

ARC 850 & ARC 1550

High-speed circuit breaker for 750V and 1500V DC applications

GENERAL DESCRIPTION

The Alstom high-speed circuit breakers range, ARC, for DC applications consists of unipolar apparatuses which ensure the protection of the rolling stock and sub-station components. The ARC circuit breakers have a common general base structure and a specific upper arc chute assembly.

They include an intrinsic bi-directional current trip according to the operational voltage. These circuit breakers are also equipped with an electromagnetic control and are available in the following ranges : 750 Vdc and 1500 Vdc, for thermal currents of 5000A.

The ARC 850 and ARC 1550 circuit breakers are 5000 amp. DC unipolar devices with a bi-directional over-current and electrical trip (tripping characteristics are independent of current passing through the device and are not affected in the event of closing on short-circuit).

PRODUCT CATEGORIES:

- Infrastructure solutions
- Industrial application

CUSTOMER BENEFITS

- Service proven product used on projects throughout the world since 1999
- Benefiting from Alstom's wide railway expertise over the whole product life-cycle
- Easy maintenance without completely dismantling the circuit breaker
- Compact design for rolling stock or infrastructure applications

KEY REFERENCES

Infrastructures :

- Istanbul (Turkey)
- Caracas (Venezuela)
- Mexico
- Melbourne (Australia)
- Marseille, Tours , Paris (France)
- Santiago (Chili)
- Cairo (Egypt)
- Barcelona (Spain)



STANDARDS

Compliant with:

- EN 50123-1-2: Railway applications – Fixed installations – D.C. switchgear
- EN 50124-1: Railway applications – Insulation coordination

TECHNICAL SPECIFICATIONNS

Thermal current	5000A	
Type of circuit breaker	Bi-directional	
Nominal Operating Temperature	Min -15°C	Max +50°C
Storage Temperature	Min -40°C	Max +70°C
Altitude	1400m	
Humidity	95% at 40°C	
Mechanical endurance	50 000 Cycles (at 25°C)	
Weight	ARC 850 : 160Kg - ARC 1550 / 185Kg	
Dimension (mm)	ARC 850 : 900x500x720 ARC 1550 : 900x500x815	
HV connections	HV input and HV output : 5 x 11mm Diam holes on electrical connection	
LV connections	Fixed FCI connector type 8585-10-R-22-B-41-SNH068 (mobile connector supplied)	
Fire behaviour	In agreement with standard for installation in technical area	
Fire smoke	NF F 16 101 : Fire behaviour-Material choice NF 16 102 : Fire behaviour-Material choice and application fir electric equipment	

BREAKING CAPACITY

	ARC 850		
Max prospective current (kA) (Inss)	142	80	75
Time constant (Tnc) (ms)	2	40	15
Voltage (V)	900		

	ARC 1550			
Max prospective current (kA) (Inss)	102	68	55	50
Time constant (Tnc) (ms)	2	15	30	75
Voltage (V)	1500			

VARIANTS

- Electromagnet device :
48V, 110V or 125V
- Tripping range variants :
2500 to 5000 A
5000 to 10000 A
7500 to 15000 A
9000 to 15000 A

OPTIONS

- Unidirectional option
- Indirect over-current or External release option

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