

AC5 EV Fuse



DESCRIPTION:

Adler AC5 series EV fuses are specially engineered and tested to provide best-in-class PDU (power distribution unit) protection and battery high performance protection in managing systems of Electrical and Hybrid Electrical Vehicles, up to 500 Vdc in ratings from 50 A to 800 A.

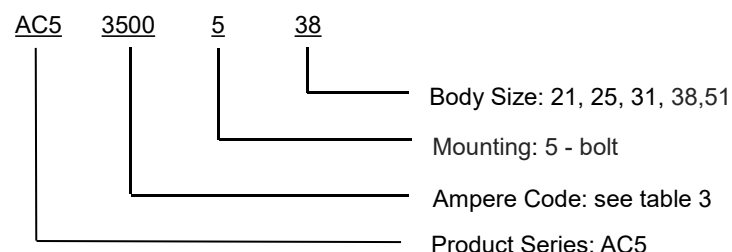
FEATURES:

- Rated voltage: 500 Vdc
- Rated Current: 50-800 A
- Max. BC: $\Phi 21$ 20 kA/ $\Phi 25$ 20 kA/ $\Phi 31$ 20 kA/
 $\Phi 38$ 50 kA/ $\Phi 51$ 50 kA
- Min. BC: $\Phi 21$ 4In/ $\Phi 25$ 3In/ $\Phi 31$ 3In/ $\Phi 38$ 2In/ $\Phi 51$ 2In
- Time Constant: 2 ± 0.5 ms
- Size: 21×40 mm, 25×44 mm, 31×53 mm,
 38×53 mm, 51×53 mm
- Reliable clearing of DC fault currents
- High cycling performance
- Low watt losses
- Full coverage of battery module current

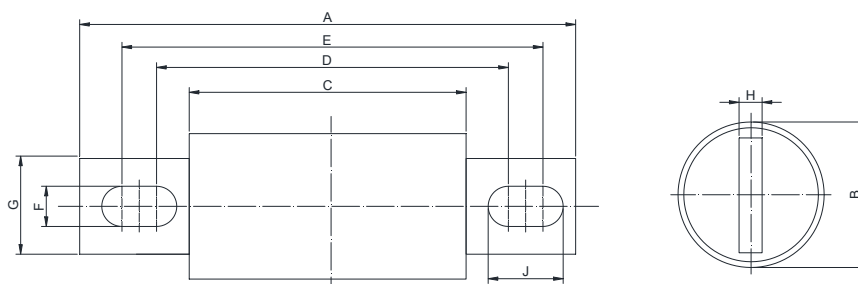
AGENCY INFORMATION:

- Ref. to UL 248-20, ISO 8820-8, JASO D622, GB/T 31465
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

PART NUMBERING SYSTEM



DIMENSIONS (mm)



P/N	A	B	C	D	E	F	G	H	J
$\Phi 21 \times 40$	81 ± 0.8	21 ± 0.5	40 ± 0.8	57 ± 0.8	66 ± 0.8	8.5 ± 0.5	15 ± 0.5	3.2 ± 0.1	13 ± 0.5
$\Phi 25 \times 44$	89 ± 0.8	25 ± 0.5	44 ± 0.8	71 ± 0.8	73 ± 0.8	9 ± 0.5	18 ± 0.5	3.2 ± 0.1	10 ± 0.5
$\Phi 31 \times 53$	92 ± 0.8	31 ± 0.5	53 ± 0.8	69 ± 0.8	76 ± 0.8	8.5 ± 0.5	22 ± 0.5	4.8 ± 0.1	12 ± 0.5
$\Phi 38 \times 53$	110 ± 0.8	38 ± 0.5	53 ± 0.8	70 ± 0.8	88 ± 0.8	10.5 ± 0.5	24.8 ± 0.5	6 ± 0.1	19.5 ± 0.5
$\Phi 51 \times 53$	110.4 ± 0.8	51 ± 0.5	53 ± 0.8	71.1 ± 0.8	90.1 ± 0.8	10.5 ± 0.5	38 ± 0.5	6 ± 0.1	20 ± 0.5

