



# SOURCE

# CHANGEOVER SWITCHES

Product Catalog for Devices that Ensures Power Reliability.



**ELMEASURE**<sup>®</sup>  
Possibilities...Infinite



# **ENERGY IS EVERYTHING.**

And we help you manage it.

## **ABOUT US**

With a collective experience and expertise in the field of energy and building management, our mission is to contribute significantly to the world by helping people manage energy efficiently, reduce their wastages, and drive sustainability. We continuously strive to collaborate and build innovative energy and power management products, that not only meets the highest quality standards of product performance, but delights the customers as well.





# MOTORISED AUTOMATIC CHANGEOVER SWITCHES

Protect your mission-critical facilities from power uncertainties.



INBUILT  
**AMF**  
Controller

  
**IEC 60947-6-1**  
TSE standards

  
40A 3200A  
Wide range of applications





## **AUTOMATIC TRANSFER SWITCHES**

The microprocessor-based ATS with in-built AMF controller provides advanced monitoring and control capabilities, allowing for precise and automated switching between the main power source and backup generator. This ensures a seamless transition of power during a power outage, minimizing downtime and protecting equipment from damage. The ATS with an inbuilt microprocessor-based AMF controller also allows for remote monitoring and control, which can be useful for monitoring power usage, diagnosing problems, and scheduling maintenance. Additionally, it can provide a detailed history of power events, which can be useful for troubleshooting and identifying patterns of power usage. All these features, coupled with the AMF function, will be beneficial for the smooth running of the manufacturing plant.

**Meets Standards**  
IEC-60947-6-1 (TSE)

**ADVANCED  
MONITORING  
AND  
CONTROL.**

**PRECISE  
AUTOMATED  
SWITCHING.**

**SEAMLESS  
TRANSITION OF  
POWER DURING  
OUTAGE.**

**BENEFICIAL  
FOR SMOOTH  
RUNNING FOR  
OPERATIONS.**

## Residential



In a residential setting, power outages can be disruptive to systems such as heating, cooling, and security systems, and can cause inconvenience. ATS can help to minimize these risks by providing an uninterrupted power supply, and ensure the safety and comfort of the residents.

## Restaurants



ATS ensures that important systems such as refrigeration and lighting, remain operational, minimizing disruption to the restaurant's operations, preserving food safety and making sure the customers have a lovely experience. Additionally, the ATS can also improve overall efficiency by automatically switching back to the primary power source eliminating the need for manual intervention.

## Banking/Financial Institutions



In the banking industry, where even a few minutes of downtime can cause significant financial losses. ATS can ensure that systems such as ATM machines, servers, and data centers, remain operational during a power outage, minimizing disruption to banking operations and preserving data integrity. The use of ATS can be an essential component in maintaining business continuity and customer trust.

## Educational Institutions



In the case of educational institutions, ATS can help to ensure that major systems that support technology-based learning such as servers, internet connections, and labs for experiential learning remain operational. Moreover, during a power outage, the ability to maintain lighting and heating systems, allows students and staff to remain safe and comfortable.

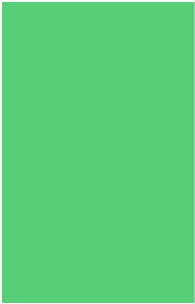
# Protect your mission-critical facilities from power uncertainties.



- Inbuilt Micro-processor based AMF controller.
- Automatic DG Start/Stop operation during main's failure.
- AC-32B Utilization category as per IEC 60947-6-1.
- PC-class ATS with breaker co-ordination.
- 3 operational position (Source 1, Center off, Source 2).
- Monitors V, A, F, PF, kW, kWh, ON hours & Load hours.
- Incomer level self monitoring and protection against under/over voltage, frequency, phase sequence and optional over load tripping logic.
- Systematic with time delays to prolong the stability of power source during automatic switching of sources in the case of blackout or loss of power.
- Dual contact design extinguishes the arc effectively.
- Optional fire fighting DG Start/Stop logic.
- Mode of operation Auto/Manual/RS-485 Communication
- Free 12 months IoT cloud connectivity
- Optional Wi-Fi communication
- Remote monitoring / Controlling / Configuration through Cloud



# Ensuring a seamless transition of power during a power outage.



## Commercial Malls / Retail Shops



A retail mall requires constant power supply for its various functions like lighting, HVAC, escalators, elevators, security systems, and many more, so having an advanced control system like this can ensure that there is no interruption in the power supply, which in turn will help in providing a comfortable and safe environment for the visitors, and also help in maintaining the image of the mall as a reliable and safe destination.

## Industries



ATS ensures a seamless transition of power during a power outage, minimizing downtime and protecting equipment from damage.

## Healthcare



ATeS can help hospitals and healthcare centers to maintain a reliable power supply to operate critical systems, such as life support equipment, during a power outage. They also reduces the risk of equipment failures, and ensure patient safety during power outages.

## Transportation



In transportation systems such as railways, power failures can cause signaling systems to fail and communication systems to go down, trains to stop, all of which can lead to severe delays and even accidents. By providing an uninterrupted power supply, ATS can help minimize these risks and ensure the safe and efficient operation of the railway system. Moreover, ATS can also be used in rail yards and maintenance facilities, where they can ensure that the necessary power is always available for engines and other maintenance equipment.

# High-end Micro-processor based ATS Controller

AMF inbuilt controllers in automatic transfer switches play a crucial role in ensuring a reliable, efficient, and safe power supply to critical loads during power outages, making it an indispensable component for any critical power application.

- DG Start/Stop potential free contacts
- Remote Controlling through PLC / SCADA / EMS
- Source 1 & 2 - Indications output
- Fire fighting DG Start/Stop
- Optional overload tripping logic S1 & S2
- Universal Auxiliary Supply 12–24V DC
- Dual source energy monitoring



**Improved Uptime:** By automatically switching to the backup generator power in case of a main power failure, AMF inbuilt controllers ensure that critical loads are never left without power, which results in improved uptime.

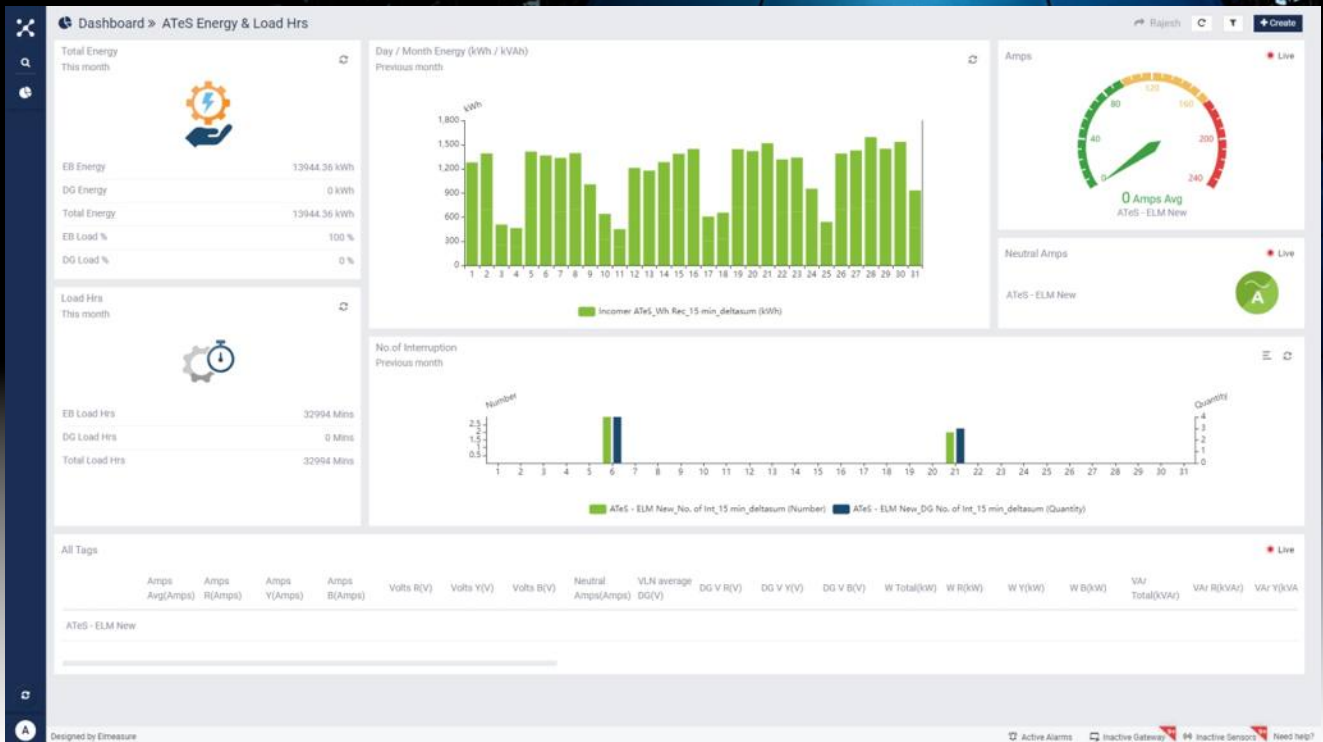
**Increased Efficiency:** The AMF controller automatically starts and stops the generator based on the load demand, which ensures that the generator runs only when necessary, reducing fuel consumption and increasing efficiency.

