

AEX 1000 Vdc EV FUSE



FEATURES

- Reliable clearing of DC AC fault currents
- High cycling performance
- Low watt losses
- Ultra-compact size and power density
- Time Constant: $2 \pm 0.5\text{ms}$
- High breaking capacity to $50\text{kA}@1000\text{Vdc}$
- High breaking capacity to $100\text{kA}@1000\text{Vac}$
- Operation as low as 135% for 70A to 200A and 200% for 225A to 800A I_n overload protection
- Full coverage of battery module current

OPERATING CONDITIONS

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

- ✧ Normal temperature: -5°C – 40°C , permissible operating temperature: -40°C – 120°C ;
- ✧ The altitude of the normal site of installation of the fuses does not exceed 2000m above sea level and permissible altitude site of installation does not exceed 5000m;
- ✧ The air is clean and its relative humidity does not exceed 50 % at the maximum temperature of 40°C ;
- ✧ Higher relative humidity is permitted at lower temperatures, e.g., 90 % at 20°C ;
- ✧ Pollution grade III
- ✧ Under these conditions, moderate condensation may occasionally occur due to variation in temperature.
- ✧ For operating conditions other than above, please contact manufacturer.

STORAGE

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

DESCRIPTION

Adler AEX series EV fuses are specially 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 1000 Vdc I_n ratings from 70A to 800A.

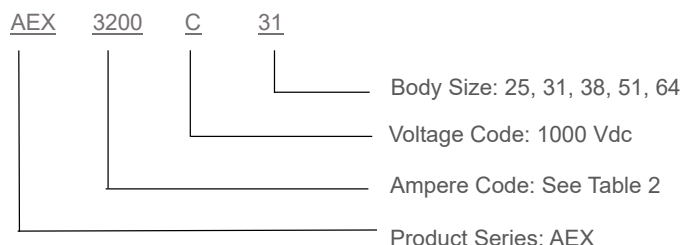
AGENCY INFORMATION

- Designed to JASO D622, ISO 8820-8, UL248-20, Comply to IEC60269-7, UL248-13, GB/T 13539-4
- UL, TUV, CCC certified
- IATF 16949 quality system
- RoHS and REACH Compliant

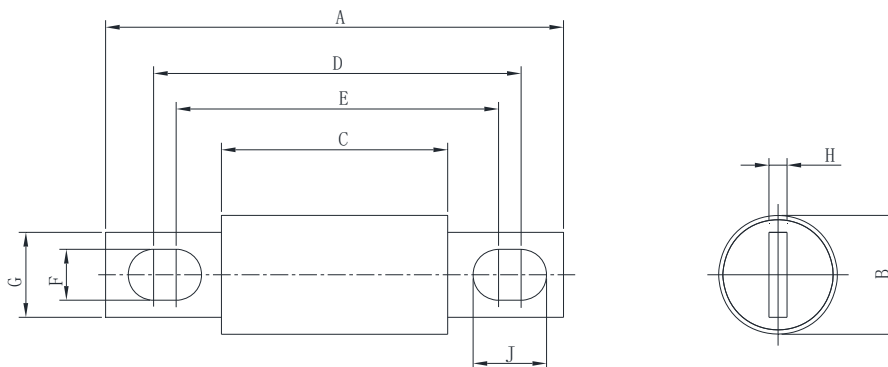
APPLICATIONS

- Battery Charging Protection

PART NUMBERING SYSTEM



DIMENSIONS (mm)



Fuse Size	A ± 0.8mm	B ± 0.5mm	C ± 0.8mm	D ± 0.8mm	E ± 0.8mm	F ± 0.5mm	G ± 0.5mm	H ± 0.25mm	J ± 0.5mm
Φ25x72	111	25	72	95.1	88.1	8.5	19	3.2	12
Φ31x72	111	31	72	95.1	88.1	8.5	21.8	5	12
Φ38x72	129	38	72	107.1	89.1	10	24.8	6	19.5
Φ51x72	129	51	72	109.1	90.1	10	38	6	20
Φ64x72	122	64	72	101.5	92.5	10	40	10	15

Packing information

Fuse Size	Box specifications (mm)	Packing quantity / per container	Weight / PCS (g)	Recommended Screw	Recommended tightening torque (N·m)
Φ25x72	410×215×160	110pcs	103±3%	M8	12±1
Φ31x72	410×215×160	68pcs	163±3%	M8	12±1
Φ38x72	410×215×160	33pcs	257±3%	M10	20±1
Φ51x72	410×215×160	14pcs	452±3%	M10	20±1
Φ64x72	410×215×160	18pcs	720±3%	M10	20±1