Table 1

PACKING INFORMATION

Part Number	Product net weight / PCS (g)	Inner Box			Outer Carton		
		Packing quantity / per inner box (PCS)	Inner box size (mm)	Inner box gross weight (g)	Product quantity / outer carton (PCS)	Outer carton size (mm)	Outer carton gross weight (kg)
AC5xxx520	38±3%	16	342*242*30	673±5%	64	350×250×162	3.092±5%
AC5xxx525	68±3%	18	342*242*34	1289±5%	72	350×250×162	5.556±5%
AC5xxx531	131±3%	16	342*242*39	2161±5%	64	350×250×162	9.044±5%
AC5xxx538	213±3%	14	342*242*47	3047±5%	42	350×250×162	9.541±5%
AC5xxx551	400.6±3%	10	342*242*67	4071±5%	20	350×250×162	8.542±5%

Table 2
ELECTRICAL SPECIFICATIONS

Size(mm)	Part Number	Rated Current	Ampere Code	Rated Voltage	Breaking Capacity	Melting I ² t	Clearing I ² t	Dissipation (W)	Certifications
								0.5 I _n	
Φ 21×40	AC52500520	50 A	2500	500 Vdc	20 kA@ 500 Vdc	1302	3478	2.2	○
	AC52600520	60 A	2600			1528	4082	2.7	○
	AC52700520	70 A	2700			1773	4734	3.1	○
	AC52800520	80 A	2800			2035	5434	3.5	○
	AC53100520	100 A	3100			4578	12227	4.5	○
	AC53125520	125 A	3125			5881	15705	5.1	○
	AC53150520	150 A	3150			6593	17606	6.0	○
Φ 25×44	AC53100525	100 A	3100	500 Vdc	20 kA@ 500 Vdc	2232	11100	3.0	○
	AC53125525	125 A	3125			4559	14036	3.7	○
	AC53150525	150 A	3150			7996	26972	4.7	○
	AC53175525	175 A	3175			9338	39908	5.5	○
	AC53200525	200 A	3200			14760	42845	6.8	○
	AC53225525	225 A	3225			19545	51367	7.8	○
	AC53250525	250 A	3250			24798	59890	8.8	○

$\Phi 31 \times 53$	AC53200531	200 A	3200	500 Vdc	20 kA@ 500 Vdc	6823	16641	8.5	○
	AC53225531	225 A	3225			7337	18002	8.1	○
	AC53250531	250 A	3250			8255	20228	9.3	○
	AC53300531	300 A	3300			10090	80760	10.4	○
	AC53350531	350 A	3350			30700	116760	12.7	○
	AC53400531	400 A	3400			60500	215890	14.0	○
$\Phi 38 \times 53$	AC53350538	350 A	3350	500 Vdc	50 kA@ 500 Vdc	27983	103552	15.2	○
	AC53400538	400 A	3400			50378	186413	10.0	○
	AC53450538	450 A	3450			108450	239770	12.0	○
	AC53500538	500 A	3500			135615	294537	13.0	○
	AC53550538	550 A	3550			158218	343627	14.0	○
	AC53600538	600 A	3600			181453	492590	16.0	○
$\Phi 51 \times 53$	AC53550551	550 A	3550	500 Vdc	50 kA@ 500 Vdc	210938	597657	13.0	○
	AC53600551	600A	3600			260420	737848	15.8	○
	AC53700551	700 A	3700			303750	860625	17.2	○
	AC53800551	800 A	3800			375000	1062500	22.7	○

