



# Enclosed changeover switches

## Automatic operation

ATSE\* - Automatic equipment from 40 to 3200 A

coff\_366\_a\_1\_cat



Three-phase **ATyS M 6e**  
in steel enclosure

coff\_305\_b\_1\_cat



Three-phase **ATyS 6e**  
in steel enclosure

### The solution for

- > High Rise Buildings.
- > Data centres.
- > Energy production.
- > Healthcare buildings.
- > Banking and Insurances.
- > Transportation (Airports, tunnels...).



### Strong points

- > Dedicated solution.
- > A complete range of configurations.
- > Robust product.
- > Easy integration.

### Conformity to standards

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



### Function

- **Automatic Transfer Switch Equipment (ATSE)** in enclosures provides an autonomous and complete management in the continuity of the power supply to critical loads.
- From 40 to 160 A, enclosures are equipped with ATyS M 6s (2P/4P - Simplified control system) or ATyS M 6e (4P - extended control system), which are modular units enabling optimised integration.
- From 250 to 3200 A, enclosures are equipped with ATyS 6e 4P (extended control system) with a back-to-back switch configuration, providing a more compact device and enabling easier connection.

### Advantages

#### Dedicated solution

The integrated ATSE has been designed and tested to provide a reliable, safe and autonomous solution that is easy to install and commission.

#### A complete range of configurations

The ATSE range is available in polycarbonate or steel enclosures.

\* ATSE: Automatic Transfer Switch Equipment.

## What you need to know - ATSE model

### ATyS M 6s and 6e models

#### Power supply

- ATyS M 6 products are self powered from incoming supplies: 230 VAC (176-288 VAC for the ATyS M 6s and 160-305 VAC for the ATyS M 6e), 50/60 Hz (45-65 Hz).
- For three-phase two versions are available:
  - 230 / 400 VAC with distributed neutral conductor: product is powered between phase and neutral,
  - 127 / 230 VAC with or without distributed neutral conductor: product is powered between 2 phases.
- For single-phase one version is available:
  - 230 VAC networks: product is powered between phase and neutral.
- The neutral conductor can be connected to the left or right side of each switch.
- Automatic detection of neutral position.

#### Configuration

##### ATyS M 6s

###### Single-phase interface



###### Three-phase interface



- Common points between the three-phase and single-phase versions:
  - 2 potentiometers (normal supply loss and return time delays)
  - 2 dip-switches (Pause for 2 seconds in position 0 during switching I<->II; Transformer/Transformer or Transformer/Genset application).
- 4 LEDs (Source availability indicators; "AUT" Automatic mode; Fault).
- 3 inputs for external control (Inhibition of the automatic mode; Remote test on load (Priority selection for Transformer/Transformer); Manual retransfer from the alternate supply to the normal supply).
- 1 NO bi-stable output relay for generator start /stop command (30 VDC / 2 A).
- 1 NC relay for product availability (250 VAC / 0.5 A).
- Specific to the three-phase ATyS M:
  - 2 additional potentiometers (Nominal voltage; Voltage/frequency thresholds)
  - 2 additional dip switches (50 or 60 Hz; network selection)
- Specific to the single-phase ATyS M:
  - PRG button: voltage and nominal frequency auto configuration.

##### ATyS M 6e

###### Three-phase interface



- Applications: Transformer/Genset, Transformer/Transformer, with or without priority.
- Display + keyboard (Device configuration; Displays supply measurements; Test and control mode access).
- LEDs (Product Power On; Source availability indicators; Position indication; "AUT" Automatic mode; TEST/CONTROL Mode; Fault).
- 3 configurable inputs.
- 3 configurable output relays.
- 1 configurable bi-stable output relay for generator start /stop command (30 VDC / 2 A).
- Connection of a remote interface ATyS D10 or D20.
- RS485 MODBUS communication (COM version).

### On ATyS 6e models

#### Operation

##### ATyS 6e



ATyS 6e are equipped with 2 power inputs (same as ATyS 3e): one for supply from power source 1 and the other for supply from power source 2.

They allow the device to be controlled electrically and automatically into any of the 3 positions when either of the 2 supply sources is present.

