

### PREMIUM PC ATS - 40A UP TO 3200A

#### Description

The Mertech Premium PC Automatic Transfer Switches are the ideal solution for transferring power from the Mains to a Standby supply or from Network to Network supplies. With Mains and Standby three phase monitoring plus full electrical and mechanical interlocking you can be confident of switching supply under fault conditions at any time. With sizes from 40 Amps all the way up to 3200 Amp using motorised changeover switches, we can cover the requirements of all your likely projects. With full conformity to the latest IEC 60947-6-1 you can confidently specify the Mertech range of Automatic Transfer Switches.

#### Designed for

- Health-care buildings
- Fire pump installations
- Life safety schemes
- Data centres
- Generator manufacturers

#### Features

- Multiple programmable parameters including delay timers, potentiometers for voltage and frequency thresholds.
- Automatic or Manual operation availability.
- Padlockable.
- Switching between Line to line, line to generator and OFF position selection.

#### Details

Supply Voltage	400V AC, 3P 4W, 50Hz
No. Phases	3 Phase 4 Wire
System Earth	Solidly Earthed
Location	Switchroom
Atmosphere	Indoor, fine particles of dust.
Ambient Temp	Max +40deg C Min + 5deg C
Enclosure Protection	IP 65 to IEC60529
ATS Standard	IEC 60947-6-1



Premium PC Automatic Transfer Switch

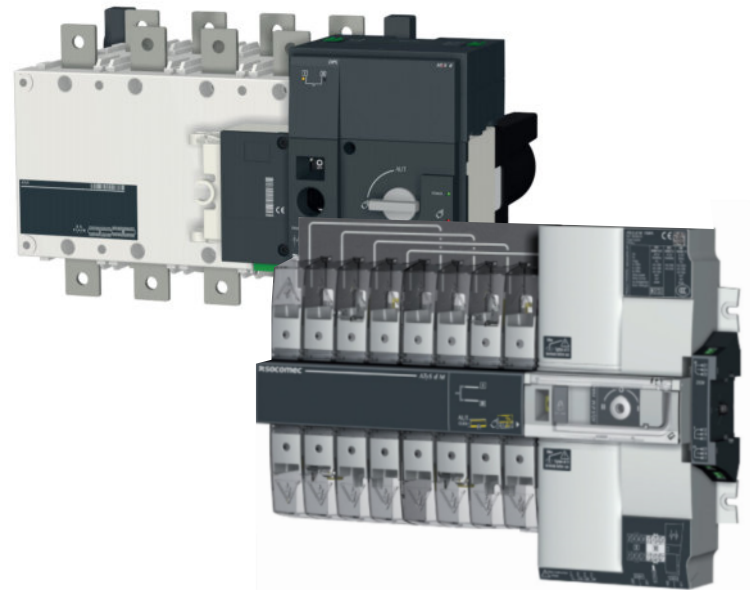
Definition	Life Safety
Type	ATS
Series	P-PC
Programmable	✓
MODBUS comms via RS485	✓
3 Phase Mains Sensing	✓
3 Phase Standby Sensing	✓
ATS Control Module	✓
Auto and Manual ATS switching	✓
IEC 60947-6-1	✓
IP65 to IEC60529	✓
Incoming Isolator Option	✓

**PREMIUM PC ATS - 40A UP TO 3200A**

**Product presentation**

This quick-acting transfer switch incorporates:

1. 2 mechanically interlocked switches.
2. A quick-acting electric control unit enabling electric or manual system operation.
3. Electrical specifications compliant with product standards, and a version identification.
4. Changeover switch wiring identification.
5. Control connections.



**Specifications and advantages**

1 - Power section:

A fully integrated and interlocked transfer switch, with high electrical performance offering microprocessor control and monitoring.

2 - Operation:

A flexible operating mechanism enabling quick motorised transfer in automatic mode or locally in manual mode for emergency operations. Features a locking device to ensure (in position zero) a secured isolation of the load (padlocked).