**Improved Monitoring and Reporting:** The AMF controller provides real-time monitoring and reporting of the power system status, mains failure and source unhealthy conditions, allowing users to take proactive measures to maintain the reliability of the power supply.



# Remote Connectivity with IoT Cloud Monitoring.

- Incomer level monitoring
- EB / DG energy consumption
- Number of interruptions
- Historical data on faults
- ON Hour / Load Hr monitoring
- Remote configuration (Voltage/frequency high/low thresholds, timers)



# Technical Specification

Current Rating	40/63/80A	100/125A	160A	200/250A	315/400/630A
<b>GENERAL CHARACTERISTICS</b>					
No. of Poles	4				
Rated Operating Voltage	415V				
Rated Insulation Voltage (Ui) V - Power Circuit	690V				
Rated Insulation Voltage (Ui) V - Control Circuit	500V				
Rated Impulse with stand Voltage (Uimp)-Power Circuit	12kV				
Rated Impulse with stand Voltage (Uimp)-Control Circuit	4kV				
Classification/Utilization Category	PC Class / AC - 32B				
Rated Control Power Supply Voltage	230V / 50Hz				
Rated Short Circuit with stand current (KA, Rms) I <sub>cs</sub> (60 ms)	5 kA	7 kA	10 kA	10kA	12.5 kA
Rated Short Circuit Making Capacity (KA, Peak) I <sub>cm</sub>	10 kA	15 kA	20 kA	20 kA	25 kA
Operating Cycle	10000		8000	8000	6000
Motor Operating Voltage	220V AC (150-280V AC) / 50-60Hz				
Auxiliary DC Voltage	12-24V DC (for RS485 Communication)				
Standard / service	IEC 60947-6-1 : 2021 / CB				
<b>MEASUREMENT PARAMETERS</b>					
Primary Source	Voltage, Frequency & Current (Optional)				
Secondary Source	Voltage, Frequency & Current (Optional)				
Measurements Monitored	In-Built Display / Remote Display - V, A, F, PF, kW, kWh, ON Hours & Load Hours				
Communication	Rs485 / WiFi (Optional)				
<b>PROGRAM CONFIGURATION</b>					
Primary Source	Under Voltage (155-210V)/Over Voltage (230-285V), Over Load with external CT, Under Frequency (40-48Hz)/Over Frequency (50-60Hz) and Phase sequence enable / disable.				
Secondary Source	Under Voltage (155-210V)/Over Voltage (230-285V), Over Load with external CT, Under Frequency (40-48Hz)/Over Frequency (50-60Hz) and Phase sequence enable / disable.				
Timers	Recovery delay (1 to 600s), Transfer delay (1 to 600s), Generator Start / Stop delay (1 to 600s), Trip Delay (1-60)				
Priority Selection	Source I and Source II				
Overload	Source I (10-110%) and Source II (10-110%)				
Overload Trip Cycles	Up to 4 cycles (6-150s)				
AC System Selection	3Phase / 1Phase for both Sources				
Phase Sequence	Enable / Disable				
<b>MODE OF OPERATION</b>					
Selection Mode	Auto / Manual / Remote / Cloud				
Position Order	I-OFF-II				
Functionality	On Load				
Manual Emergency Operation	Available				
<b>GENERAL CHARACTERISTIC</b>					
Ambient Temperature	-20°C to 55°C				
Air Humidity	Not more than 50% @ 40°C				
Altitude	Not more than 2000 m				
<b>ELECTROMAGNETIC CHARACTERISTICS</b>					
Class	Class B				
Radio Frequency Transmission Test	EN55011				
Radio Frequency Radiation Transmission Test	EN55011				

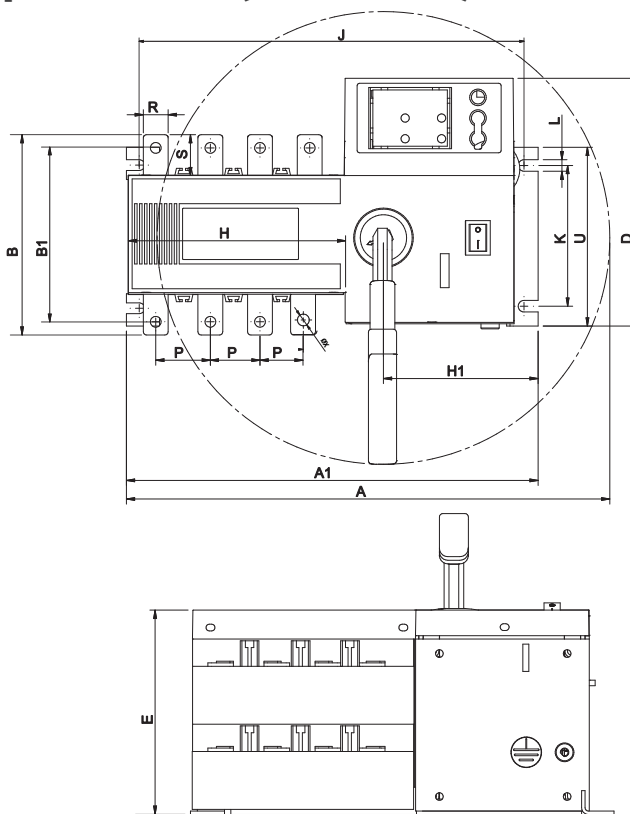
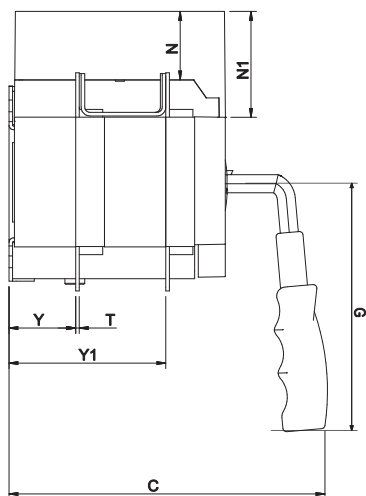
# Technical Specification

Current Rating	800A	1000A	1250A	1600A	2000A	2500A	3200A
<b>GENERAL CHARACTERISTICS</b>							
No. of Poles	4						
Rated Operating Voltage	415V						
Rated Insulation Voltage (Ui) V - Power Circuit	690V						
Rated Insulation Voltage (Ui) V - Control Circuit	500V						
Rated Impulse with stand Voltage (Uimp)-Power Circuit	12kV						
Rated Impulse with stand Voltage (Uimp)-Control Circuit	4kV						
Classification/Utilization Category	PC Class / AC - 32B						
Rated Control Power Supply Voltage	230V / 50Hz						
Rated Short Circuit with stand current (KA, Rms) Icw (60 ms)	20 kA	20 kA	25 kA	35 kA	40 kA	50 kA	65 kA
Rated Short Circuit Making Capacity (KA, Peak) Icm	40 kA	40 kA	50 kA	70 kA	80 kA	100 kA	100 kA
Operating Cycle	5000						
Motor Operating Voltage	220V AC (150-280V AC) / 50-60Hz						
Auxiliary DC Voltage	12-24V DC (for RS485 Communication)						
Standard / Service	IEC 60947-6-1 : 2021 / CB						
<b>MEASUREMENT PARAMETERS</b>							
Primary Source	Voltage, Frequency & Current (Optional)						
Secondary Source	Voltage, Frequency & Current (Optional)						
Measurements Monitored	In-Built Display / Remote Display - V, A, F, PF, kW, kWh, ON Hours & Load Hours						
Communication	RS485 / WiFi (Optional)						
<b>PROGRAM CONFIGURATION</b>							
Primary Source	Under Voltage (155-210V)/Over Voltage (230-285V), Over Load with external CT, Under Frequency (40-48Hz)/Over Frequency (50-60Hz) and Phase sequence enable / disable.						
Secondary Source	Under Voltage (155-210V)/Over Voltage (230-285V), Over Load with external CT, Under Frequency (40-48Hz)/Over Frequency (50-60Hz) and Phase sequence enable / disable.						
Timers	Recovery delay (1 to 600s), Transfer delay (1 to 600s), Generator Start / Stop delay (1 to 600s), Trip Delay (1-60)						
Priority Selection	Source I and Source II						
Overload	Source I (10-110%) and Source II (10-110%)						
Overload Trip Cycles	Up to 4 cycles (6-150s)						
AC System Selection	3Phase / 1Phase for both Sources						
Phase Sequence	Enable / Disable						
<b>MODE OF OPERATION</b>							
Selection Mode	Auto / Manual / Remote / Cloud						
Position Order	I-OFF-II						
Functionality	On Load						
Manual Emergency Operation	Available						
<b>GENERAL CHARACTERISTIC</b>							
Ambient Temperature	-20°C to 55°C						
Air Humidity	Not more than 50% @ 40°C						
Altitude	Not more than 2000 m						
<b>ELECTROMAGNETIC CHARACTERISTICS</b>							
Class	Class B						
Radio Frequency Transmission Test	EN55011						
Radio Frequency Radiation Transmission Test	EN55011						



