

PREMIUM CC ATS DISTRIBUTION BOARD - 40A UP TO 250A

Description

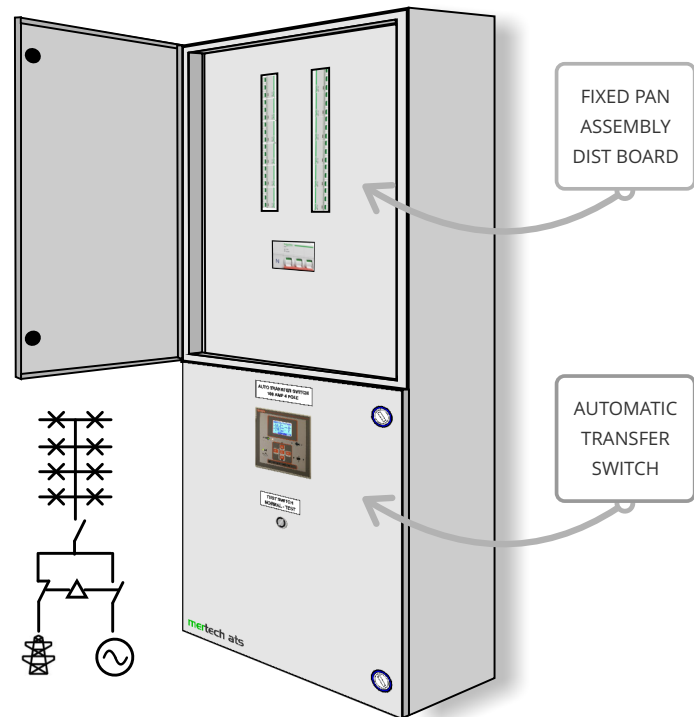
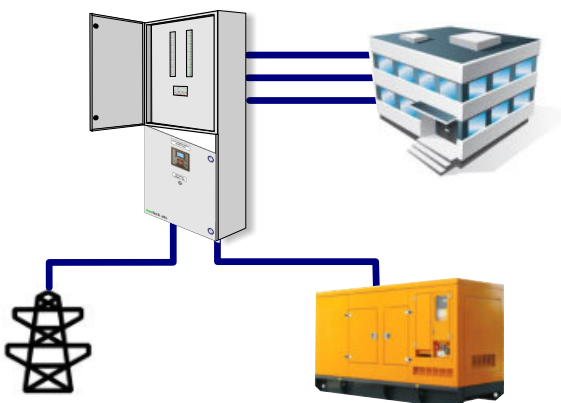
The Mertech Premium CC Automatic Transfer Switches with Distribution Board are the ideal solution for transferring power from the Mains to a Standby supply and distributing it to the local loads. With Mains and Standby three phase monitoring plus full electrical and mechanical interlocking you can be confident of switching supply under fault conditions at any time. Sizes from 4P 45 Amps up to 250 Amp using contactors 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 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

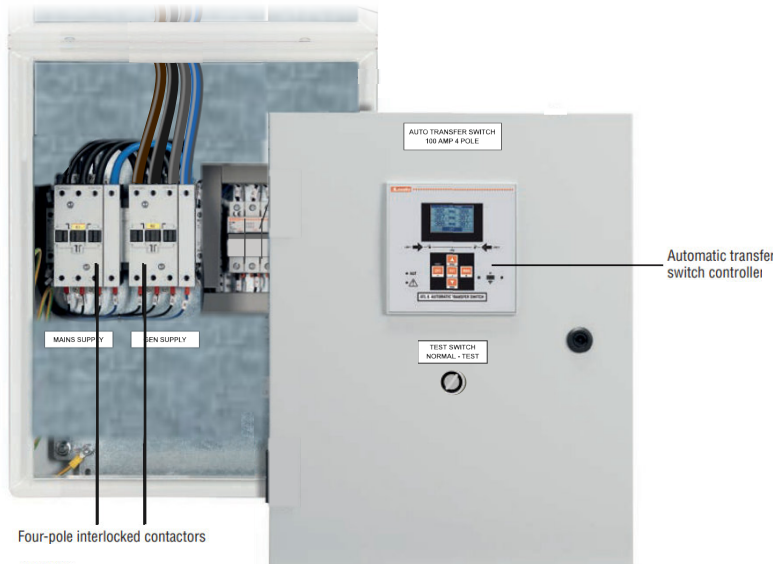


Premium CC Automatic Transfer Switch with Fixed Pan Assembly Distribution Board

Definition	Premium
Type	ATS-DB
Series	P-CC-DB
Auto Transfer Switch	
ATS Programmable	✓
Optical Comms Port	✓
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 60947-4	✓
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



