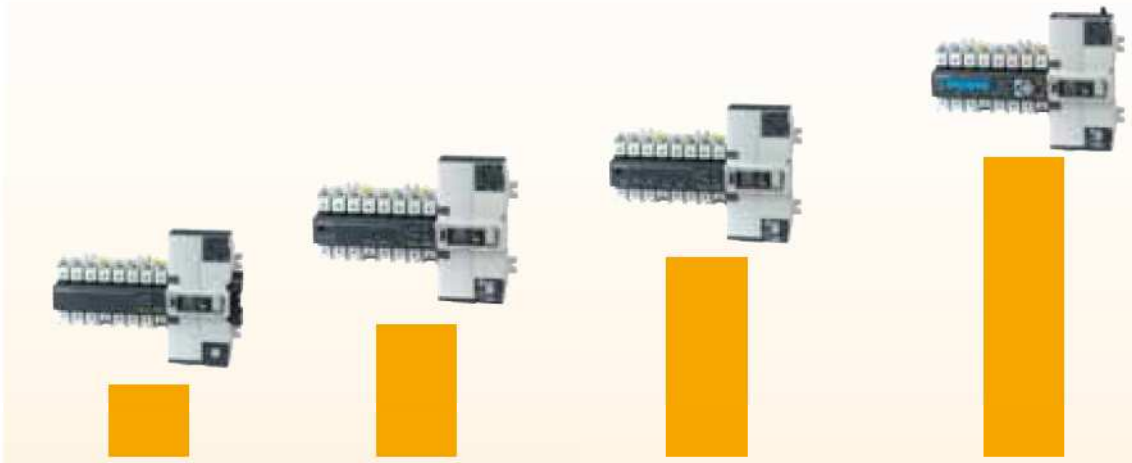
new The new *ATyS M* range: safe and reliable solutions

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

RTSE (Remotely operated)	ATSE (Automatic)		



ATyS d M	***ATyS t M***	***ATyS g M***	***ATyS p M***
Motorised Transfer Switch Equipment	Automatic Transfer Switch Equipment	Automatic Transfer Switch Equipment	Automatic Transfer Switch Equipment
Dual power supply	Automatic controller to manage mains/ mains applications	Automatic controller to manage mains/ genset applications	Mains/Mains and Mains/Genset Tripping function, programmable parameters and communication

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

new

atys-md_002_b_1_cat

ATyS d M
I-0-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

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.

Conformity to standards

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

IEC

Approvals and certifications

KEMA KEUR

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.

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.

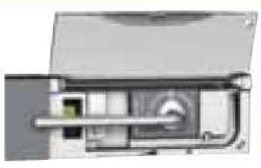
Fast transfer
ATyS d M are based on coil and technology with rotative contacts, therefore ensuring an extremely short black-out duration (< 90ms).

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

socomec
Innovative Power Solutions

What you need to know

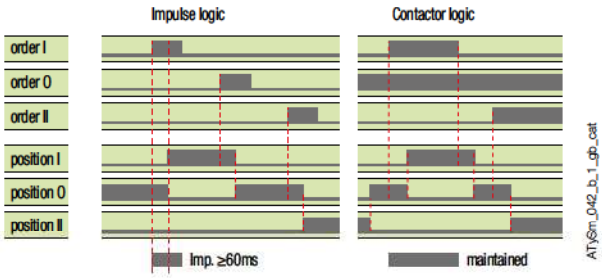
Electrical control

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.



Single-phase interface *Three-phase interface*

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**(1)	1st A/C block included 2nd A/C block Separate common points 1309 **0001**(2) Linked common points 1309 **0011**(2)
	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**			

(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 t M - ATyS g M

Automatic Transfer Switching Equipment

from 40 to 160 A

Transfer switches

new

ATyS t M
I-0-II 4P

ats-mt_001_b_1_cat

ATyS g M
I-0-II 2P

ats-mg_001_b_1_cat

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(1)

(1) Product reference on request.

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.