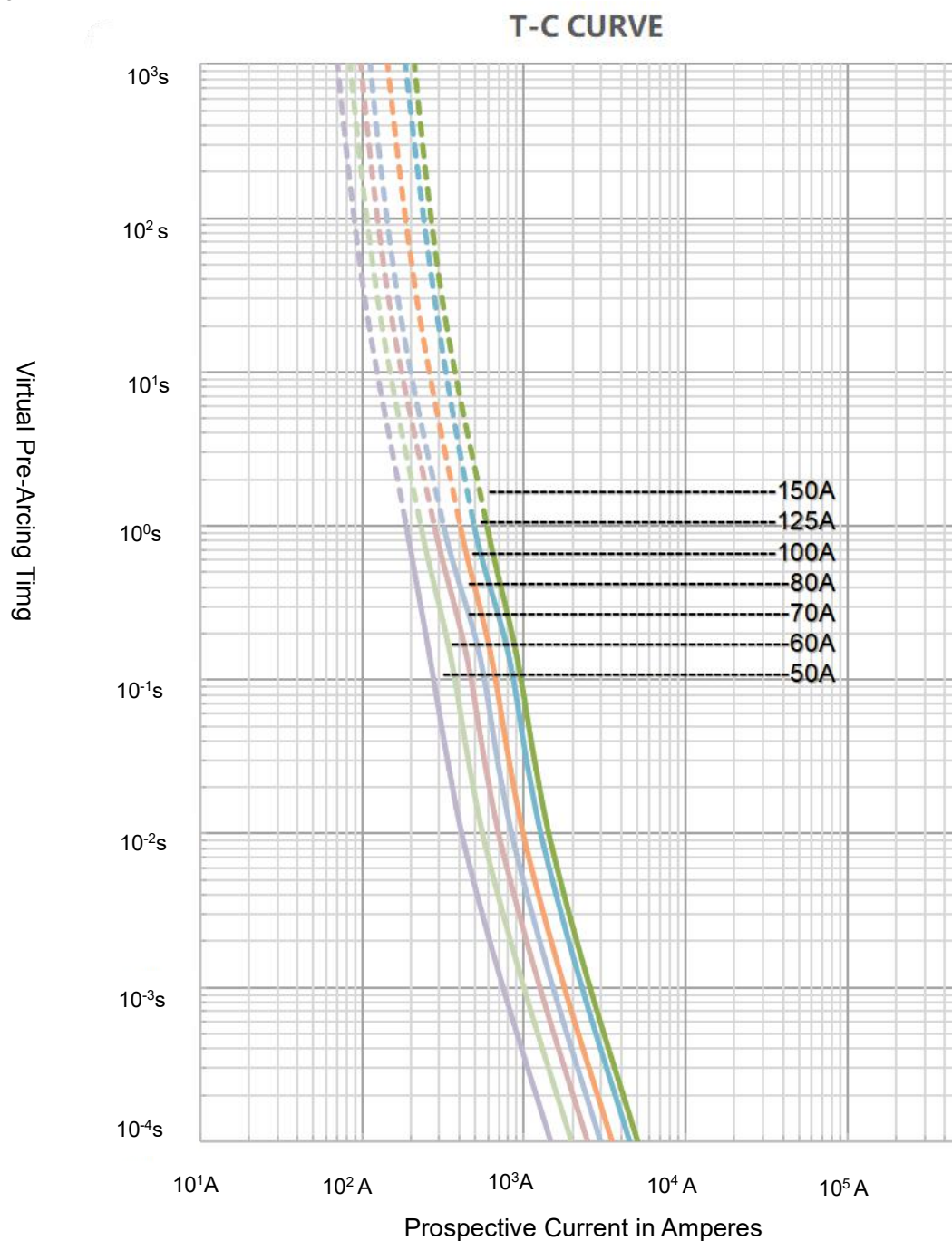
Note: 1.○--- Certification is pending
2..I²t base on I1 test

