

PREMIUM PC ATS DISTRIBUTION BOARD - 40A UP TO 160A

Description

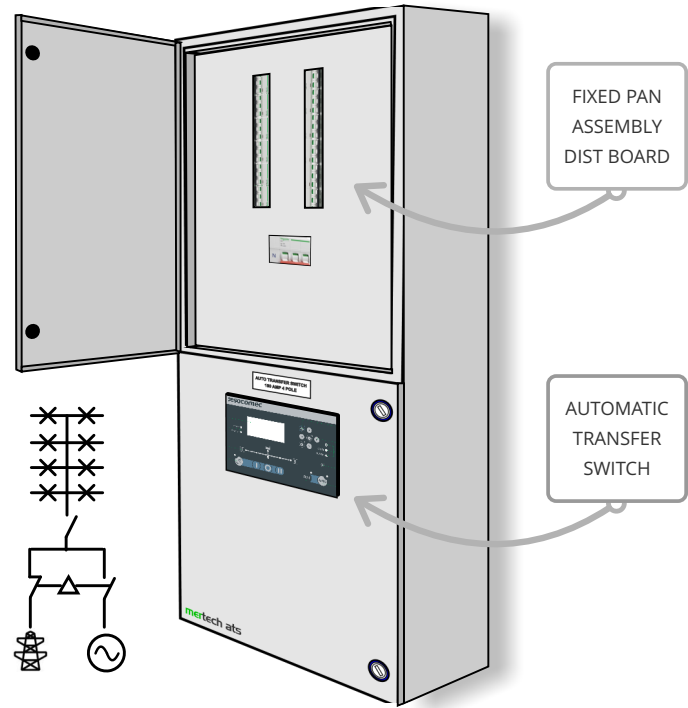
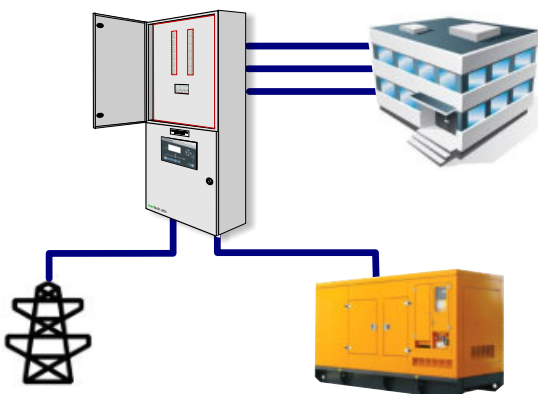
The Mertech Premium PC Automatic Transfer Switches with Distribution Board are the ideal solution for transferring power from the Mains to a Standby supply and distributing it to the local loads. With Mains and Standby three phase monitoring plus full electrical and mechanical interlocking you can be confident of switching supply under fault conditions at any time. Sizes from 4P 40 Amps up to 160 Amp using motorised changeover switches and up to 24 Way TPN MCB distribution. With full conformity to the latest IEC 60947-6-1 and IEC 61439-3 you can confidently specify the Mertech range of ATS Distribution Boards.

Features

- ATS Multiple programmable parameters including delay timers, potentiometers for voltage and frequency thresholds.
- ATS Automatic or Manual operation availability.
- Fixed Pan Assembly or Customised Control Gear.
- 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
Cable Entry	Incoming Bottom Outgoing Top
Location	Switchroom - Riser Cupboard
Atmosphere	Indoor, fine particles of dust.
Ambient Temp	Max +40deg C Min + 5deg C