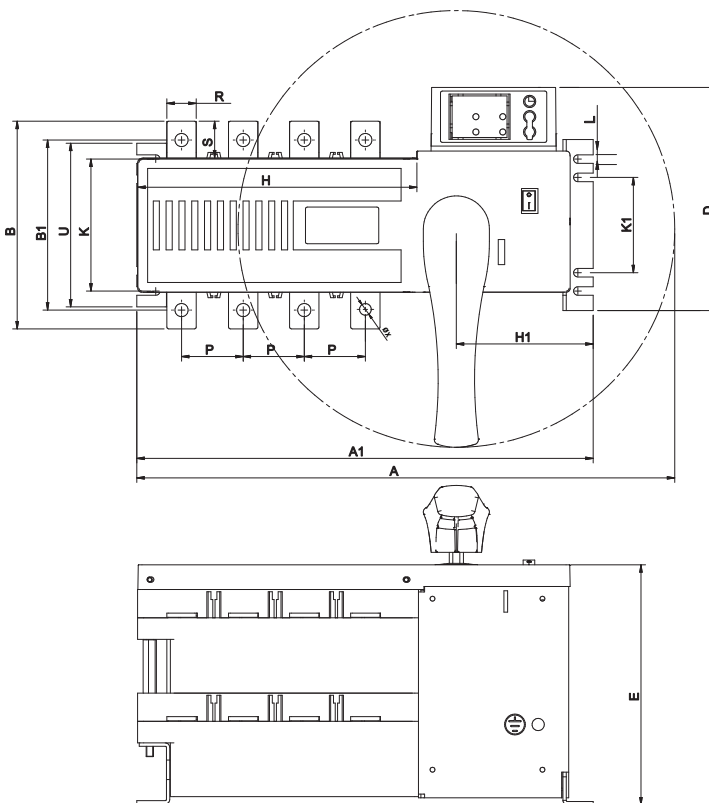
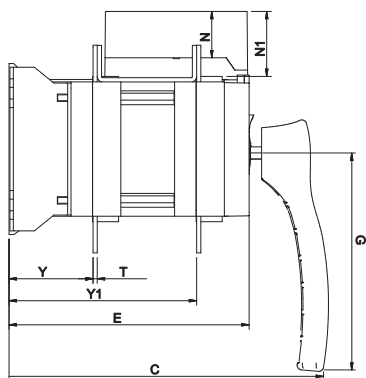
# ATeSL - Mechanical Specification (Version 2.0)

## Frame 1 : 100 - 125A



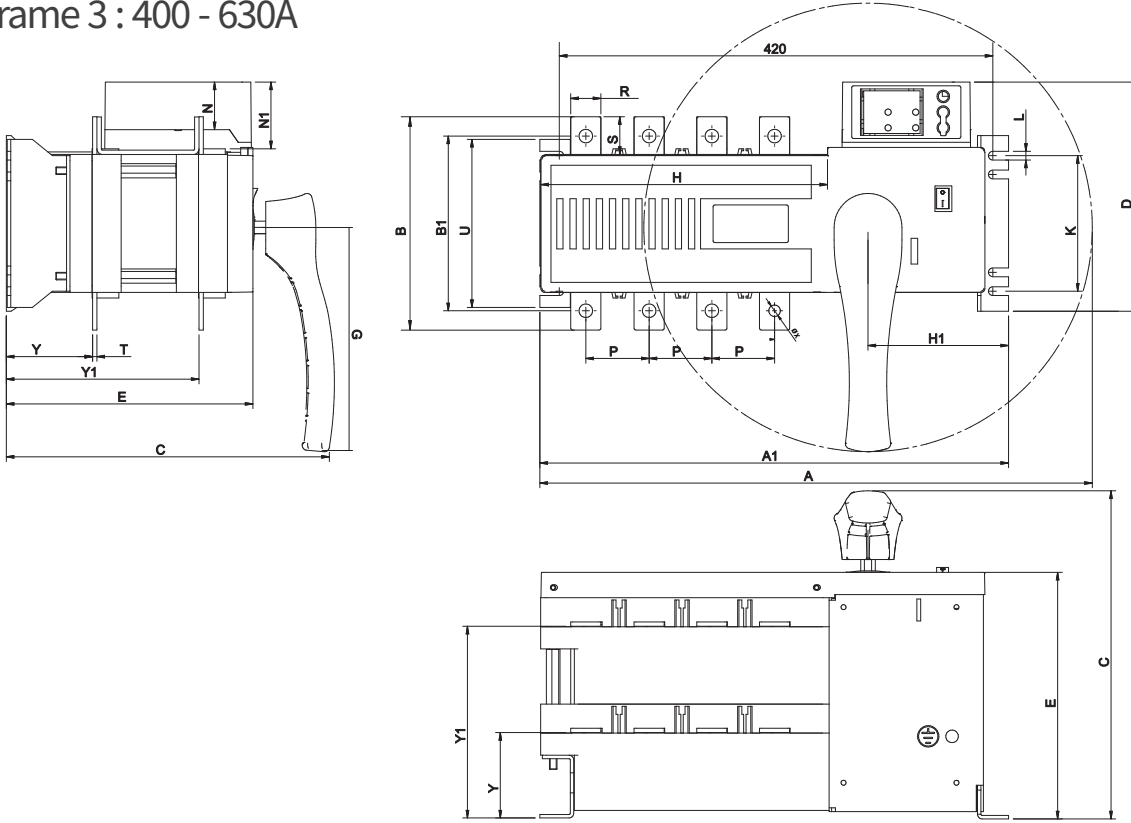
Specification	Outline Size (mm)						Mounting Size (mm)																
	A	A1	B	B1	C	D	E	G	H	H1	J	K	L	N	N1	P	R	S	T	U	ØX	Y	Y1
ATeSL 100- 125A	292	248.7	121	103	175	149	120	174	131	93	228	85	7	38	53.2	30	15	24	2	108	6	37	87

## Frame 2 : 200 - 250A



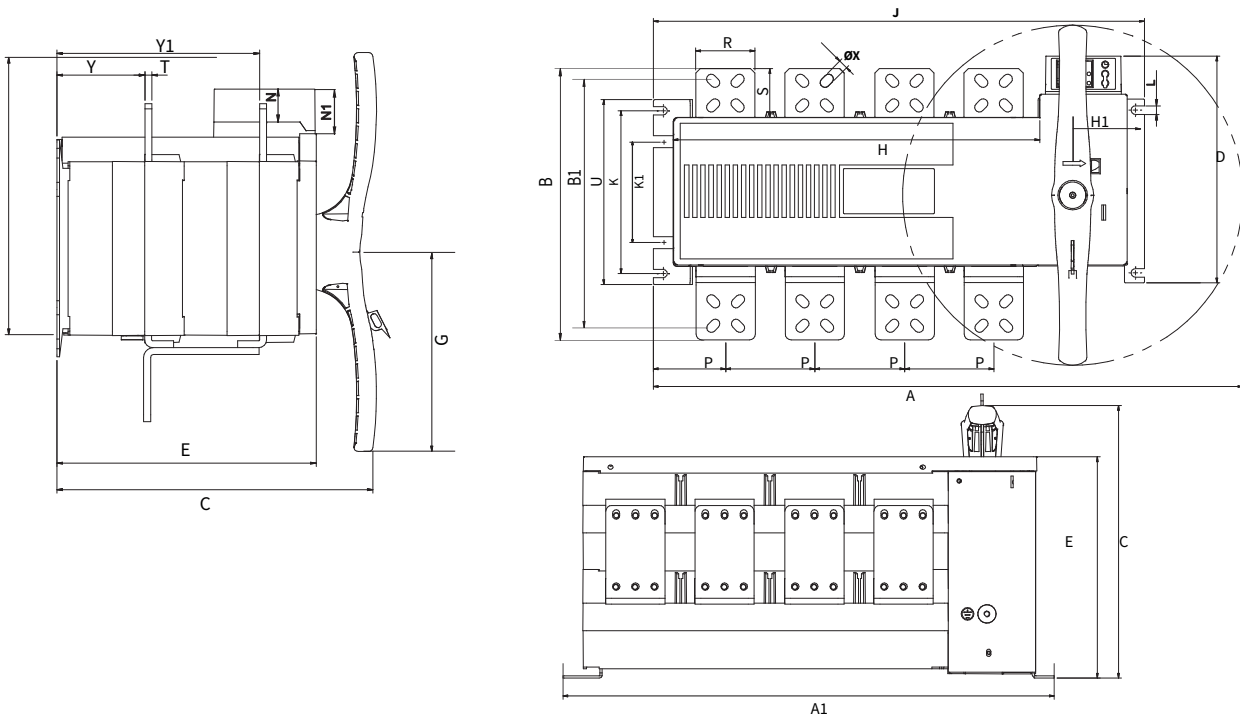
Specification	Outline Size (mm)						Mounting Size (mm)																	
	A	A1	B	B1	C	D	E	G	H	H1	J	K	K1	L	N	N1	P	R	S	T	U	ØX	Y	Y1
ATeSL 200- 250A	440	373	170	140	257	182.7	196.6	180	228.5	112	355	108	78	7	38	53.2	50	24	30	3.4	134	11	68.8	53.6

