



552269B

ATyS DT

Spare switch / Standalone
100 A, 200 A, 260 A, 400 A




More information:
www.socomec.com/operating-instructions
www.socomec.com

Preliminary operations

Check the following upon delivery and after removal of the packaging:

- Packaging and contents are in good condition.
- The product reference corresponds to the order.
- Contents should include:
Qty 1 x ATyS FT
Qty 1 x Terminal screw kit
Quick Start Guide


Warning

 Risk of electrocution, burns or injury to persons and / or damage to equipment.

This Quick Start is intended for personnel trained in the installation and commissioning of this product. For further details refer to the product instruction manual available on the SOCOMEC website.

- This product must always be installed and commissioned by qualified and approved personnel.
- Maintenance and servicing operations should be performed by trained and authorized personnel.
- Do not handle any control or power cables connected to the product when voltage may be, or may become present on the product, directly through the mains or indirectly through external circuits.
- Always use an appropriate voltage detection device to confirm the absence of voltage.
- Ensure that no metal objects are allowed to fall in the cabinet (risk of electrical arcing).

Failure to observe good engineering practices as well as to follow these safety instructions may expose the user and others to serious injury or death.

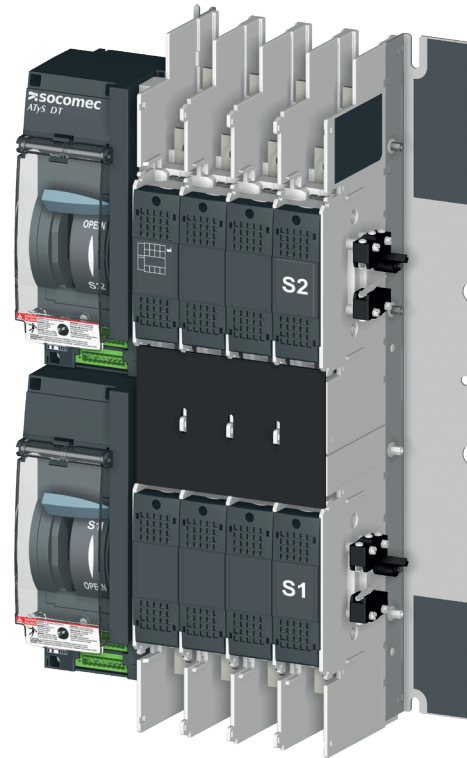
 Risk of damaging the device.
In case the product is dropped or damaged in any way it is recommended to replace the complete product. Installation standards must be respected.

Accessories / Spares

Accessories are not included and must be ordered separately.

- Terminal shrouds (see step 9).
- Additional aux contacts (ref. 96990021).
- Digiware I/O 10 (ref. 48290140).
- Transformer 480 - 240 VAC (SPARTAN SP350MQMJ).
- Controller 24 VDC aux power supply (6W minimum type SELV) mandatory with I/O 10 Modules.
- Power terminal lugs (see step 4).
- ATyS C66 Controller (ref. 16000066).
- Connector kit (ref. 16090002).
- Controller Nema 3R gasket (ref. 16090001).
- Controller mounting screws (ref. 16090004).
- Controller mounting feet (ref. 16090005).
- Cable harness without transformer (ref. 98974000).
- Cable harness with transformer (ref. 98974000).

For further details refer to the product instruction manual under chapter "Spares and Accessories".



