

EF5 EV Fuse



Features

- Reliable clearing of DC fault currents
- High cycling performance
- Low watt losses
- Ultra-compact size and power density
- High breaking capacity to 50kA
- Operation as low as 510% I_n overload protection
- QR code marks on each fuse for traceability

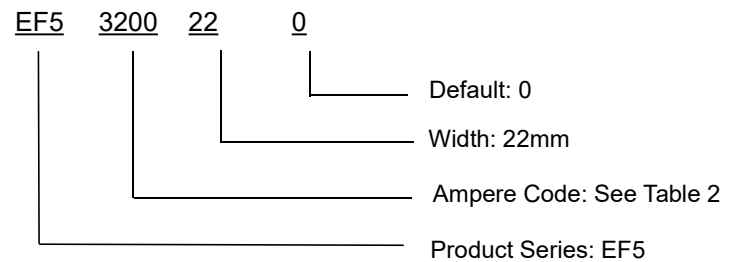
Description

Adler EF5 series EV fuses are especially engineered and tested to provide best-in-class protection performance in protecting high power battery charging and managing systems of Electrical Vehicles and Hybrid Electrical Vehicles, up to 500 Vdc in ratings from 100A to 400A.

Agency Information

- Designed to UL 248-20
- UL Recognized Component
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

Part Numbering System



Dimensions (mm):

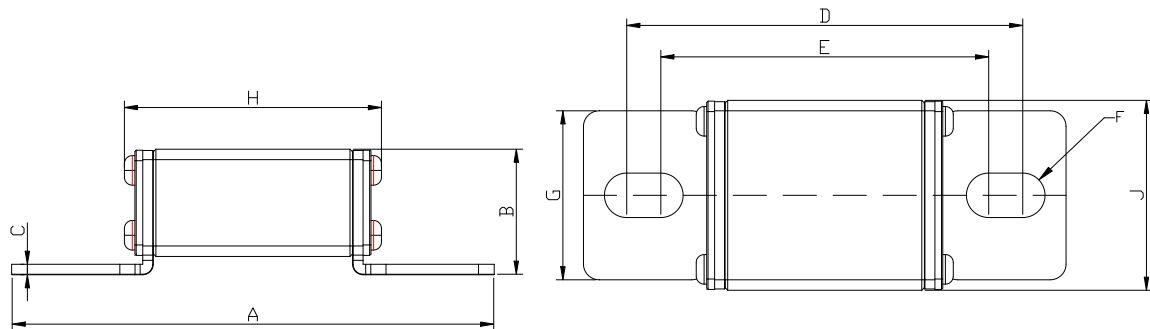


Table 1

Fuse Size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm
49x22	90 ±1	25 ±1	2 ±0.1	75 ±0.8	62.5 ±0.8	φ 8.5 ±0.5	20 ±0.5	49 ±0.8	22+1/-0.5
49x36	92 ±1.5	24 ±1	2 ±0.1	75.5 ±1	62.5 ±1	φ 8.5 ±0.5	32.5 ±0.5	49 ±1.0	36.3+1.2/-0.5