Table 3



adler®
TIME CURRENT CURVE

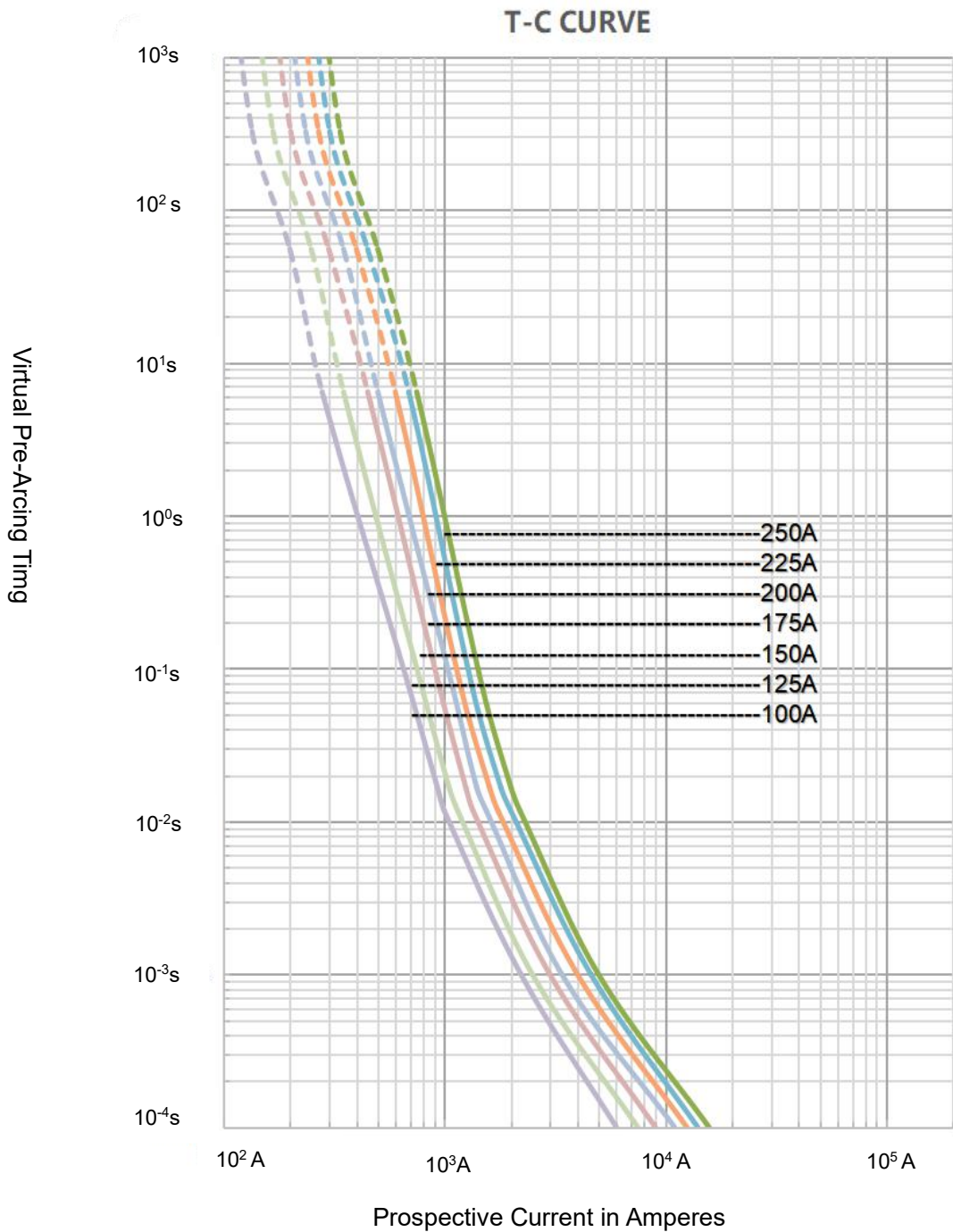
AC53xxx521