Reference configurator

N° of poles
3: 3P
4: 4P

Rating
010: 100 A
020: 200 A
026: 260 A
040: 400 A

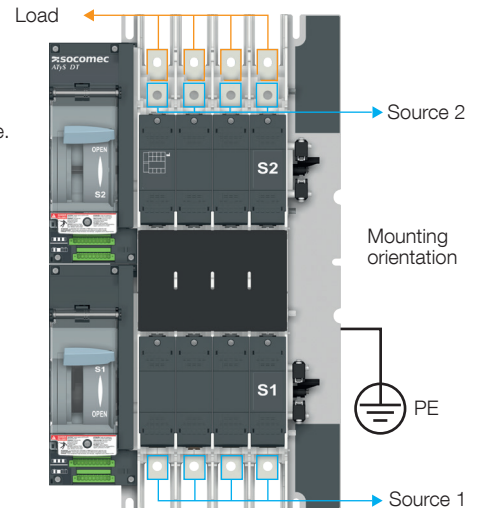
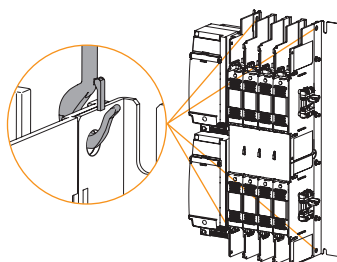
9 8 0 X X XXX

0: Without solid neutral
1: With solid neutral

1 Switch installation



Ensure that the product is installed on a flat rigid surface of a Types 1, 3R, 12 and/or 12k enclosure. Do not lift using power contacts, use the holes on the side of the metal mounting feet.

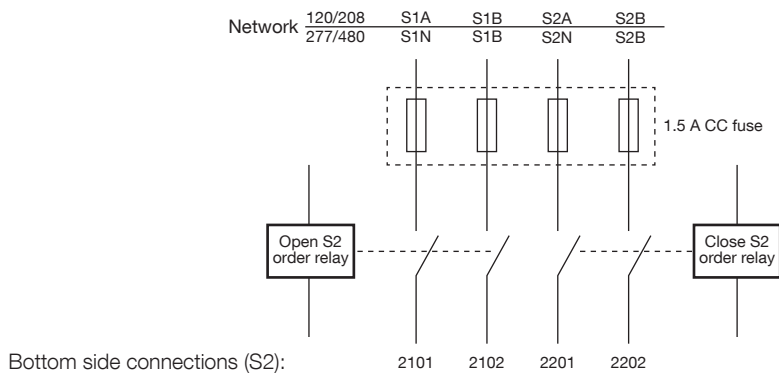
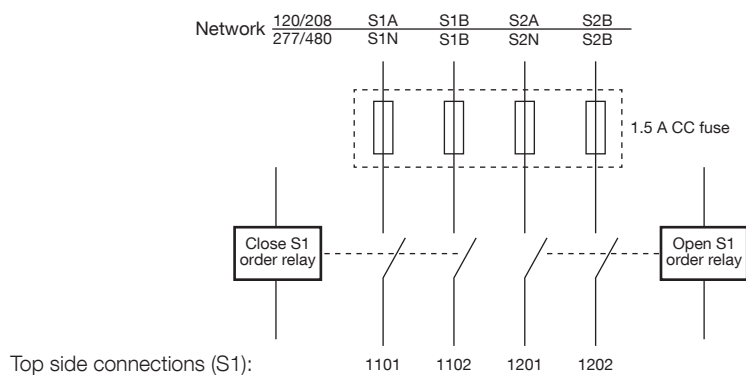


2 Power supply and actuator connections

This chapter contains information to build the cable harness.

