

# POWR-SPEED® Fuse

## PSX\_C Series High-Speed Square Body

Battery Protection Fuses • 1500 V Dc • Class aBat • 80 A–1400 A



### Description

Littelfuse PSX\_C series high-speed square body fuses are extremely fast-acting, offering high-speed performance up to 1500 V dc, ranging from 80 A to 1400 A in the smallest NH XL package sizes.

The PSX\_C series is available with multiple mounting terminations including flush-end, DIN, and bolted-blade styles.

Visual blown fuse indication is standard on all fuses and an optional micro-switch is available for external indication.

### Features & Benefits

FEATURES	BENEFITS
<b>High dc interrupting rating</b>	Provides superior short-circuit protection
<b>Extremely fast acting</b>	Delivers high-speed performance with fast, reliable, short-circuit response within the interrupting rating
<b>Low watt loss</b>	Maximizes efficiency by preventing energy loss and minimizing the wasted power of components
<b>Conforms to the IEC 60269-7 battery standard</b>	Specifically design to safeguard evolving battery technologies with fuse circuit protection
<b>Compact NH 1XL and 3XL sizes</b>	Save space and offer design flexibility

### Applications

- Battery energy storage systems (BESSs)
- Power conversion systems
- Dc common bus systems
- Hybrid PV-BESS inverters
- Regenerative drives
- Industrial heaters and welding equipment
- Metal processing equipment

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### Specifications

<b>Voltage Rating</b>	Dc: 1500 V
<b>Amperage Rating</b>	80 A–1400 A
<b>Interrupting Rating</b>	Dc: 250 kA
<b>Time Constant</b>	1XL: $\leq$ 3 ms 3XL: $\leq$ 5 ms
<b>Microswitch</b>	Yes
<b>Mounting</b>	Bolted-blade style, DIN-blade style, Metric flush-end style
<b>Material</b>	Body: ceramic Contacts: plated copper (bladed) plated brass (flush end)
<b>Approvals</b>	cURus Recognized (File: E71611)
<b>Applicable Standards</b>	UL 248-13, IEC 60269-7
<b>Environmental</b>	RoHS Compliant, REACH
<b>Operating Temperature</b>	-55 °C to +125 °C
<b>Storage Temperature</b>	Up to +35 °C with relative humidity <65 %
<b>Country of Origin</b>	China

### Certification & Compliance

<b>UL</b>	cURus Recognized (File: E71611)
<b>RoHS</b>	RoHS Directive 2011/65/EU; Directive (EU) 2015/863
<b>CE</b>	Declaration of Conformity: EU_DOC-PSX_C_231109