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

(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)(3)	ATyS g M	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contact block	Sealable cover
40 A	2P	230	9353 **2004**	2 P 1309 **2006** 4 P 1309 **4006**	2 pieces 1399 **4006**	2 pieces 2294 **4016**(1)	1 piece Separate common points 1309 **0001**(2) Linked common points 1309 **0011**(2)	2 P 1359 **2000** 4 P 1359 **0000**
	4P	230/400	9354 **4004**					
63 A	2P	230	9353 **2006**					
	4P	230/400	9354 **4006**					
80 A	2P	230	9353 **2008**					
	4P	230/400	9354 **4008**					
100 A	2P	230	9353 **2010**					
	4P	230/400	9354 **4010**					
125 A	2P	230	9353 **2012**					
	4P	230/400	9354 **4012**					
160 A	2P	230	9353 **2016**	1309 **2016**				
	4P	230/400	9354 **4016**	1309 **4016**				

(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

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

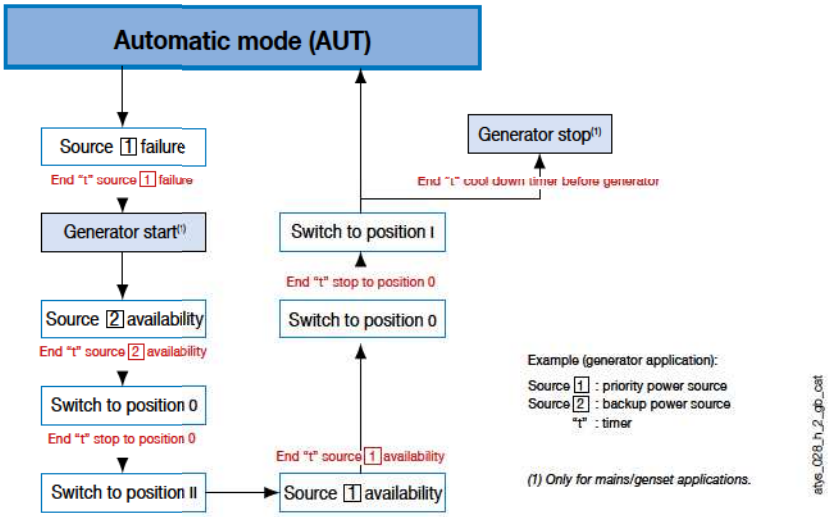
A specific version of ATyS p M is available with integrated Modbus communication. This gives acces to most product data (status, voltages, frequencies…).
A user friendly configuration software is also available free (Easyconfig) to configure, view and save all the parameters in the ATyS p M.

Remote control interface

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

What you need to know

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

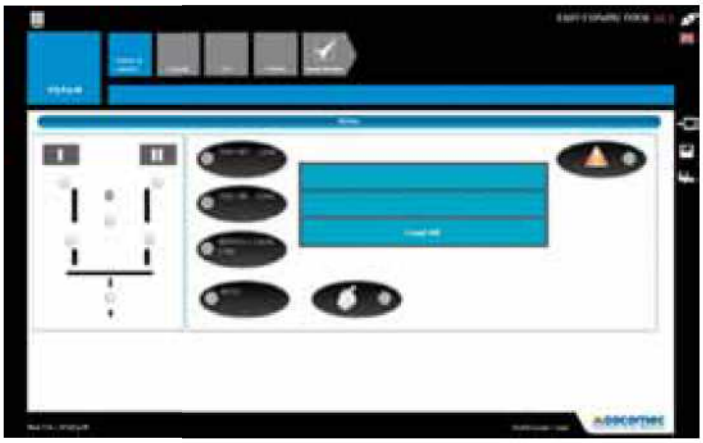


Easyconfig

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)(3)	ATyS p M	ATyS p M + com	Bridging bars	Voltage sensing and power supply tap	Terminal shrouds	Auxiliary contact block	Remote interface
40 A	4P	230/400	9364 **4004**	9384 **4004**	4 P 1309 **4006**	2 pieces 1399 **4006**	2 pieces 2294 **4016**(1)	1 piece Separate common points 1309 **0001**(2) Linked common points 1309 **0011**(2)	D10 9599 **2010** D20 9599 **2020**
63 A	4P	230/400	9364 **4006**	9384 **4006**					
80 A	4P	230/400	9364 **4008**	9384 **4008**					
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.

