu cable cross-section (mm <sup>2</sup> )	2 x 185	2 x 240					
Minimum Cu busbar cross-section (mm <sup>2</sup> )	2 x 50 x 5	2 x 50 x 5	2 x 60 x 5	2 x 80 x 5	2 x 100 x 10	2 x 100 x 10	2 x 100 x 10
Maximum Cu cable cross-section (mm <sup>2</sup> )	2 x 300	4 x 185	4 x 185	6 x 185			
Maximum Cu busbar width (mm)	63	63	63	100	100	100	100
Tightening torque mini / maxi (Nm)	20/26	20/26	20/26	40/45	40/45	40/45	40/45

Switching time (Standard setting)

I-0 or II-0 (s)	2.6	2.6	2.6	2.6	2	2	2
I - II or II - I (s)	1.6	1.6	1.6	1.6	1	1	1
Duration of "electrical blackout" I - II (s)	1.5	1.5	1.5	1.6	1	1	1

Power supply

min / max (VAC)	166/332	166/332	166/332	166/332	166/332	166/332	166/332
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Control supply power demand

Power supply 230 VAC inrush / nominal (VA) - ATyS	460/184	460/184	460/184	460/230	812/322	812/322	812/322
Power supply 230 VAC inrush / nominal (VA) - ATyS r, t, g, p	482/206	482/206	482/206	482/252	834/344	834/344	834/344

Mechanical characteristics

Durability (number of operating cycles)	4 000	4 000	4 000	3 000	3 000	3 000	3 000
Weight ATyS 3/4 P (kg)	27.9 / 32.2	28.4 / 32.9	28.9 / 33.6	33.1 / 39.4	50.7 / 61.6	50.7 / 61.6	61.0 / 75.3
Weight ATyS d 3/4 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	61.6 / 75.9
Weight ATyS r, t, g, p 3/4 P (kg)	29.0 / 33.3	29.5 / 34.0	30.0 / 34.7	34.2 / 40.5	51.8 / 62.7	51.8 / 62.7	62.1 / 76.4

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

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

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

(3) 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.

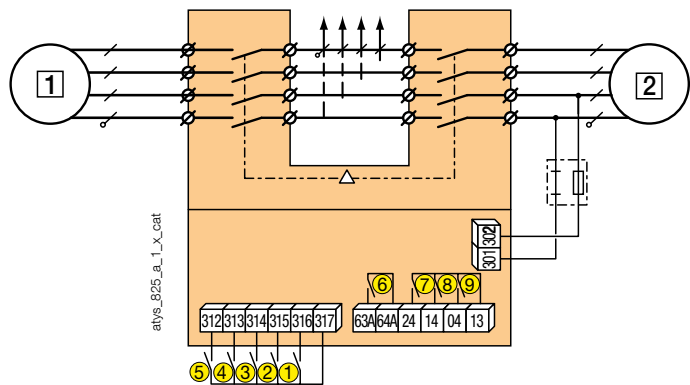
# ATyS range

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

from 125 to 3200 A

## Terminals and connections

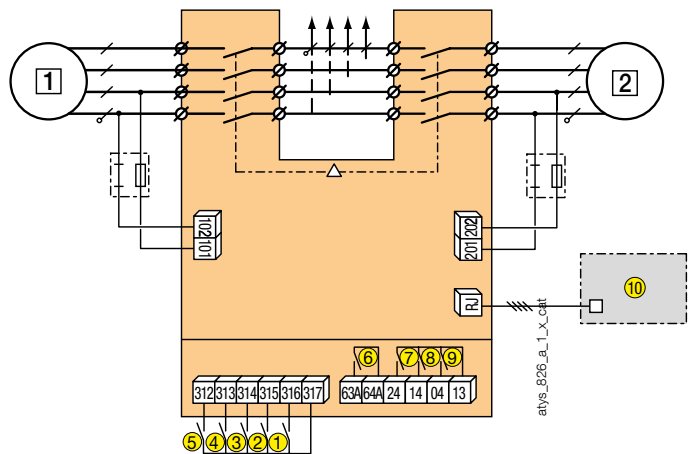
### ATyS *r*



- 1 preferred source (mains or genset)
- 2 alternate source (mains or genset)

- 1: position 0 control (contactor logic if closed)
- 2: position I control
- 3: position II control
- 4: position 0 priority control
- 5: closure of this contact enables the position control orders
- 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

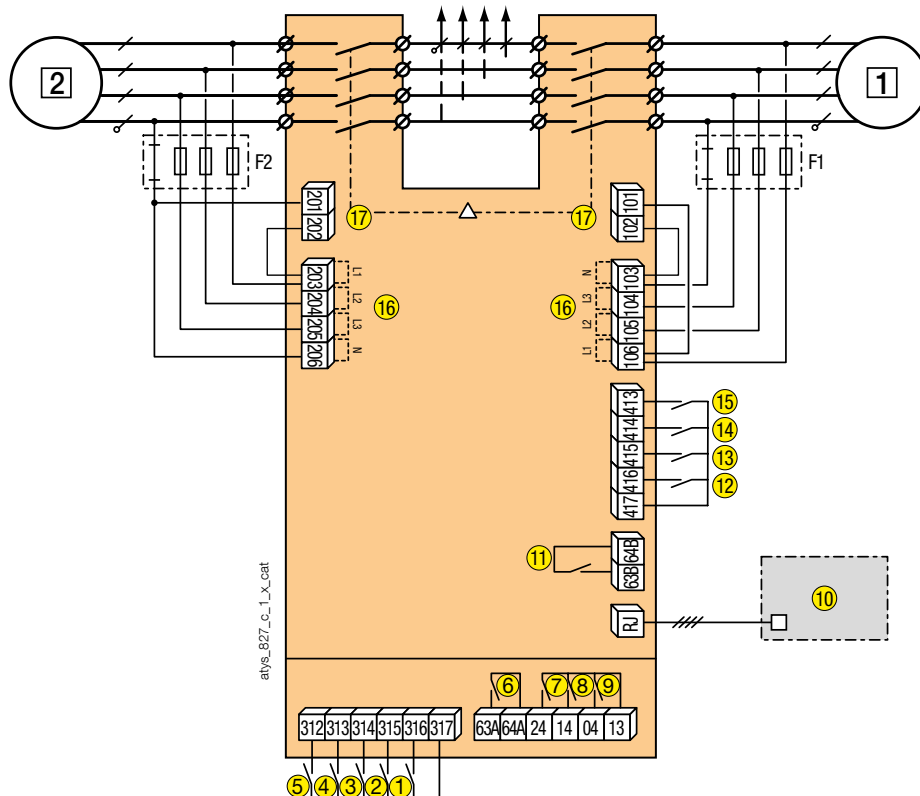
### ATyS *d*



- 1 preferred source (mains or genset)
- 2 alternate source (mains or genset)

- 1: position 0 control (contactor logic if closed)
- 2: position I control
- 3: position II control
- 4: position 0 priority control
- 5: closure of this contact enables the position control orders
- 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 indicator

### ATyS *t*

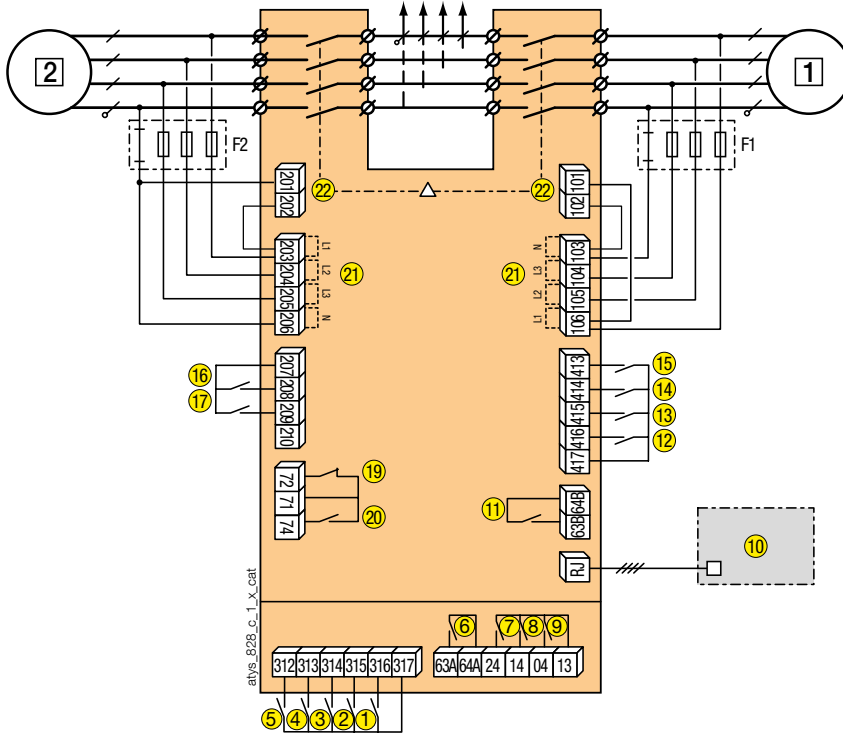


- 1 preferred source (network)
- 2 alternate source (network)

- 1: position 0 control (contactor logic if closed)
- 2: position I control
- 3: position II control
- 4: position 0 priority control
- 5: closure of this contact enables the position control orders
- 6: motorisation 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 indicator
- 11: electronic unit availability relay
- 12: automatic operation inhibited
- 13: manual retransfer confirmation
- 14: preferred source selection
- 15: operation with or without priority
- 16: voltage tap inputs
- 17: power supply inputs



## ATyS g

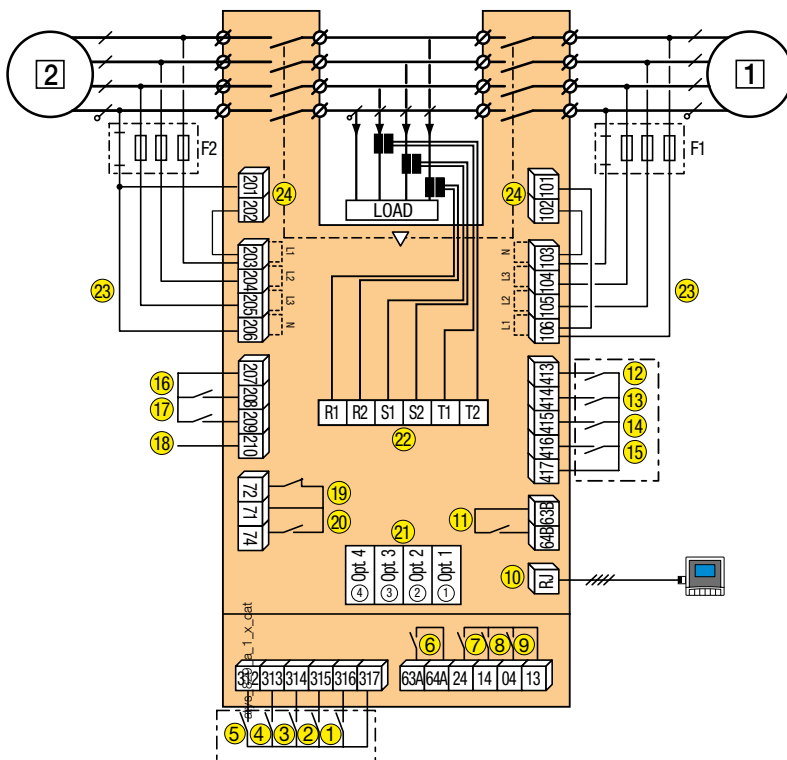


- 1 preferred source (Mains)
- 2 alternate source (Mains or genset)
  - 1: position 0 control (contactor logic if closed)
  - 2: position I control
  - 3: position II control
  - 4: position 0 priority control
  - 5: closure of this contact enables the position control orders
  - 6: motorisation unit 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 indicator
  - 11: electronic unit availability relay
  - 12: automatic operation inhibited
  - 13: manual retransfer confirmation
  - 14: 2AT time delay bypass
  - 15: priority for test on load
  - 16: remote test off load
  - 17: remote test on load
  - 19-20: genset starting and stopping order

Control	71/72 (19)	71/74 (20)
Generator starting	Contact closed	Contact open
Generator stopping	Contact open	Contact closed

- 21 : voltage tap inputs
- 22 : power supply inputs

## ATyS p



- 1 preferred source (Mains or genset)
- 2 alternate source (Mains or genset)
  - 1: position 0 control (contactor logic if closed)
  - 2: position I control
  - 3: position II control
  - 4: position 0 priority control
  - 5: closure of this contact enables the position control orders
  - 6: motorisation 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: remote display D20
  - 11: electronic unit availability relay
  - 12-17: programmable inputs
  - 18: auxiliary power supply for the use of optional modules
  - 19-20: genset starting and stopping order

Control	71/72 (19)	71/74 (20)
Generator starting	Contact closed	Contact open
Generator stopping	Contact open	Contact closed

- 21 : 4 slots for optional modules
- 22: current transformer connection
- 23: voltage tap inputs
- 24: power supply inputs