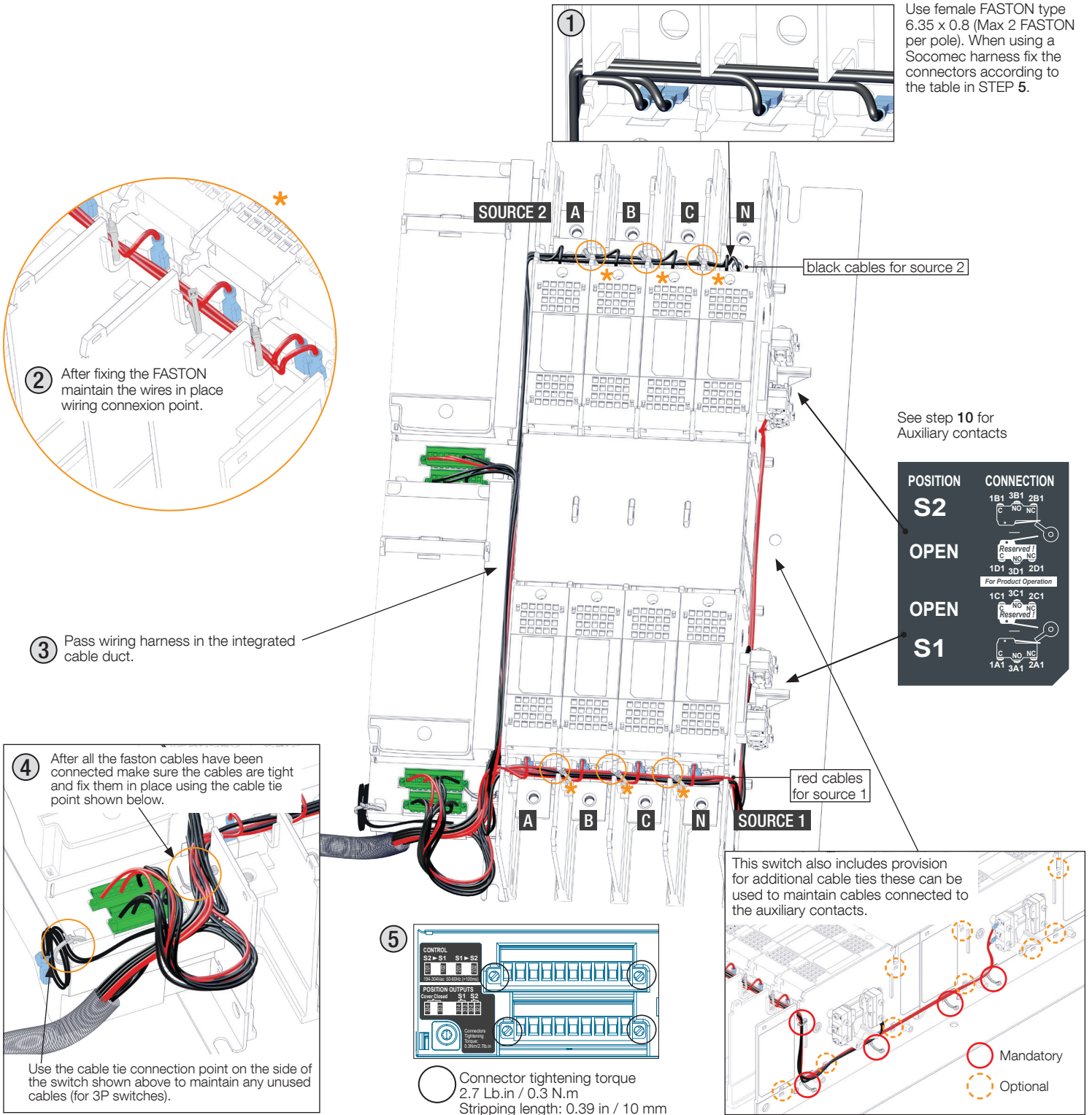
SWITCH	type	Terminal N°	Description	Characteristics	Recommended cross section
S1	Switch Power input	1101-1102	Order switch to position S1	194-304 VAC 8A for at least 100ms 50/60Hz	17-14 AWG 1-2.5 mm ² Length : min: 39in / max: 118in min.: 1000mm max: 3000mm
		1201-1202	Order switch to OPEN Switch S1		
	Switch Signalization output	1333-1334	Contact closed if cover of switch S1 is closed	Potential free dry contacts - for use with controller. 8A, 250 VAC.	
		1313-1314	Contact closed if the switch is in position S1		
S2	Switch Power input	2101-2102	Order switch to OPEN S2	194-304 VAC 8A for at least 100ms 50/60Hz	
		2201-2202	Order switch to position S2		
	Switch Signalization output	2333-2334	Contact closed if cover of switch S2 is closed	Potential free dry contacts - for use with controller. 8A, 250 VAC.	
		2313-2314	Contact closed if the switch S2 is OPEN		
		2323-2324	Contact closed if the switch is in position S2		

! WARNING: Each power input (1101/1102/1201/1202/2101/2102/2201/2202) must be kept open with individual contacts. Never close all four contacts of the same switch simultaneously. See schematic below:



3 Mouting the cable harness on the switch

This switch includes provisions for connecting and securing cables these provision must be used with Socomec or external harnesses.