Premium PC Automatic Transfer Switch with Fixed Pan Assembly Distribution Board

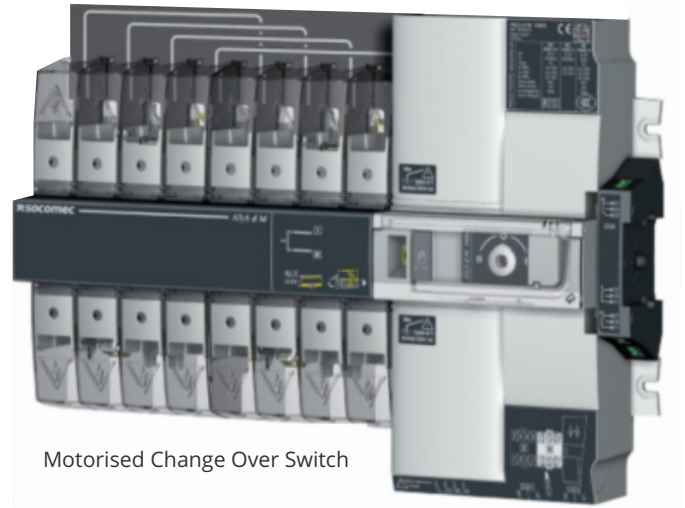
Definition	Premium
Type	ATS-DB
Series	P-PC-DB
Auto Transfer Switch	
ATS Programmable	✓
MODBUS comms via RS485	✓
3 Phase Mains Sensing	✓
3 Phase Standby Sensing	✓
Door Mtd ATS Control Module	✓
Auto and Manual ATS switching	✓
BS EN 60947-6-1	✓
BS EN 60947-3	✓
IP65 to IEC60529	✓
Distribution Board	
MCB Pan Assembly or Custom	✓
Fully Shrouded Neutral	✓
BS EN 61439-3 to 25kA isc	✓
BS EN 60947-2	✓

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ATS Product presentation

This quick-acting Socomec 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.



Motorised Change Over Switch

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:

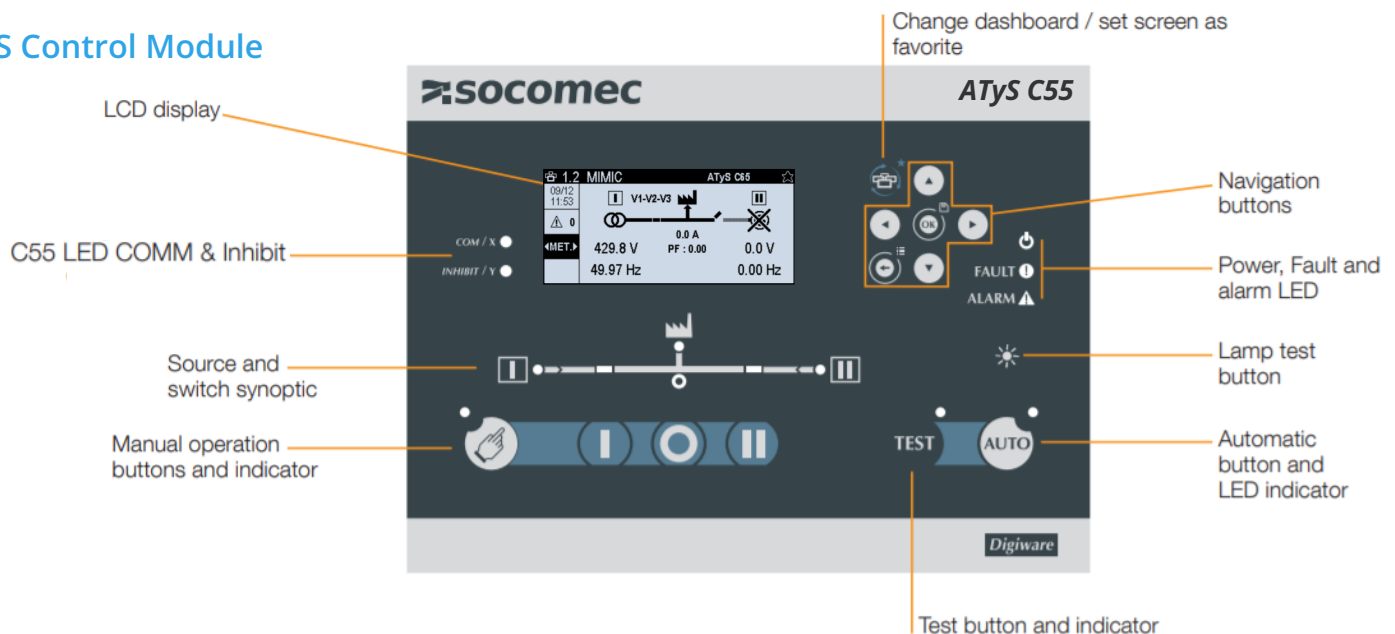
All contacts, including the neutral, are fitted on the same moving contact bar which ensures neutral referencing & avoids surges. This is SOCOMEC's solution to the overlapping neutral "requirement".