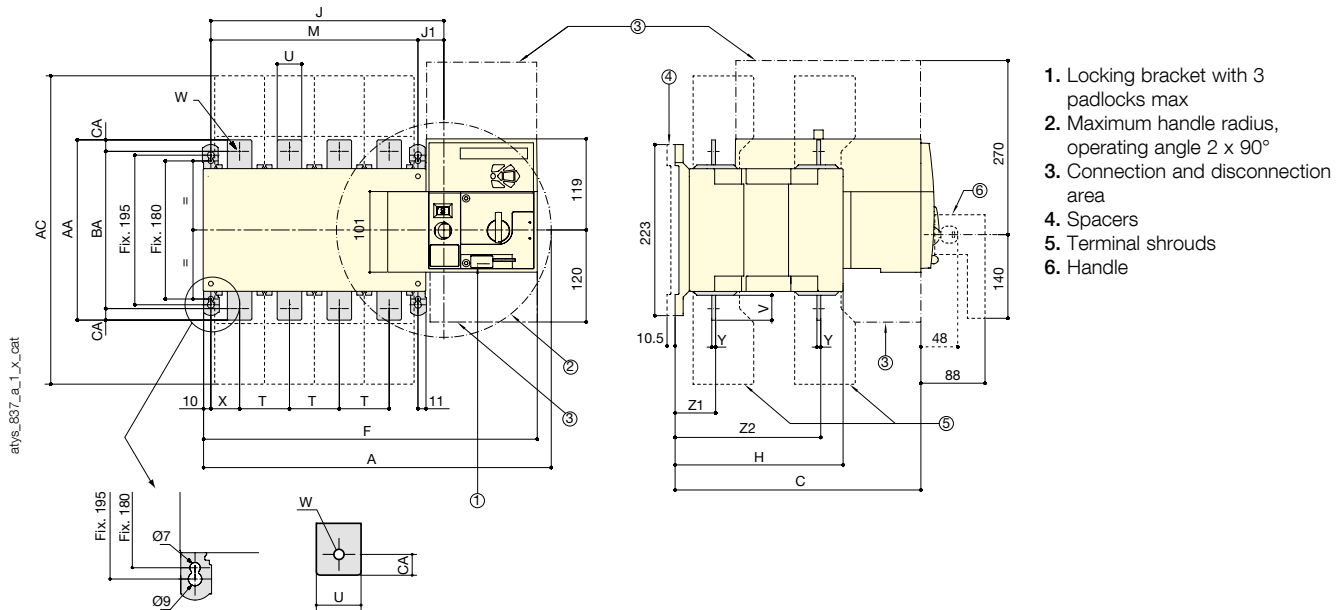
# ATyS range

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

from 125 to 3200 A

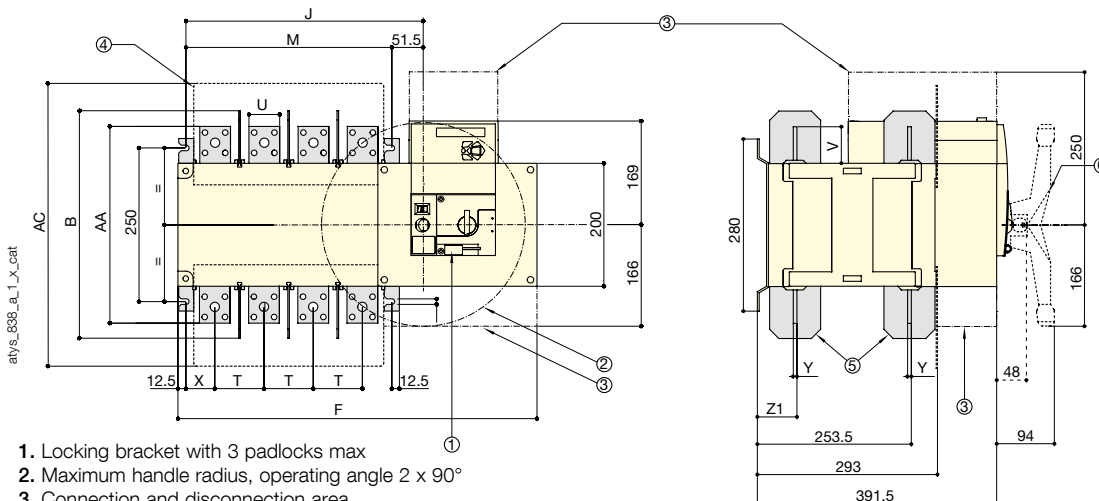
## Dimensions

### ATyS 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	Z1	AA	BA	CA
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

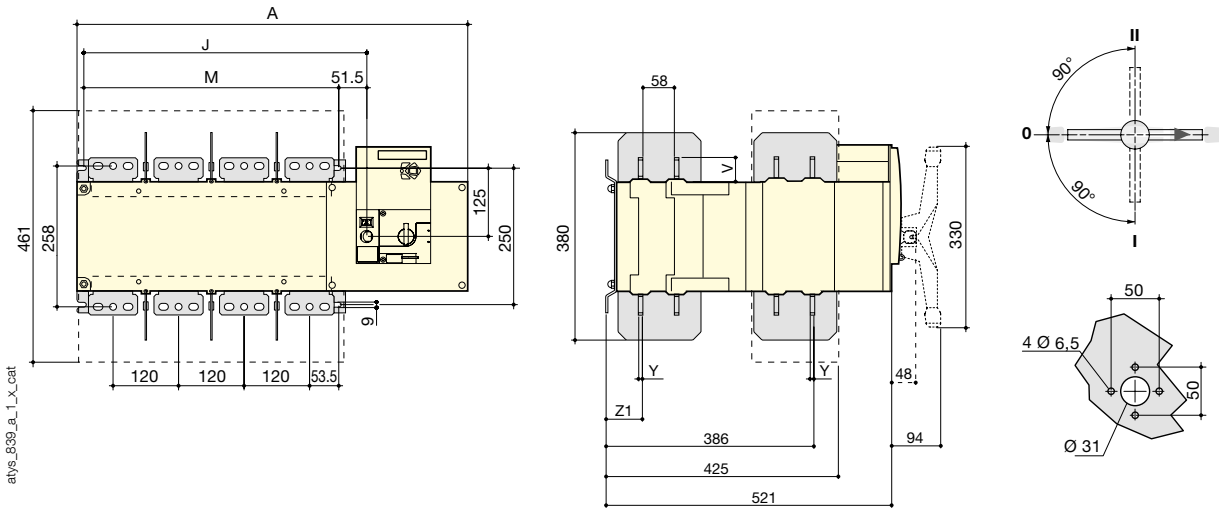
### ATyS 800 to 1600 A / B6 to B7



1. Locking bracket with 3 padlocks max
2. Maximum handle radius, operating angle 2 x 90°
3. Connection and disconnection area
4. Terminal screens
5. Inter phase barrier
6. Handle

Rating (A) / Frame size	Overall dimensions		Terminal shrouds		Switch body				Switch mounting				Connection						
	B	AC	F 3p.	F 4p.	J 3p.	J 4p.	M 3p.	M 4p.	T	U	V	X	Y	Z1	AA				
800 / B6	370	461	504	584	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				

ATyS 2000 to 3200 A / B8



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

Cut of dimensions

ATyS 125 to 630 A / B3 to B5

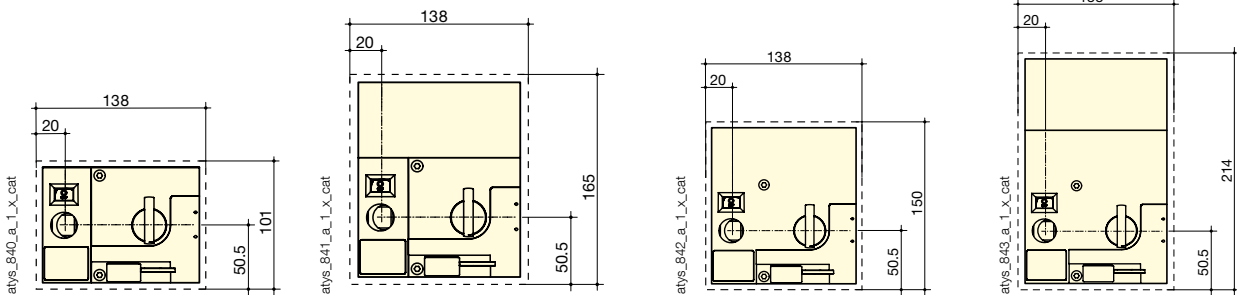
ATyS 800 to 1600 A / B6 to B7

ATyS r

ATyS d, t, g, p

ATyS r

ATyS d, t, g, p

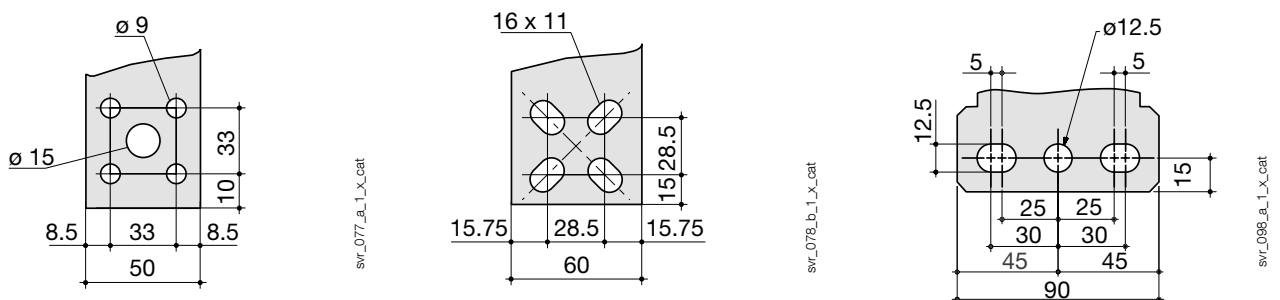


Connection terminals

ATyS 800 to 1000 A / B6

ATyS 1250 A / B6

ATyS 1600 to 3200 A / B7 to B8





# ATyS d H

Remotely operated Transfer Switching Equipment  
from 4000 to 6300 A

Transfer switches

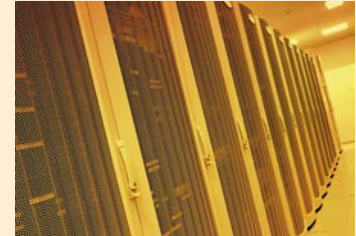
new

Available in  
January  
2015



## 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 SOCOMECC 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 including an ATyS C20 / C30 / C40 controller with a door mounted external display.

## Function

The ATyS d H is a three-phase transfer switch, 3 and 4 poles, designed for low voltage high power applications that require a 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 143kA lcm (making) and 65kA for 0.1sec lcw (withstand). Further to its high short circuit withstand, the ATyS d H performance in terms of load switching capacity is AC33iB (6xln cos Ø 0.5) without derating.

### Safe on-load transfer: I-0-II

The ATyS d H includes two mechanically interlocked switches to ensure fast switching whilst providing a neutral (Off - 0) position. This ensures that the main and alternative power supplies do not overlap. The 0 position can also be used for safe maintenance of the installation, providing isolation between both sources and the load.

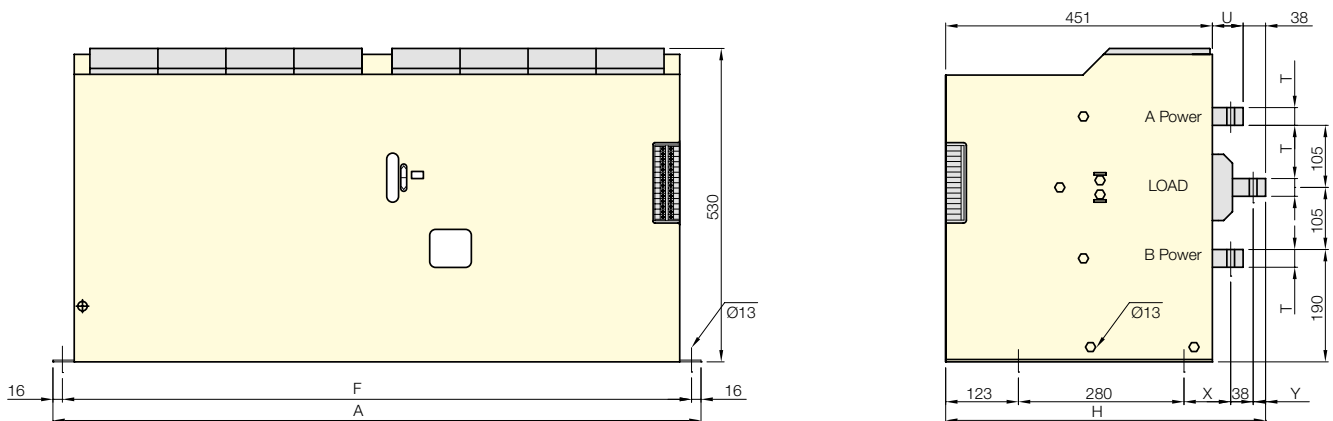
## Characteristics according to IEC 60947-6-1

### 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	
<b>Rated short-circuit withstand at 660 VAC</b>			
Rated short-time withstand current 0.1s $I_{cw}$ (kA rms)		65	
Rated peak withstand current (kA peak)		143	
Rated operational current $I_b$ (A), at 660 VAC - AC32B	4000	5000	6300
Rated operational current $I_b$ (A), at 660 VAC - AC33iB (6xIn cos $\phi$ 0.5)	4000	5000	6300
<b>Connection</b>			
Rear connection with busbar	•	•	•
<b>Switching time</b>			
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	
<b>Power supply</b>			
VAC power supply (powered directly on terminals S1 and S2)		230	
Main coil operating current (peak during transfers)		65 A <sup>(1)</sup>	
<b>Mechanical characteristics</b>			
Durability (number of operating cycles)		3000	
Weight (kg) - Fixed 3/4P model	180 / 220	200 / 250	200 / 250
Weight (kg) - Plug-in 3/4P model	220 / 275	245 / 400	245 / 400

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

## Dimensions for fixed models



Rating (A)	Overall dimensions		Switch body			Connection			
	A 3p.	A 4p.	F 3p.	F 4p.	H	X	Y	T	U
4000 A	866	1096	834	1064	527	69	17	24	38
5000 A	866	1096	834	1064	541	79	21	30	52
6300 A	866	1096	834	1064	541	79	21	30	52

## Reference

For more information regarding references, please consult us.