### Accessories

**Microswitch:** MSXL2000C

**Fuseblock:** LSCR series

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### Ordering Information

CASE SIZE	FLUSH METRIC (FL)			BOLTED BLADE (UB)			DIN BLADE (DB)			BOX QUANTITY	
	CATALOG NUMBER	ORDERING PART NUMBER	UPC	CATALOG NUMBER	ORDERING PART NUMBER	UPC	CATALOG NUMBER	ORDERING PART NUMBER	UPC		
NH 1XL	PSX1XLFL0080C	PSX1XLFL0080XC	07945835827	PSX1XLUB0080C	PSX1XLUB0080XC	07945835841	PSX1XLDB0080C	PSX1XLDB0080XC	07945836949	1 pc/box	
	PSX1XLFL0100C	PSX1XLFL0100XC	07945835828	PSX1XLUB0100C	PSX1XLUB0100XC	07945836936	PSX1XLDB0100C	PSX1XLDB0100XC	07945836950	1 pc/box	
	PSX1XLFL0125C	PSX1XLFL0125XC	07945835829	PSX1XLUB0125C	PSX1XLUB0125XC	07945836937	PSX1XLDB0125C	PSX1XLDB0125XC	07945836951	1 pc/box	
	PSX1XLFL0160C	PSX1XLFL0160XC	07945835830	PSX1XLUB0160C	PSX1XLUB0160XC	07945836938	PSX1XLDB0160C	PSX1XLDB0160XC	07945836952	1 pc/box	
	PSX1XLFL0200C	PSX1XLFL0200XC	07945835831	PSX1XLUB0200C	PSX1XLUB0200XC	07945836939	PSX1XLDB0200C	PSX1XLDB0200XC	07945836953	1 pc/box	
	PSX1XLFL0250C	PSX1XLFL0250XC	07945835832	PSX1XLUB0250C	PSX1XLUB0250XC	07945836940	PSX1XLDB0250C	PSX1XLDB0250XC	07945836954	1 pc/box	
	PSX1XLFL0280C	PSX1XLFL0280XC	07945835833	PSX1XLUB0280C	PSX1XLUB0280XC	07945836941	PSX1XLDB0280C	PSX1XLDB0280XC	07945836955	1 pc/box	
	PSX1XLFL0315C	PSX1XLFL0315XC	07945835834	PSX1XLUB0315C	PSX1XLUB0315XC	07945836942	PSX1XLDB0315C	PSX1XLDB0315XC	07945836956	1 pc/box	
	PSX1XLFL0350C	PSX1XLFL0350XC	07945835835	PSX1XLUB0350C	PSX1XLUB0350XC	07945836943	PSX1XLDB0350C	PSX1XLDB0350XC	07945836957	1 pc/box	
	PSX1XLFL0400C	PSX1XLFL0400XC	07945835836	PSX1XLUB0400C	PSX1XLUB0400XC	07945836944	PSX1XLDB0400C	PSX1XLDB0400XC	07945836958	1 pc/box	
	PSX1XLFL0450C	PSX1XLFL0450XC	07945835837	PSX1XLUB0450C	PSX1XLUB0450XC	07945836945	PSX1XLDB0450C	PSX1XLDB0450XC	07945836959	1 pc/box	
	PSX1XLFL0500C	PSX1XLFL0500XC	07945835838	PSX1XLUB0500C	PSX1XLUB0500XC	07945836946	PSX1XLDB0500C	PSX1XLDB0500XC	07945836960	1 pc/box	
	PSX1XLFL0550C	PSX1XLFL0550XC	07945835839	PSX1XLUB0550C	PSX1XLUB0550XC	07945836947	PSX1XLDB0550C	PSX1XLDB0550XC	07945836961	1 pc/box	
	PSX1XLFL0630C	PSX1XLFL0630XC	07945835840	PSX1XLUB0630C	PSX1XLUB0630XC	07945836948	PSX1XLDB0630C	PSX1XLDB0630XC	07945836962	1 pc/box	
	NH 3XL	PSX3XLFL0450C	PSX3XLFL0450XC	07945836963	PSX3XLUB0450C	PSX3XLUB0450XC	07945836974	PSX3XLDB0450C	PSX3XLDB0450XC	07945836985	1 pc/box
		PSX3XLFL0500C	PSX3XLFL0500XC	07945836964	PSX3XLUB0500C	PSX3XLUB0500XC	07945836975	PSX3XLDB0500C	PSX3XLDB0500XC	07945836986	1 pc/box
PSX3XLFL0550C		PSX3XLFL0550XC	07945836965	PSX3XLUB0550C	PSX3XLUB0550XC	07945836976	PSX3XLDB0550C	PSX3XLDB0550XC	07945836987	1 pc/box	
PSX3XLFL0630C		PSX3XLFL0630XC	07945836966	PSX3XLUB0630C	PSX3XLUB0630XC	07945836977	PSX3XLDB0630C	PSX3XLDB0630XC	07945836988	1 pc/box	
PSX3XLFL0700C		PSX3XLFL0700XC	07945836967	PSX3XLUB0700C	PSX3XLUB0700XC	07945836978	PSX3XLDB0700C	PSX3XLDB0700XC	07945836989	1 pc/box	
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PSX3XLFL1000C		PSX3XLFL1000XC	07945836970	PSX3XLUB1000C	PSX3XLUB1000XC	07945836981	PSX3XLDB1000C	PSX3XLDB1000XC	07945836992	1 pc/box	
PSX3XLFL1100C		PSX3XLFL1100XC	07945836971	PSX3XLUB1100C	PSX3XLUB1100XC	07945836982	PSX3XLDB1100C	PSX3XLDB1100XC	07945836993	1 pc/box	
PSX3XLFL1250C		PSX3XLFL1250XC	07945836972	PSX3XLUB1250C	PSX3XLUB1250XC	07945836983	PSX3XLDB1250C	PSX3XLDB1250XC	07945836994	1 pc/box	
PSX3XLFL1400C	PSX3XLFL1400XC	07945836973	PSX3XLUB1400C	PSX3XLUB1400XC	07945836984	PSX3XLDB1400C	PSX3XLDB1400XC	07945836995	1 pc/box		