Table1

ELECTRICAL SPECIFICATIONS

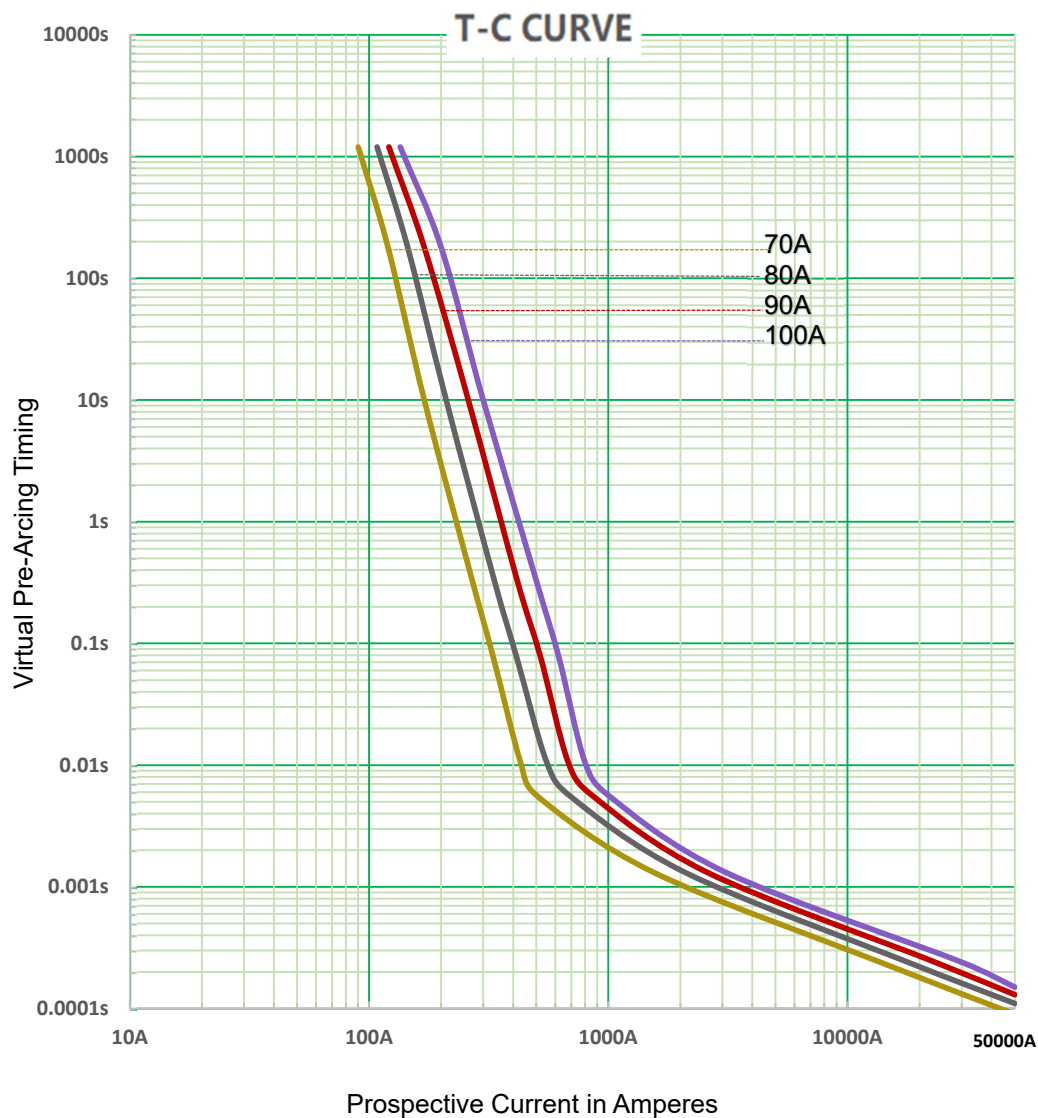
Size	Part Number	Rated Current	Ampere Code	Breaking Capacity		Melting I ² t	Clearing I ² t	Watt Loss (W)
(mm)						(A ² s)	(A ² s)	0.5 I _n
25x72	AEX2700C25	70A	2700	50kA@1000Vdc	100kA@1000Vac	870	3270	3.9
	AEX2800C25	80A	2800	50kA@1000Vdc	100kA@1000Vac	1290	4620	4.5
	AEX2900C25	90A	2900	50kA@1000Vdc	100kA@1000Vac	1820	6190	5.2
	AEX3100C25	100A	3100	50kA@1000Vdc	100kA@1000Vac	2390	8160	5.8
31×72	AEX3125C31	125A	3125	50kA@1000Vdc	100kA@1000Vac	1647	5960	6.7
	AEX3150C31	150A	3150	50kA@1000Vdc	100kA@1000Vac	2455	8920	7.8
	AEX3175C31	175A	3175	50kA@1000Vdc	100kA@1000Vac	4413	13950	8.1
	AEX3200C31	200A	3200	50kA@1000Vdc	100kA@1000Vac	6259	20950	9.0
38×72	AEX3225C38	225A	3225	50kA@1000Vdc	100kA@1000Vac	6802	22790	12.8
	AEX3250C38	250A	3250	50kA@1000Vdc	100kA@1000Vac	8612	27560	13.6
	AEX3275C38	275A	3275	50kA@1000Vdc	100kA@1000Vac	11479	33980	14.9
	AEX3300C38	300A	3300	50kA@1000Vdc	100kA@1000Vac	14976	42190	15.9
51×72	AEX3350C51	350A	3350	50kA@1000Vdc	100kA@1000Vac	18805	67700	17.0
	AEX3400C51	400A	3400	50kA@1000Vdc	100kA@1000Vac	27580	93400	18.3
64×72	AEX3450C64	450A	3450	50kA@1000Vdc	100kA@1000Vac	34520	99000	22.7
	AEX3500C64	500A	3500	50kA@1000Vdc	100kA@1000Vac	41590	119000	24.9
	AEX3550C64	550A	3550	50kA@1000Vdc	100kA@1000Vac	48570	143000	26.7
	AEX3600C64	600A	3600	50kA@1000Vdc	100kA@1000Vac	57820	165000	28.2
	AEX3700C64	700A	3700	50kA@1000Vdc	50kA@1000Vac	58940	198000	30.5
	AEX3800C64	800A	3800	50kA@1000Vdc	50kA@1000Vac	83360	217000	32.5