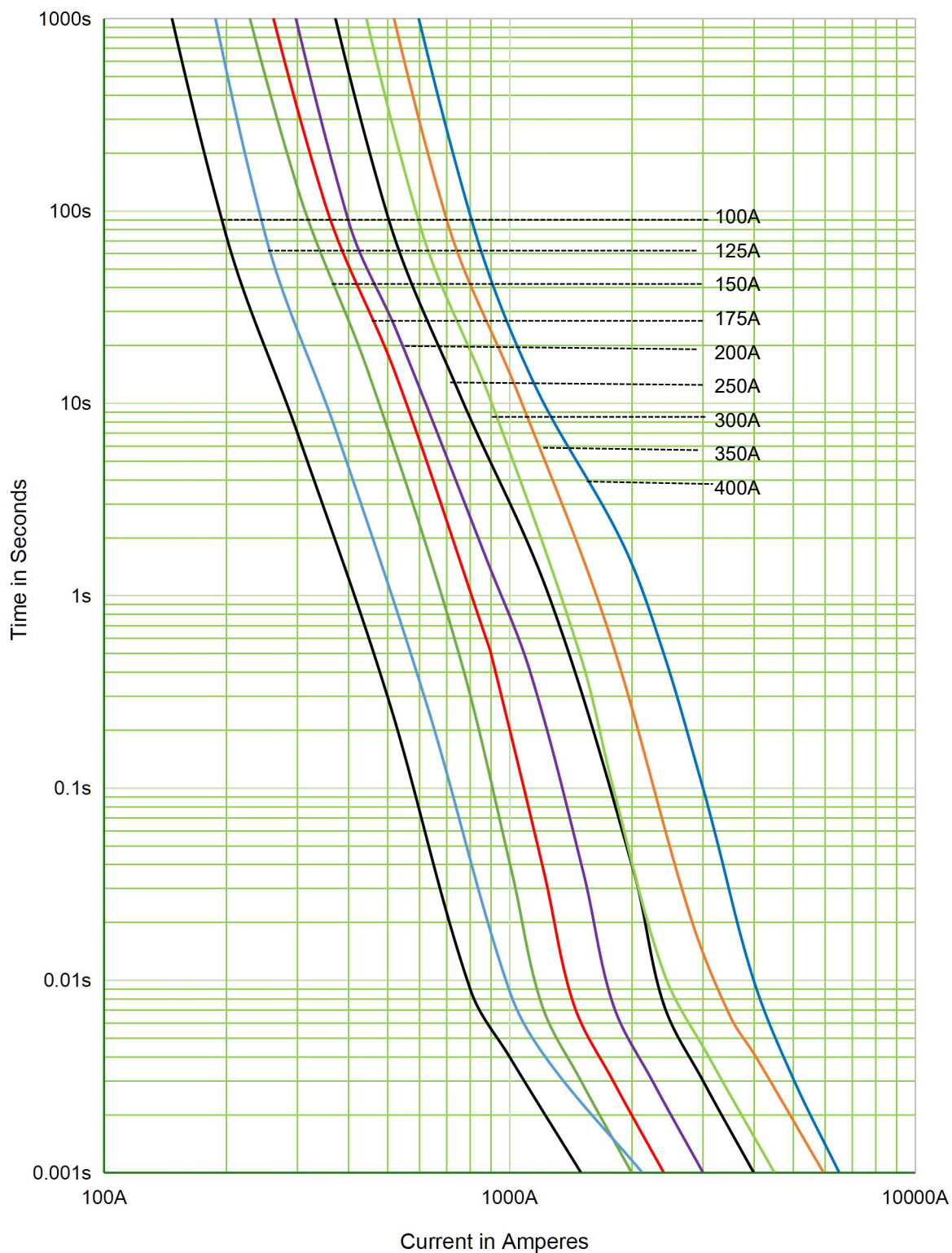
Electrical Specifications
Table 2

Size (mm)	Part Number	Rated Current	Ampere Code	Rated Voltage	Breaking Capacity		I ² t (A ² sec)		Watt Loss (W)	
					UL **	Self-Certificated	Pre-arcing	Total @ 500Vdc	0.5In	1.0In
49x22	EF53100220	100 A	3100	500Vdc/420Vac	5.1In~50 kA @500Vdc	20kA@420Vac	1770	7020	2.8	14.9
	EF53125220	125 A	3125	500Vdc/420Vac	5.1In~50 kA @500Vdc	20kA@420Vac	2850	11500	3.8	19.3
	EF53150220	150 A	3150	500Vdc/420Vac	5.1In~50 kA @500Vdc	20kA@420Vac	4150	15770	4.5	23.1
	EF53175220	175 A	3175	500Vdc/420Vac	5.1In~50 kA @500Vdc	20kA@420Vac	5970	22850	5.3	27.5
	EF53200220	200 A	3200	500Vdc/420Vac	5.1In~50 kA @500Vdc	20kA@420Vac	9350	36500	5.5	30.8
	EF53250220	250 A	3250	500Vdc	5.1In~50 kA @500Vdc	-	16600	67800	6.2	35.2
49x36	EF53300370	300 A	3300	500Vdc	5.1In~50 kA @500Vdc	-	20500	67500	7.1	50
	EF53350370	350 A	3350	500Vdc	5.1In~50 kA @500Vdc	-	32600	107580	7.85	54
	EF53400370	400 A	3400	500Vdc	5.1In~50 kA @500Vdc	-	42250	148000	9.8	70