# 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 cabinet 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

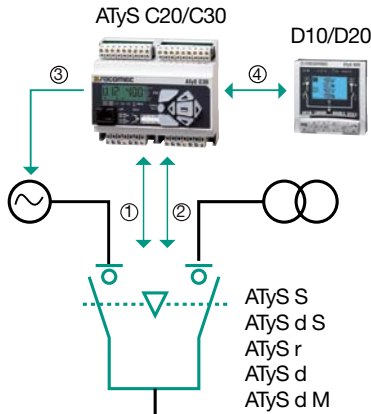
The ATyS C20, C30 and C40 are modular products (6 modules, 105 mm wide) which can be DIN-rail mounted.

### 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

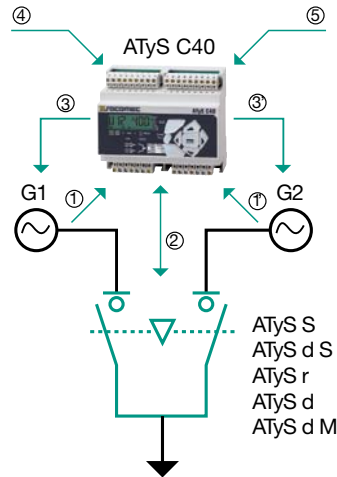
### ATyS C20/C30: Transformer/transformer and transformer/genset applications



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\_149\_l\_1\_x\_cat

### 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

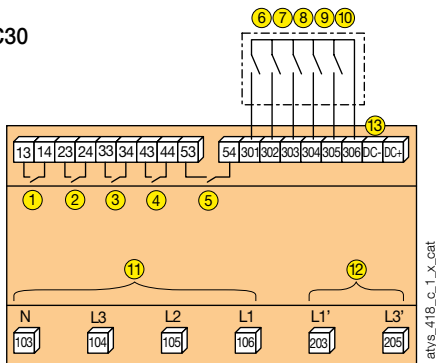
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## Electrical characteristics

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

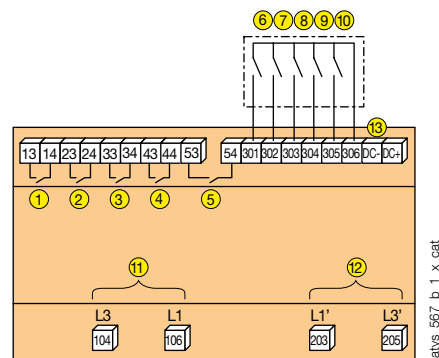
### ATyS C20/C30



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\_418\_c\_1\_x\_cat

### 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

atys\_567\_b\_1\_x\_cat

## 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



# The UL product range

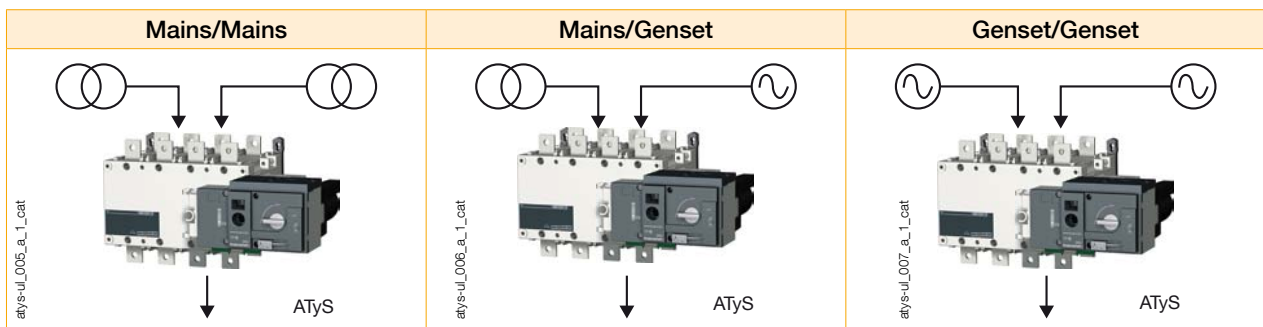
Transfer switches

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

MTSE (Manual)	RTSE (Remotely operated)
 <p data-bbox="245 1104 534 1189"><b>SIRCOVER UL 1008</b> Manual Transfer Switch Equipment</p>	 <p data-bbox="715 1104 922 1189"><b>ATyS UL 1008</b> Motorised Transfer Switch 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 switch 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 built in 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 motorization remote controls interface.
- Integrated switch position auxiliary contacts.
- An active "product availability" status feedback.
- Compatibility with virtually any make of ATS, AMF, Genset controller provided with volt-free contacts.

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

## SOCOMECL UL products

The ATYS UL is a full load break transfer switch where the main switching components are 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 ATS controller that may be fitted to the door or remotely extended outside the enclosure.

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.

Thanks to an integrated factory installed stable OFF position, the operating mechanism of the ATyS allows the user to intentionally and safely disconnect both the normal and alternate supplies regardless of supply availability.

### UL Applications

ATYS UL 1008 transfer switches are rated from 100 to 400A 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.

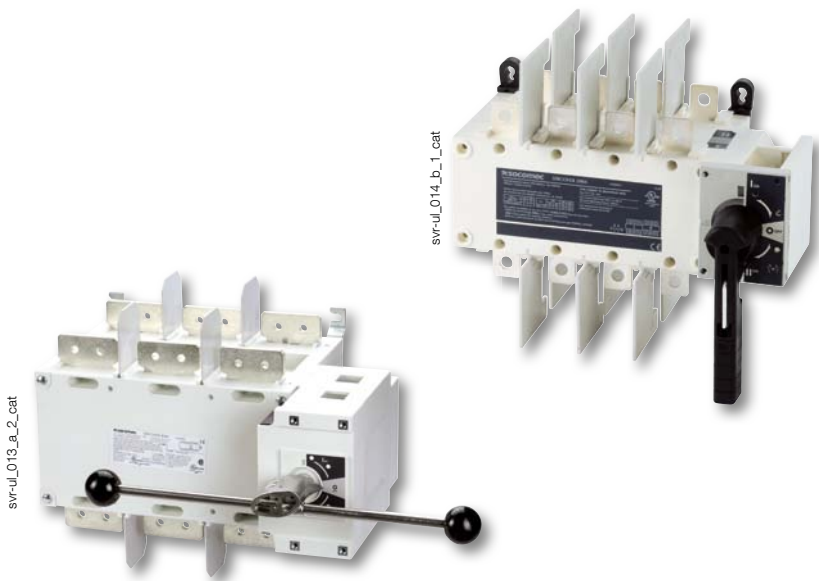


# SIRCOVER UL 1008

## Manual Transfer Switching Equipment

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.*

### Function

SIRCOVER UL 1008/98 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

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

#### Compact design

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

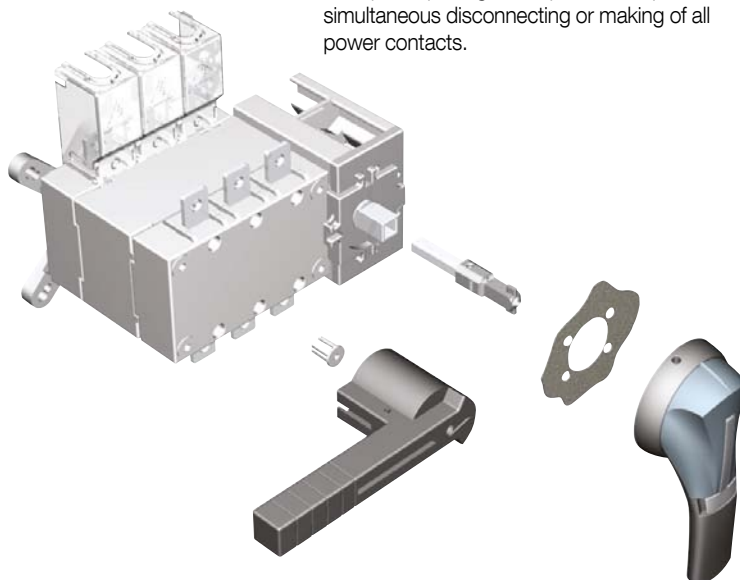
#### On load switching

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

#### Reliability

The SIRCOVER 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.

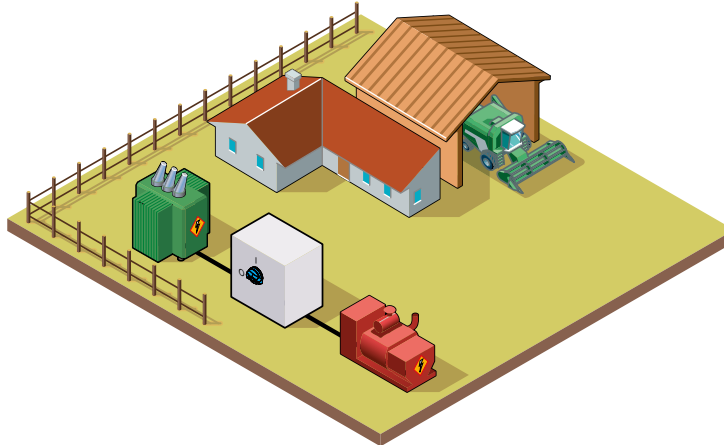


svr\_136\_a\_2\_cat

### 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 range of standalone or enclosed manual transfer switches and manual by-pass switches with overlapping options. Contact us for further information on our complete range



# SIRCOVER UL 1008

Manual Transfer Switching Equipment

100 to 1200 A

## References

### UL 1008

Rating (A)	No. of poles	Switch body	Direct handle	External handle	Shaft for external handle	Bridging bars	Auxiliary contacts	Terminal screens						
100 A	2 P	4150 2012	Black 4199 4012	S2 type Black I - 0 - II 4, 4X 142D 2113	S2 type 200 mm 7.9 inches 1400 1020	2P 4159 2021 3P 4159 3021 4P 4159 4021	Contact NO/NC 4159 0021 Low level 4159 0022	2P & 3P 4158 3021 4P 4158 4021						
	3 P	4150 3012												
	4 P	4150 4012												
200 A	2 P	4150 2022		S2 type Black I - 0 - II 4, 4X 142D 2813 <sup>(1)</sup>	320 mm 12.6 inches 1400 1032  400 mm 15.7 inches 1400 1040	2P 4159 2021 3P 4159 3021 4P 4159 4021		Contact NO/NC 4159 0021 Low level 4159 0022	2P & 3P 4158 3021 4P 4158 4021					
	3 P	4150 3022												
	4 P	4150 4022												
260 A	2 P	4150 2026		Black 4199 4012	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		2P 4159 2041 3P 4159 3041 4P 4159 4041	Contact NO/NC 4159 0021 Low level 4159 0022	2P & 3P 4158 3041 4P 4158 4041				
	3 P	4150 3026												
	4 P	4150 4026												
400 A	2 P	4150 2042	Black 4199 7012		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	2P 4159 2041 3P 4159 3041 4P 4159 4041	Contact NO/NC 4159 0021 Low level 4159 0022		2P & 3P 4158 3041 4P 4158 4041				
	3 P	4150 3042												
	4 P	4150 4042												
600 A	3 P	4150 3060			Black 4199 7062	S4 type Black I - 0 - II 4, 4X 144D 3813 <sup>(1)</sup>	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												
800 A	3 P	4150 3080				Black 4199 7062	S4 type Black I - 0 - II 4, 4X 144D 3813 <sup>(1)</sup>			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
	4 P	4150 4080												
1200 A	3 P	4150 3120		Black 4199 7062			S4 type Black I - 0 - II 4, 4X 144D 3813 <sup>(1)</sup>		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
	4 P	4150 4120												

(1) Padlockable in all 3 positions.

## Accessories

### Direct handle

Rating (A)	Colour	Handle type	Reference
100 ... 400	Black	1 lever	4199 <b>4012</b>
600 ... 1200	Black	2 lever	2799 <b>7042</b>



access\_129\_a\_1\_cat

### External handle

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

(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 (authorized persons only).