Table 2

1. TUV File: 50608102 (Φ 25) / 50604939 (Φ 31) / 50602915 (Φ 38) / 50607808 (Φ 51) / 50608091 (Φ 64).
2. UL File: E485737.
3. CCC File: 2023000308000089 (Φ 25) / 2023000308000090 (Φ 31) / 2023000308000091 (Φ 38) / 2023000308000092 (Φ 51) / 2023000308000093 (Φ 64).
4. Time constant: 2 ± 0.5ms.
5. All data is based on DC.

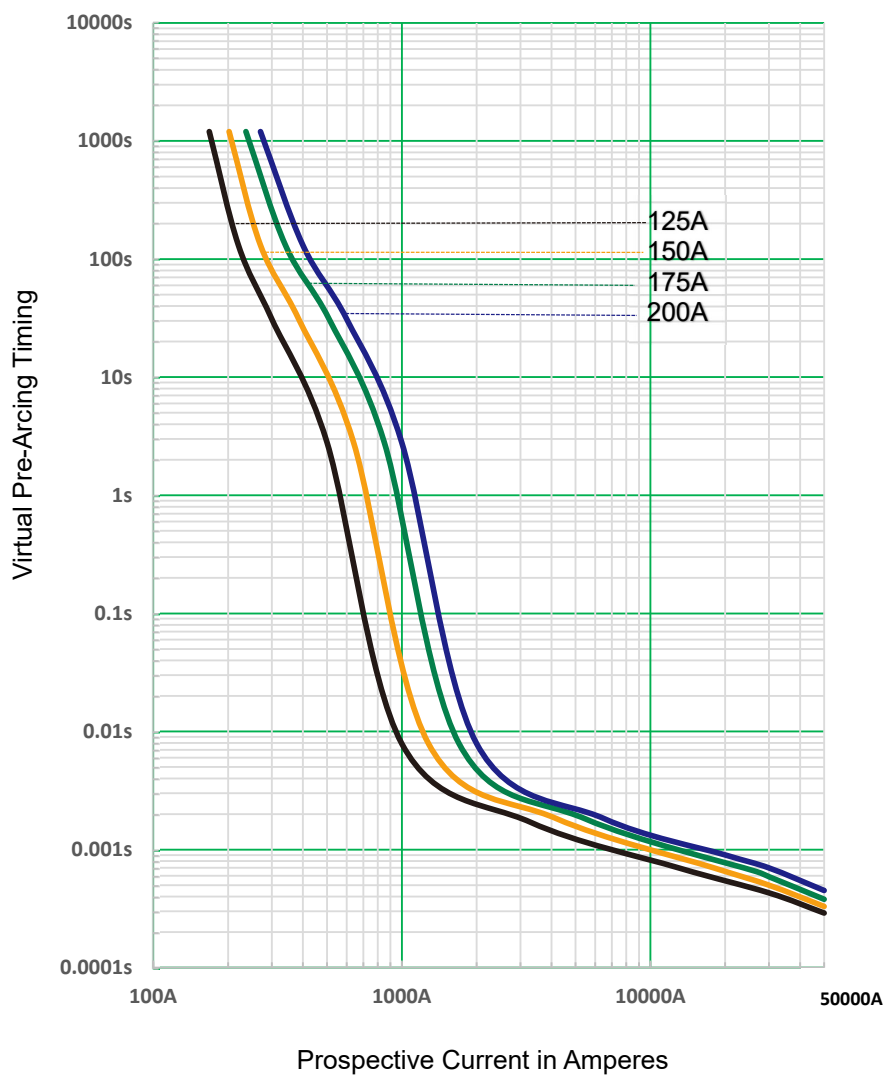
TIME CURRENT CURVE

AEXxxxxC25 70A – 100A