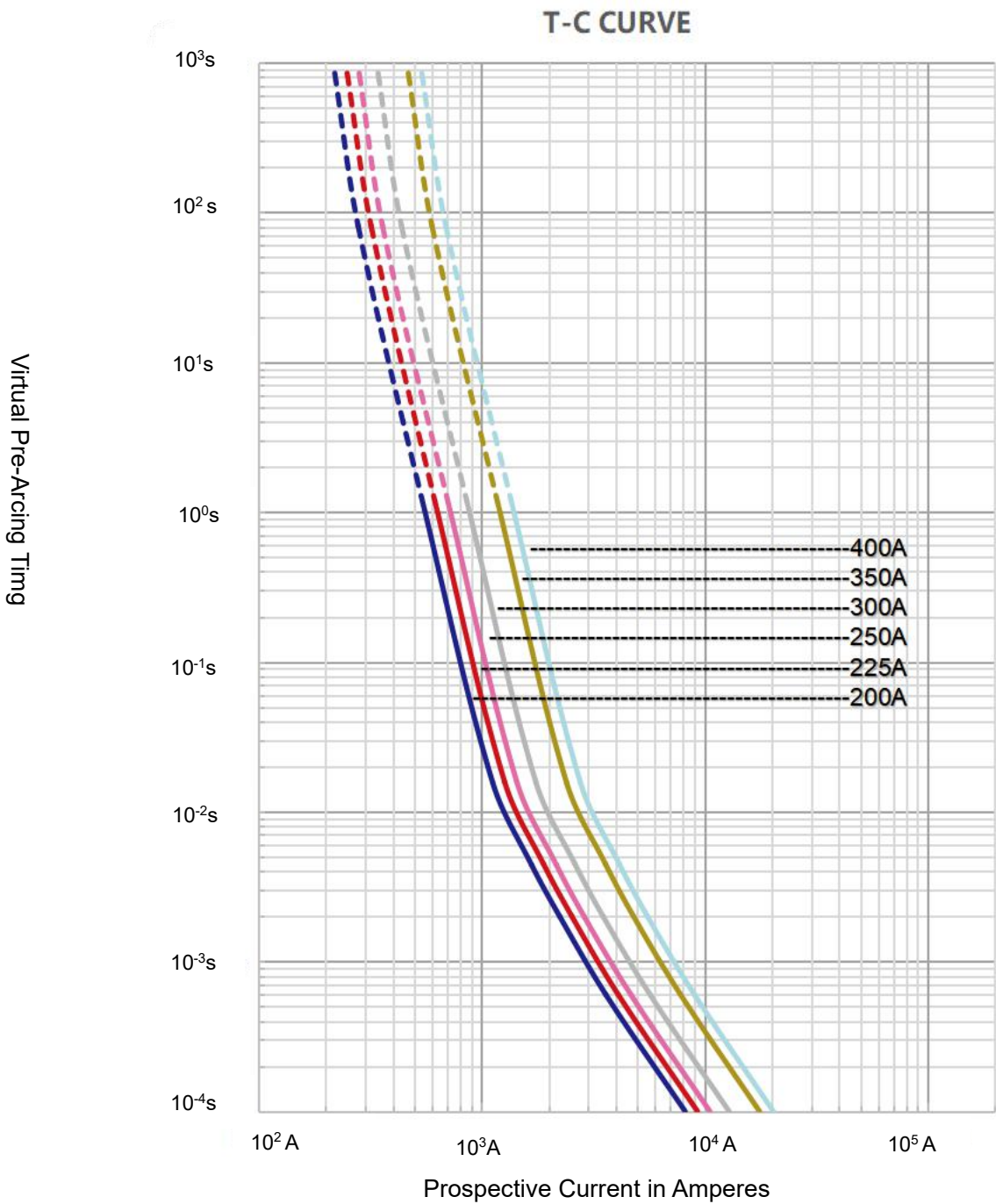
TIME CURRENT CURVE

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