### Frame 3 : 400 - 630A



Specification	Outline Size (mm)						Mounting Size (mm)																
	A	A1	B	B1	C	D	E	G	H	H1	J	K	L	N	N1	P	R	S	T	U	ØX	Y	Y1
ATeSL 400- 630A	517	436	260	210	290	200	250	180	290	112	420	180	9	38	53.2	65	40	50	5	222	13	83	195

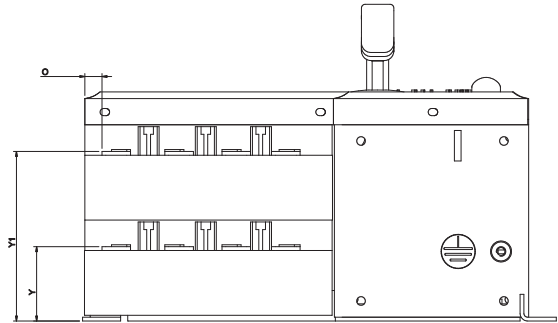
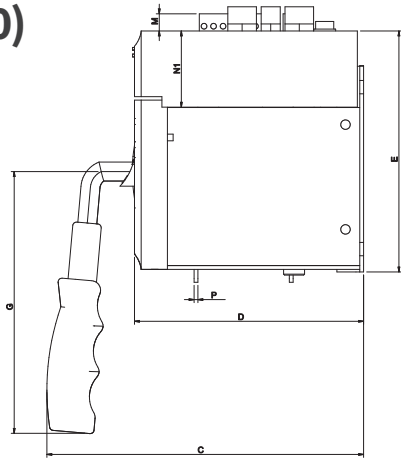
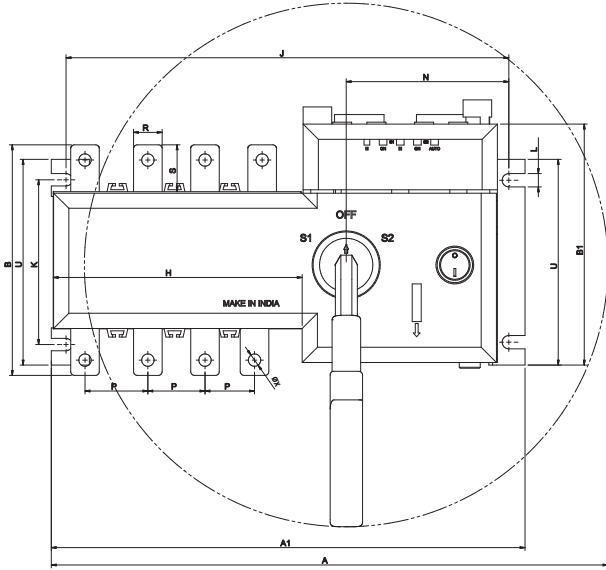
### Frame 4 : 800 - 1600A



Specification	Outline Size (mm)						Mounting Size (mm)																	
	A	A1	B	B1	C	D	E	G	H	H1	J	K	K1	L	N	N1	P	R	S	T	U	ØX	Y	Y1
ATeSL 800- 1600A	800	664	370	335	365	306	299	235	495	97	642	220	136	9	38	53.2	120	80	66	10	250	13	100	233

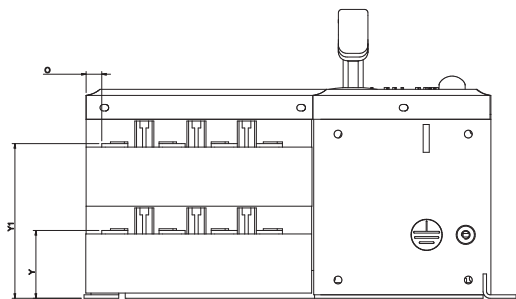
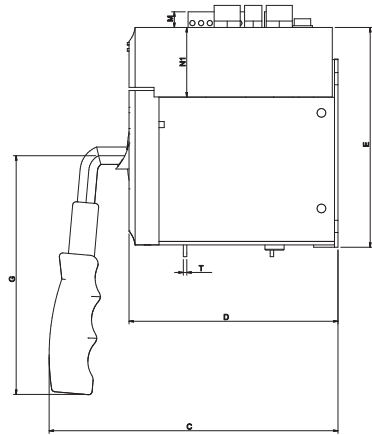
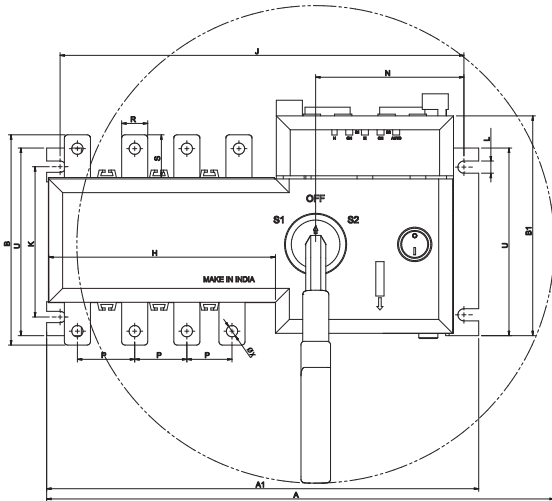
# ATeS - Mechanical Specification (Version 1.0)

## Frame 1 : 40 - 63A



Specification	Outline Size (mm)						Mounting Size (mm)																
	A	A1	B	B1	C	D	E	G	J	K	L	M	N	N1	O	P	R	S	T	U	ØX	Y	Y1
ATeS 40 - 63A	267	228	108	126	174	122.3	126.5	174	211	87	6.5	9	85	40	10.87	25	13	18	2.5	107	6	42.6	94.2

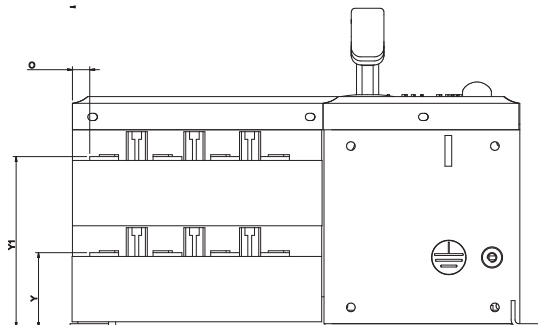
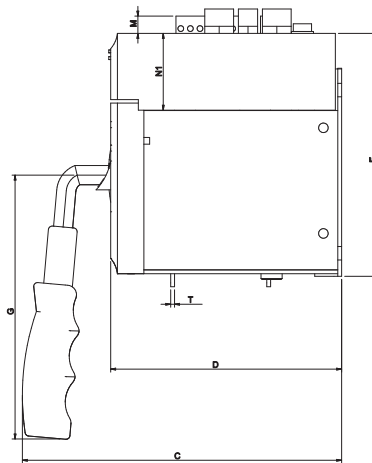
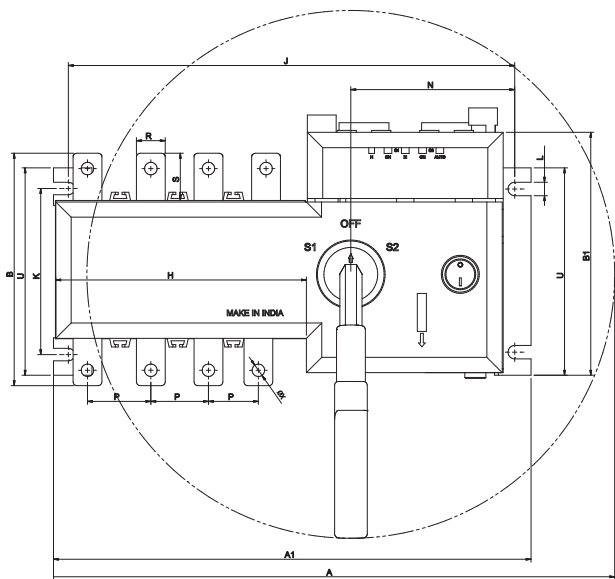
## Frame 2 : 100 - 125A



Specification	Outline Size (mm)						Mounting Size (mm)																
	A	A1	B	B1	C	D	E	G	J	K	L	M	N	N1	O	P	R	S	T	U	ØX	Y	Y1
ATeS 200 - 250A	284	244	119	126	174	122.3	126.5	174	228	87	6.5	9	89	40	12.7	30	15	34	2.5	107	8	41.2	91.2