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

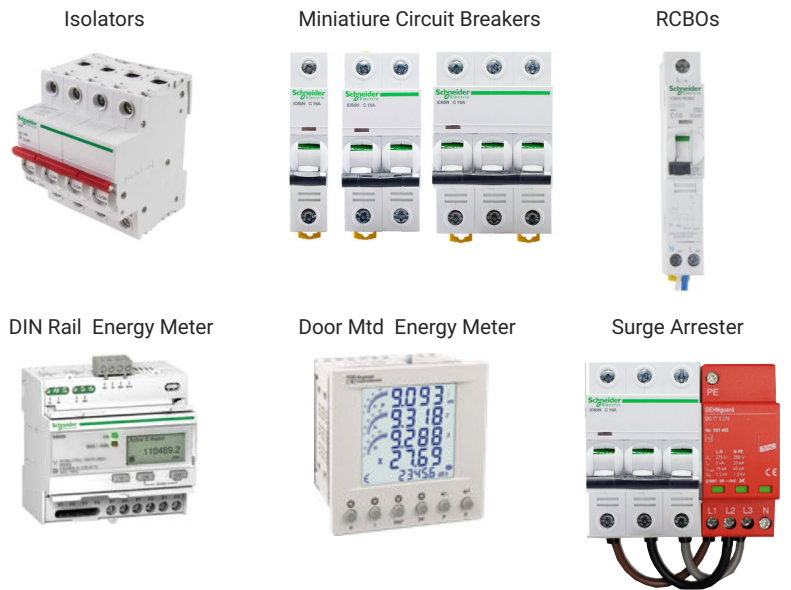
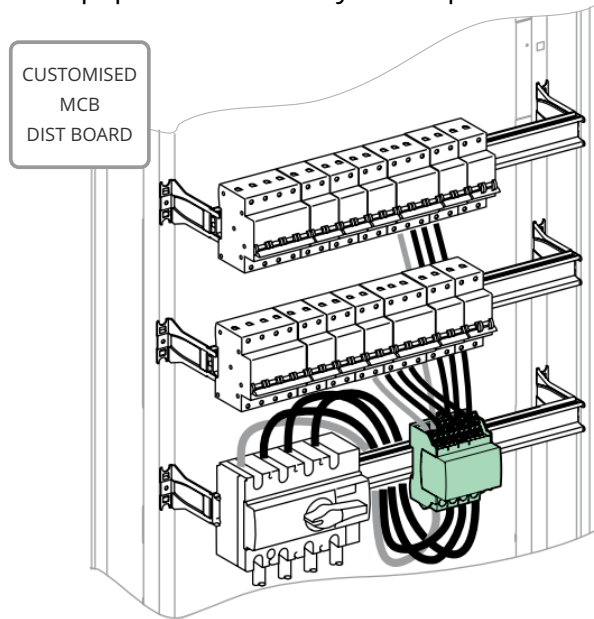
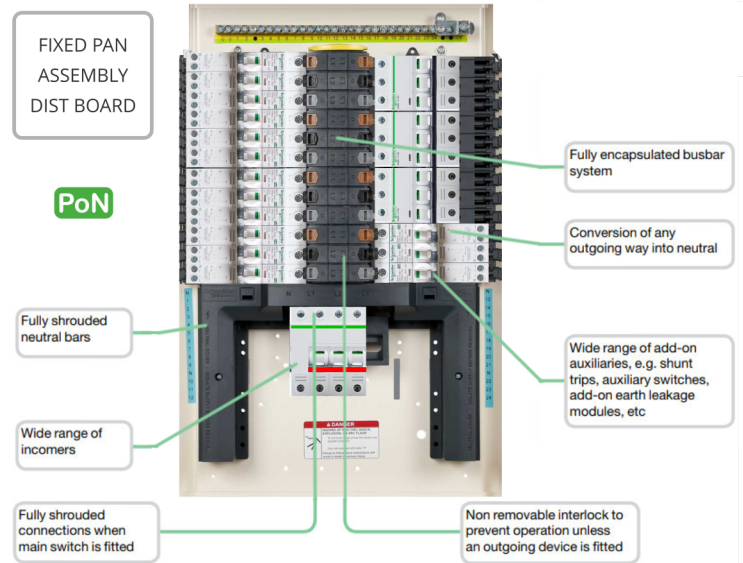