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



access\_150\_a\_1\_cat



access\_151\_a\_1\_cat



access\_152\_a\_1\_cat



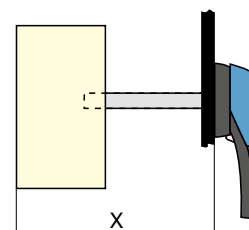
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### Shaft for external handle

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



access\_369\_a\_1\_cat



access\_202\_a\_1\_x\_cat

# SIRCOVER UL 1008

## Manual Transfer Switching Equipment

### 100 to 1200 A

#### 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	as standard



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	2x 2x(#2 - 600MCM)	2	6	Cu / Al	3954 3120
800 ... 1200	2x 2x(#2 - 600MCM)	2	8	Cu / Al	3954 4120



ul\_032\_a

## Characteristics

### Characteristics according to UL 1008

	100 to 1200 A						
General use rating (A)	100 A	200 A	260 A	400 A	600 A	800 A	1200 A
Operation voltage	600	600	600	600	600	600	600
Short circuit rating with circuit breaker (kA/ms)	10 / 25	10 / 25	14 / 50	14 / 50	35 / 50	35 / 50	35 / 50
Short circuit rating at 600 VAC (kA)	100 <sup>(1)</sup>	100 <sup>(1)</sup>	65 <sup>(1)</sup>	65 <sup>(1)</sup>	100	100	100
Type of fuse	J <sup>(1)</sup>	J <sup>(1)</sup>	J <sup>(1)</sup>	J <sup>(1)</sup>	L	L	L
Max. fuse rating (A)	200 <sup>(1)</sup>	400 <sup>(1)</sup>	600 <sup>(1)</sup>	600 <sup>(1)</sup>	800	1000	1600
<b>Operational power / current max Operational 1 ph</b>							
240 VAC Total system (A)	100	100	260	400	-	-	-
240 VAC Resistive load (A)	100	200	260	400	-	-	-
<b>Operational power / current max Operational 3 ph</b>							
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	200	200	200
600 VAC Resistive load (A)	100	200	260	400	600	800	1200
<b>Mechanical endurance</b>							
Endurance (number of operating cycles)	6050	6050	6050	6050	6050	3550	3550
<b>Connection terminals</b>							
Min. connection section / AWG	#6	#6	#4 / 2 x #6	#4 / 2 x #6	2x #2	4x #2	4x #2
Max. connection section / AWG	300MCM	300MCM	600MCM / 2x 350MCM	600MCM / 2x 350MCM	2x 600MCM	4x 600MCM	4x 600MCM

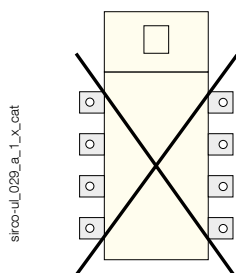
(1) Note: Short circuit data given above with fuses is for general info only. These tests are currently pending UL 1008 certification.

### Characteristics according to UL 98/CSA 22.2#4

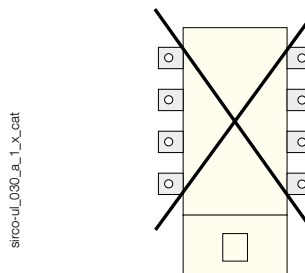
	100 to 1200 A						
General use rating at 600VAC and 250VDC (A)	Specific reference on request				600 A	800 A	1200 A
Short circuit rating at 600 VAC (kA)	-	-	-	-	200	100	100
Type of fuse	-	-	-	-	J	L	L
Max. fuse rating (A)	-	-	-	-	600	800	1200
<b>Max. motor, hp / FLA 3 ph motor max.</b>							
220-240 VAC	-	-	-	-	200 / 480	-	-
440-480 VAC	-	-	-	-	400 / 477	-	-
600 VAC	-	-	-	-	500 / 472	-	-
<b>Mechanical characteristics</b>							
Endurance (number of operating cycles)	-	-	-	-	6000	3500	3500
Operating torque (lbs.in/Nm)	-	-	-	-	327.5/37	442.5/50	442.5/50
<b>Auxiliary contacts</b>							
Electrical characteristics	A300	A300	A300	A300	A300	A300	A300

## Mounting orientation

### SIRCOVER - 100 to 400 A



### SIRCOVER - 600 to 1200 A

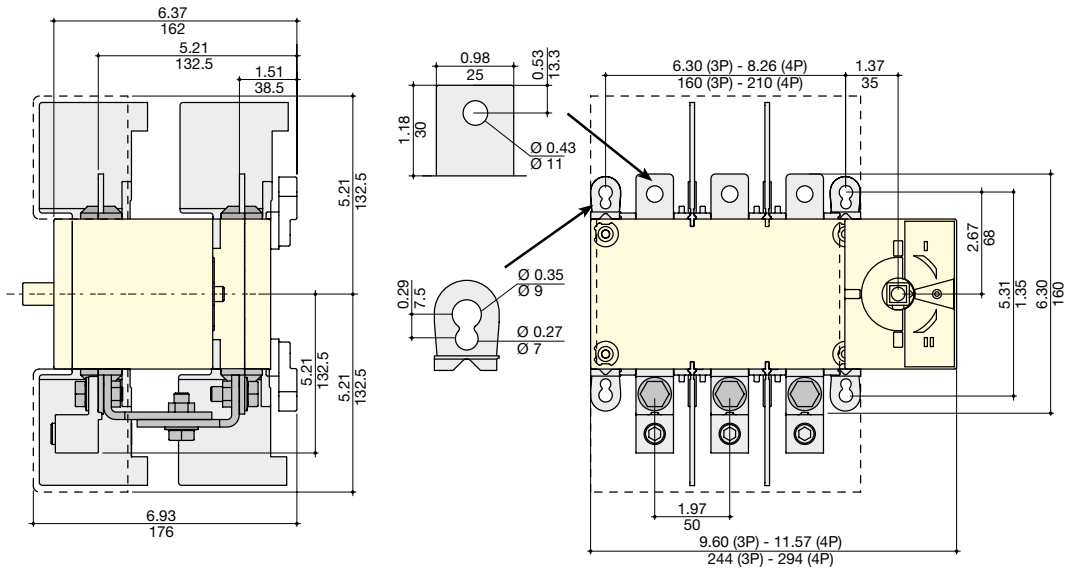


# SIRCOVER UL 1008

Manual Transfer Switching Equipment  
100 to 1200 A

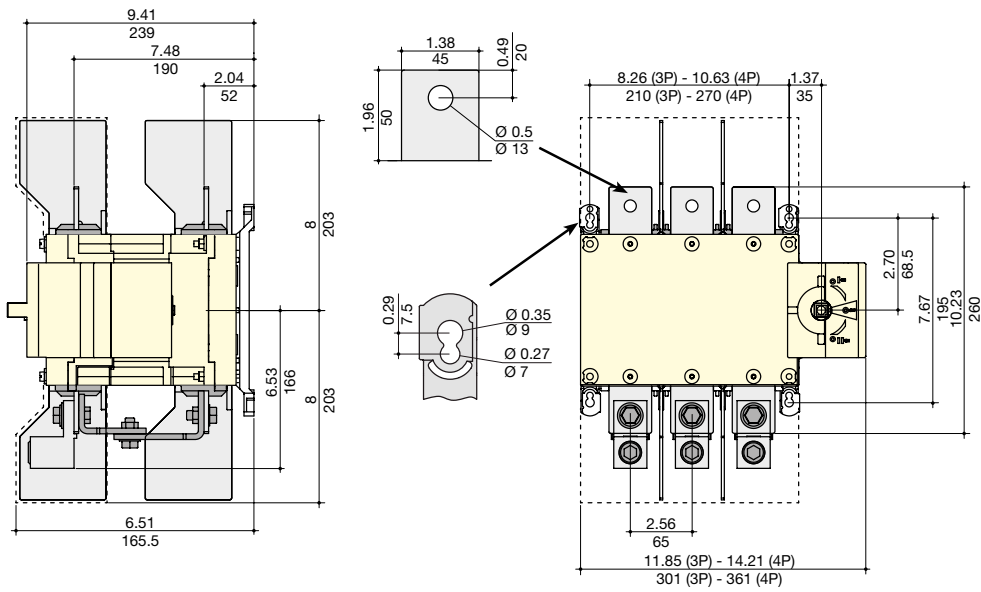
## Dimensions (in/mm)

### 100 to 200 A



svr-ul\_015\_a\_x\_cat

### 400 A

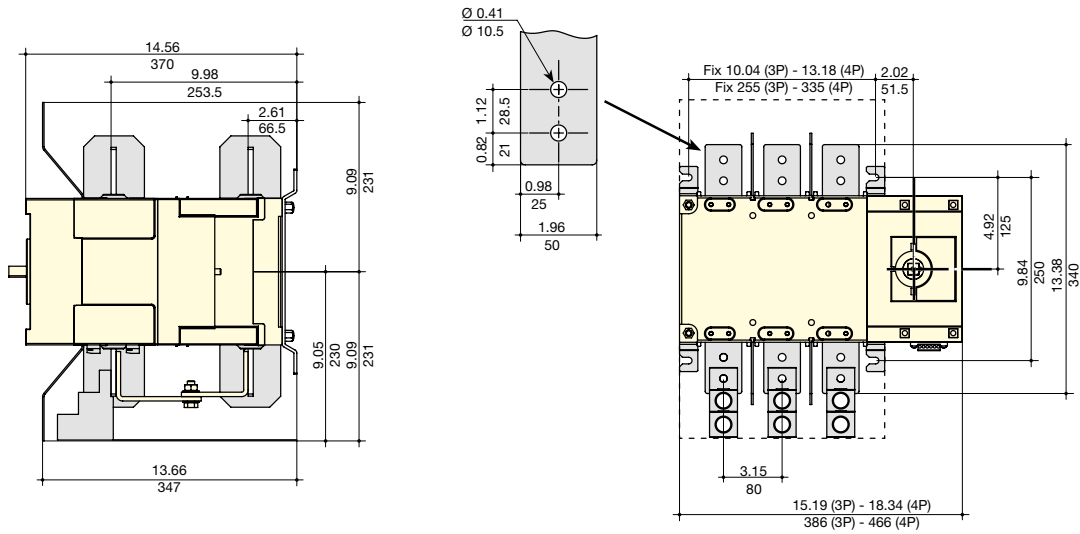


svr-ul\_016\_a\_x\_cat



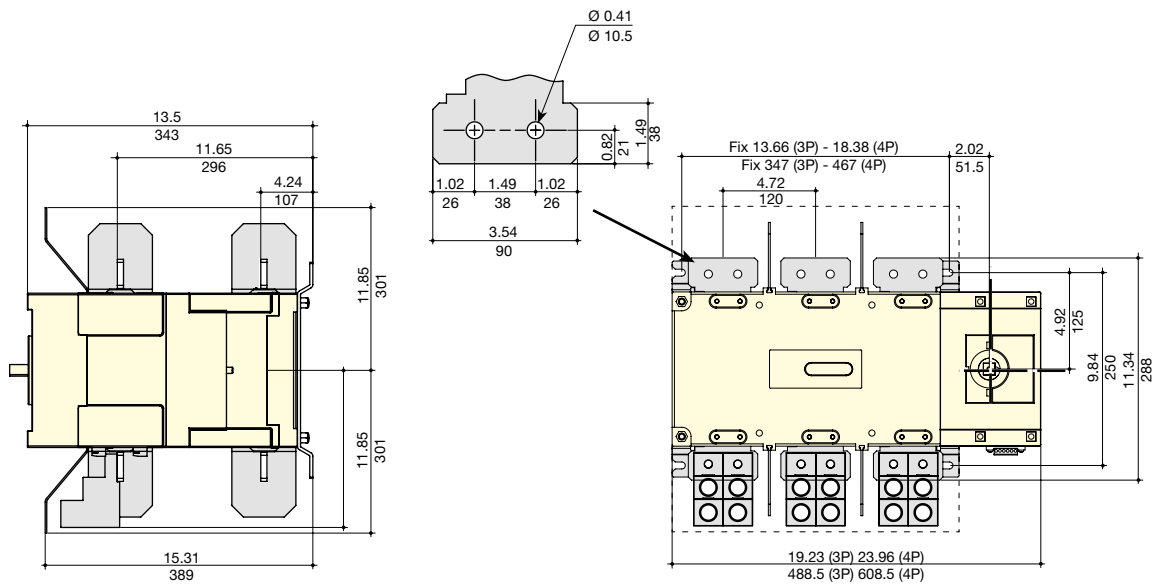
Dimensions (in/mm) (continued)

600 A



svr-ul\_003\_a\_x\_cat

800 to 1200 A



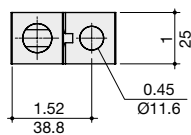
svr-ul\_004\_b\_x\_cat

# SIRCOVER UL 1008

Manual Transfer Switching Equipment  
100 to 1200 A

## Terminal lugs (in/mm)

### SIRCOVER 100 to 200 A

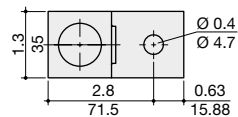


sirco\_115\_b\_1\_us\_cat



300 kcmil

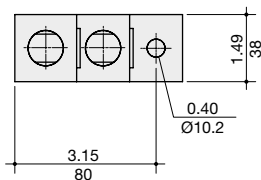
### SIRCOVER 260 to 400 A



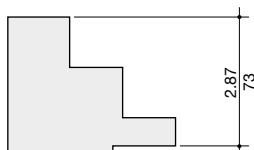
600 kcmil

sirco-ul\_010\_a\_1\_us\_cat

### SIRCOVER 600 to 1200 A



sirco\_116\_b\_1\_us\_cat



2 x 600 kcmil

## External handles dimensions (in/mm)

### SIRCOVER 100 and 200 A

Handle type	Front operation Direction of operation	Door drilling
<b>S2 type</b>  		

svr-ul\_010\_a\_1\_gb\_cat

External handles dimensions (in/mm)

SIRCOVER 260 and 600 A

Handle type	Front operation Direction of operation	Door drilling
<p><b>S3 type</b></p>		

svr-ul012\_a\_1\_gb\_cat

SIRCOVER 800 to 1200 A

Handle type	Front operation Direction of operation	Door drilling
<p><b>S4 type</b></p>		

svr-ul011\_a\_1\_gb\_cat

SIRCOVER 800 to 1200 A

Handle type	Front operation Direction of operation	Door drilling
<p><b>S5 type with V Escutcheon</b></p>		

poign\_023\_a\_1\_gb\_cat

Handle type	Front operation Direction of operation	Door drilling
<p><b>V1 type</b></p>		

srco-ul031\_a\_1\_gb\_cat



# ATyS UL 1008

## Motorized Transfer Switching Equipment from 100 to 400 A

Transfer switches



atys-ul007\_a\_1\_cat

### 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 load break disconnect where the main components are based on proven technology also fulfilling 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 emergency manual operation. This is extremely safe and easy to use.