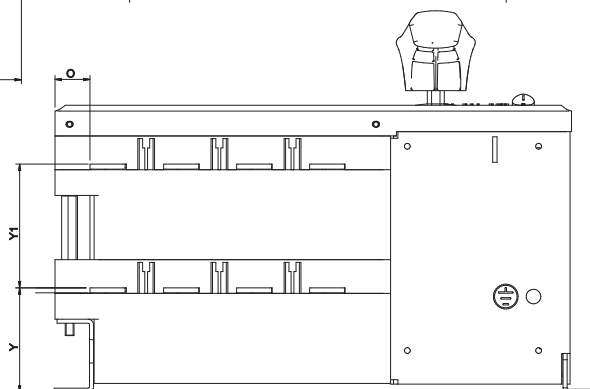
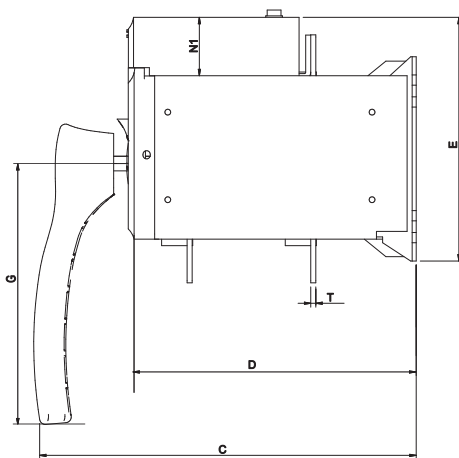
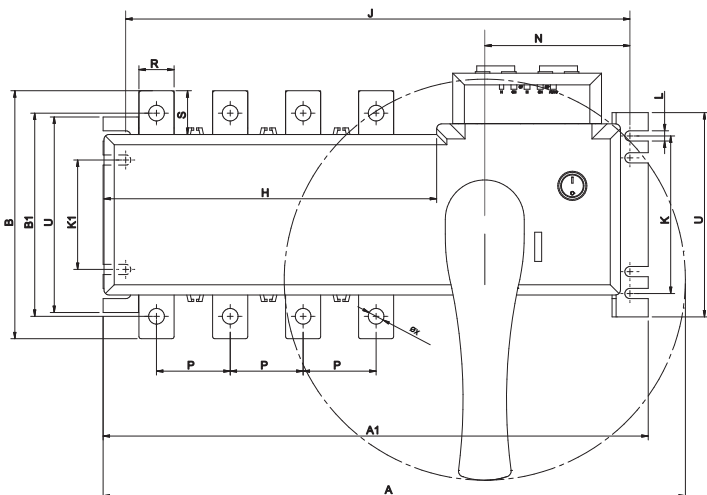


### Frame 3 : 160A



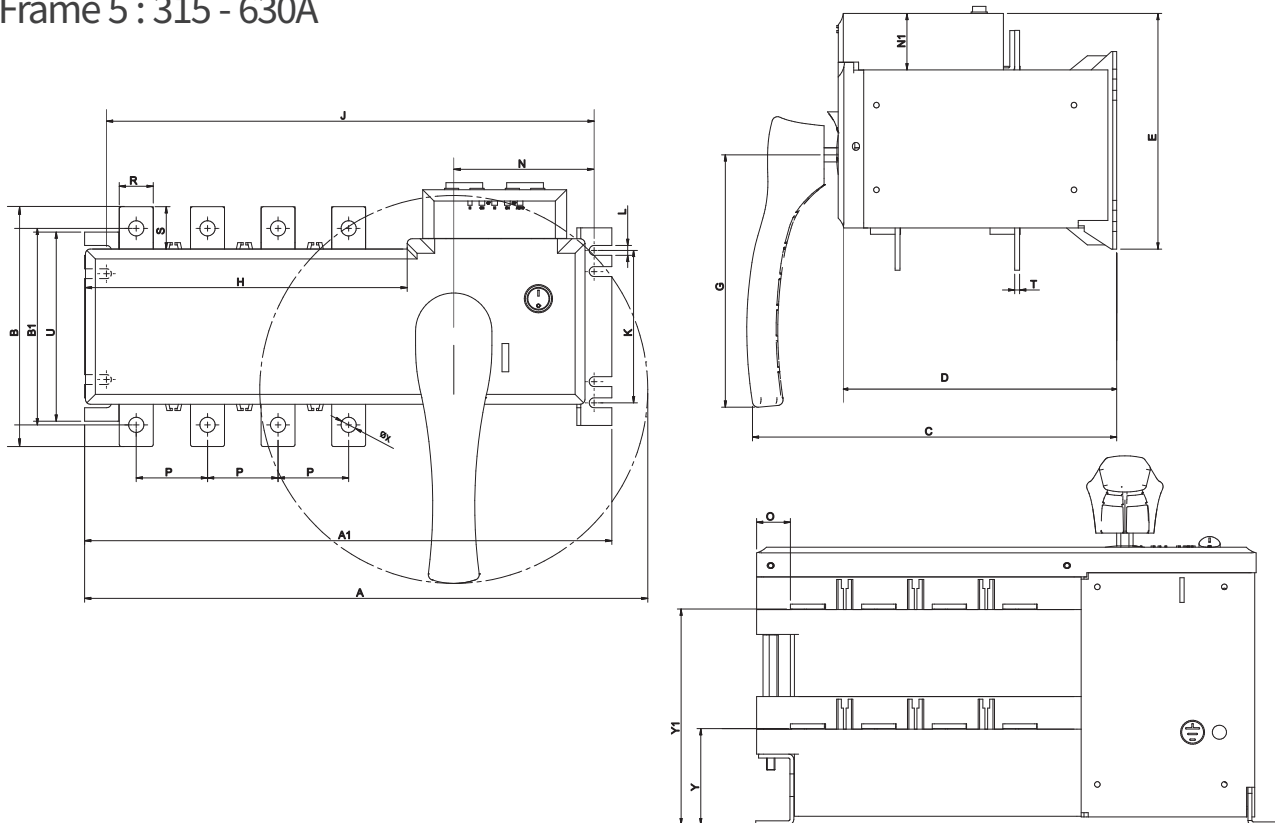
Specification	Outline Size (mm)							Mounting Size (mm)															
	A	A1	B	B1	C	D	E	G	J	K	L	M	N	N1	O	P	R	S	T	U	ØX	Y	Y1
ATeS 160A	330	302	135	127	204	163.5	136	174	287	101	6.5	9	90	40	21.7	35	20	24	3.5	127	10	55.4	125

### Frame 4 : 200 - 250A



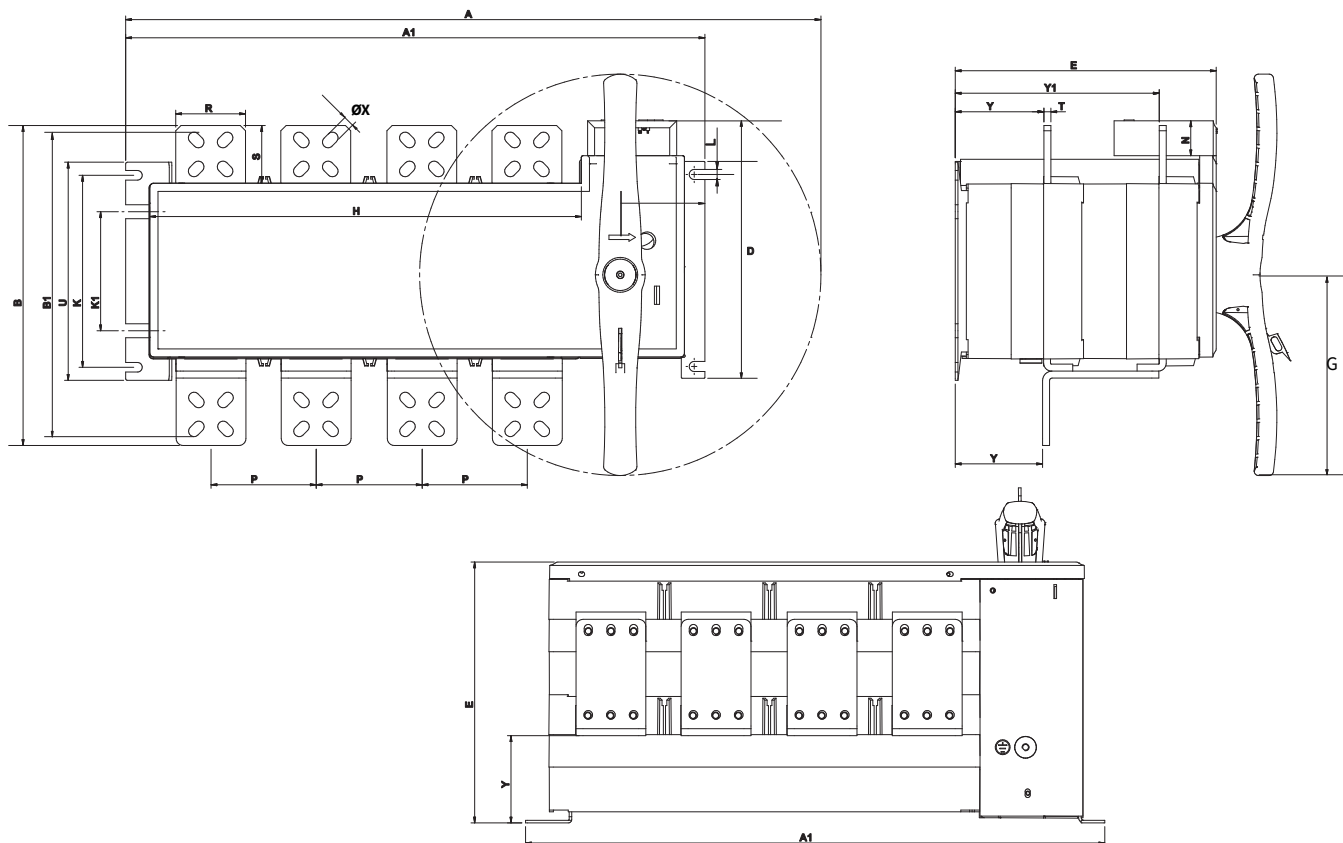
Specification	Outline Size (mm)							Mounting Size (mm)																
	A	A1	B	B1	C	D	E	G	H	J	K	K1	L	N	N1	O	P	R	S	T	U	ØX	Y	Y1
ATeS 200 - 250A	400	374	170	139	258	197	167	180	228	346	108	75	7	93	40	24	50	24	30	3.4	134	11	71.5	84.7

## Frame 5 : 315 - 630A



Specification	Outline Size (mm)						Mounting Size (mm)															
	A	A1	B	B1	C	D	E	G	J	K	L	N	N1	O	P	R	S	T	U	ØX	Y	Y1
ATeS 400-630A	517	436	260	222	290	250	220	180	420	180	9	103	40	27.6	65	40	50	5	222	13	82.9	194

## Frame 4 : 800 - 1600A



Specification	Outline Size (mm)						Mounting Size (mm)																	
	A	A1	B	B1	C	D	E	G	H	H1	J	K	K1	L	N	N1	P	R	S	T	U	ØX	Y	Y1
ATeS 800 - 1600A	800	664	370	335	365	302	299	235	495	97	642	220	136	9	97	40	120	80	66	10	250	13	100	233



# MANUAL TRANSFER SWITCHES

Highly **durable**, easy to **use** and uncompromisingly **safe**.