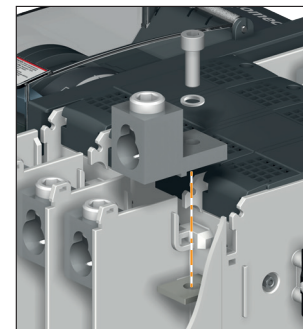


⚠ Wires must not be in contact with active voltage points. In order to do so any unused or loose cables must be tensed then fixed on a non conductive part of the transfer switch (use cable tie fixation points as shown in the images above).

4 Installing terminal lugs (optional accessory)

Use terminal screws and washers supplied with the ATSE

Product Rating (A)	Designation	Ref. lugs	Quantity per reference	Openings per lug	Size / Section (AWG)		Pressure screw torque				Bolt torque			in mm		
					min.	max.	lb.in	Nm	Size in	lb.in	Nm	Size	in	mm		
100A	IlSCO D0957	Contact us		1	14	1/0	50	5,65	⊖	8	70.8	8	⊖	5mm	0.625	15,9
200A	IlSCO D2831	Contact us		1	6	250 KCMIL	275	31,1	⊖	5/16	70.8	8	⊖	5mm	1	25,4
100-200 A	CMC LA-300R	39542020	2	1	6	300 KCMIL	275	31,1	⊖	5/16	70.8	8	⊖	5mm	1.12	28,4
		39543020	3													
		39544020	4													
260-400 A	CMC LA-630R	39542040	2	1	4	600 KCMIL	550	62,1	⊖	1/2	310	35	⊖	8mm	1.79	45,7
		39543040	3													
		39544040	4													
260-400 A	IlSCO D3096	Contact us		1	4	600 KCMIL	600	67,8	⊖	1/2	310	35	⊖	8mm	1.79	45,7



Mount the load terminal lugs on the switch terminals before mounting source 2 terminal lugs.

Power cable connections : For 100A use 1/0 AWG / For 200A use 250 KCMIL / For 260A use 300 Kcmil / For 400A use 600 Kcmil copper cables.

5 Mounting & connecting the cable harness (not included)

For details on the Socomec cable harness wiring diagram and integration see Cable harness Quickstart guide ref 551401.

Cable harness without transformer (ref. **98964000**) delivered with **98AX XXXX** products.

Cable harness for connections with transformer (ref. **98974000**) delivered with **988X XXXX** products.

Note: transformers are not delivered with the product.

6 Connection of harness on the switch (Socomec harness only)

Connect the faston on the switch connexion according to your network and the table below:

Network type	type	SOURCE	RTSE Faston connections				AUXILIARY CONTACT				Voltage Transformer			
											480 VAC		240 VAC	
			A	B	C	N	1C1	3C1	1D1	3D1	Primary		Secondary	
										H1	H4	X1	X4	
120/208 VAC	3P+N / 4P	S2	S2A & 2201	S2B	S2C	S2N			1D1	3D1				
		S1	S1A & 1102	S1B	S1C	S1N	1C1	3C1						
208 VAC	3P	S2	S2A & 2201	S2B	S2C	- ⁽¹⁾			1D1	3D1				
		S1	S1A & 1102	S1B	S1C	- ⁽¹⁾	1C1	3C1						
277/480 VAC	3P+N / 4P	S2	S2A	S2B	S2C	S2N & 2201			1D1	3D1				
		S1	S1A	S1B	S1C	S1N & 1102	1C1	3C1						
480 VAC + Transformer	3P	S2	2xS2A	2xS2B	S2C	-			1D1	3D1	T2A	T2B	T2A'	T2B'
		S1	2xS1A	2xS1B	S1C	-	1C1	3C1			T1A	T1B	T1A'	T1B'

(1) Cables which are not used are to be fastened as shown in image 4 of step 2B.

See full instruction manual for cable recommendation without Socomec harness.