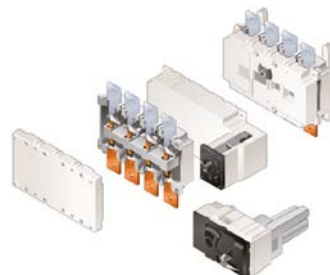
#### Maintenance free

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 motorization failure, the ATyS is designed in a way that the motorization can be replaced easily and very quickly. Furthermore, the ATyS remains manually operational with or without the motorization 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\_298\_b

### The solution for

- > Commercial
- > Light Industry
- > Residential applications



### Strong points

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

### Conformity to standards

- > UL 1008, Guide WPYV, file 317092



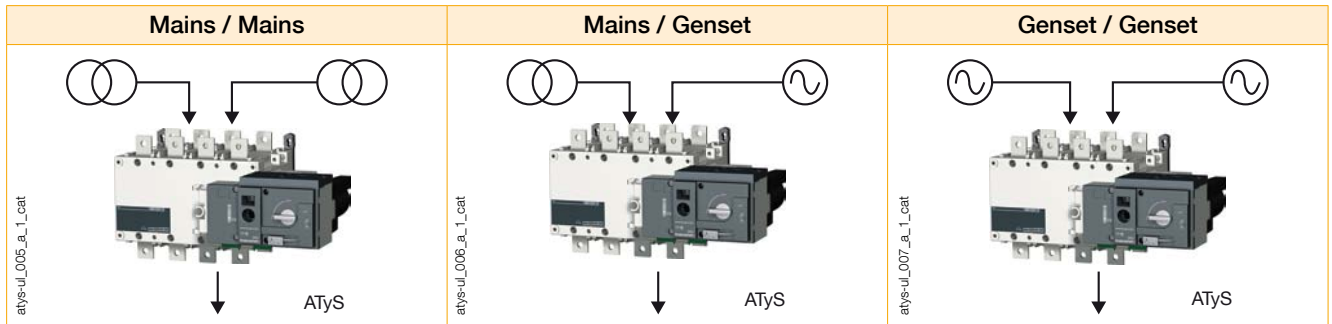
*Product reference on request.*

### 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.

## Typical applications

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





## Part of a globally recognized 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**

Remote Transfer Switch


Remote Transfer Switch



**ATyS d**

Remote Transfer Switch (RTS)


Dual power supply



**ATyS t**

Automatic Transfer Switch (ATS)


Automatic controller to manage mains/mains applications



**ATyS g**

Automatic Transfer Switch (ATS)

Automatic controller to manage mains/genset applications



**ATyS p**

Automatic Transfer Switch (ATS)

Functions for energy management  
Communication options

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

# ATyS UL 1008

Motorized Transfer Switching Equipment  
from 100 to 400 A

## References

Rating (A)	No. of poles	ATyS	Bridging bars	Terminal screens	Auxiliary contact	Lug kits
100 A	2 P	9723 2010	2 P 4159 2021 3 P 4159 3021 4 P 4159 4021	2/3 P 4158 3021 4 P 4158 4021	NO / NC 4159 0021  Low level 4159 0022	2 P 3954 2020 <sup>(1)</sup> 3 P 3954 3020 <sup>(1)</sup> 4 P 3954 4020 <sup>(1)</sup>
	3 P	9723 3010				
	4 P	9723 4010				
200 A	2 P	9723 2020	2 P 4159 2041 3 P 4159 3041 4 P 4159 4041	2/3 P 4158 3021 4 P 4158 4021		2 P 3954 2040 <sup>(2)</sup> 3 P 3954 3040 <sup>(2)</sup> 4 P 3954 4040 <sup>(2)</sup>
	3 P	9723 3020				
	4 P	9723 4020				
260 A	2 P	9723 2026	2 P 4159 2041 3 P 4159 3041 4 P 4159 4041	2/3 P 4158 3021 4 P 4158 4021	2 P 3954 2040 <sup>(2)</sup> 3 P 3954 3040 <sup>(2)</sup> 4 P 3954 4040 <sup>(2)</sup>	
	3 P	9723 3026				
	4 P	9723 4026				
400 A	2 P	9723 2040	2 P 4159 2041 3 P 4159 3041 4 P 4159 4041	2/3 P 4158 3021 4 P 4158 4021	2 P 3954 2040 <sup>(2)</sup> 3 P 3954 3040 <sup>(2)</sup> 4 P 3954 4040 <sup>(2)</sup>	
	3 P	9723 3040				
	4 P	9723 4040				

(1) 1x #6-300MCM.  
(2) 1x #6-600MCM.

## Accessories

### Terminal screens

#### Use

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

For upstream and downstream protection, order the reference once.

Rating (A)	No. of poles	Position	Reference
100 ... 200	2/3 P	top / bottom	4158 3021
100 ... 200	4 P	top / bottom	4158 4021
260 ... 400	2/3 P	top / bottom	4158 3041
260 ... 400	4 P	top / bottom	4158 4041



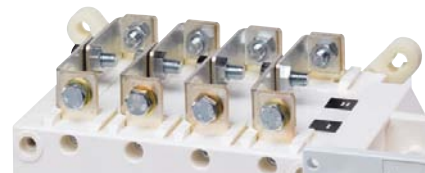
access\_207\_a\_2\_cat

### Bridging bars

#### Use

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

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



4159 4021

access\_205\_a\_2\_cat

## Accessories (continued)

### Auxiliary contacts (additional)

**Use**

Pre breaking and signalling of positions I and II: Each reference provides a single NO/NC contact.

(Note : The motorization includes 3 x NO position auxiliary contacts as standard)



access\_065\_a\_1\_cat

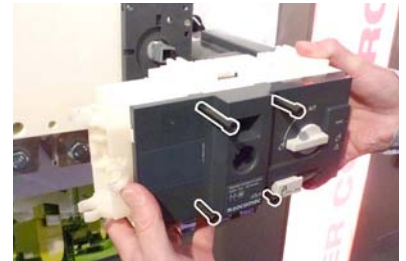
Rating (A)	Designation	Reference
100 ... 400	NO / NC	4159 <b>0021</b>
100 ... 400	Low level NO / NC	4159 <b>0022</b>

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

## Spares

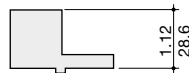
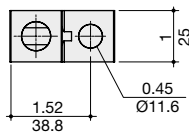
### Motorization module

Used for ATyS reference			Ref. Spare part motorization	
100 A	2, 3, 4 P	B4	9723 <b>2010</b> / 9723 <b>3010</b> / 9723 <b>4010</b>	9709 <b>5010</b>
200 A	2, 3, 4 P		9723 <b>2020</b> / 9723 <b>3020</b> / 9723 <b>4020</b>	9709 <b>5020</b>
260 A	2, 3, 4 P	B5	9723 <b>2026</b> / 9723 <b>3026</b> / 9723 <b>4026</b>	9709 <b>5026</b>
400 A	2, 3, 4 P		9723 <b>2040</b> / 9723 <b>3040</b> / 9723 <b>4040</b>	9709 <b>5040</b>



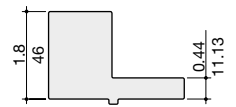
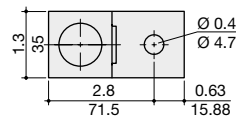
## Terminals lugs (in/mm)

### ATyS from 100 to 200 A



sirco\_115\_b\_1\_us\_cat

### ATyS from 260 to 400 A



sirco-ul\_010\_a\_1\_us\_cat

Rating (A)	Wires range	Lugs per kit	Wires	Reference
100 ... 200	6 - 300MCM	2	Cu / Al	3954 <b>2020</b>
100 ... 200	6 - 300MCM	3	Cu / Al	3954 <b>3020</b>
100 ... 200	6 - 300MCM	4	Cu / Al	3954 <b>4020</b>
260 ... 400	4 - 600MCM	2	Cu / Al	3954 <b>2040</b>
260 ... 400	4 - 600MCM	3	Cu / Al	3954 <b>3040</b>
260 ... 400	4 - 600MCM	4	Cu / Al	3954 <b>4040</b>

## Mounting orientation

### ATyS 100 to 400 A

Recommended	OK	Not Allowed	Not Allowed

# ATyS UL 1008

## Motorized Transfer Switching Equipment

from 100 to 400 A

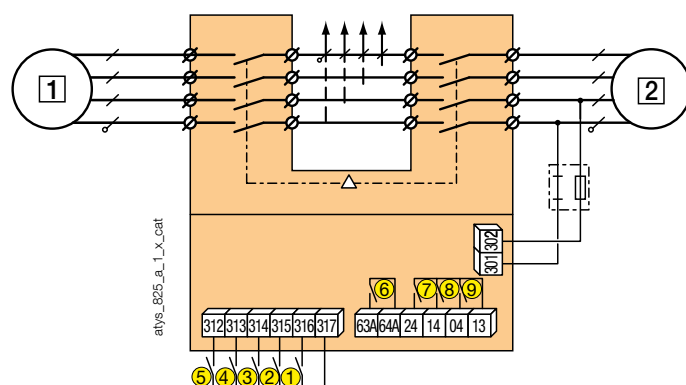
### Characteristics according to UL 1008 (Optional standby)

100 to 400 A

Frame	B4		B5	
General use rating	100 A	200 A	260 A	400 A
Operation voltage	600	600	600	600
Short circuit rating with ANY CIRCUIT BREAKER (kA/ms)	10 / 25	10 / 25	14 / 50	14 / 50
Short circuit rating at 600 VAC (kA) <sup>(1)</sup>	100	100	65	65
Type of fuse <sup>(1)</sup>	J	J	J	J
Max. fuse rating (A) <sup>(1)</sup>	100	200	260	400
<b>Operational power / current max Operational 1 ph</b>				
240 VAC Total system (A)	100	100	260	400
240 VAC Resistive load (A)	100	200	260	400
<b>Operational power / current max Operational 3 ph</b>				
240 VAC Total system (A)	100	200	260	400
240 VAC Resistive load (A)	100	200	260	400
480 VAC Total system (A)	100	100	260	400
480 VAC Resistive load (A)	100	200	260	400
600 VAC Total system (A)	100	100	200	200
600 VAC Resistive load (A)	100	200	260	400
<b>Mechanical endurance</b>				
Endurance (number of operating cycles)	6050	6050	6050	6050
<b>Connection terminals</b>				
Min. connection section / AWG	#6	#6	#4 / 2 x 1/0	#4 / 2 x 1/0
Max. connection section / AWG	300MCM	300MCM	600MCM / 2x 350MCM	600MCM / 2x 350MCM
<b>Aux Power Supply</b>				
Supply voltage VAC 50/60 Hz	208-277 VAC			
<b>Switching time</b>				
I to II or II to I (s)	1.3			
I to 0 or 0 to II (s)	0.85			
Duration of electrical blackout (s)	0.6			

(1) Note: Short circuit data given above with fuses is for general info only. These tests are currently pending UL 1008 certification.

### Terminals and connections



1 preferred source (transformer or generator)

2 alternate source (transformer or generator)

1: position 0 control (contactor logic if closed)

2: position I control

3: position II control

4: position 0 priority control

5: closure of this contact enables the position control orders

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

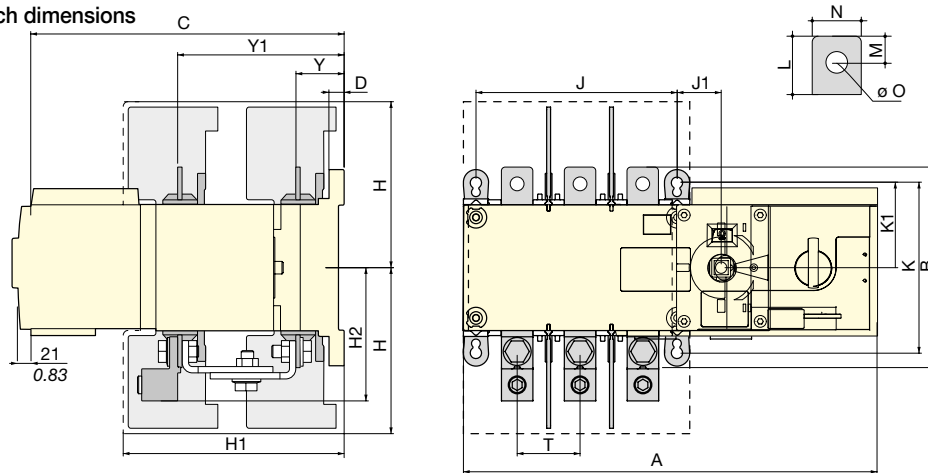
9: auxiliary contact, closed when the switch is in position 0



Dimensions (in/mm)