**RELIABLE  
PERFORMANCE EVEN  
WITH FREQUENT  
USE AND HARSH  
ENVIRONMENTS.**

- Available from 63A -1600A up to 600V AC
- Conformity to IS/IEC 60947-3
- High short-circuit withstand capacity
- 3 position center-off switch is robust and easy to use
- Modular and compact design
- Reliable and maintenance free operation.
- Available in 3 pole / 4 pole version

**EASY TO USE  
FOR QUICK  
AND EFFICIENT  
SWITCHING OF  
POWER.**

- Open transition on load transfer between two sources
- High electrical and mechanical life
- Customized Incoming and Outgoing Terminal interchangeability
- Terminal shrouds and phase barriers provides complete safety
- Rugged design to compact environmental conditions

**SAFE DESIGN TO  
PREVENT FROM  
ELECTRICAL SHOCK  
TO PERSONNEL  
OR FIRE.**

- Utilization category - AC 23 (Withstand high in-rush current)
- Design to withstand high thermal condition
- Tolerance to high electrical and mechanical characteristics
- Isolation pad lock for maintenance operations
- Maintenance free self cleaning contacts
- Auxiliary indication contacts for source 1 and source 2



Rugged industrial design



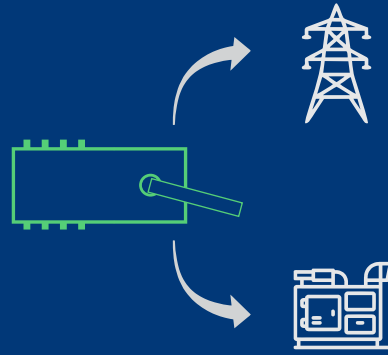
Wide range of applications



AUXILIARY  
Indication contact



# MANUALLY CONTROL YOUR POWER SOURCE



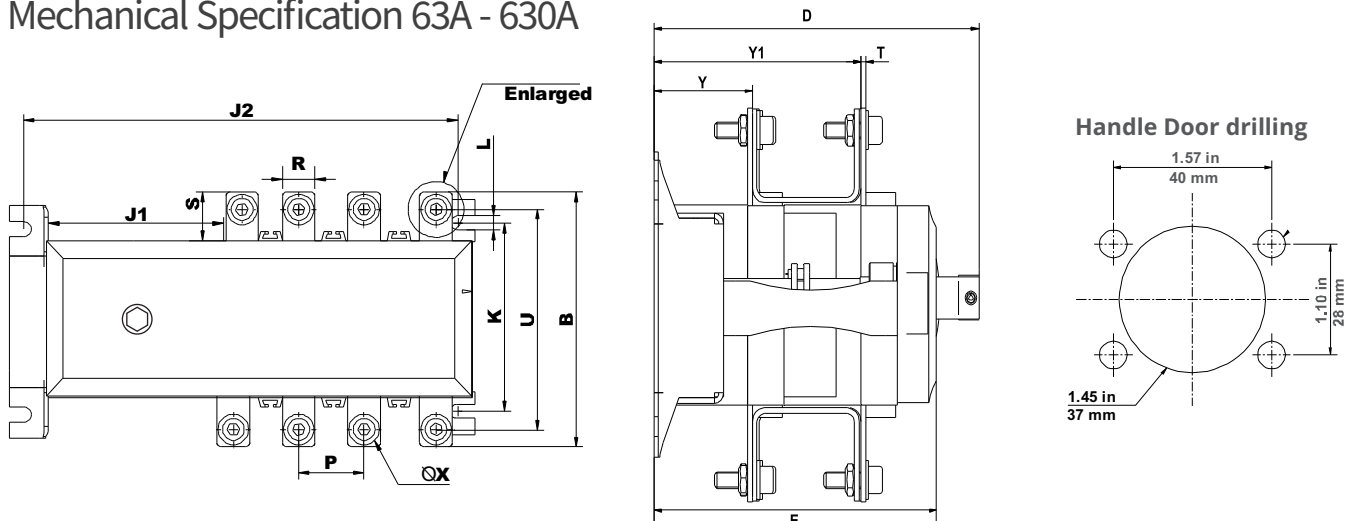
## Features

- Wide range from 63 to 630A (3 Pole & 4 Pole Version)
- Utilization category AC 23A (With high in-rush current)
- Operating handle with provision to lock in ON/OFF position
- User-friendly installation and operation
- Quick-make & quick-break operation for transferring of loads
- Incoming and outgoing terminal interchangeability
- Terminals suitable for aluminum and copper conductor Connectivity.
- Inbuilt Mechanical Limit switch for External indication (1 NO & 1 NC)
- Conforms IEC 60947- 6-1 Up to AC -33B, IS/ IEC 60947-3 Up to AC 23A, Front operated 3 pole & 4 pole 415V 50HZ
- Maintenance free most reliable mechanically held contact technology
- High short circuit with stand capacity

## Applications

- Generator OEM's
- Commercial buildings
- Automobile Industry
- Manufacturing Industry
- Power distribution and Load Management
- Healthcare
- Emergency / bypass systems
- Server rooms

## Mechanical Specification 63A - 630A

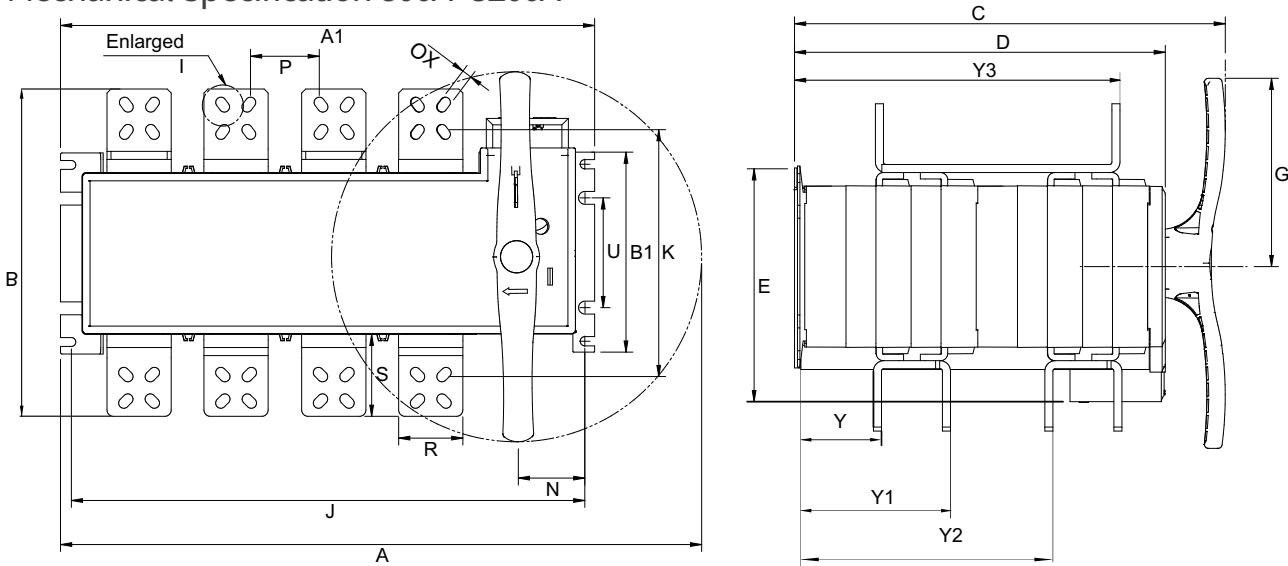


SIZE	Specifications	Dimensions Details														
	63A-630A 4 POLE MTS	B	D	E	J1	J2	K	L	P	R	S	T	U	OX	Y	Y1
Frame -1	MTS-63A	116	140	125	82	200	86	6.5	30	13	23	2.5	103	8	42	92
	MTS-100A	116	140	125	82	200	86	6.5	30	13	23	2.5	103	8	42	92
	MTS-FR1-125A	116	140	125	82	200	86	6.5	30	13	23	2.5	103	8	42	92
Frame -2	*MTS-FR2-125A	135	185	165	97	257	102	6.5	35	22	26	3.5	115	8	57	127
	MTS- 160A	135	185	165	95	260	104	6.5	38	20	25	3.5	115	8	56	126
	MTS-200A	152	185	165	95	260	104	6.5	55	25	33	3.5	148	10.8	72	153
Frame -3	MTS-250A	185	215	200	95	305	110	6.5	55	30	40	3.5	148	10.8	72	153
	MTS-315A	185	215	200	95	305	108	6.5	55	30	40	3.5	148	12	72	152
Frame -4	MTS-400A	241	265	245	110	385	180	9.5	72	40	40	5	205	12	83	195
	MTS-630A	260	265	245	117	385	180	9.5	65	42	55	6	225	12	83	195