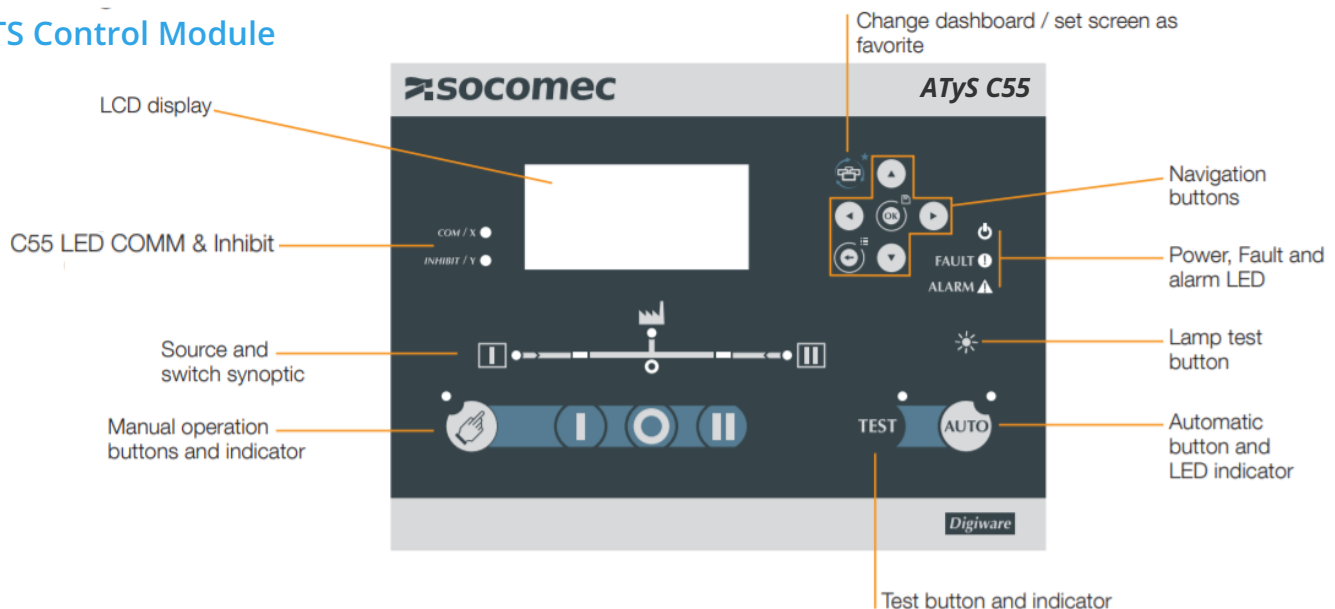
3 - Synchronised neutral opening & closing:

All contacts, including the neutral, are fitted on the same moving contact bar which ensures neutral referencing & avoids surges. This is SOCOMEC's solution to the overlapping neutral "requirement".

**Supply types**

The power supply of the switching device is required to be 220 VAC -20% to 240VAC +20% at a frequency of 50/60 Hz and has been developed so as to meet most network configurations. Measurement accuracy: Frequency: 1 % - Voltage: 1 %