100 to 400 A

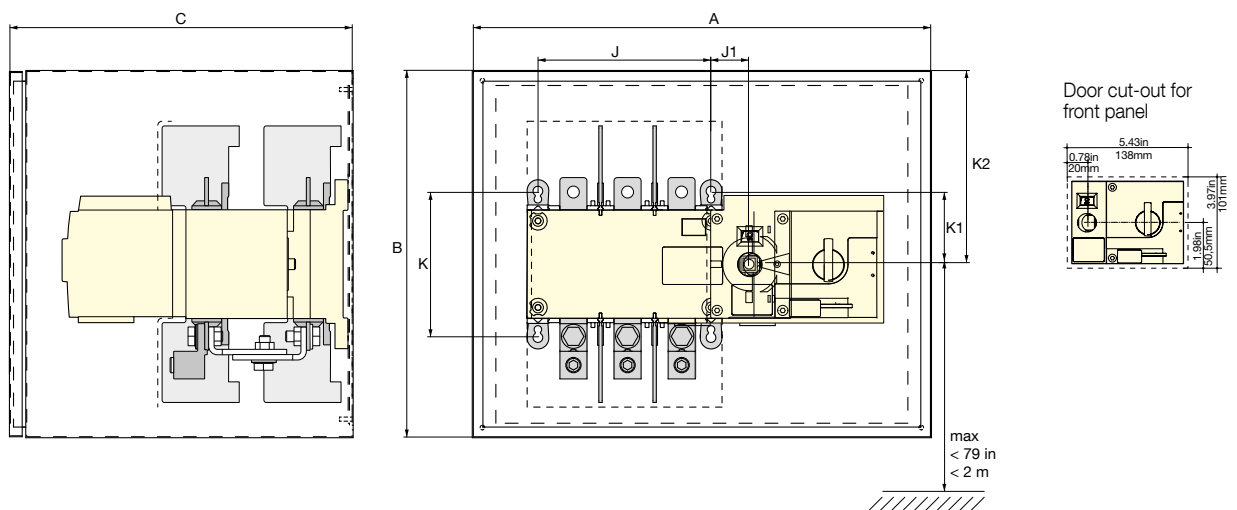
Transfer switch dimensions



Rating	Ref. code		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 A	9723 2010 / 9723 3010	2/3P	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 2020 / 9723 3020																			
	9723 4010 / 9723 4020	4P	14.88	378																
260 - 400 A	9723 2026 / 9723 3026	2/3P	14.84	377	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 2040 / 9723 3040																			
	9723 4026 / 9723 4040	4P	17.20	437																

Rating	Ref. code		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 - 200A	9723 2010 / 9723 3010	2/3P	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 2020 / 9723 3020																			
	9723 4010 / 9723 4020	4P	8.26	210																
260 - 400A	9723 2026 / 9723 3026	2/3P	8.26	210	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 2040 / 9723 3040																			
	9723 4026 / 9723 4040	4P	10.63	270																

Minimum enclosure dimensions recommended



Rating	Ref. code		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 A	9723 2010 / 9723 3010	2/3P	24	610	24	610	12	305	6.30	160	1.37	35	5.31	135	2.67	68	12	305
	9723 2020 / 9723 3020																	
	9723 4010 / 9723 4020	4P							8.26	210								
260 - 400 A	9723 2026 / 9723 3026	2/3P	32	813	32	813	16	406	8.26	210	1.37	35	7.67	195	3.84	97,5	15	381
	9723 2040 / 9723 3040																	
	9723 4026 / 9723 4040	4P							10.63	270								



# Enclosed transfer switch solutions

## ATS no-break Bypass solution

ATSE\* - Automatic equipment from 40 to 3200 A

Transfer switches



### 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 of two supply sources to ensure continuity of supply to critical loads such as sprinklers, elevators, 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**, will enable an easy configuration, exploitation and visualisation of the data shown on the front of the equipment (timers settings, hysteresis, start/stop of the genset...).

## General characteristics

- From 40 to 3200 A - 4 poles.
- 230/400 VAC +/- 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 (factory fitted).
- 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 250A to 3200 A.
- Plug-in ATS 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.

\*ATSE: Automatic Transfer Switch Equipment

# Enclosed transfer switch solutions

ATS no-break Bypass solution

ATSE - Automatic equipment from 40 to 3200 A

## 2 versions

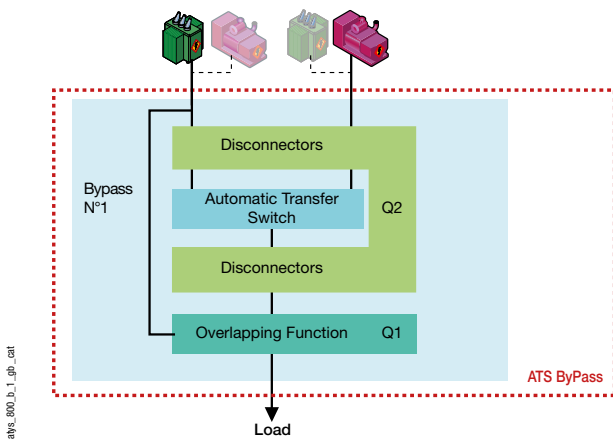
### Single Line ATS Bypass

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

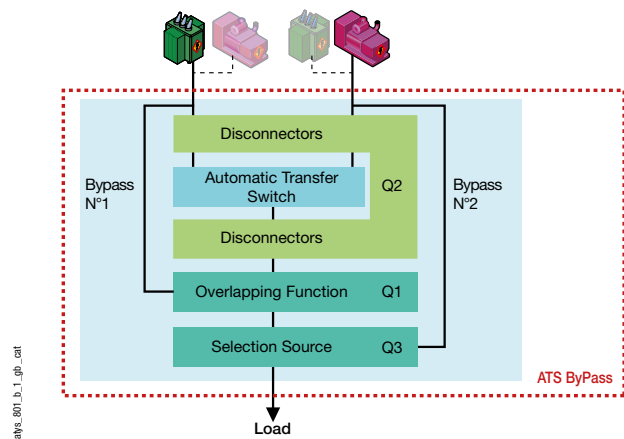
### Double Line ATS Bypass

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

ATS Bypass - SINGLE LINE



ATS Bypass - DOUBLE LINE



## Use

### Normal Position:

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

### Bypass position:

- ATS seamless transfer to the Bypass mode is achieved using the bypass line via Q1 to ensure continuity in the power supply to the load. Switch Q2 is then open to provide complete isolation from the power supply sources and to ensure safe interventions.

### Test Position:

- From the Bypass position, changeover switch Q2 can be closed to supply the ATS 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

## ATS no-break Bypass solution

ATSE - Automatic equipment from 40 to 3200 A

## Accessories

### Customer fit

Description	Reference
2 inputs / 2 outputs module (ATyS p only)	1599 <b>2001</b>

### Extension cabinet

#### Use

From 1250A to 3200 A, the standard enclosed ATS 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 ATS 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

Padlockable handle in position 0	Reference
1250 ... 2000	1599 <b>9004</b>
2500 ... 3200	1599 <b>9005</b>

### Protection against overvoltages

#### Use

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

For more information, please see our general catalogue or our website [www.socomec.com](http://www.socomec.com).



sgys\_069\_a\_1\_cat

Rating (A)	Reference
40 ... 125	1599 <b>9016</b>
250 ... 400	1599 <b>9017</b>
630 ... 3200	1599 <b>9018</b>

### Multifunction meter

#### Use

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

For more information, please see our general catalogue or our website [www.socomec.com](http://www.socomec.com).



diris\_750\_a\_1\_cat

### Engine Exerciser

#### Use

The enclosed ATS 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 <b>9006</b>

### Tinned Busbars

#### Use

Tinned busbar option for severe environmental conditions.

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

# Enclosed transfer switch solutions

ATS no-break Bypass solution

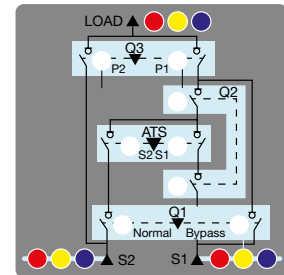
ATSE - Automatic equipment from 40 to 3200 A

## Signalling

### Use

To get a global overview of the system status, an optional 16 LED mimic panel is available (voltage availability per phase and device positions).

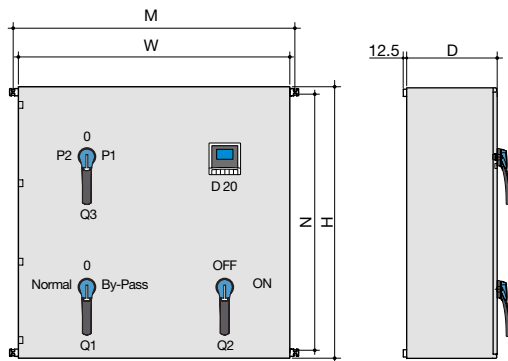
Rating (A)	Mimic panel	
	Single Line Reference	Double Line Reference
40 ... 3200	1599 9033	1599 9034



access\_2715\_b\_1\_x\_cat

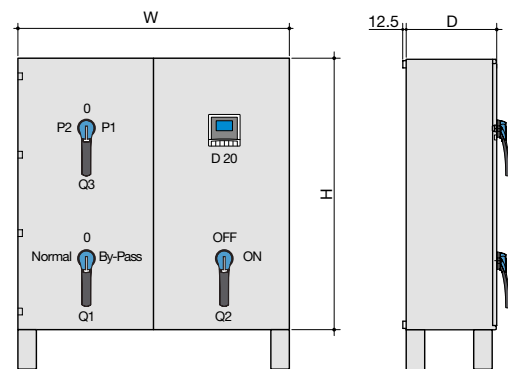
## Dimensions

from 40 to 160 A



atys\_749\_c\_1\_gb\_cat

≥ 250 A



atys\_759\_c\_1\_gb\_cat

### Wall mounting - Bottom

Rating (A)	Recommended connection cross-section (mm <sup>2</sup> )	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 <sup>2</sup> )	H (mm)	W (mm)	D (mm)	Weight (kg)
250	70	1200 <sup>(1)</sup>	1000	550	180
400	240	1200 <sup>(1)</sup>	1000	550	200
630	2x185	1600 <sup>(1)</sup>	1200	600	600
800 ... 3200 <sup>(2)</sup>					

(1) Add 100 mm mm for feet.

(2) Please consult us.

## Connection (input / output)

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

U = RI

# TSE technical guide

The applications .....	<i>p. 112</i>
Types of transfer switching .....	<i>p. 113</i>
The sources .....	<i>p. 114</i>
The loads .....	<i>p. 114</i>
Typical electrical diagrams .....	<i>p. 115</i>
Automatic transfer .....	<i>p. 126</i>
Specific applications .....	<i>p. 128</i>
IEC 60947-6-1 standard .....	<i>p. 129</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.

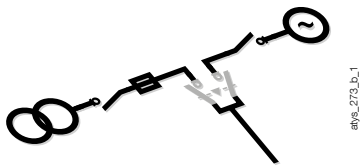
The transfer concept is mainly applied to two sources requiring changeover, one considered as a main power supply and the other one as an alternate source or backup supply.

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,...).

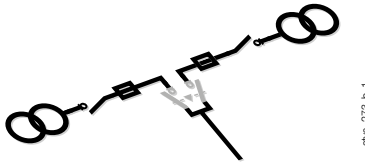
Another typical application is "Genset/Genset", and this is when the load is supplied by two generators.

### Normal/emergency applications

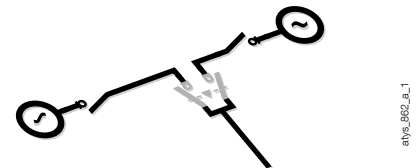
#### Mains/Genset application



#### Mains/Mains application



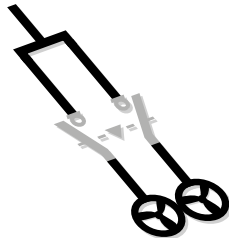
#### Genset/Genset application



'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, ...

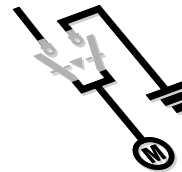
### Other typical applications

#### Switching between loads



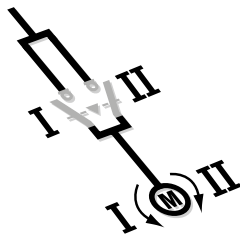
Switching the power supply from one load to another generates redundancy with a balanced operating time for the two loads.

#### Earthing



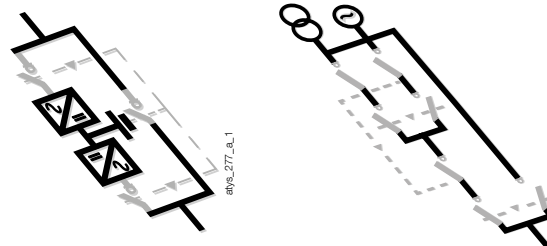
Safely isolating a load from the supply whilst earthing equipment such as motors or electrical lines. This enables work to be carried out downstream of the transfer switch in total safety.