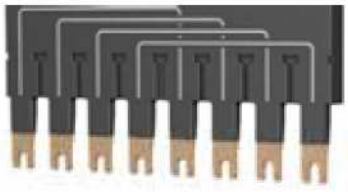
Accessories

Bridging bars

Use

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

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



Voltage sensing and power supply tap

Use

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

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

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

Terminal shrouds

Use

Protection against direct contact with terminals or connecting parts.

Advantages of the terminal shrouds

Perforations 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.

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

(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, 0, 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 **0001**
40 ... 160	Linked common connection	1309 **0011**

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 **2000**
40 ...160	4 P	1359 **0000**

Polycarbonate enclosure

Use

Dedicated to the installation of a three-phase ATyS M, it enables easy integration of a compact transfer switch solution.

Rating (A)	H x W x D (mm)	Reference
40 ... 160	385 x 385 x 193	1309 **9006**

Extension box for polycarbonate enclosure

Use

Combined with the polycarbonate enclosure, the extension unit provides additional space in order to connect 70 mm² cables to the ATyS M with ease.

Rating (A)	Reference
40 ... 160	1309 **9007**

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 **9056**

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 **4121**

Double power supply - DPS

Use

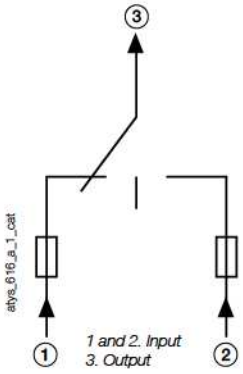
Allows an ATyS d M to be supplied by two 230 VAC, 50/60 Hz networks to have full control in terms of transfer to and from any position with any one of the power supplies available.

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^2.
- 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 **4001**



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

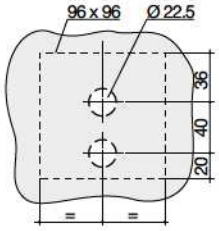
Door mounting

2 holes Ø 22.5.

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

Description of accessories	Reference
D10	9599 **2010**
D20	9599 **2020**

Interfaces are self powered from the ATyS M



Drillings

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 35mm² cables or one 70mm² cable. Compatible with aluminium terminals. Each power connection terminal is provided with separation screens.

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

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**

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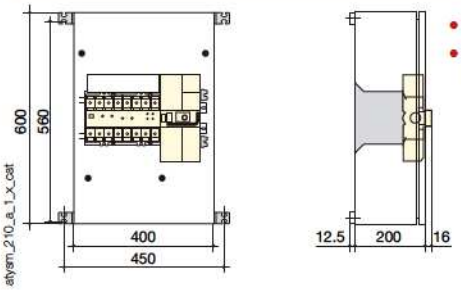
Accessories

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 mm², max. 70 mm².

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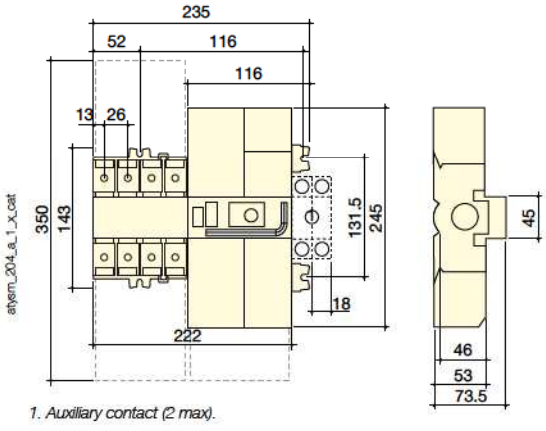
Dimensions