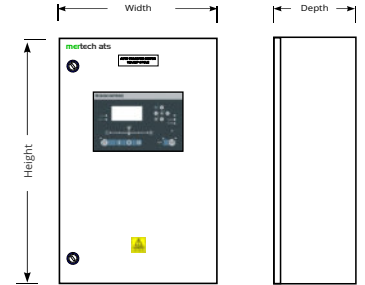
**ATS Control Module**



## PREMIUM PC ATS - 40A UP TO 160A

### Characteristics

ATS Switching Device Details		40 A	63 A	80 A	100 A	125 A	160 A
Dimensions (mm)							
Height		600	600	600	600	600	600
Width		500	500	500	500	500	500
Depth		210	210	210	210	210	210
<b>Thermal current I<sub>n</sub> at 40°C</b>		<b>40 A</b>	<b>63 A</b>	<b>80 A</b>	<b>100 A</b>	<b>125 A</b>	<b>160 A</b>
Rated insulation voltage U <sub>i</sub> (V) (power circuit)		800	800	800	800	800	800
Rated impulse withstand voltage U <sub>imn</sub> (kV) (power circuit)		6	6	6	6	6	6
Rated insulation voltage U <sub>i</sub> (V) (control circuit)		300	300	300	300	300	300
Rated impulse withstand voltage U <sub>imn</sub> (kV) (control circuit) - ATyS d M		4	4	4	4	4	4
<b>Rated operational currents I<sub>n</sub> (A) according to IEC 60947-6-1</b>							
<b>Rated voltage</b>	<b>Utilisation category</b>	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
<b>Rated operational currents I<sub>n</sub> (A) according to IEC 60947-3</b>							
<b>Rated voltage</b>	<b>Utilisation category</b>	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
<b>Current rated as conditional short-circuit with fuse gG DIN</b>							
Conditional short-circuit current (kA rms)		50	50	50	50	50	40
Associated fuse rating (A)		40	63	80	100	125	160
<b>Current rated as conditional short-circuit with any brand of circuit breaker that ensures tripping in less than 300ms</b>							
Current rated as short-time withstand I <sub>cw</sub> 0.3s (kA rms)		7	7	7	7	7	7
<b>Short-circuit operation</b>							
Current rated as short-time withstand I <sub>cw</sub> 1s (kA rms) <sup>(2)</sup>		4	4	4	4	4	4
Rated peak withstand current (kA peak) <sup>(2)</sup>		17	17	17	17	17	17
<b>Connection</b>							
Min. connection cross-section		10	10	10	10	10	10
Minimum Cu cable cross-section (mm) <sup>2</sup>		70	70	70	70	70	70
Tightening torque (Nm)		5	5	5	5	5	5
<b>Switching time<sup>(5)</sup></b>							
I - 0 or II - 0, following a command (ms)		45	45	45	45	45	45
Transfer time I - II or II - I, following a command (ms)		180	180	180	180	180	180
I-0 or II-0, after outage (s)		1.2	1.2	1.2	1.2	1.2	1.2
I-II or II-I transfer time, after outage (s)		1.4	1.4	1.4	1.4	1.4	1.4
Contact transfer time ("black-out") I-II min. (ms) <sup>(3)</sup>		150	150	150	150	150	150
<b>Power supply</b>							
Min./max. supply (VAC) (ATyS d M, t M and g M)		176/288	176/288	176/288	176/288	176/288	176/288
Min./max. supply (VAC) (ATyS p M)		160/305	160/305	160/305	160/305	160/305	160/305
<b>Control supply power</b>							
Rated power (VA)		6	6	6	6	6	6
Max. intensity at 230 VAC (A) - ATyS d M, t M and g M		30	30	30	30	30	30
Max. intensity at 230 VAC (A) - ATyS p M		20	20	20	20	20	20



Dimensions  
For dimensions with incoming Isolators please call the office



ATS Motorised Switching Device

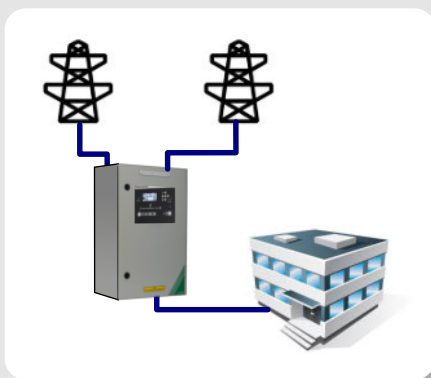
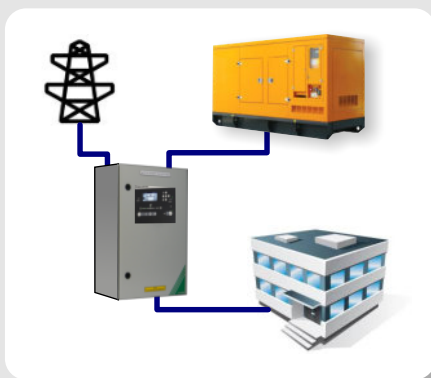


Door Mounted ATS Controller

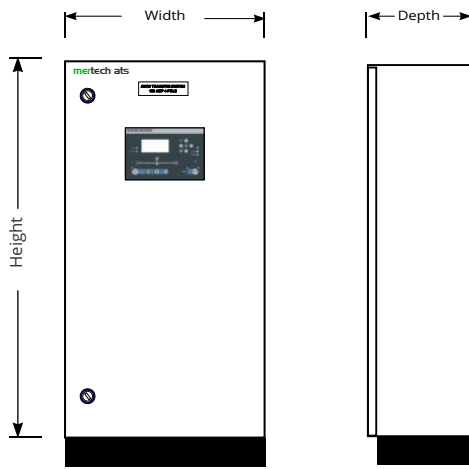
1) Category with index A = frequent operation / Category with index B = infrequent operation  
2) For a rated operational voltage U<sub>e</sub> = 400 VAC. (3) 5% tolerance.  
3) 5% tolerance.

4) Value for coordination with any circuit breaker that ensures tripping in less than 0.3s. For coordination with specific circuit-breaker references, higher short-circuit current values are available. Please contact us. rated voltage - excluding time delays, where applicable.

5) At rated voltage - excluding time delays, where applicable.