Start / Stop Generator Signal

A volt free changeover contact for clients use to signal the Generator to start & stop as required by the control program. Wired to terminals S5, S6, S7.

A changeover contact is provided with 1 n/o & 1 n/c contact to be used as required by the generator control panel.

Delay On Start Timer (DOST)

A 'Delay on Supply off' timer is provided and associated with the Generator Start / Stop signal This is adjustable from 0 -60 Seconds and provides a timed delay on the start signal, on Terminals S5, S6, S7.

Delay On Changeover Timer

This timer allows a delay to be set in changing over between the Line 1 (K1) and the Line 2 (K2) supplies / contactors.

Generator Cool Down Timer

Upon a return to the primary Line 1 supply this timer allows the Line 2 supply, if using a Generator to run on for a time period prior to removing the start signal.

BMS / Indication Contact - Load On Line 1

A volt free indication contact of the K1 Line 1 contactor, This is a N/O contact so when the contactor is open and the Line 1 supply is not on load it is open and when the contactor is closed and on load the contact is closed. Wired to terminals S8, S9.

BMS / Indication Contact - Load On Line 2

A volt free indication contact of the K2 Line 2 contactor, This is a N/O contact so when the contactor is open and the Line 2 supply is not on load it is open and when the contactor is closed and on load the contact is closed. Wired to terminals S10, S11.

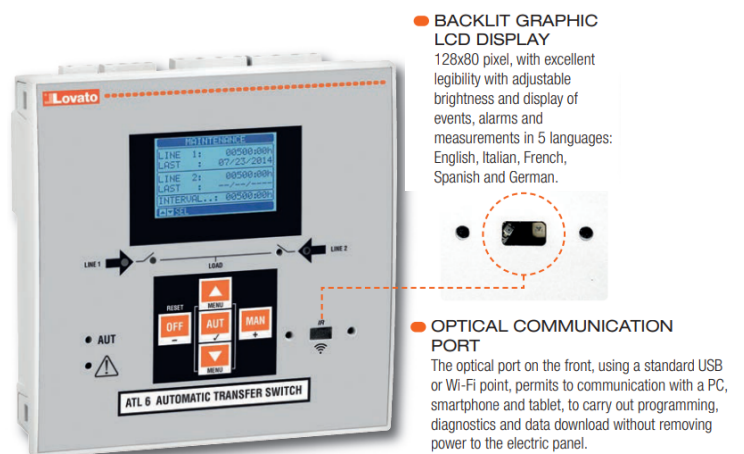
Test Switch

A Key switch is provided to simulate a mains failure, In the Normal position the system is set for Automatic mains failure detection & normal changeover, In the Test position the loss of Supply 1 is simulated and the system will changeover to the standby Line 2 supply. The key is removable in both positions.

BMS / Indication Contact - Test Switch

A volt free indication contact of the mains fail test switch is given, this is a N/C Contact so when the switch is turned to Test the contact will open and when the switch is turned to Normal the contact will close.