# Technical Specification

MTS	63A	100A	125A	160A	200A	250A	315A	400A	630A
<b>Thermal Current I<sub>th</sub> (40°C)</b>									
Number of Poles	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P
Max. Normal Rating of Fuses	63	100	125	160	200	250	315	400	630
Insulation Voltage U <sub>i</sub> (V)	750	750	750	750	1000	1000	1000	1000	1000
Dielectric Strength (V) 50Hz 1mn.	4000	4000	5000	5000	5000	5000	5000	8000	8000
Impulse Voltage (kV)	6	6	6	6	8	8	8	12	12
<b>Rated Operational Currents I<sub>e</sub> (A)</b>									
415 VAC-AC 23A	63	100	125	160	200	250	320	400	630
500 VAC-AC 23A	55	55	100	130	160	200	250	315	315
440 VDC-DC 21A	63	100	125	160	200	250	320	400	500
440 VDC-DC 22A	63	100	125	130	160	200	250	400	500
440 CDC-DC 23A	63	63	125	130	160	200	250	400	500
<b>Protection</b>									
Short-circuit Current with Fuses (kA rms)	80	80	80	80	80	80	80	80	80
Fuse Rating	63	100	125	160	200	250	315	400	630
Peak Short-circuit making capacity (kA rms)	15	15	20	20	20	30	45	45	45
Admissible Short time current 1 sec (kA rms)	5	5	7	7	7	9	13	13	13
<b>Making &amp; Breaking Characteristics</b>									
Breaking Capacity (Arms) 415 VAC PF-0.35	504	504	1000	1280	1600	2000	2520	3200	5040
Making Capacity (Arms) 415 VAC PF-0.35	630	630	1250	1600	2000	2500	3150	4000	6300
<b>Endurance</b>									
Mechanical No. of operations	10000	10000	8000	8000	8000	8000	5000	5000	5000
Electrical No. of operations	2500	1500	1000	1000	1000	1000	1000	1000	1000
Operating Force (Nm)	3.5	3.5	9.5	9.5	9.5	11	11	17	17
<b>Connection</b>									
Min. Cu Cable / Bus Bar size (mm <sup>2</sup> )	16	35	50	70	95	120	185	240	40 x 8
Min. Al Cable / Bus Bar size (mm <sup>2</sup> )	25	2 x 25	70	95	150	185	240	300	40 x 8 x 2

# Mechanical Specification 800A -3200A



Specification	Outline Size (mm)						Mounting Size (mm)															
	A	A1	B	B1	C	D	E	G	J	K	L	N	P	R	S	T	U	ØX	Y	Y1	Y2	Y3
MTS/800A-3200A	845	665	350	220	400	248.3	373	450	645	220	12	85	120	60	64	8	250	12	103	227	330	427
MTS-800A	845	665	350	220	400	248.3	373	450	645	220	12	85	120	60	64	8	250	12	103	227	330	427
MTS-1000A	845	665	355	220	400	248.3	373	450	645	220	12	85	120	80	72	8	250	13	103	227	330	427
MTS-1250A	845	665	355	220	400	248.3	373	450	645	220	12	85	120	80	72	10	250	13	103	227	330	427
MTS-1600A	845	665	355	220	530	448.1	373	450	645	220	12	85	120	80	72	10	250	13	103	227	330	427
MTS-2000A	845	665	384	220	530	448.1	373	450	645	220	12	85	120	80	90	15	250	13	103	227	330	427
MTS-2500A	845	665	384	220	530	448.1	373	450	645	220	12	85	120	120	90	15	250	13	103	227	330	427
MTS-3200A	845	665	384	220	530	448.1	373	450	645	220	12	85	120	120	90	15	250	13	103	227	330	427

## Technical Specification

MTS	800A	1000A	1250A	1600A	2000A	2500A	3200A
<b>Thermal Current I<sub>th</sub> (40°C)</b>							
Number of Poles	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P	3P/4P
Max. Normal Rating of Fuses	800	1000	1250	1600	2000	2500	3200
Insulation Voltage U <sub>i</sub> (V)	1000	1000	1000	1000	1000	1000	1000
Dielectric Strength (V) 50Hz 1mn.	5000	5000	5000	5000	5000	5000	5000
Impulse Voltage (kV)	12	12	12	12	12	12	12
<b>Rated Operational Currents I<sub>e</sub> (A)</b>							
415 VAC-AC 23A	800	1000	1250	1600	2000	2500	3000
500 VAC-AC 23A	630	1000	1000	1000	1000	1000	1000
440 VDC-DC 21A	630	1000	1250	1600	2000	2000	2000
440 VDC-DC 22A	800	1000	1250	1250	1250	1250	1250
440 CDC-DC 23A	800	1000	1000	1000	1000	1000	1000
<b>Protection</b>							
Short-circuit Current with Fuses (kA rms)	80	80	80	80	80	80	80
Fuse Rating	800	1000	1250	2x800	2x1000	2x1250	2x1600
Peak Short-circuit making capacity (kA rms)	55	105	105	110	110	110	120
Admissible Short time current 1 sec (kA rms)	26	50	50	50	50	50	50
<b>Making &amp; Breaking Characteristics</b>							
Breaking Capacity (Arms) 415 VAC PF-0.35	6400	8000	8000	8000	10000	10000	10000
Making Capacity (Arms) 415 VAC PF-0.35	8000	1000	10000	10000	12500	12500	12500
<b>Endurance</b>							
Mechanical No. of operations	4000	4000	4000	3000	3000	2500	2500
Electrical No. of operations	500	500	500	500	500	500	500
Operating Force (Nm)	40	40	40	40	60	60	60
<b>Connection</b>							
Min. Cu Cable / Bus Bar size (mm <sup>2</sup> )	50x5x2	60x5x2	80x5x2	100x5x2	100x5x3	100x5x4	100x10x3
Min. Al Cable / Bus Bar size (mm <sup>2</sup> )	50x8x2	50x10x2	63x12x2	100x8x2	100x10x3	100x10x4	100x10x5



# AUTOMATIC CHANGEOVER WITH CURRENT LIMITER

The best solution for frustrating manual **source changeovers**.

## IMPROVED CONVENIENCE OF AUTOMATIC SOURCE CHANGEOVER.

- Microprocessor based ACCL with current limiter
- Intelligent tripping: inverse curve (Higher the overload, faster the trip)
- Inbuilt display of A, V, F, Wh, kWh
- Under/over voltage protection for EB and DG (M300)
- Single phase contactor based ACCL with off-load switching
- On site field programmable features in single phase ACCL through configurator (ACCL 400 & 400C)

## PROTECTION OF EQUIPMENT FROM HAZARDOUS POWER SURGES.

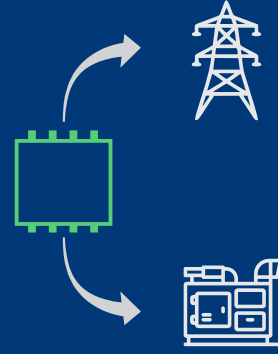
- Conformity standard as per IEC 60947-6-1
- Wide range of operational voltage (180-270)VAC
- Optional prepaid billing feature for DG (RS-485) with software
- More than 20000 operations
- Display of overload information for both EB and DG, along with phase indication.

## RUGGED DESIGN FOR MAXIMUM PERFORMANCE AND RELIABILITY.

- Installation is done as DIN rail for single phase and surface mountable for 3 phase (Optional DIN rail for 3 phase up to 40A).
- Eco friendly thermoplastic and fire retardant enclosure.
- More than 20000 operations.
- Reason for trip is displayed.
- RS 485 communication. (Optional)
- Protection against neutral current flow beyond threshold.