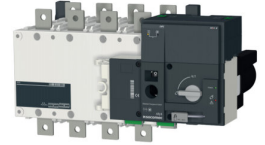


### PREMIUM PC ATS - 200A UP TO 3200A



### Dimensions

Rating (A)	CU Cable size (mm <sup>2</sup> )	H (mm)	W (mm)	D (mm)	H1 (mm)
>630	2x185	1200	600	400	100
800	2x240	1200	800	600	100
1000	4 x 150	1500	800	600	100
1250	4x185	1500	800	600	100
1600	4 x 240	2000	800	600	100
2000	8x150	2000	1000	800	100
2500	8 x 185	2000	1000	800	100
3200	8x240	2000	1000	800	100



Motorised Switching Device



Door Mounted ATS Controller

For dimensions with incoming isolators please call the office

### Characteristics

Thermal current I <sub>n</sub> to 40°C	250 A	315 A	400 A	500 A	630 A	800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A
Frame size	B4	B4	B4	B5	B5	B6	B6	B6	B7	B8	B8	B8
Rated insulation voltage i <sub>i</sub> (V) (power circuit)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage (V) <sub>imp</sub> (kV) (power circuit)	12	12	12	12	12	12	12	12	12	12	12	12
Rated insulation voltage i <sub>u</sub> (V) (control circuit)	300	300	300	300	300	300	300	300	300	300	300	300
Rated impulse withstand voltage (V) <sub>imp</sub> (kV) (control circuit)	4	4	4	4	4	4	4	4	4	4	4	4
<b>Rated operational currents I<sub>n</sub> (A) according to IEC 60947-3</b>												
Rated voltage Utilisation category	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)
415 VAC AC-21 A / AC-21 B	250/250	315/315	400/400	500/500	630/630	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
415 VAC AC-22 A / AC-22 B	250/250	315/315	400/400	500/500	630/630	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
415 VAC AC-23 A / AC-23 B	200/200	315/315	400/400	500/500	500 /630	800/800	1000/1000	1250/1250	1250/1250	-/1600	-/1600	-/1600
<b>Rated operational currents I<sub>n</sub> (A) according to IEC 60947-6-1</b>												
Rated voltage Utilisation category												
415 VAC AC-31 B	250	315	400	500	630	800	1000	1250	1600	2000	2500	3200
415 VAC AC-32 B	200	315	400	500	500	800	1000	1250	1250	2000	2000	2000
415 VAC AC-33 B	200	200	200	400	400	800	1000	1000	1000	1250	1250	1250
<b>Current rated as conditional short-circuit with fuse gG DIN, according to IEC 60947-3</b>												
Prospective fuse protected short-circuit withstand at 415 VAC(6)	50	50	50	50	50	50	50	100	100			
Prospective fuse protected short-circuit withstand at 690 VAC(kA rms)	50	50	50	50	50	50	50	50	50			
Associated fuse rating (A)	250	315	400	500	630	800	1000	1250	2x800			
<b>Short-circuit withstand without protection as per IEC 60947-3</b>												
Rated short-time withstand current 0.3s I <sub>sw</sub> at 415 VAC (kA rms)	15 (4)	15 (4)	15 (4)	17 (4)	17 (4)	64	64	64	78	78	78	78
Rated short-time withstand current 1s I <sub>sw</sub> at 415 VAC (kA rms)	8 (4)	8 (4)	8 (4)	11 (4)	10 (4)	35	35	35	50	50	50	50
Rated peak withstand current at 415 VAC (kA peak)	30	30	30	45	45	55	55	80	110	120	120	120
<b>Short-circuit withstand without protection as per IEC 60947-6-1</b>												
Rated short-time withstand current 300 ms I <sub>sw</sub> at 415 VAC (kA rms)	10	10	10									
Rated short-time withstand current 600 ms I <sub>sw</sub> at 415 VAC (kA rms)				10	12.6	20	20	25	32	50	50	50
<b>Switching time (rated voltage, after receiving command)</b>												
Transfer time I-II or II-I (s)	0.9	0.9	0.9	0.95	0.95	2.8	2.8	2.8	2.9	2.8	2.8	2.8
I-0 or 0-II (s)	0.5	0.5	0.5	0.55	0.55	1.4	1.4	1.4	1.4	1.8	1.8	1.8
Contact transfer time ("black-out" I-II) minimum (s)	0.4	0.4	0.4	0.4	0.4	1.4	1.4	1.4	1.5	1	1	1

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

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

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

(4) V alues given at 690 VAC.

3-pole device with 2 pole in series for the +an 1 pole for the -