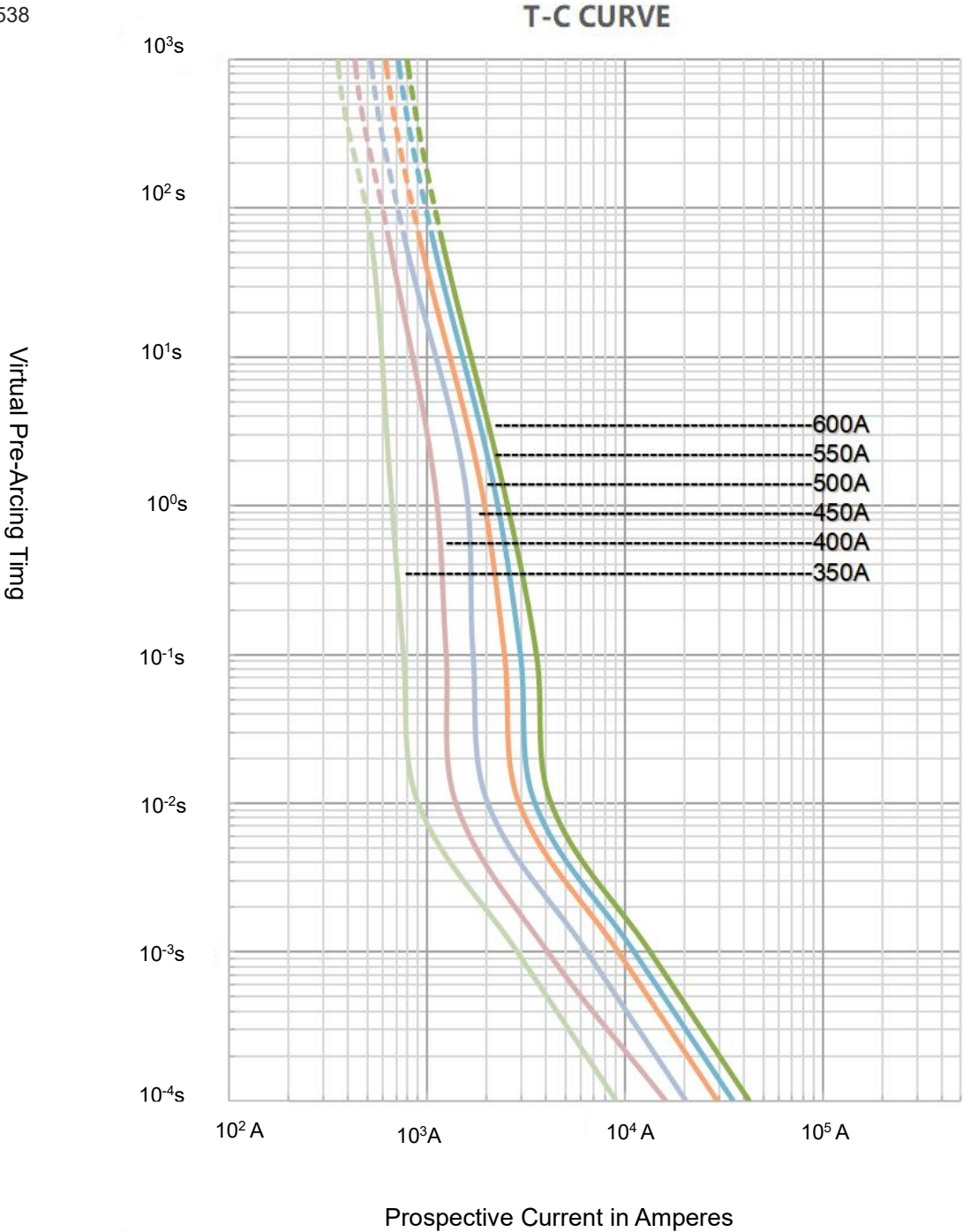
adler®
TIME CURRENT CURVE
AC53xxx531