#### Characteristics

- Single phase or three phase control of networks I and II.
- Independent adjustable over/undervoltage and over/under frequency thresholds: +/- 20 % of the nominal value.
- Adjustable hysteresis thresholds linked to the threshold values.
- Control of phase rotation.
- Measure (3U and frequency on network 1 and 2; Timer for ATyS Normal/Alternate cycle).
- Display + keyboard (adjustment of all threshold parameters; adjustment of MFT, DTT, OMF, MRT, OMR and CDT delays; real time display of measured electrical values; Test functions and position control functions;
- LEDs (Product Power On; Source availability indication; Position indication; "AUT" mode; TEST/CONTROL mode and Fault).
- 1 configurable bi-stable output relay for generator start/stop command. (30 VDC, 5 A, AC1).
- 1 NO fault relay activated in case of changeover position ordered and not reached (30 VDC, 5A, AC1).

# Enclosed changeover switches

## Automatic operation

ATSE\* - Automatic equipment from 40 to 3200 A

### Single-phase **ATyS M 6s** in polycarbonate enclosure



atysm\_251\_a\_1\_cat

#### General characteristics

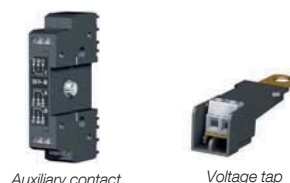
- From 40 to 160 A.
- Network 230 VAC [176-288 VAC] / 50 Hz/60 Hz [45 Hz-65 Hz].
- Protection degree: IP 55, IK08.
- Colour RAL 7035.
- Material: transparent cover, polycarbonate casing.
- Wall mounting: 4 holes on the rear of the enclosure.
- Flame resistant to 650°C.

#### References

##### Single-phase AtyS M 6s model (2P): 230 VAC network

Rating (A)	No. of poles	Reference
40	2 P	1854 2004
63	2 P	1854 2006
80	2 P	1854 2008
100	2 P	1854 2010
125	2 P	1854 2012
160	2 P	1854 2016

#### Accessories



Auxiliary contact

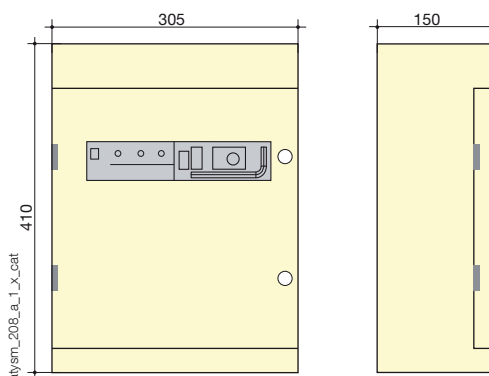
Voltage tap

#### Customer fit

Description	Reference
Auxiliary contact <sup>(1)</sup>	1309 0001
Voltage sensing and power supply tap (2 per reference) <sup>(1)</sup>	1399 4006
Sealable cover <sup>(1)</sup>	1359 2000

<sup>(1)</sup> For more details please refer to the AtyS M section of this catalogue.

#### Dimensions



atysm\_208\_a\_1\_x\_cat

- Weight: 5.5 kg.
- Connection: recommended cable size (Cu): 25 to 70 mm<sup>2</sup> according to rating (maximum size of a cable: 70 mm<sup>2</sup>).

# Enclosed changeover switches

Automatic operation

ATSE\* - Automatic equipment from 40 to 3200 A

## Three-phase ATyS M 6e /6s in steel enclosure



### General characteristics

- From 40 to 160 A.
- Network 230/400 VAC +/-20 % as standard 50 Hz/60 Hz [45 Hz-65 Hz].
- Network 127/230 VAC on request for ATyS M 6s and ATyS M 6e 50 Hz/60 Hz [45 Hz-65 Hz].
- For 4 pole applications as standard and 3 pole applications as an option.
- Integrated bridging bar.
- Protection degree: IP3X or IP54.
- Colour RAL 7035.
- Cable gland plates: top and bottom.
- Materials: steel, thickness 1.2 mm.
- Coating: epoxy polyester powder.
- Wall mounting: 4 wall mounting brackets supplied - not mounted
- Door: hinged, cut-out 327.4x47.6mm (IP3X).
- Locking system: 3 mm double-bar key (key supplied).
- ATyS M 6e version includes RS485 MODBUS communication.

### References

#### Three-phase ATyS M 6s model (4P): 230/400 VAC network

Rating (A)	No. of poles	IP 3X Reference <sup>(1)</sup>	IP 54 Reference <sup>(1)</sup>
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

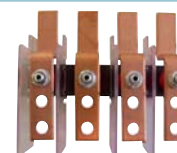
(1) Network 127/230 VAC, on request.

