

ARC 820

High-speed circuit breaker for 750V DC applications

GENERAL DESCRIPTION

The Alstom high-speed circuit breaker 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 3500A.

The ARC 820 circuit breakers are direct current 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
- Infrastructure solutions

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
- Reduced number of components
- High reliability
- High number operations without maintenance
- Easy maintenance without completely dismantling the circuit breaker
- Compact design for vertical or horizontal operations

KEY REFERENCES

Trains:

- Citadis Dualis tram-train in France

Infrastructures :

- Reims, France
- Strasbourg, France
- Algiers, Algeria



STANDARDS

IEC 60077-1-2-3: Railway applications – Electric equipment for rolling stock

EN 50123-1-2 : Railway applications - fixed installations - D.C switchgear

TECHNICAL SPECIFICATIONS

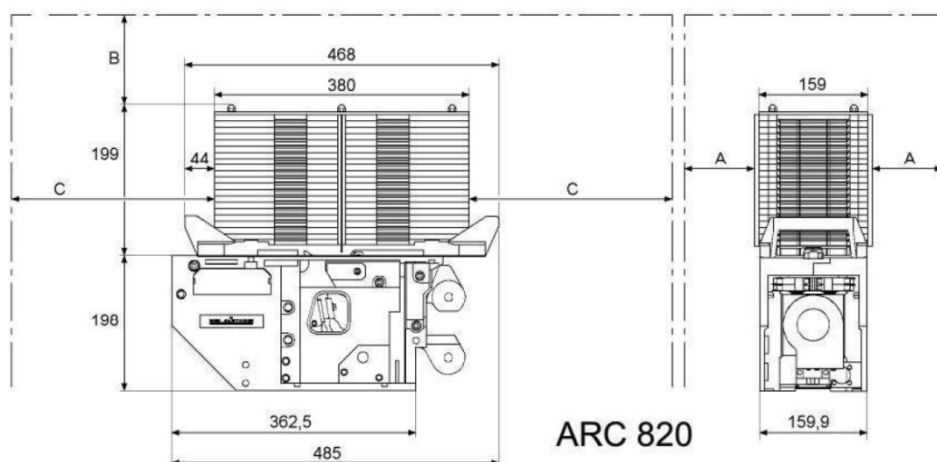
Traction input voltage	750V	
Thermal current	2000 A	
Type of circuit breaker	Bi-directional	
Nominal Operating Temperature	Min -25°C	Max +70°C
Exceptional Operating Temperature	Min -25°C	Max +85°C
Storage Temperature	Min -40°C	Max +70°C
Altitude	up to 1400m	
Humidity	95% at 70°C	
Mechanical endurance	250 000 Cycles (at 25°C)	
Weight	33 kg	
Dimension (mm)	620x406x191 with covers	
HV connections	HV input and HV output : 17mm diameter holes on electrical connections	
LV connections	Burndy connector SMS18R1 (FCI connector as option)	
Shock and Vibrations	IEC 61373 (Category 1, Class B)	
	ISO 9001 & IRIS (International Railway Industry Standard)	

VARIANTS

- Electronic control panel.
- Tripping range variants :
1200 to 2500 A
1800 to 3600 A
3000 to 5000 A

OPTIONS

- Arc chute
(cover option or lateral seals option)
- Overcurrent signaling contact
- External high-speed release



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