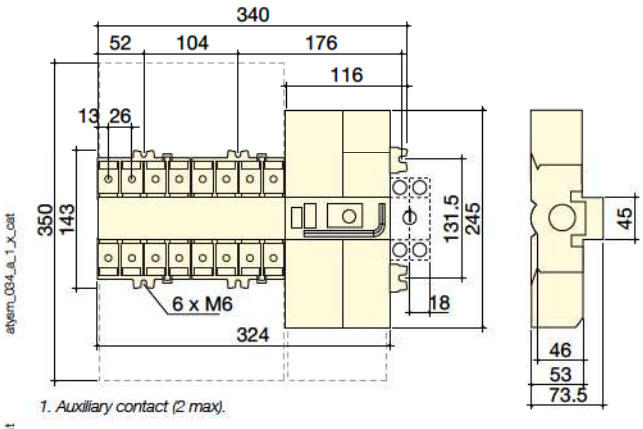
ATyS M 40 to 160 A

Single-phase ATyS M



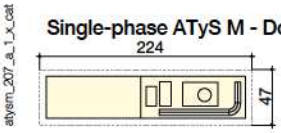
1. Auxiliary contact (2 max).

Three-phase ATyS M

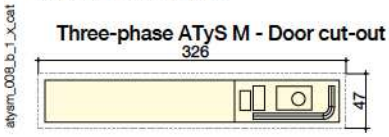


1. Auxiliary contact (2 max).

Single-phase ATyS M - Door cut-out

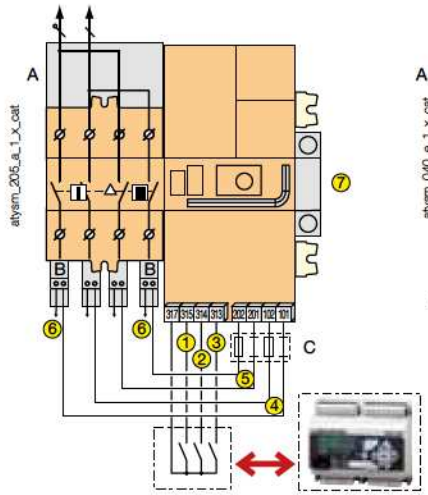


Three-phase ATyS M - Door cut-out

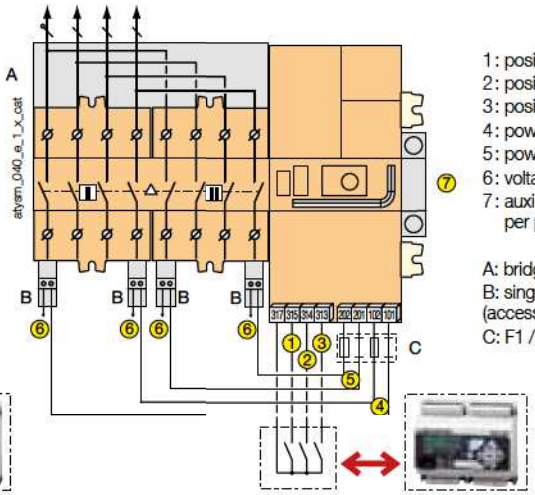


Terminals and connections

Single-phase ATyS d M



Three-phase ATyS d M

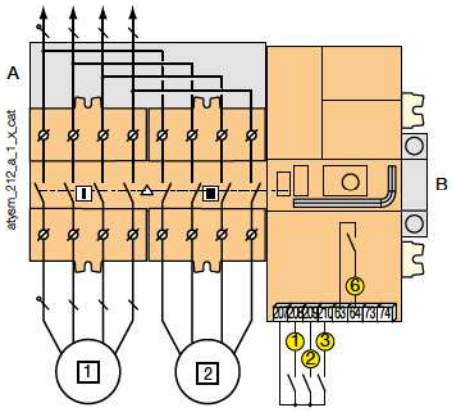


1: position I control
2: position II control
3: position 0 / C control
4: power supply I (230 VAC)
5: power supply II (230 VAC)
6: voltage tap
7: auxiliary contact block - 1 NO/NC contact per position I, 0, II (factory fitted)