### Electrical Specifications

CASE SIZE	CATALOG NUMBER			AMPERE RATING (A)	VOLTAGE RATING (V)	INTERRUPTING RATING	MINIMUM BREAKING CAPACITY (A)	MELTING (PRE-ARC) I <sup>2</sup> T (A <sup>2</sup> S)	TOTAL CLEARING I <sup>2</sup> T (A <sup>2</sup> S) AT RATED VOLTAGE	WATTS LOSS AT 100% RATED CURRENT (W)	AGENCY CERTIFICATION	
	FLUSH METRIC (FL)	BOLTED BLADE (UB)	DIN BLADE (DB)		DC	DC		DC	DC	DC	cURus	
NH 1XL	PSX1XLFL0080C	PSX1XLUB0080C	PSX1XLDB0080C	80	1500	250 kA	800 A	2048	8720	16.4	•	
	PSX1XLFL0100C	PSX1XLUB0100C	PSX1XLDB0100C	100	1500	250 kA	1000 A	3540	15485	19.1	•	
	PSX1XLFL0125C	PSX1XLUB0125C	PSX1XLDB0125C	125	1500	250 kA	1250 A	7091	35720	19.6	•	
	PSX1XLFL0160C	PSX1XLUB0160C	PSX1XLDB0160C	160	1500	250 kA	1600 A	13704	55490	24.6	•	
	PSX1XLFL0200C	PSX1XLUB0200C	PSX1XLDB0200C	200	1500	250 kA	2000 A	18016	77240	34.6	•	
	PSX1XLFL0250C	PSX1XLUB0250C	PSX1XLDB0250C	250	1500	250 kA	2500 A	36552	156450	38.5	•	
	PSX1XLFL0280C	PSX1XLUB0280C	PSX1XLDB0280C	280	1500	250 kA	2800 A	36552	156450	48.7	•	
	PSX1XLFL0315C	PSX1XLUB0315C	PSX1XLDB0315C	315	1500	250 kA	3150 A	56940	212400	53.6	•	
	PSX1XLFL0350C	PSX1XLUB0350C	PSX1XLDB0350C	350	1500	250 kA	3500 A	86623	332050	51.8	•	
	PSX1XLFL0400C	PSX1XLUB0400C	PSX1XLDB0400C	400	1500	250 kA	4000 A	116271	352600	64.4	•	
	PSX1XLFL0450C	PSX1XLUB0450C	PSX1XLDB0450C	450	1500	250 kA	6750 A	149336	540850	69.3	•	
	PSX1XLFL0500C	PSX1XLUB0500C	PSX1XLDB0500C	500	1500	250 kA	7500 A	250109	774600	71.5	•	
	PSX1XLFL0550C	PSX1XLUB0550C	PSX1XLDB0550C	550	1500	250 kA	8250 A	276650	924967	83.1	•	
	PSX1XLFL0630C	PSX1XLUB0630C	PSX1XLDB0630C	630	1500	250 kA	9450 A	276650	924967	127.3	•	
	NH 3XL	PSX3XLFL0450C	PSX3XLUB0450C	PSX3XLDB0450C	450	1500	250 kA	4500 A	57143	194500	146.3	•
		PSX3XLFL0500C	PSX3XLUB0500C	PSX3XLDB0500C	500	1500	250 kA	5000 A	98570	333900	132.5	•
PSX3XLFL0550C		PSX3XLUB0550C	PSX3XLDB0550C	550	1500	250 kA	5500 A	142790	451600	136.7	•	
PSX3XLFL0630C		PSX3XLUB0630C	PSX3XLDB0630C	630	1500	250 kA	6300 A	205617	650304	150.9	•	
PSX3XLFL0700C		PSX3XLUB0700C	PSX3XLDB0700C	700	1500	250 kA	7000 A	305720	1003650	164.5	•	
PSX3XLFL0800C		PSX3XLUB0800C	PSX3XLDB0800C	800	1500	250 kA	8000 A	335493	1150000	209.6	•	
PSX3XLFL0900C		PSX3XLUB0900C	PSX3XLDB0900C	900	1500	250 kA	9000 A	403262	1308500	266.9	•	
PSX3XLFL1000C		PSX3XLUB1000C	PSX3XLDB1000C	1000	1500	250 kA	10000 A	484792	1791500	335.0	•	
PSX3XLFL1100C		PSX3XLUB1100C	PSX3XLDB1100C	1100	1500	250 kA	11000 A	656719	2201250	341.0	•	
PSX3XLFL1250C		PSX3XLUB1250C	PSX3XLDB1250C	1250	1500	250 kA	12500 A	995376	3003500	346.9	•	
PSX3XLFL1400C	PSX3XLUB1400C	PSX3XLDB1400C	1400	1500	250 kA	14000 A	1395828	4228250	361.9	•		