#### Three-phase ATyS M 6e model (4P): 230/400 VAC network

Rating (A)	No. of poles	IP 3X Reference <sup>(1)</sup>	IP 54 Reference <sup>(1)</sup>
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

(1) Network 127/230 VAC, on request.

### Accessories



Power connection terminals

### Customer fit

Description	Reference
Auxiliary contact <sup>(3)</sup>	1309 0001
Voltage sensing and power supply tap (2 per reference) <sup>(3)</sup>	1399 4006
Solid neutral kit <sup>(4)</sup>	1309 9008
Sealable cover <sup>(3)</sup>	1359 0000 <sup>(1)</sup>
Kit IP54 (for IP3X enclosure conversion)	1399 4016
Power connection terminals <sup>(3)</sup>	1399 4017 <sup>(2)</sup>

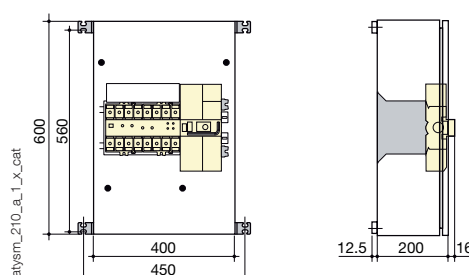
(1) For ATyS M 6s.

(2) For fully equipped product, order the reference 3 times.

(3) For more details please refer to the ATyS M section of this catalogue.

(4) Solid neutral kit provides a maintained connection between both incoming and outgoing neutral terminals, thereby providing an unswitched neutral.

### Dimensions



- Weight (without accessories): 15 kg.
- Connection (without power connection terminals): min. Cu 6 mm<sup>2</sup>, max. 70 mm<sup>2</sup>.

# Enclosed changeover switches

## Automatic operation

ATSE\* - Automatic equipment from 40 to 3200 A

## Three-phase ATyS 6e in steel enclosure



coff\_306\_b\_1\_cat

### General characteristics

- Adapted to mechanical risk and dust hazard.
- Protection degree: IP54.
- Colour: RAL 7035.
- Connection of cables: Top or bottom from 125 to 3200 A, bottom from 400 to 3200 A.
- The auxiliary contacts are wired to a terminal block.
- Material: XC steel, thickness 2 mm.
- Coating: epoxy polyester powder.
- Wall mounting: 4 wall mounting brackets supplied - not mounted (range  $\leq 400$  A), floor standing feet (range  $\geq 630$  A).
- Door: solid with hinges.
- Locking system: 3 mm double-bar key (key supplied).

### References

#### Standard device - 230 VAC

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

### Accessories

#### Factory fitted

Description	Reference
2 <sup>nd</sup> auxiliary contact from 125 to 630 A	1599 9022
2 <sup>nd</sup> auxiliary contact from 800 to 1600 A	1599 9032
Autotransformer 400 / 230 VAC for three-phase networks without neutral	see ATyS pages
Terminal shrouds	see ATyS pages
3 position padlocking (I-O-II)	1599 9003

#### Customer fit

Description	Reference
Solid neutral 125 ... 160 A	1599 1006
Solid neutral 250 A	1599 1025
Solid neutral 400 A	1599 1040
Solid neutral 630 A	1599 1063
Solid neutral 800 A	1599 1080
Solid neutral 1000 A	1599 1100
Solid neutral 1250 A	1599 1120
Solid neutral 1600 A	1599 1160
ATyS D10	1599 2010
ATyS D20	1599 2020
RJ45 connecting cable	1599 2009 <sup>(1)</sup>
RS485 MODBUS communication module	1599 2000
2 inputs / 2 outputs module	1599 2001

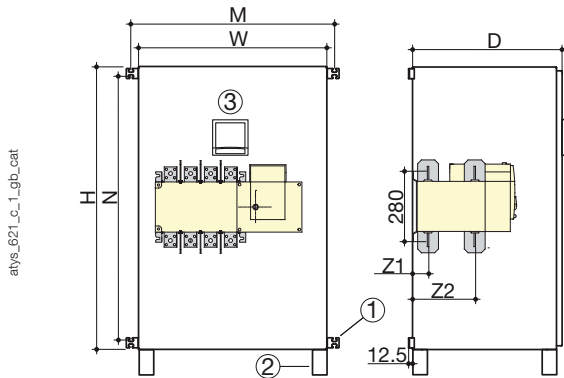
<sup>(1)</sup> Necessary to connect an ATyS D10 or D20.

# Enclosed changeover switches

Automatic operation

ATSE\* - Automatic equipment from 40 to 3200 A

## Dimensions



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

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