7 Operational limits

Operating voltage @ 50/60 (+/- 10%) Hz		
Network	Minimum Coil Operating voltage (VAC)	Maximum Coil Operating voltage (VAC)
277/480 VAC	194 (Ph/N)	304 (Ph/N)
120/208 VAC	194 (Ph/Ph)	304 (Ph/Ph)
120/240 VAC	194 (Ph/Ph)	304 (Ph/Ph)
480 VAC with transformer	194 (Ph/N)	304 (Ph/N)

Operating temperature	
Switch and Transformer	
32 to 131°F 0 to +55°C	

Operating times ⁽¹⁾					
Rating	Transfer description	Minimum transfer time (ms) (Normal to alternate)	Minimum transfer time (ms) (Alternate to normal)	Maximum transfer time (ms) (Normal to alternate)	Maximum transfer time (ms) (Alternate to normal)
100-200 A	Contact transfer time ⁽²⁾	48	41	61	54
260-400 A	Contact transfer time ⁽²⁾	60	54	90	64

(1) All times measured without load and at 240 VAC at ambient temperature, actual times may vary depending on network and load.

(2) Time for which load is disconnected from both source 1 and source 2 with both sources available.

8 Manual operation (for maintenance purposes only) Instructions for manual, non-electric, offload operations for service

⚠ WARNING! More than one live circuit! Disconnect all sources of supply before servicing and/or before using the manual operation.

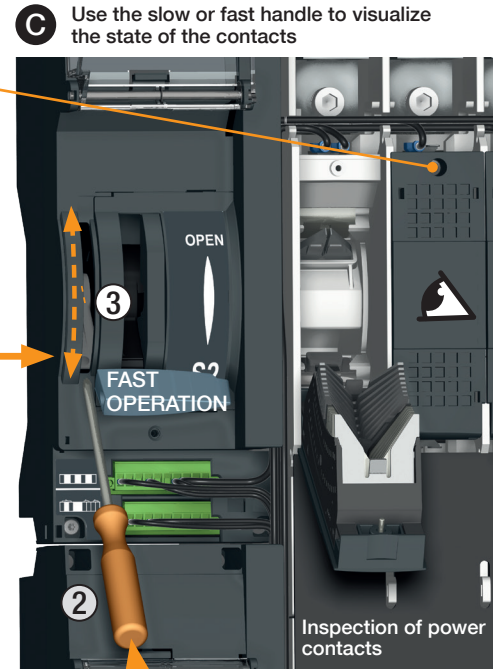


A Unscrew handle cover and arc chutes cover

⚠ WARNING!
When the cover is open the coil actuator is disconnected. This information can be sent remotely to the controller using dry contacts 333-334.

Operation order
A → **B** → **C**
After maintenance operations are done screw back the covers:
Tightening torque
17.7 lb.in / 2 N.m / PH2

For inspection use a standard tool as shown to operate (not included).



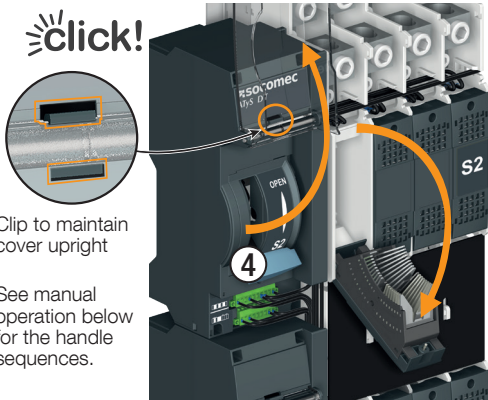
C Use the slow or fast handle to visualize the state of the contacts

1
Slide cover to access service handle hole.

3
FAST OPERATION

Inspection of power contacts

0.25 in / 6mm diam max.
SLOW OPERATION



B Open the cover and click in place and open the arc chute

Recommendation : carry out one offload manual operation with handle **4** (FAST OPERATION) before putting the switch back in service.

Reverse the procedure to close. Ensure that all is closed properly before putting back in service. In case any part of the ATyS DT switch is found to be damaged in any way, replace the complete switch.