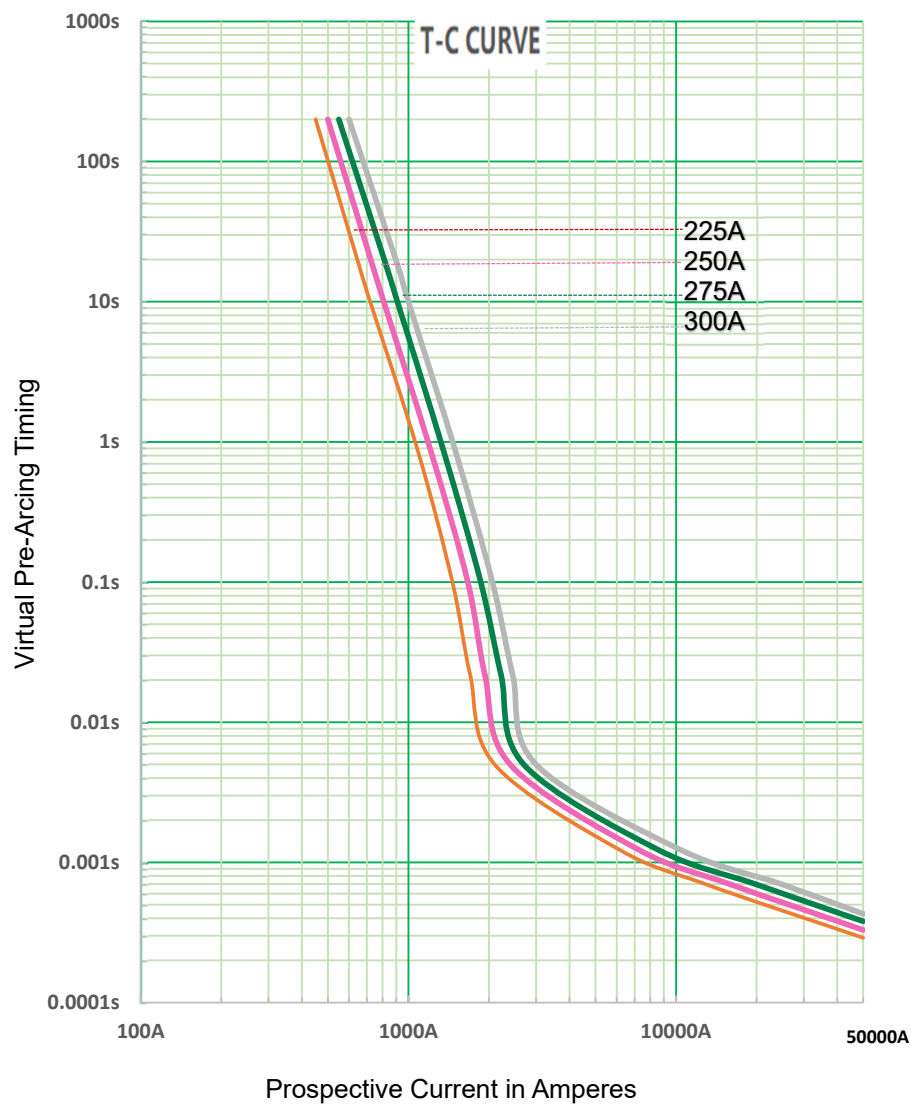
TIME CURRENT CURVE

AEXxxxxC31 125A – 200A



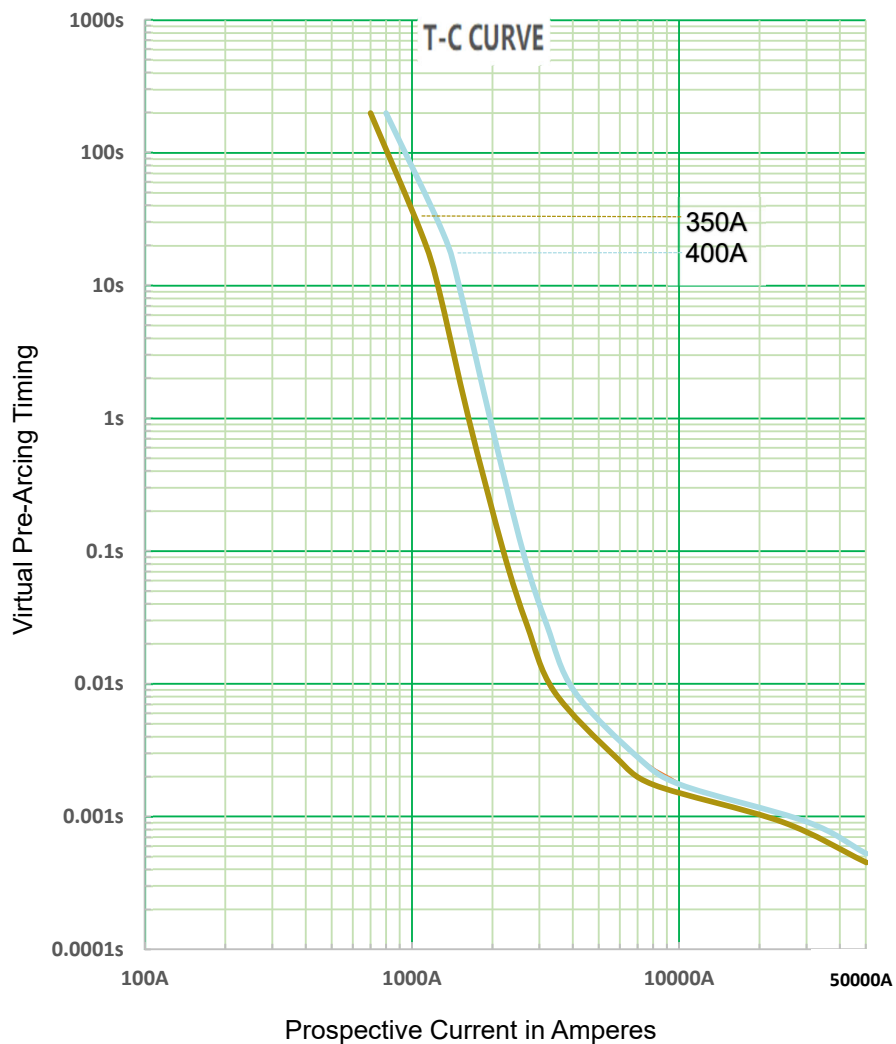
TIME CURRENT CURVE

AEXxxxxC38 225A – 300A



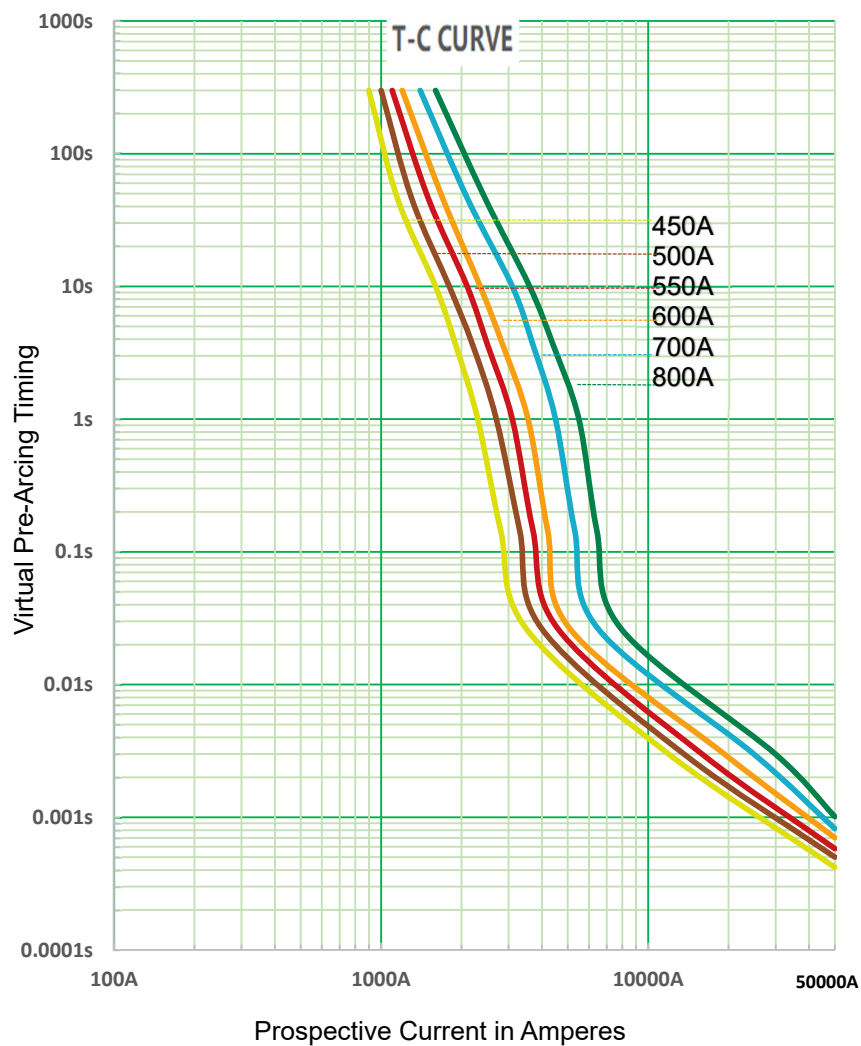
TIME CURRENT CURVE