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### Dimensions

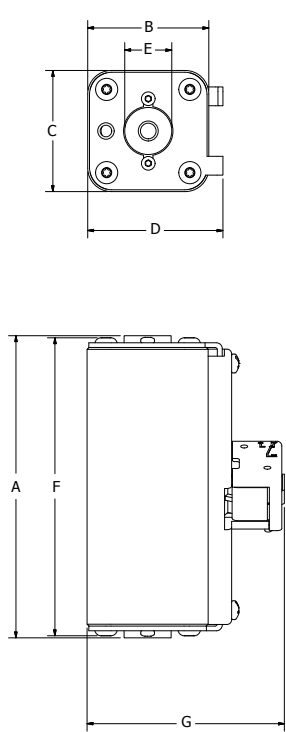


Figure 1. Flush-metric style

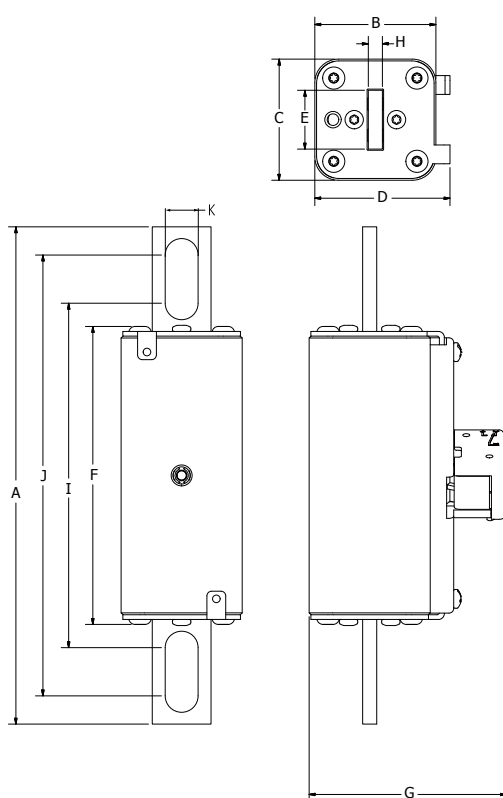


Figure 2. Bolted-blade style

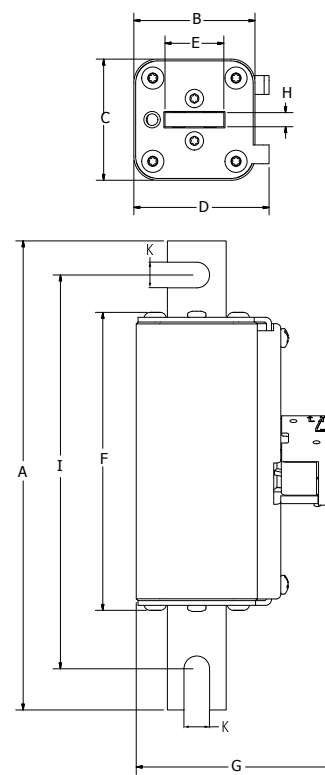


Figure 3. DIN-blade style

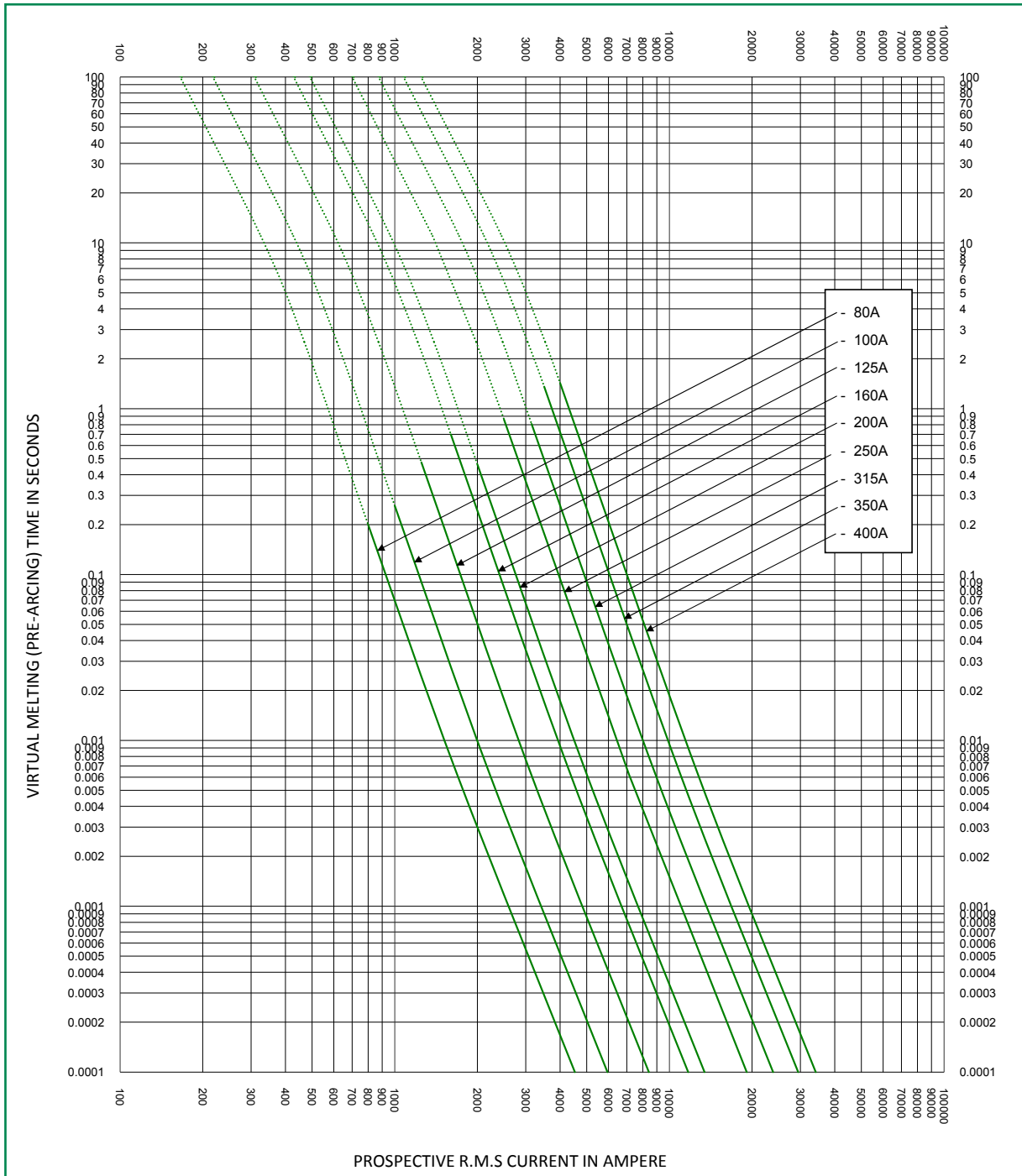
DIMENSIONS MM (IN)																
CASE SIZE	MOUNTING STYLE	FIGURE	A	B	C	D	E	F	G*	H	I	J	K	RECOMMENDED FASTENER	THREAD	RECOMMENDED TORQUE
NH 1XL	FLUSH METRIC (FL)	1	128.5 (5.06)	51.5 (2.03)	51.5 (2.03)	57.5 (2.26)	20.0 (0.79)	128.5 (5.06)	83.9 (3.30)	-	-	-	-	-	M8 x 1.25	13–20 Nm
	BOLTED BLADE (UB)	2	211.7 (8.33)	51.5 (2.03)	51.5 (2.03)	57.5 (2.26)	25.0 (0.98)	127.7 (5.03)	83.9 (3.30)	6.0 (0.24)	146.5 (5.77)	187.5 (7.38)	14.0 (0.55)	12 mm (1/2)	-	64 Nm