#### 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.

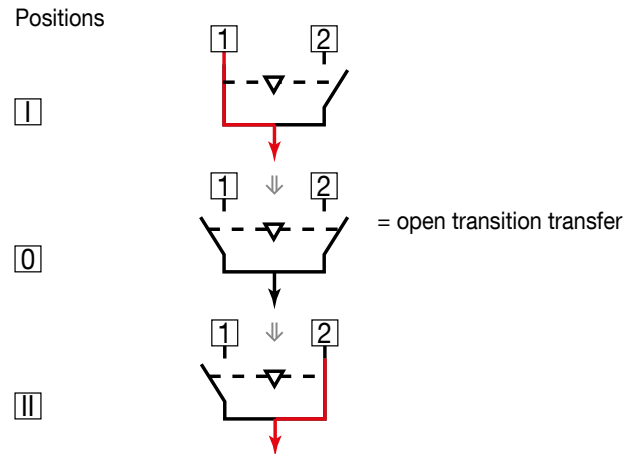


## Types of transfer switching

### 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)

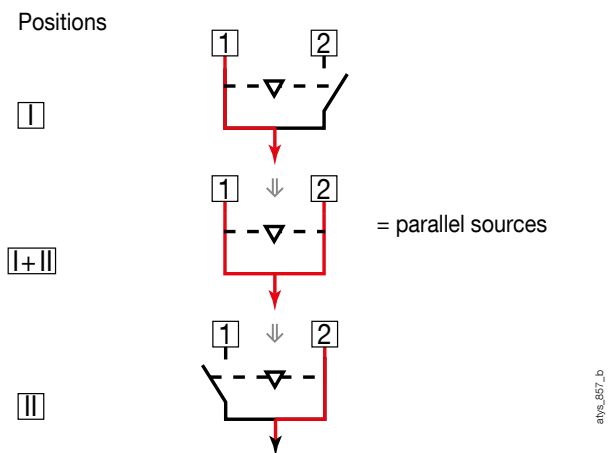
Depending on the local network regulations the normal and the alternative source may temporarily run in parallel for a period of <100ms. This is typically used for scheduled transfers, for example returning to the Normal source from the alternative source.

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).

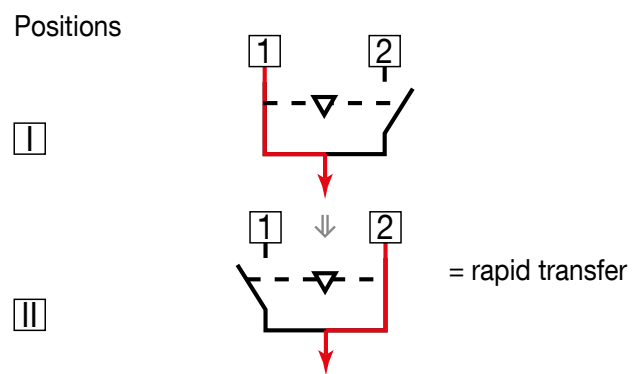
When synchronised within these limits a scheduled or return to normal supply transfer may take place without a blackout time allowing continuity of service.

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.



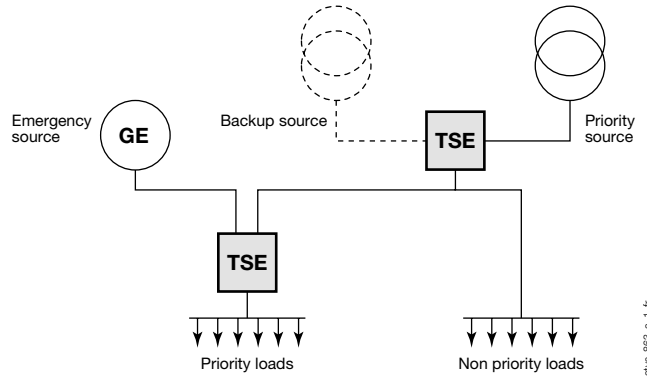
# Low voltage installation

## 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.

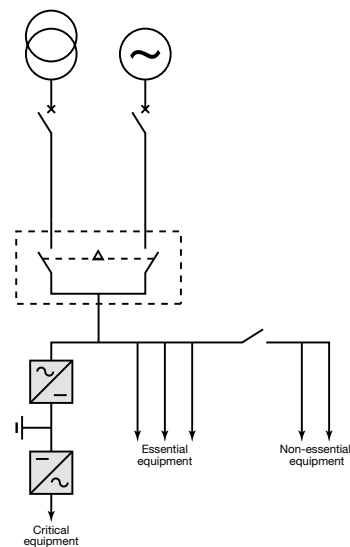
Various categories have been identified:

- 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



## 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.

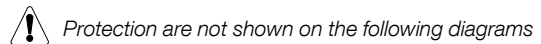
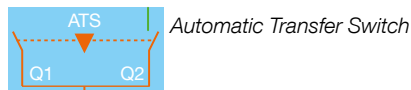
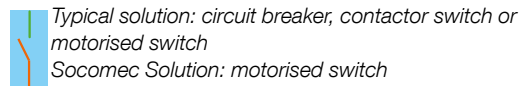
Those changeover switches can be used not just for Normal/Backup operation, but also for managing the switching of loads or the connection of equipment to earth.

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

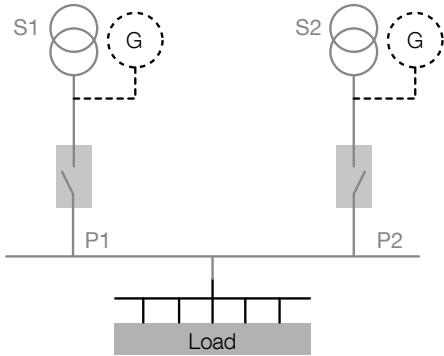


# Low voltage installation

## Transfer between 2 sources - 1 busbar

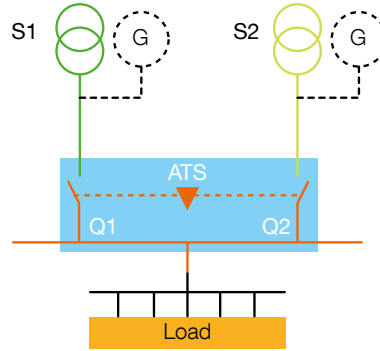
$S1 \text{ (kVA)} = S2 \text{ (kVA)}$

### Typical solution



COMUT 041 A FR

### SOCOMEC solution



COMUT 042 A FR

### Truth table

S1	S2	Typical solution	SOCOMEC	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

### SOCOMEC 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



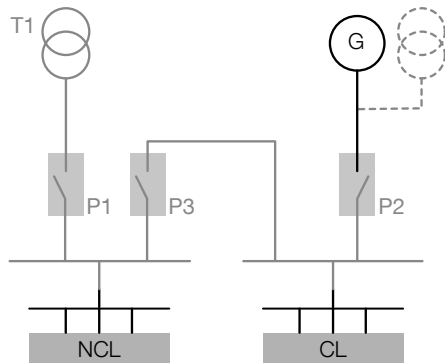
ATyS\_MP 001 B - ATyS 836 A  
ATyS 443 B

## Transfer between 2 sources - 2 busbars

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

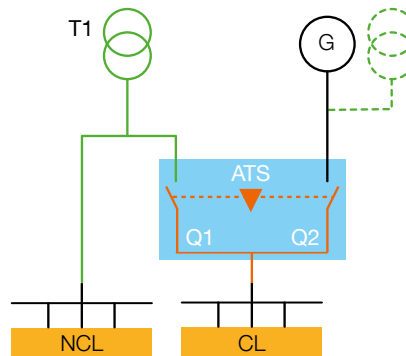
First type of architecture:  $S1 \text{ (kVA)} > SG \text{ (kVA)}$

Typical solution



COMUT 043 A

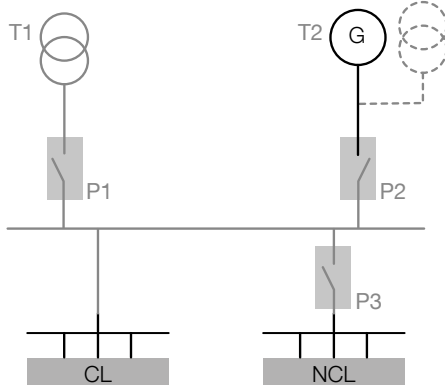
SOCOMEc solution



COMUT 044 A

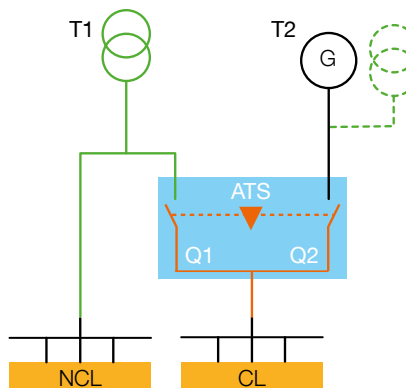
Second type of architecture:  $S1 \text{ (kVA)} > S2 \text{ (kVA)}$

Typical solution



COMUT 043 A

SOCOMEc solution



COMUT 043 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

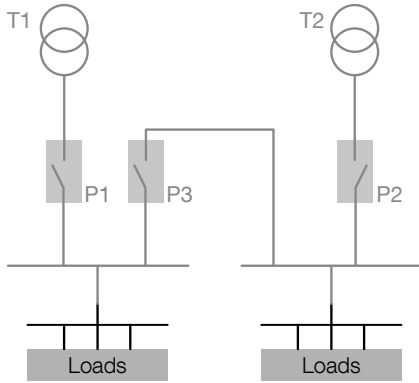
# Low voltage installation

## Transfer between 2 sources - 2 busbars (continued)

2) Sources are 2 transformers: loads are not differentiated

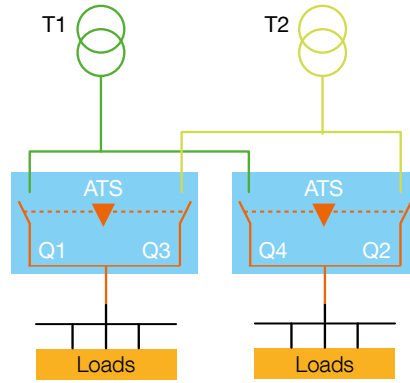
$$S1 \text{ (kVA)} = S2 \text{ (kVA)}$$

### Typical solution



COMUT 047 A FR

### SOCOMEC solution



COMUT 048 A FR

### Truth table

T1	T2	Typical solution	SOCOMEC	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

### SOCOMEC products

#### Mains/Mains - Mains/Genset:

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



ATyS\_MP 001 B - ATyS t 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



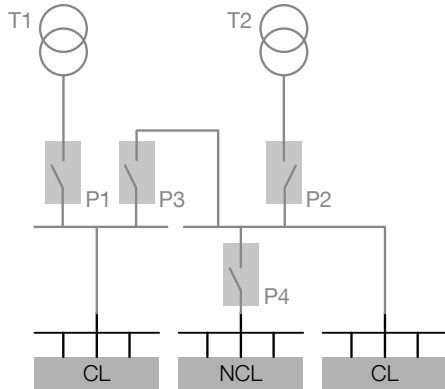
ATyS\_MD 001 B - ATyS 838 A  
ATyS 448 B

## Transfer between 2 sources - 3 busbars

1) Sources are 2 transformers

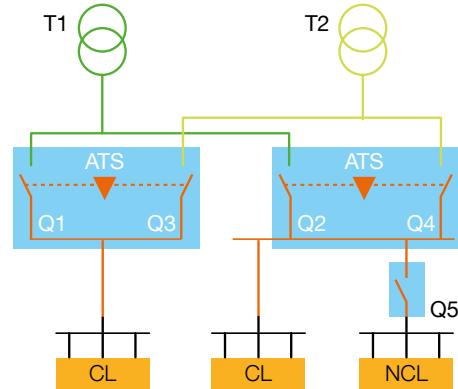
$$S1 \text{ (kVA)} = S2 \text{ (kVA)}$$

Typical solution



COMJUT 049 A

SOCOMEK solution



COMJUT 060 A

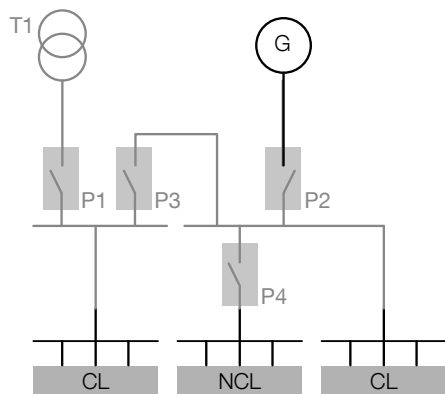
Truth table

T1	T2	Typical solution	SOCOMEK	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:

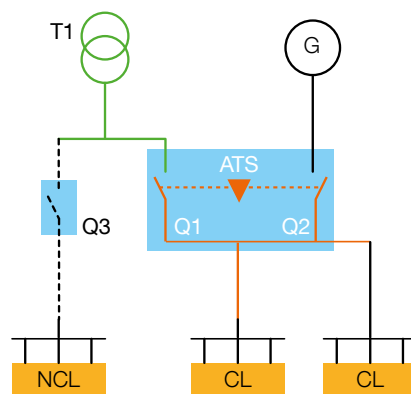
$$S1 \text{ (kVA)} > S2 \text{ (kVA)}$$

Typical solution



COMJUT 051 A

SOCOMEK solution



COMJUT 052 A

Truth table

T1	G	Typical solution	SOCOMEK	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

# Low voltage installation

## 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



ATyS\_MP\_001 B - ATyS\_t 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 636 A  
ATyS 448 B