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Distribution Board product presentation

Distribution boards can be either fixed pan assembly types or customised MCB control boards designed to suit your particular requirement.

- **Fixed pan assembly PoN DBs** come in ranges from 4 way TPN up to 24 way TPN and utilise the latest Schneider Acti9 B Pan Assemblies.
- **Customised MCB DBs** incorporate the latest Schneider MCBs and control equipment wired to your requirement.



Tripping Devices, Auxiliaries and Control Gear for Customisable Distribution Boards

MN	MNs	MNx	MSU	MX	MX+OF	OF.S	OF	SD	OF+SD/OF
Undervoltage release			Voltage threshold release	Shunt release		Open/closed auxiliary contact	Open/closed auxiliary contact	Fault indicating contact	Double open/closed or fault indicating contact
Instantaneous	Delayed	Independent of the supply voltage			With open/closed auxiliary contact				



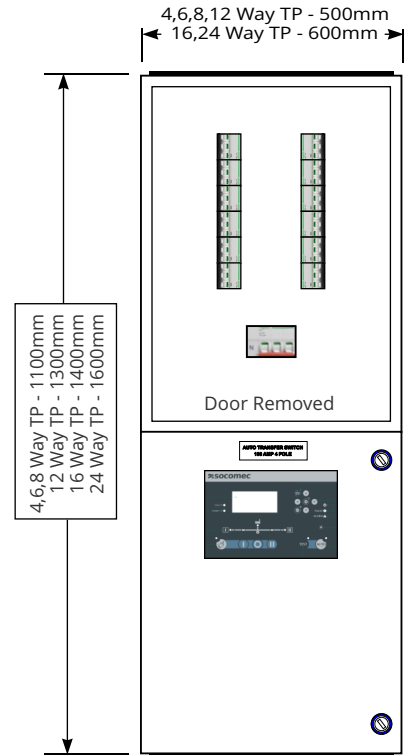
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ATS Characteristics