1. ** --- UL File: E506668
2. Recommend mounting torque is 12+/-1.0Nm (M8)

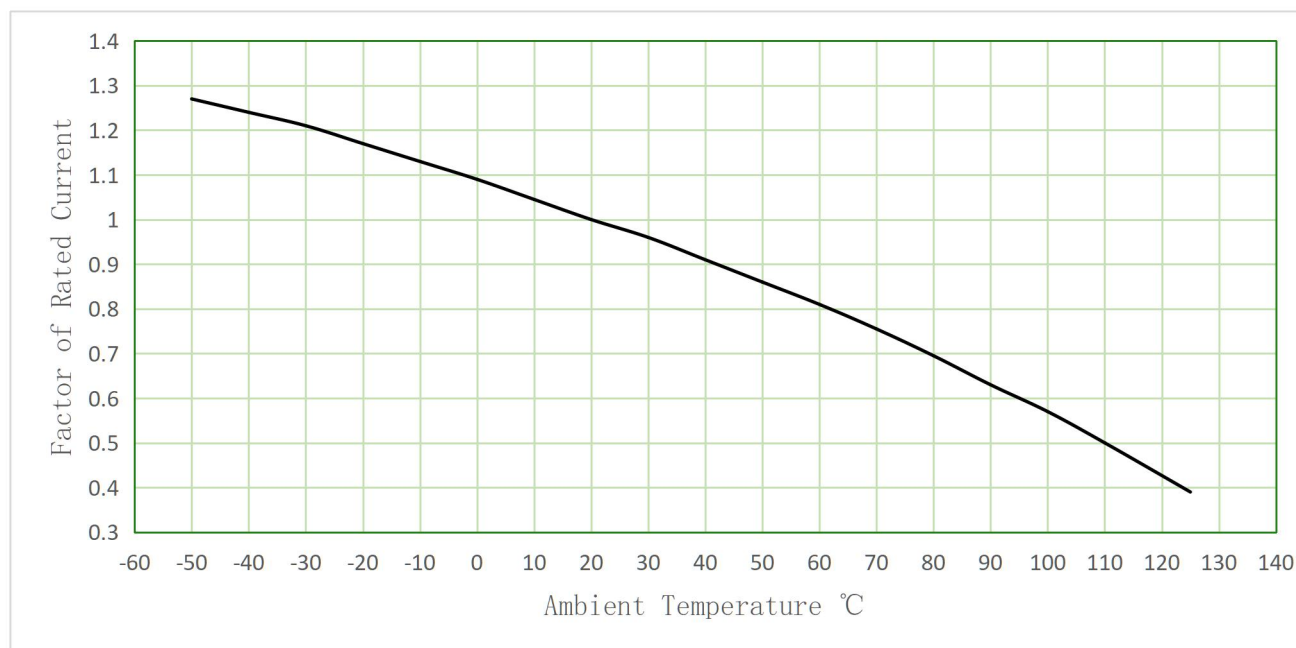
TIME CURRENT CURVE

EF5xxxx220 and EF5xxxx370

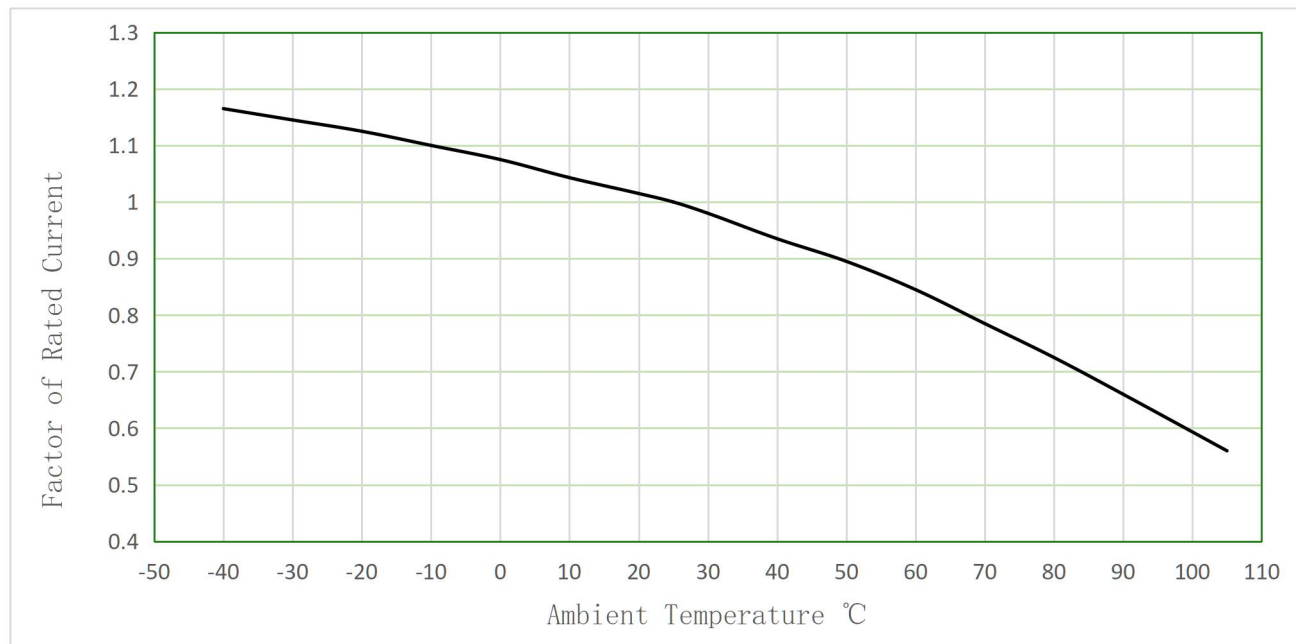


TEMPERATURE DERATING CURVE

EF5xxx220 (100 – 250A)



EF5xxx370 (300 – 400A)



TRANSPORTATION and STORAGE

During transportation and storage, customer should avoid water seepage and mechanical damage.

CONDITIONS for OPERATION in SERVICE

Where the following conditions apply, fuses complying with this standard are deemed capable of operating satisfactorily without further qualification.

- Normal temperature: -5°C to 40°C;
- The altitude of the site of installation of these fuses should not exceed 2000 m above sea level;
- The air should be clean and its relative humidity does not exceed 50% at the maximum temperature of 40°C;
- Higher relative humidities are permitted at lower temperatures, e.g., 90 % at 20°C;
- Under these conditions, moderate condensation may occasionally occur due to variation in temperature.