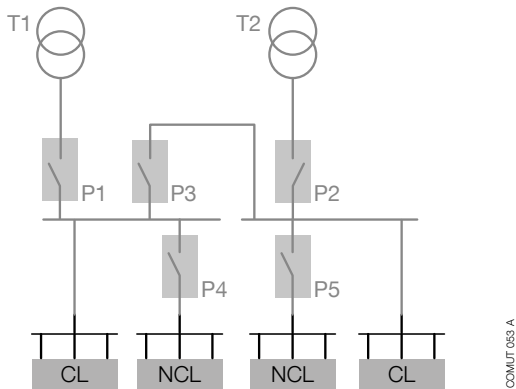


## Transfer between 2 sources - 4 busbars

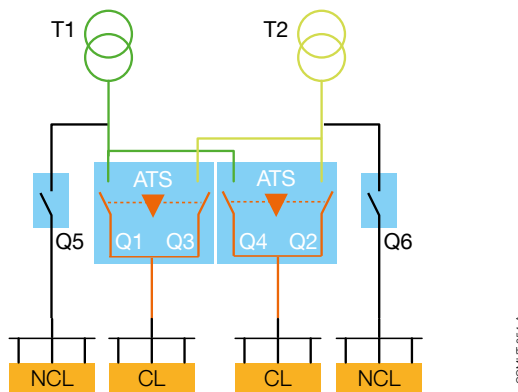
1) Sources are 2 transformers

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

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

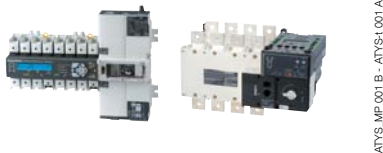
#### Implementation

- 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

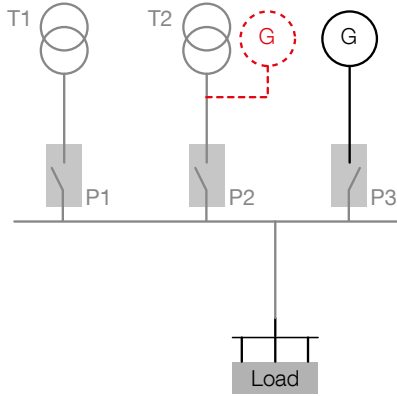


# Low voltage installation

## Transfer between 3 sources - 1 busbar

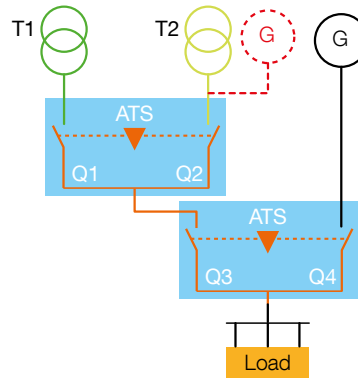
$$S1 \text{ (kVA)} = S2 \text{ (kVA)} = SG \text{ (kVA)}$$

### 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-1 001 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

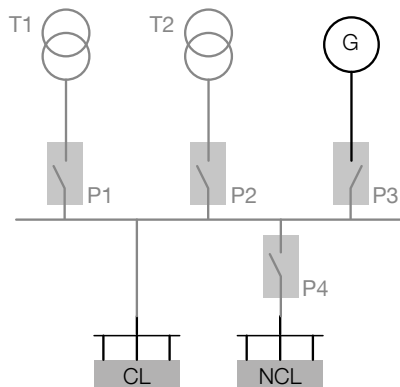


ATyS\_MD 001 B - ATyS 836 A  
ATyS 448 B

## Transfer between 3 sources - 2 busbars

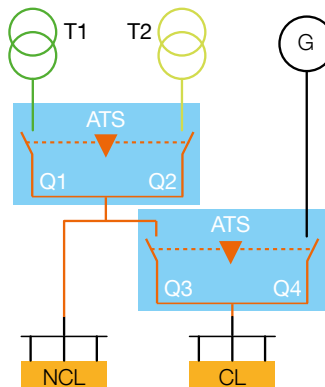
First type of architecture:  $S1 \text{ (kVA)} = S2 \text{ (kVA)} > SG \text{ (kVA)}$

Typical solution



COMJUT 057 A

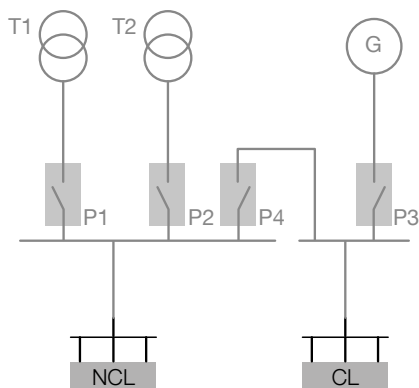
SOCOMEK solution



COMJUT 058 A

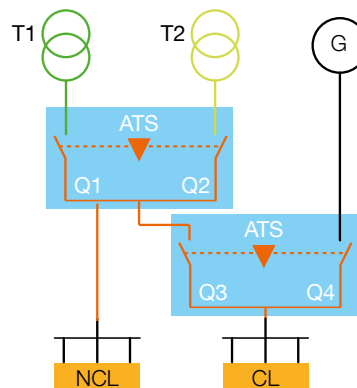
Second type of architecture:  $S1 \text{ (kVA)} = S2 \text{ (kVA)} > SG \text{ (kVA)}$

Typical solution



COMJUT 061 A

SOCOMEK solution



COMJUT 062 A

### Truth table

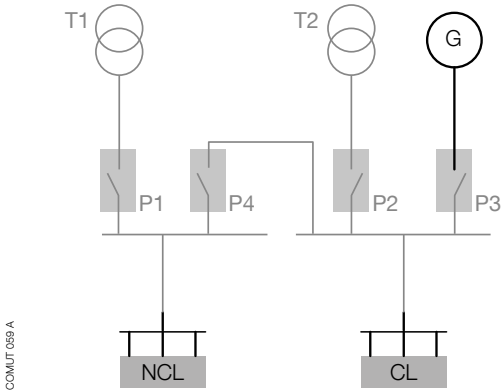
T1	T2	G	Typical solution	SOCOMEK	CL	NCL
0	0	0	X:	X:	Not supplied	Not supplied
1	0	0	P1 + P4	Q1 + Q3	Supplied	Supplied
0	1	0	P2 + P4	Q2 + Q3	Supplied	Supplied
0	0	1	P3	Q4	Supplied	Not supplied

# Low voltage installation

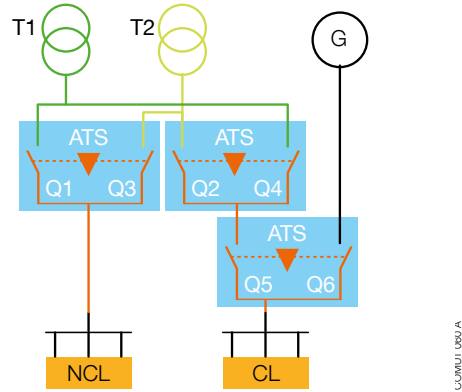
## Transfer between 3 sources - 2 busbars (continued)

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

Typical solution



SOCOMEK solution

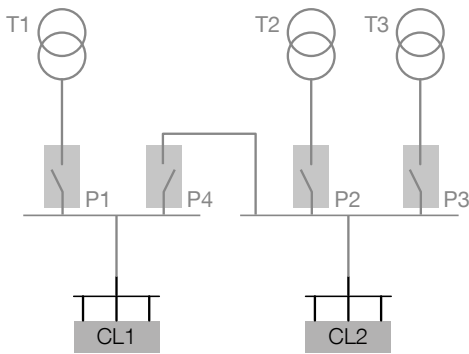


Truth table

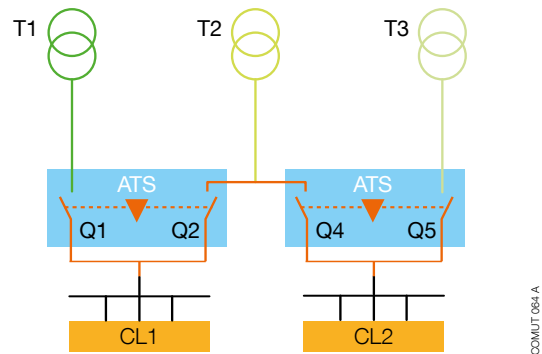
T1	T2	G	Typical solution	SOCOMEK	CL	NCL
0	0	0	X:	X:	Not supplied	Not supplied
1	0	0	P1 + P4	Q1 + Q4 + Q5	Supplied	Supplied
0	1	0	P2 + P4	Q3 + Q2 + Q5	Supplied	Supplied
0	0	1	P3	Q6	Supplied	Not supplied
1	1	0	P1 + P2	Q1 + Q2 + Q5	Supplied	Supplied

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 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



# Low voltage installation

## Automatic transfer

### Introduction

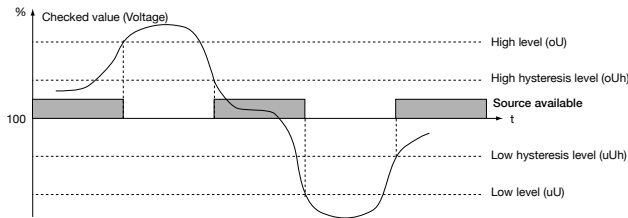
The automatic transfer, commonly known as the "ATS Controller", can be either external to the transfer switching equipment, or integrated in the product. The main functions of these controllers, are listed below.

### Monitoring of voltages and frequency

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

Monitoring these values enable:

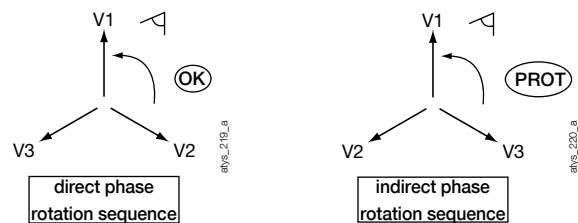
- A problem with the source to be detected if the voltage or frequency are outside of the limits (whether these are set by the controller or adjusted to customer requirements). The source will then be declared unavailable, and the sequence for transferring to the secondary source will be started.
- Validate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

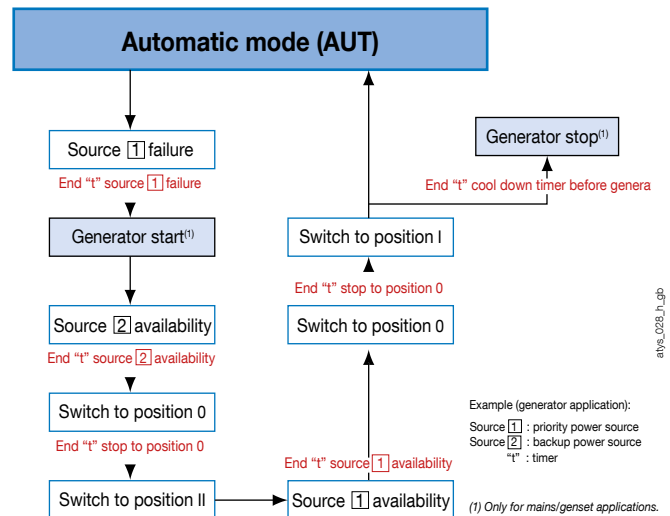
For certain applications, particularly rotating machine loads on three-phase networks, it may be recommended that the direction of phase rotation is monitored. This monitoring will ensure that the direction of rotation of the two sources is consistent. If not consistent, the source will not be declared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



## 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.

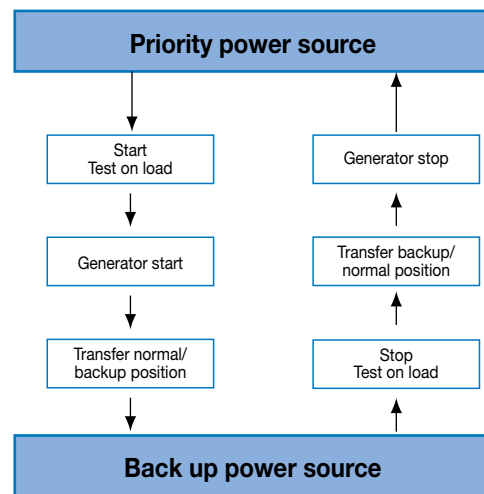


## Test cycles

### 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.

# Low voltage installation

## Specific applications

### Automatic transfer inhibition

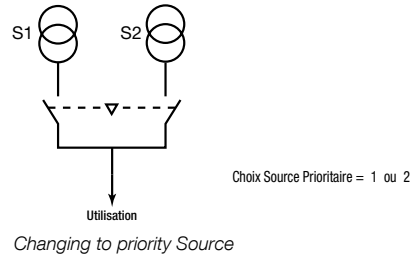
During normal operation, the controller takes over the product and manages the automation. In certain cases, (for example if a protection is triggered off upstream), it may be necessary to remotely intervene and prevent automatic operation. This is possible by activating a programmable contact on the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

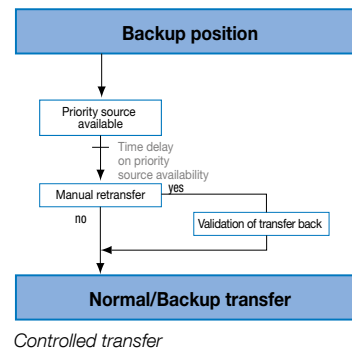
Specific time and cycle sequences remain the same. Only the position considered as having priority is modified.



### 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.

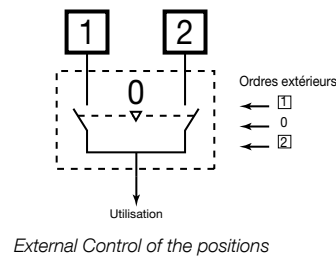


### External Control of the positions

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.



### 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.



## 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.

<b>ATyS d M 40A</b>				
Ref.: 92234004				
Power supply: 230Va.c.				
<b>CE</b>				
PRODUCT PATENTED www.socomec.com		<b>IEC 60947-6-1</b>	<b>IEC 60947-3</b>	<b>GB 14048.11</b>
	Ue	415V	415V	415V
	Fn	50/60Hz	50/60Hz	50Hz
	Class	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-mtd\_003\_a

# References list

References	Pages	References	Pages	References	Pages	References	Pages
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