	DIN BLADE (DB)	3	199.7 (7.86)	51.5 (2.03)	51.5 (2.03)	57.5 (2.26)	25.0 (0.98)	127.7 (5.03)	83.9 (3.30)	6.0 (0.24)	167.5 (6.59)	-	10.5- 11.0 (0.41- 0.43)	10 mm (3/8)	-	26 Nm
NH 3XL	FLUSH METRIC (FL)	1	129.5 (5.10)	73.5 (2.89)	73.5 (2.89)	79.5 (3.13)	30.0 (1.18)	129.5 (5.10)	105.9 (4.17)	-	-	-	-	-	M12 x 1.75	45–55 Nm
	BOLTED BLADE (UB)	2	213.5 (8.41)	73.5 (2.89)	73.5 (2.89)	79.5 (3.13)	36.0 (1.42)	128.7 (5.07)	105.9 (4.17)	6.0 (0.24)	153.1 (6.03)	186.1 (7.33)	16.0 (0.63)	14 mm (9/16)	-	92 Nm
	DIN BLADE (DB)	3	199.0 (7.83)	73.5 (2.89)	73.5 (2.89)	79.5 (3.13)	36.0 (1.42)	128.7 (5.07)	105.9 (4.17)	6.0 (0.24)	166.8 (6.57)	-	10.5- 11.0 (0.41- 0.43)	10 mm (3/8)	-	26 Nm

\*These dimensions include the optional bolt-on microswitch.