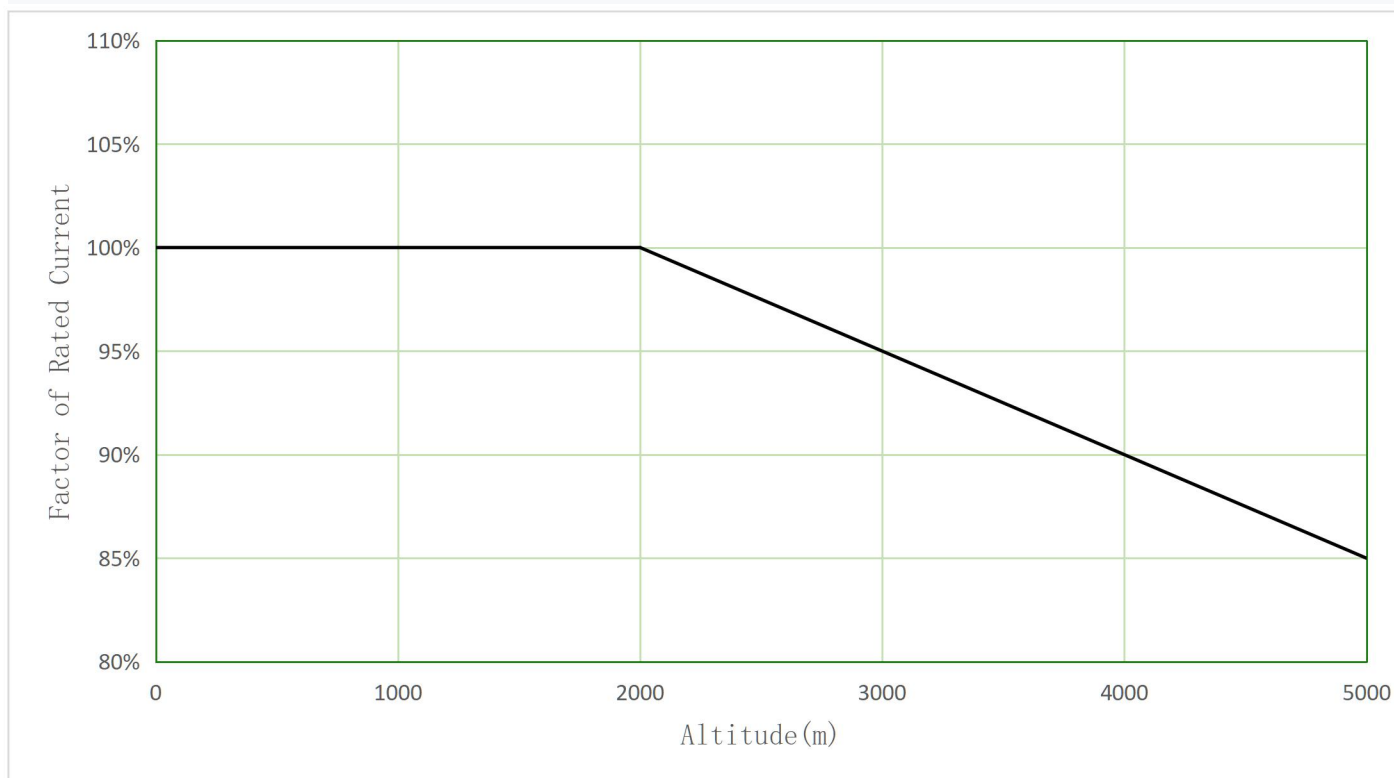
For operating conditions other than above, please contact the manufacturer.

VIBRATION

These fuse meet UL248-20 Section 8.6.2.3 Vibration Test C requirement, can be use on Electrical Vehicle application.

Re-rating with HIGH ALTITUDE

The formula for calculating current load at high altitude: $I = I_n * (1 - (h-2000)/100*(0.5/100))$ h is altitude, less than 5000m.



PACKAGING INFORMATION

Part No	Inner box				Outer box					
	L (mm)	W (mm)	H (mm)	Qty (pcs)	Qty boxes / outer box	Net Weight (kg)	Gross Weight (kg)	L (mm)	W (mm)	H (mm)
EF5xxx220	127	96	49	10	18	16.38	17.655	330	310	200
EF5xxx370	100	80	43	3	35	15.33	16.679	385	250	210

Web Resources

Download the latest technical documents: www.adlerelectric.com. Specifications are subject to change without notice.