Automatic Transfer Switch Controller

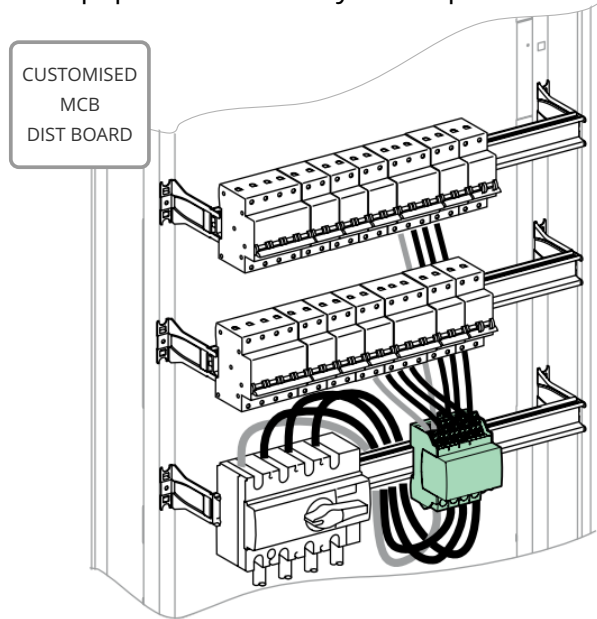
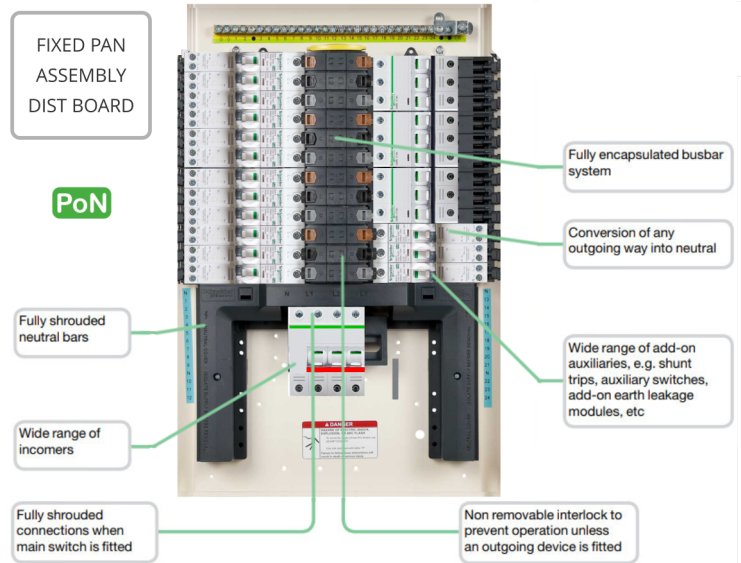


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Distribution Board product presentation

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

- **Fixed pan assembly 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.



Isolators



Miniature Circuit Breakers



RCBOs



DIN Rail Energy Meter



Door Mtd Energy Meter



Surge Arrester



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				

Contactors

Relays

Time Switch

Photocell Control

Pushbuttons

Switches

Indicators

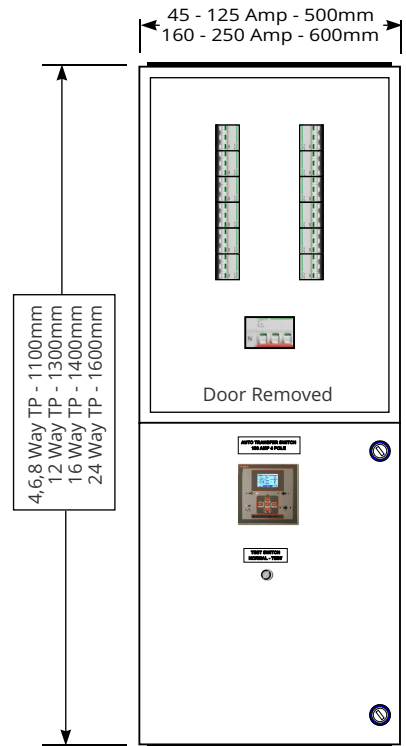


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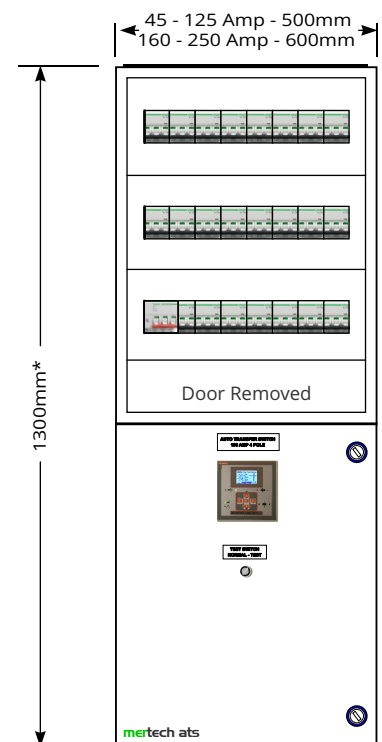
ATS Characteristics