# FOR A SEAMLESS, CHANGEOVER BETWEEN POWER SOURCES.



## Features

### Three Phase ACCL

iACCL M300, M330



- Micro controller based automatic source changeover with neutral isolation
- Intelligent re-connection once trip occurs, either due to over voltage or over load
- Energy, Current, Voltage measurement for DG & Current, Voltage measurement for EB (M300)
- Dual Source Energy Monitoring on M300L
- Intelligent tripping: Inverse curve (Higher the overload faster the trip)
- Conformity standard as per IEC 60947-6-1
- Manual reset provision when in sleep mode for restoring power supply Or through the mobile app when network is available
- Intelligent changeover with R phase or any one phase failure (Manufacturing option)
- Under/Over voltage and single phase missing & Overload protection for EB and DG(M300)
- DG delay programmable for each ACCL to avoid loading the generator at a time
- Automatic trip if sum of power circuit and lighting circuit is >32A (single phase / relay version) optional
- DG Phase selection - Programmable

### Single Phase ACCL

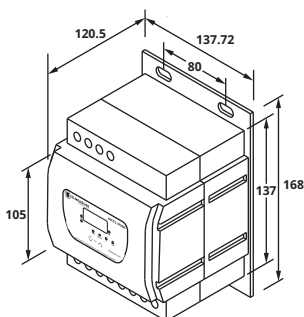
iACCL 400, 400C, M400,



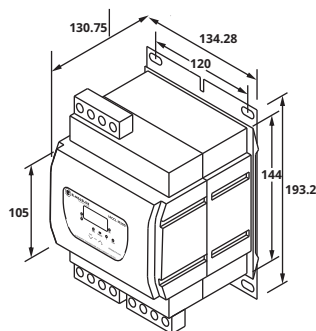
- Under and Over Voltage protection when load is running on DG
- Protect DG with Staggered Delay and Inverse curve Protection
- Reduced wiring complexity and installation time- Terminal 16mm capacity
- Programmable DG current limiting features on site through configuration tool
- EB/DG Input source Interchangeability
- Field configuration through CFG 400 for iACCL 400/400C

## Mechanical Specification

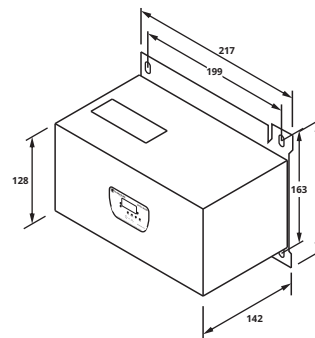
iACCL M300 & M300L (32A-40A)  
M330 (40A)



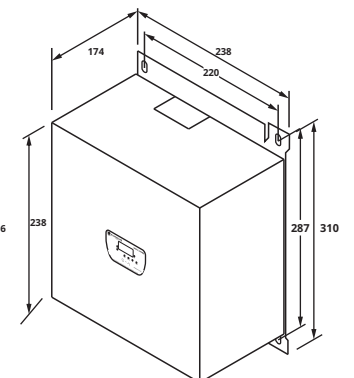
iACCL M300 (63A)



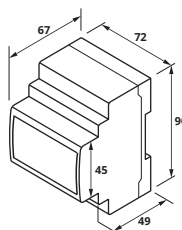
iACCL M300 (80A)



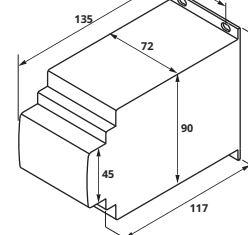
iACCL M300 (100 - 125A)



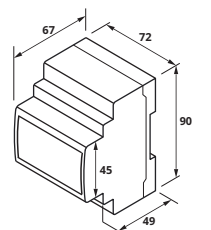
iACCL 400



iACCL 400C



iACCL M400





# Technical Specification

	iACCL	400	400C	M400	M300 (40/63A)	M300 (80A)	M300 (100/125A)	M330
<b>ELECTRICAL CHARACTERISTICS</b>								
DC Maximum Current Limit	25/32A			40/63A		80A	100/125A	32/40A
No. of Poles	1P+N			3P+N				EB:3P+N, DG:1+N
Rated Operating Voltage	240V AC			415/240VAC				
Rated Frequency	50Hz							
Utilization Category AC1	25/32A			40/63A	80A	100/125A	40A	
Utilization Category AC3	20/25A			32/40A	63A	80A	32/40A	
Ingress Protection	IP 20 & Double Insulation (As per IEC 61010-1)							
Accuracy	Class 1.0							
<b>PROGRAMMING FEATURES</b>								
Energy Selection	NA			Wh/VAh				
DG Under Voltage	170-210VAC				165-210VAC			
DG Over Voltage	240-270VAC				240-285V AC (M300L)			
DG Maximum Current Limit	25/32A			40/63A	80A	100/125A	40A	
EB Maximum Current Limit				40/63A	80A	100/125A	40A	
DG Transfer Time	1sec - 30sec							
Cycle Time	NA			6sec - 150sec				
No. of Cycles	NA			5 to 10				
DG Selection	NA			DG Output selection				
<b>METERING PARAMETERS</b>								
EB Source	NA				Voltage / Current			
DG Source	Current, Voltage, PF, W, VA, Wh/VAh							
Indication	EB Source, DG Source, Trip, Minus, Communication and Reason for Trip							
<b>COMMUNICATION</b>								
Device ID & Parity	1 to 247 & Odd, Even, None (Preferred Even)							
Protocol & Interface	MODBUS, RTU & Rs485							
Baud Rate	4800 bps to 19200 bps (Preferred 9600 bps)							
Isolation	2000 volts AC isolation for 1 minute between communication & other circuits							
<b>DISPLAY</b>								
Display type				LED 1 Row				
Instantaneous Digits				4				
Integrated Digits				4				
<b>FAULT TRIPPING</b>								
EB Source	NA				Over Current			
DG Source	Over Current, Under/Over Voltage, Phase Missing							
Trip Reset	Reset Key							
<b>MECHANICAL CHARACTERISTICS</b>								
Mounting (Vertical)	DIN-Rail			Surface Mounting				
Outline Dimension in LxWxH mm	90x72x67	110x72x135	90x72x67	168x137x120	186x217x142	310x238x174	168x137x120	
Weight	280 grams	700 grams	300 grams	2.1 kg	4.5 kg	7 kg	2.1 kg	
Torque	1N-m			2N-m	2N-m	2.5N-m	2N-m	
Wire gauge	11 AWG			6 AWG	4 AWG	1 AWG	6 AWG	
<b>STANDARDS</b>								
Compliance	IEC 60947-6-1							
<b>USE ENVIRONMENT CHARACTERISTICS</b>								
Temperature	Ambient: -5 to +55°C, Storage: -25 to +75°C, Operating: -10 to +55°C, Operating Humidity: 5 to 85% RH							
Environment	Class B							
Pollution Degree	2							

# OUR KEY CUSTOMERS



*Building from the heart.*





# Make smart decisions.



THEIOX is an IoT platform built for analytics and making sense of data, to give actionable insights that improves your operational efficiency and overall profitability.



#### SMART ENERGY

- Continuous reliability
- High efficiency
- Operational reports



#### SMART BUILDINGS

- Utility bill tracking
- Preventive maintenance
- Tenant retention



#### SMART MANUFACTURING

- Operational intelligence
- Predictive maintenance
- Remote device control

# ENERGY & POWER MONITORS

THD, TDD,  
TEHD, TOHD,  
K-Factor,  
Crest Factor,  
Harmonics,  
Sag & Swell,  
Power Inter.

W, VA, PF, VAR,  
Wh, Vah, VARh,  
Load Hours,  
Load Efficiency,  
Co2, V2H, A2H,  
NET Energy,  
TOTAL Energy.

VLL, VLN, A, Hz,  
RPM, Angle V/A,  
Unbalance V/A.

## Counter Type Energy Meters



GD 3110  
Smart 3E

## VAF + PF Meters



SL 1300

## Ammeter / Voltmeter



SL 13XX



SL X  
SL 3X



µAlpha X  
µAlpha 3X

## Frequency Meters



SL Hz



µAlpha Hz

## DC Ammeter / Voltmeter



SL ADC  
SL VDC



µAlpha ADC  
µAlpha VDC

## Branch Circuit Power Monitors



BM 5140



ET 5030

## Dual Source Energy Meters



LG 25XX



LG 25XXD

## DC Energy Meters



EDC 2150



EDC 2450X

## Multi-functional Energy Meters



LG 64XX



LG 25XX



µG 1119



LG 25XXD



LG MXX

## Transducers



TR 1XXX



TR 2XXX



TR 4200



TR 5200

## Isolators



ISO 100



ISO 200

## Class A Power Analyzers



PQ 8800

## Power Quality Monitors



PN 8700



EN 84XX

## Demand Controllers



PN 8700



EN 8400



EN 6400



EN 7500

## Gateways



GW 2000



GW 3000X

**BASIC VAF  
METERING**

**MID-LEVEL ENERGY /  
POWER / PROCESS MONITORING**

**ADVANCED ENERGY /  
POWER MONITORING**

**QUICKLY EXPLORE OUR  
RANGE OF PRODUCTS.**



# SWITCHGEARS, PROTECTION, CONTROL & NETWORKING PRODUCTS.

## Power Factor Controller



APFC 440 APFC 640

## Earth Leakage Relay



IELR 300 IELR 200D

**PROTECTION AND CONTROL**

## Smart Meters



PE 5121S PE 5120S

## Prepaid Meters



PE 5121-P PE 5120-P

**UTILITY / REVENUE METERS**

## Automatic Transfer Switches



Solenoid ATS



ATeS (63A - 1600A)

## Manual Transfer Switches



## ACCL



iACCL M3XX iACCL M3XX



iACCL 400 iACCL 400C iACCL M400

**SOURCE CHANGEOVER SWITCHES**

## ACB



## MCCB



## Switch Disconnecter



## Overload Relays



## IoT Contactors



## Contactors



**LOW VOLTAGE SWITCHGEARS**







**ELMEASURE**<sup>®</sup>  
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