Manual operation

Connecting to source 2:
To connect the load to Source 2 (S2) position both handle to the bottom position (top handle to S2, bottom handle to OPEN).

Connecting to source 1:
To connect the load to Source 1 (S1) position both handle towards the top (top handle to OPEN, bottom handle to S1).

Connecting to center OFF:
To connect the load to center off (OPEN) position the top switch handle to the top position and the bottom switch handle to the bottom position.

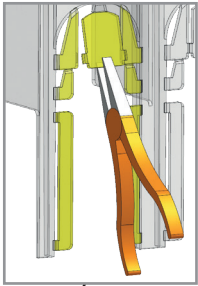


Interlocking mechanism:
The mechanical interlock ensures that S1 and S2 are mutually exclusive and inhibits one switch from being closed unless the other switch is open.

⚠ Warning! When manually switching always place one of the two handles in the OPEN position BEFORE switching the second handle.

9 Installing power terminal shrouds (optional accessories)

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

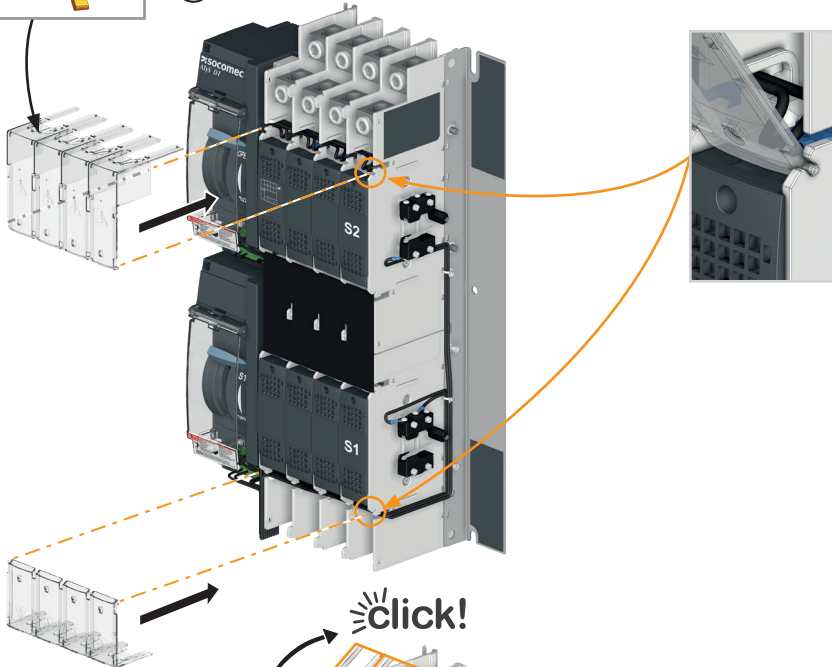


- ① For 250, 300 & 600 KCMIL (200, 260 400A) break off all removable parts (highlighted on the picture). For 1/0 & (100A) do not remove any parts.

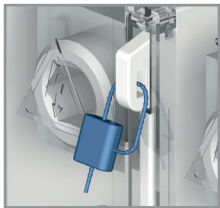
	No. of poles	Reference*
100-200A	3P	96983020
	4P/3P+N	96984020
260-400A	3P	96983040
	4P/3P+N	96984040

* Refs: top and bottom

- ② Fix the terminal shrouds in place and push back

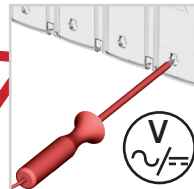


- ③ Push back to click in place.



Terminal shrouds can be locked in place using locking points

Terminal shrouds contain provisions for voltage sensing



PERIODIC MAINTENANCE

The ATyS DT shall be maintained in accordance with industry standards and as per instructions in the ATyS DT instruction sheet.

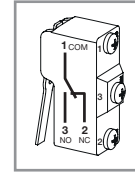
As per NFPA 110 requirements for emergency and standby power systems the ATyS DT should be inspected and should be exercised under load at least monthly.

Refer to step 7 for instructions for manual, "non-electric", offload operations for service.