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

Terminals and connections

Three-phase ATyS t M

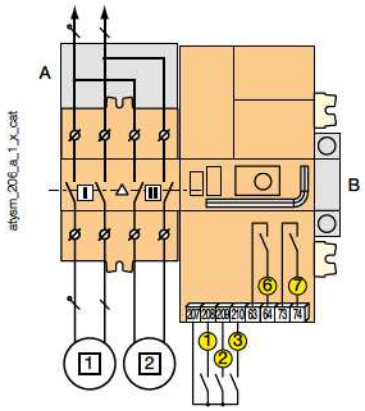


1 preferred source (network)
2 alternate source (network)

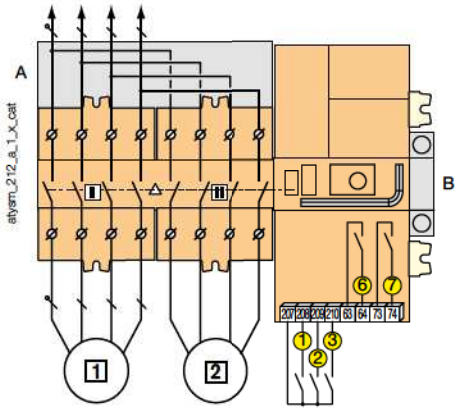
1: position 0 control
2: preferred source selection
3: automatic mode inhibition
6: availability S1 or S2

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

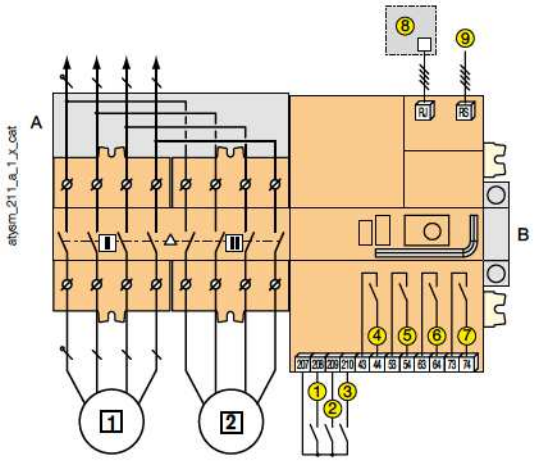


1 preferred source
2 alternate source

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[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**
415 VAC	AC-31 A / AC-31 B	40/40	63/63	80/80	100/100	100/125	100/160
415 VAC	AC-32 A / AC-32 B	40/40	63/63	80/80	100/100	100/125	100/160
415 VAC	AC-33 A / AC-33 B	-/40	-/63	-/80	-/100	-/125	-/125
Rated operational currents I_e (A) according to IEC 60947-3							
Rated voltage	**Utilisation category**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**
415 VAC	AC-20 A / AC-20 B	40/40	63/63	80/80	100/100	125/125	160/160
415 VAC	AC-21 A / AC-21 B	40/40	63/63	80/80	100/100	125/125	160/160
415 VAC	AC-22 A / AC-22 B	40/40	63/63	80/80	100/100	125/125	160/160
415 VAC	AC-23 A / AC-23 B	40/40	63/63	80/80	100/100	125/125	125/160
690 VAC[5]	AC-21 A / AC-21 B	40/40	63/63	80/80	100/100	125/125	160/160
690 VAC[5]	AC-22 A / AC-22 B	40/40	63/63	80/80	80/80	100/125	100/125
690 VAC[5]	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[4]							
Rated short-time withstand current 0.3s I_{cw} (kA rms)		7	7	7	7	7	7
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)[2]		17	17	17	17	17	17
Connection							
Minimum Cu cable cross-section (mm^2)		10	10	10	10	10	10
Maximum Cu cable cross-section (mm^2)		70	70	70	70	70	70
Tightening torque (Nm)		5	5	5	5	5	5
Switching time[5]							
I - 0 or II - 0 (ms)[3]		45	45	45	45	45	45
I - II or II - I (ms) [3]		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_e = 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.