adler®
TIME CURRENT CURVE

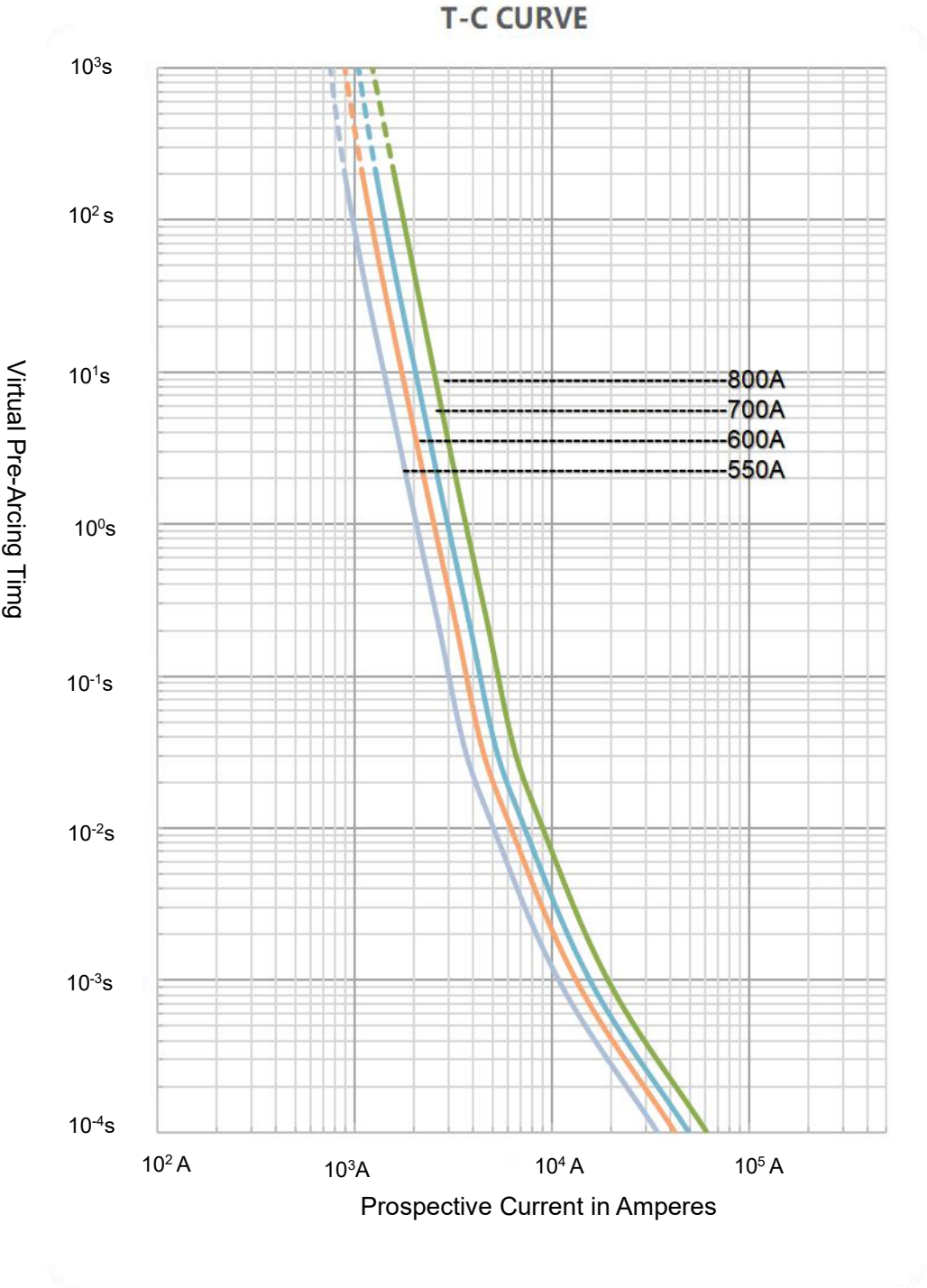
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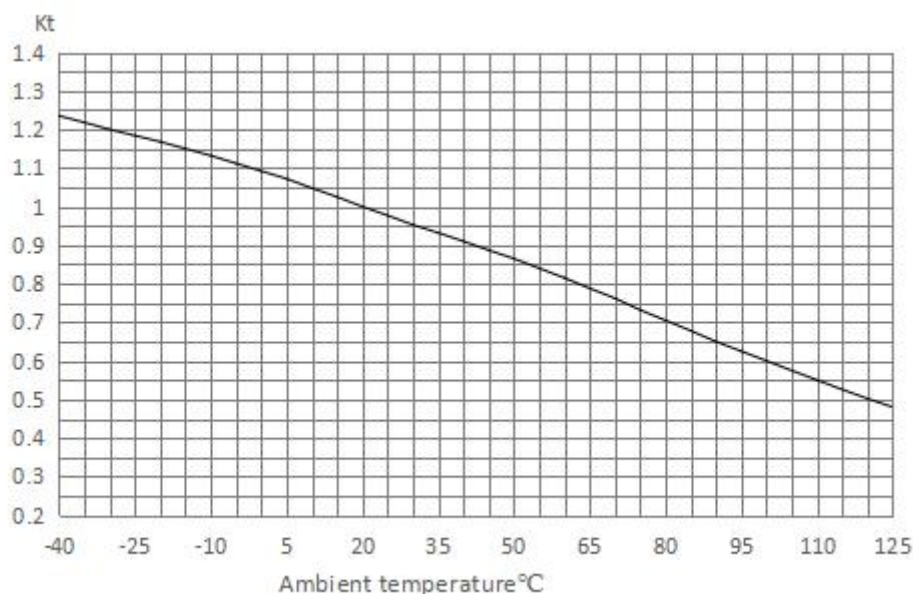
adler®
TIME CURRENT CURVE

AC53xxx551



TEMPERATURE DERATING CURVE

When the fuse is operating below -5°C or above 40°C , the rated current needs additional modification. The correction factor is K_t .



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 to 40°C , permissible operating temperature: -40°C to 125°C .
- The altitude of the site of installation of the fuses should not exceed 2000 m above sea level and permissible altitude site of installation does not exceed 5000 m.
- The air should be 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 .
- Under these conditions, moderate condensation may occasionally occur due to variation in temperatures.
- For operating conditions other than detailed above, please contact manufacturer.

STORAGE

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