⚠ WARNING! More than one live circuit!
Disconnect all sources of supply before servicing and/or before using the manual operation.

10 Additional auxiliary contacts

The ATyS DT switch has 4 pre-installed auxiliary contacts, two of which are reserved for use for harness. This kit includes two additional contacts it is therefore recommended to order two sets of this kit for ATyS DT switches.



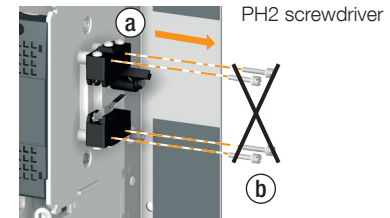
Terminal tightening torque
7.9 lb.in / 0.9 Nm

Auxiliary contact electrical characteristics

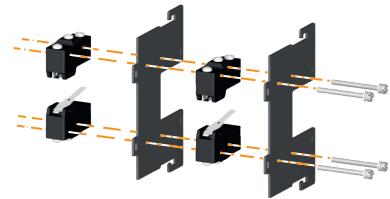
Rated current (125-480 VAC)	22 A
Rated current (125 VDC)	0.5A
Rated current (250 VDC)	0.25 A
Rated horse power up to 250 VAC	½ HP
Rated horse power up to 480 VAC	¼ HP
Recommended wire section for 22A	10 AWG 4 mm ²

⚠ Use the correct protection according to your auxiliary contact circuit and your load

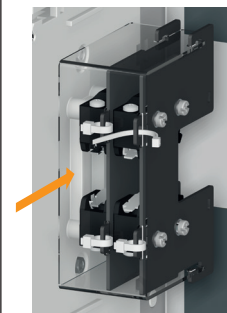
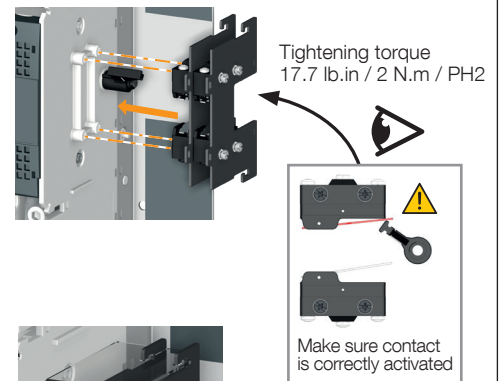
- ① Remove pre-installed auxiliary contact



- ② Assemble contacts with parts from kit as shown below



- ③ Assemble optional aux contact and pre-installed aux contact together



- ④ Place the transparent plastic piece to cover the auxiliary contacts and lock in place in order to protect from direct contacts.