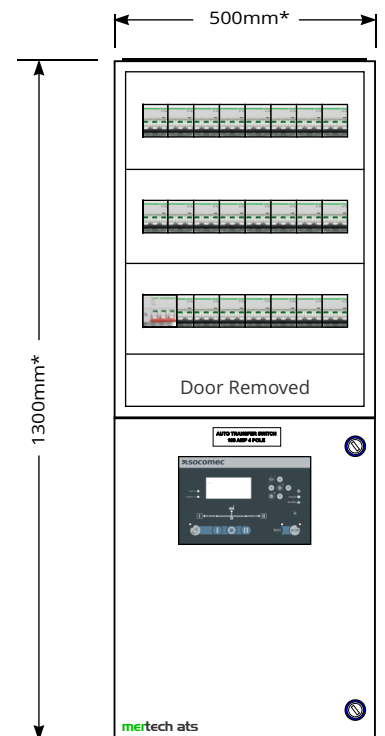
Thermal current I_{th} at 40°C	40 A	63 A	80 A	100 A	125 A	160 A	
Rated insulation voltage U_i (V) (power circuit)	800	800	800	800	800	800	
Rated impulse withstand voltage U_{imn} (kV) (power circuit)	6	6	6	6	6	6	
Rated insulation voltage U_i (V) (control circuit)	300	300	300	300	300	300	
Rated impulse withstand voltage U_{imn} (kV) (control circuit) - ATyS d M	4	4	4	4	4	4	
Rated operational currents I_b (A) according to IEC 60947-6-1	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	
Rated voltage	Utilisation category						
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_b (A) according to IEC 60947-3	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	A/B(1)	
Rated voltage	Utilisation category						
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
Current rated as conditional short-circuit with fuse gG DIN							
Conditional short-circuit current (kA rms)	50	50	50	50	50	40	
Associated fuse rating (A)	40	63	80	100	125	160	
Current rated as conditional short-circuit with any brand of circuit breaker that ensures tripping in less than							
Current rated as short-time withstand I_{cw} 0.3s (kA rms)	7	7	7	7	7	7	
Short-circuit operation							
Current rated as short-time withstand I_{sw} 1s (kA rms) ⁽²⁾	4	4	4	4	4	4	
Rated peak withstand current (kA peak) ⁽²⁾	17	17	17	17	17	17	
Connection							
Min. connection cross-section	10	10	10	10	10	10	
Minimum 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, 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) ⁽³⁾	150	150	150	150	150	150	
Power supply							
Min./max. supply (VAC) (ATyS d M, t M and g M)	176/28	176/28	176/28	176/288	176/288	176/288	
Min./max. supply (VAC) (ATyS p M)	160/30	160/30	160/30	160/305	160/305	160/305	
Control supply power							
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	

1) Category with index A = frequent operation / Category with index B = infrequent operation. 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.
 2) For a rated operational voltage $U_e = 400$ VAC. (3) 5% tolerance.
 3) 5% tolerance.
 5) At rated voltage - excluding time delays, where applicable.

Dimensions



Fixed Pan Assembly Dist Board
 Depth 4,6,8,12 Way - 200mm
 Depth 16,24 Way - 300mm



Custom Designed Dist Board
 *Dimensions vary dependant on the design etc.

MCB Characteristics

Main characteristics		
According to IEC/EN 60947-2		
Insulation voltage (Ui)	500 VAC	
Pollution degree	3	
Rated impulse withstand voltage (Uimp)	6 kV	
Thermal tripping	Reference temperature	50 °C
	Temperature derating	See page 233
Magnetic tripping	C curve	8 In ± 20 %
Utilization category	A	
According to IEC/EN 60898-1		
Limitation class	3	
Rated making and breaking capacity of an individual pole (Icn1)	Icn1 = Icn	
Additional characteristics		
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
Endurance (O-C)	Electrical	10,000 cycles
	Mechanical	20,000 cycles
Overvoltage category (IEC 60364)	IV	
Operating temperature	-35°C to +70°C	
Storage temperature	-40°C to +85°C	
Tropicalization (IEC 60068-1)	Treatment 2 (relative humidity 95 % to 55°C)	

Alternating current (AC) 50/60 Hz		
Breaking capacity (Icu) according to IEC/EN 60947-2		Service breaking capacity (Ics)
Voltage (Ue)		
Ph/Ph (2P, 3P, 4P)	220 to 240 V	380 to 415 V
Ph/N (1P)	220 to 240 V	
Rating (In)	1 to 63 A	10 kA
		6 kA
100 % of Icu		
Breaking capacity (Icn) according to IEC/EN 60898-1		
Voltage (Ue)		
Ph/Ph	400 V	
Ph/N	230 V	
Rating (In)	1 to 63 A	
	4500 A	

Connection

Rating	Tightening torque	Copper cables	
		Rigid	Flexible or ferrule
1 to 25 A	2 N.m	1 to 25 mm ²	1 to 16 mm ²
32 to 63 A	3.5 N.m	1 to 35 mm ²	1 to 25 mm ²