Frame Size	Amps	45	63	100	125	160	250
Standard	IEC/EN	BS EN 60947-6-1					
Rated Operational Current Ith AC31	A	45	70	115	125	160	250
Rated Operational Current Ie AC33	A	26	40	80	80	110	150
Max. Power IEC at 400V (AC31)	kW	30	46	76	90	98	150
Max. Power IEC at 400V (AC33)	kW	13	18.5	45	46	61	80
No. of Poles	P	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P
Rated Insulation Voltage Ui	V	1000	1000	1000	1000	1000	1000
Rated Operational Voltage Ue	V	400	400	400	400	400	400
Rated frequency	Hz	50	50	50	50	50	50
Class		CC	CC	CC	CC	CC	CC
Utilization Category		AC 31A	AC 31A	AC 31A	AC 31A	AC 31A	AC 31A
Rated Impulse withstand Voltage Uimp	kV	8	8	8	8	8	8
Rated making capacity at <440V	A	260	800	1200	1200	1100	1500
Rated breaking capacity at 415V	A	208	800	1200	1200	1300	1500
Rated short time allowable current (IEC/EN60947-1)	A / 10s	210	400	640	880	1100	1300
	A / 20s	147	283	453	623	623	850
	A / 30s	127	244	391	538	538	733
	A / 60s	95	183	293	403	403	550
Max. fuse size - gG	A	50	100	160	160	200	250
Mech. Life (No. of ops. - millions)	mil	20	15	15	15	10	10
Elect. Life (Ie at 400V in AC3) (million)	mil	2	1.5	1.3	1.3	1.1	1.1
Mechanical operations (ops. per Hr)	cy/hr	3600	3600	3600	3600	2400	2400
Terminal Position I-II-Load		Bottom	Bottom	Bottom	Bottom	Bottom	Bottom
Terminal Capacity - Min Cu (cable)	mm ²	2.5	2.5	6	10	16	35
- Max Cu (cable)	mm ²	35	35	50	50	70	120
- Busbar (width)	mm	-	-	-	-	-	-
Est. Weight 3P kg	kgs						
Est. Weight 4P kg	kgs	20	20	20	25	35	45
Mounting		Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Coil Operating Voltage	V	220/240	220/240	220/240	220/240	220/240	220/240
Coil Voltage limits - pick-up	Us %	80-110	80-110	80-110	80-110	80-110	80-110
Coil Voltage limits - drop-out	Us %	20-55	20-55	20-55	20-55	20-60	20-60
Operating sequence (default times)							
Mains failure time (adj)	secs	5	5	5	5	5	5
Delay on change over time (adj)	secs	6	6	6	6	6	6
Mains return time (adj)	secs	5	5	5	5	5	5
Cooldown time (adj)	secs	120	120	120	120	120	120
Min. Voltage limit for trip	Us %	85	85	85	85	85	85
Min Voltage pick-up	Us %	90	90	90	90	90	90
Max Voltage limit for trip	Us %	115	115	115	115	115	115
Max Voltage limit for pick-up	Us %	110	110	110	110	110	110
Phase failure threshold	Us %	70	70	70	70	70	70
Max frequency limit	Us %	105	105	105	105	105	105
Min frequency limit	Us %	95	95	95	95	95	95
Contactor Reference	Lovato	BF26SET	BF40SET	BF80SET	11BF80	B115SET	B145SET

Dimensions



Fixed Pan Assembly Dist Board
Depth 45 - 125 Amp - 200mm
Depth 160 - 250 Amp - 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
	Electrical	Insulation class II
	Mechanical	10,000 cycles
Endurance (O-C)		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		
	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

