



ATS021, ATS022 Automatic Transfer Switches

ATS021, ATS022

Automatic transfer switch

ABB presents the new generation of Automatic Transfer Switches, the result of worldwide experience in low voltage applications.

The new generation of the ATS family – ATS021 and ATS022, offers the most advanced and comprehensive power continuity solution.

Reliability, safety and intelligence are the major features of the new ATS family, which complies with international standards, is simple to configure and adaptable to all application scenarios.

Moreover, its perfect integration with all ABB circuit-breakers and switch-disconnectors ensures a fully coordinated system.

Multi-function logic to meet all requirements

- Standard switching logic allows monitoring of the normal and emergency line, sending commands to the generator and controlling that the circuit-breakers have been switched;
- Management of both the two non-priority lines (ATS021, ATS022);
- Management of a third bus-tie circuit-breaker (ATS022);
- Management of non-priority load disconnection.

No auxiliary power supply required

The new ATS family is designed to work without an auxiliary power supply. An auxiliary power supply is only required when Modbus RS485 communication is used or in networks with 16 2/3 Hz rated frequency.

Compliance with IEC and EN 60947 Standards

Compliance with the IEC and EN 60947 Standards allows the new ATS family to provide the quality and safety needed for all requirements.

Compatibility with ABB circuit-breakers and switch-disconnectors

The ATS family can be used with ABB SACE Tmax (XT1...XT4, T3...T7) and Emax (X1, E1...E6) series of circuit-breakers and switch-disconnectors, fitting into a complete and coordinated system.

Advanced communication interface

ATS022 is equipped with a communication unit which allows integration with the supervision systems via Modbus RS485. Furthermore, ATS022 is fitted with a graphic display which makes parameter configuration and display extremely simple.

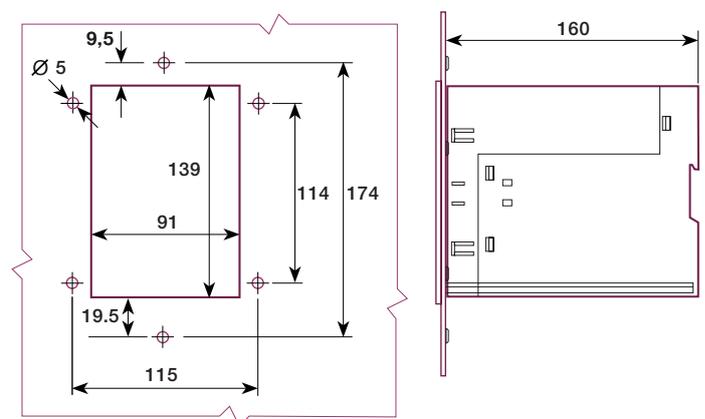
Applications

The ATS family is particularly suited to use in all emergency power supply systems where a solution which is simple to use, reliable and rapid to install is required.

Below are some of the main applications of ATS:

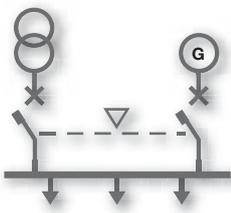
- Power supply for UPS units;
- Operating theatres and primary hospital services;
- Emergency power supplies for civil building, hotels and airports;
- Data banks and telecommunication systems;
- Power supply of industrial line for continuous processes.

Dimensions



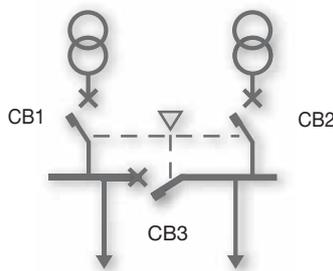
Ordering codes

Order code	Description
1SDA065523R1	ATS021 Automatic transfer switch
1SDA065524R1	ATS022 Automatic transfer switch



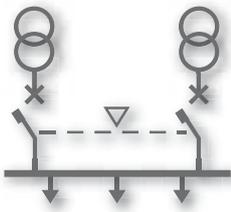
LINE-GENERATOR

If the main network goes down, the ATS021 and ATS022 devices allow management of switching over to the emergency line fitted with a GenSet system.



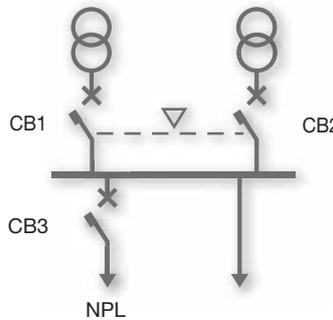
MANAGEMENT OF TWO INDEPENDENT POWER SUPPLY LINES SEPARATED BY A BUS-TIE

If one of the two power supply lines goes down, the available line supplies both the load side sections by means of the bus-tie (ATS022).



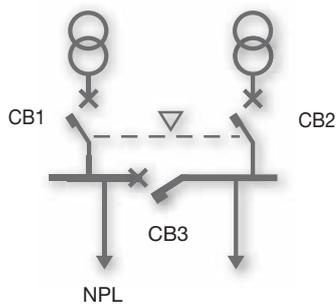
LINE-LINE

If the main network goes down, the ATS021 and ATS022 devices allow switching to a second line used as a reserve line. ATS022 allows you to select which of the two lines available is to be the priority line.



MANAGEMENT OF THE NON-PRIORITY LOADS ON THE OUTGOING LINE

If the main network goes down, the ATS022 device allows switching to a second line used as the reserve line, disconnecting the non-priority loads (NPL) by means of a bus-tie.



MANAGEMENT OF NON-PRIORITY LOADS BY MEANS OF A BUS-TIE

Should the main network go down, the ATS022 device allows you to switch to a second line used as a reserve line, disconnecting the non-priority loads (NPL) shunted from the main busbar.

Technical Characteristics



		ATS021	ATS022	
General	Auxiliary power supply	Not required	Not required (24-110 VDC is required only for Modbus dialogue and 16 2/3 Hz systems)	
	Maximum voltage, Un	Max 480 VAC	Max 480 VAC	
	Frequency, fn	50, 60 Hz	16 2/3, 50, 60, 400 Hz	
	Dimensions		H mm	96
			W mm	144
			P mm	170
Type of installation	Door mounting – DIN rail mounting	Door mounting – DIN rail mounting		
Operating Mode	Auto/Manual	Auto/Manual		
Features	Normal and Emergency line monitoring	•	•	
	Normal and Emergency line CB control	•	•	
	Generator start-up	•	•	
	Adjustable Generator shutdown delay	•	•	
	Bus-tie	-	•	
	No-priority Line	-	•	
	Priority Line Selection	-	•	
	Display	-	•	
Environmental conditions	Degree of protection	IP20	IP20	
	Operating temperature	-20 ... +60°C	-20 ... +60°C	
	Maximum humidity	5% - 90% without condensation	5% - 90% without condensation	
Operating thresholds	Min. voltage threshold	-30% ... -5% Un	-30% ... -5% Un	
	Max. voltage threshold	+5% ... +30% Un	+5% ... +30% Un	
	Frequency threshold	-10% ... +10% fn	-10% ... +10% fn	
Tests	Test Mode	•	•	
	Test Gen set Mode	•	•	
Compliance with standards	Electronic equipment for use in power installations	EN-IEC 50178	EN-IEC 50178	
	Electromagnetic compatibility	EN 50081-2	EN 50081-2	
		EN 50082-2	EN 50082-2	
	Environmental conditions	IEC 68-2-1	IEC 68-2-1	
		IEC 68-2-2	IEC 68-2-2	
	IEC 68-2-3	IEC 68-2-3		

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