

ARC 812 & ARC 1512

High-speed circuit breakers 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, 1500 Vdc, 3000 Vdc, for thermal currents ranging from 1200A to 5000A.

The ARC 812 and ARC 1512 circuit breakers are 1200 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:

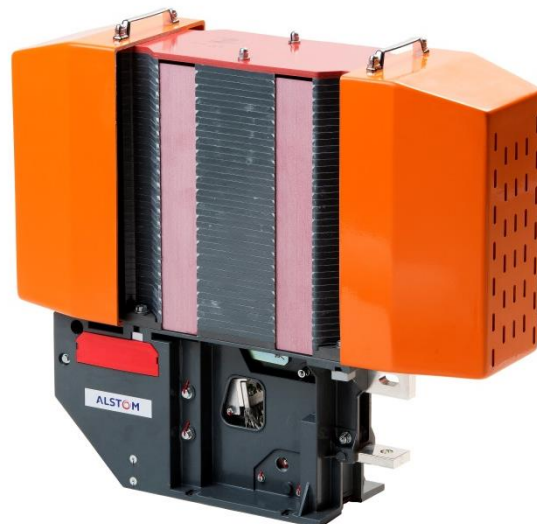
- Light Rail Vehicles
- Metro
- Regional Trains

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

- New York metro
- Beijing metro
- Paris metro
- Sydney metro
- Mexico metro
- Buenos Aires metro
- Montreal metro
- Singapore metro
- Santiago metro
- Alstom Citadis Tramways range



STANDARDS

Compliant with:

- IEC 60077-1/2/3: Railway applications – Electric equipment for rolling stock
- EN 50123-1/2 : Railway applications - fixed installations - D.C switchgear

GENERAL FEATURES

Input voltage	750 or 1500V	
Thermal current	1200A (at 55°C)	
Type of circuit breaker	Bi-directional	
Nominal Operating Temperature	Min -40°C	Max +70°C
Storage Temperature	Min -40°C	Max +70°C
Altitude	Up to 1400m	
Humidity	95% at 70°C	
Mechanical endurance	250 000 Cycles (at 25°C)	
Weight	ARC 812 : 29kg - ARC 1512 : 37kg	
Dimension (mm)	ARC 812 : 487x397x150 ARC 1512 : 487x532x150	
Shock and vibration	IEC 61373 Category 1 class B	
Fire smoke	EN 45545 HL2 R23/NFPA 130	
HV connections	HV input and HV output : 12,5mm diameter holes on electrical connection	
	ISO 9001 & IRIS (International Railway Industry Standard)	

BREAKING CAPACITY

	ARC 812		ARC 1512	
Max prospective current (kA)	30	30	22	25
Prospective current (kA) (0-20s-CO-60s-CO)	25	20	20	25
L/R (ms)	2	15	2	15
Voltage	900		1500	

VARIANTS

- Electromagnet device variant :
24V, 48V, 72V or 110V
- Electronic Control Panel
- Tripping range variants :
400A to 800A/600A to 1200A
1200A to 2500A/1800 to 3600 A

OPTIONS

- Arc chute (Cover option or lateral seals option)
- Fixing option by different handling

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