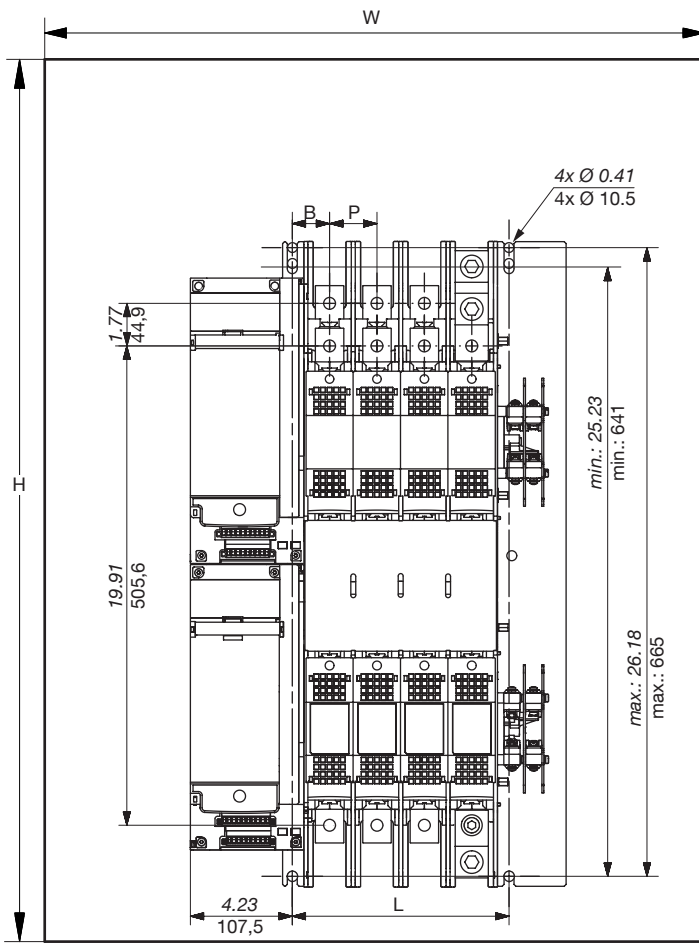
Ref : 96990021

Product dimensions

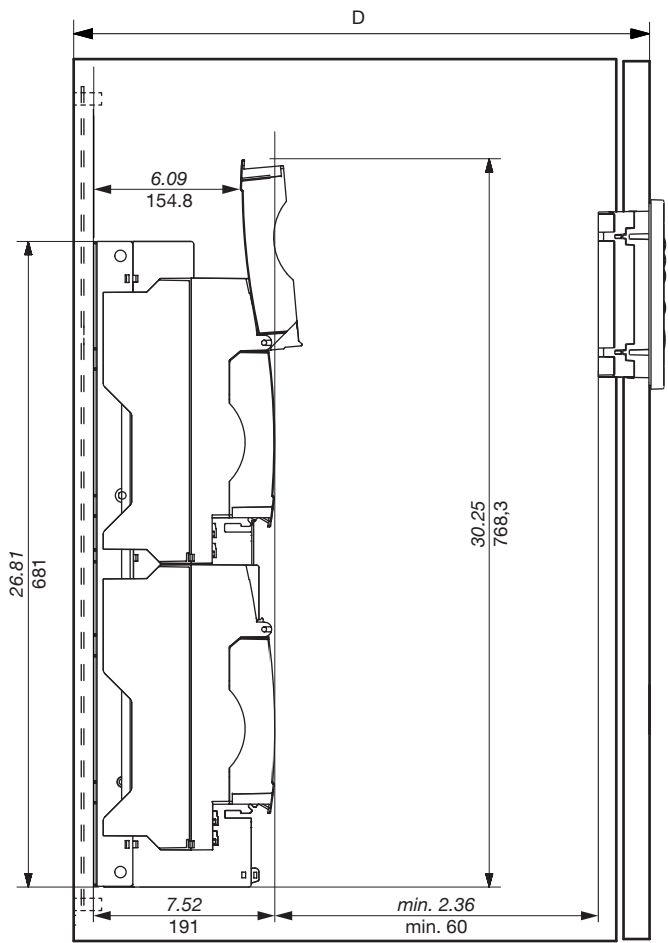
Switch & minimum enclosure size dimensions (4th pole represented with lugs installed)

Dual Dimensions
in/mm

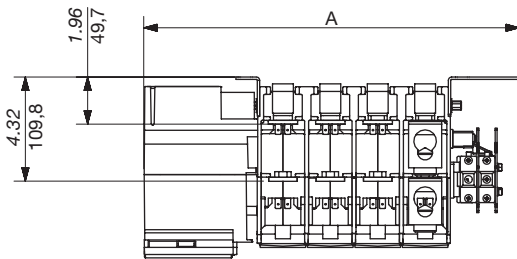
Front view



Side view



Switch top view



		Switch dimensions								Minimum enclosure size					
		A		B		L		P		H		W		D	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
100-200A	3P	11.85	301,30	1.25	31,80	5.49	133,70	1.38	35	36	915	16	406	12	305
	3P+N/ 4P	13.24	336,30	1.25	31,80	6.60	168,70	1.38	35	36	915	16	406	12	305
260-400A	3P	13.63	346,30	1.55	39,30	7	178,60	1.97	50	60	1524	24	610	12	305
	3P+N/ 4P	15.60	396,30	1.55	39,30	8.97	228,60	1.97	50	60	1524	24	610	12	305