AEXxxxxC51 350A – 400A

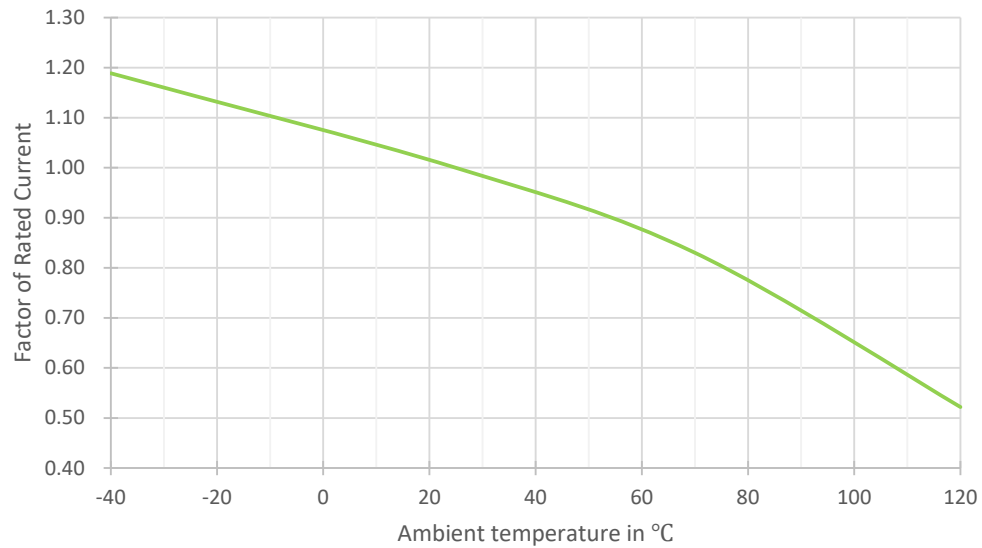


TIME CURRENT CURVE

AEXxxxxC64 450A – 800A



Temperature derating curve



WEB RESOURCES

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