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## PSX\_C Series High-Speed Square Body

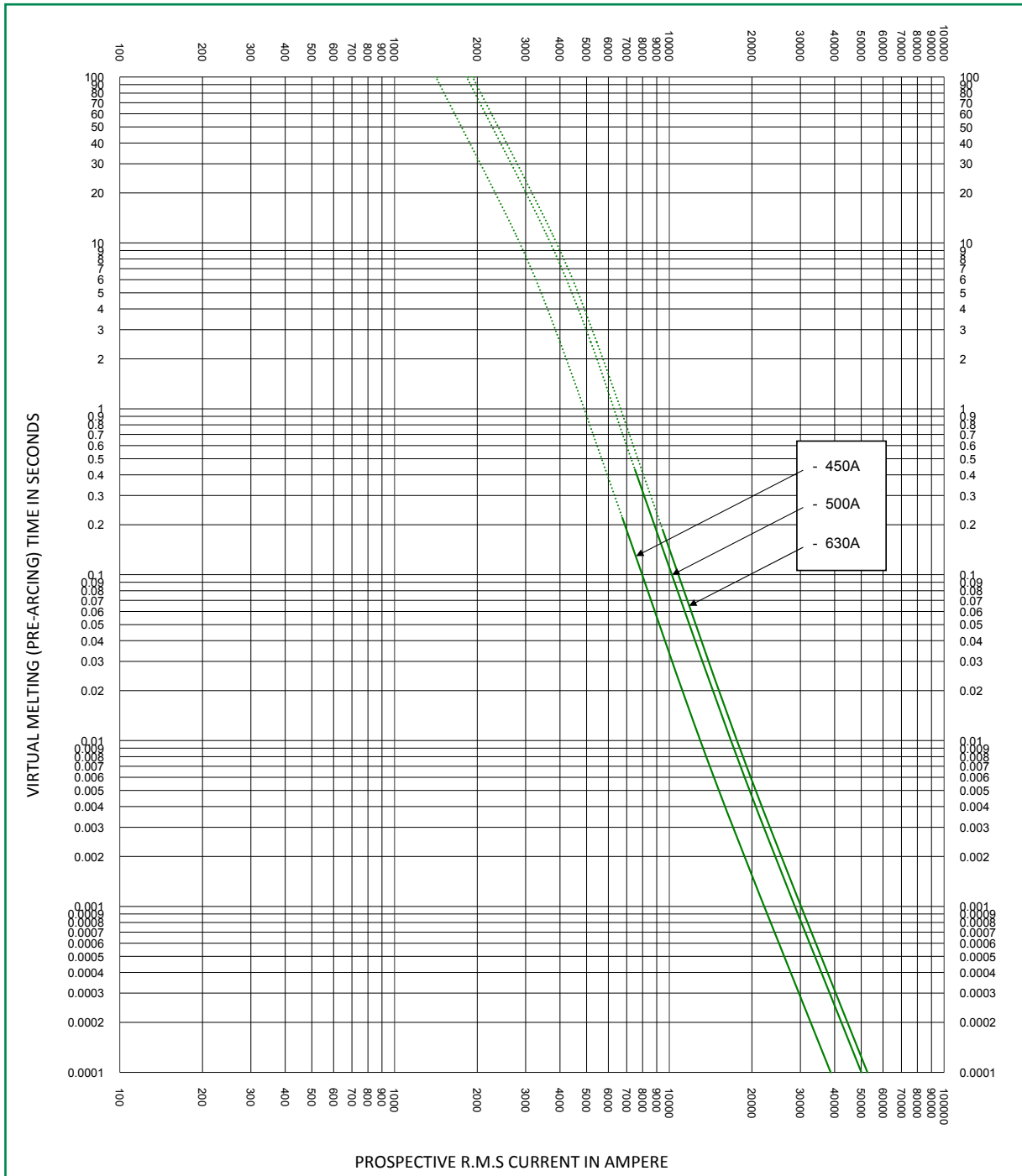
### Time Current Curve (1XL Case Size 80 A–400 A)



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## PSX\_C Series High-Speed Square Body

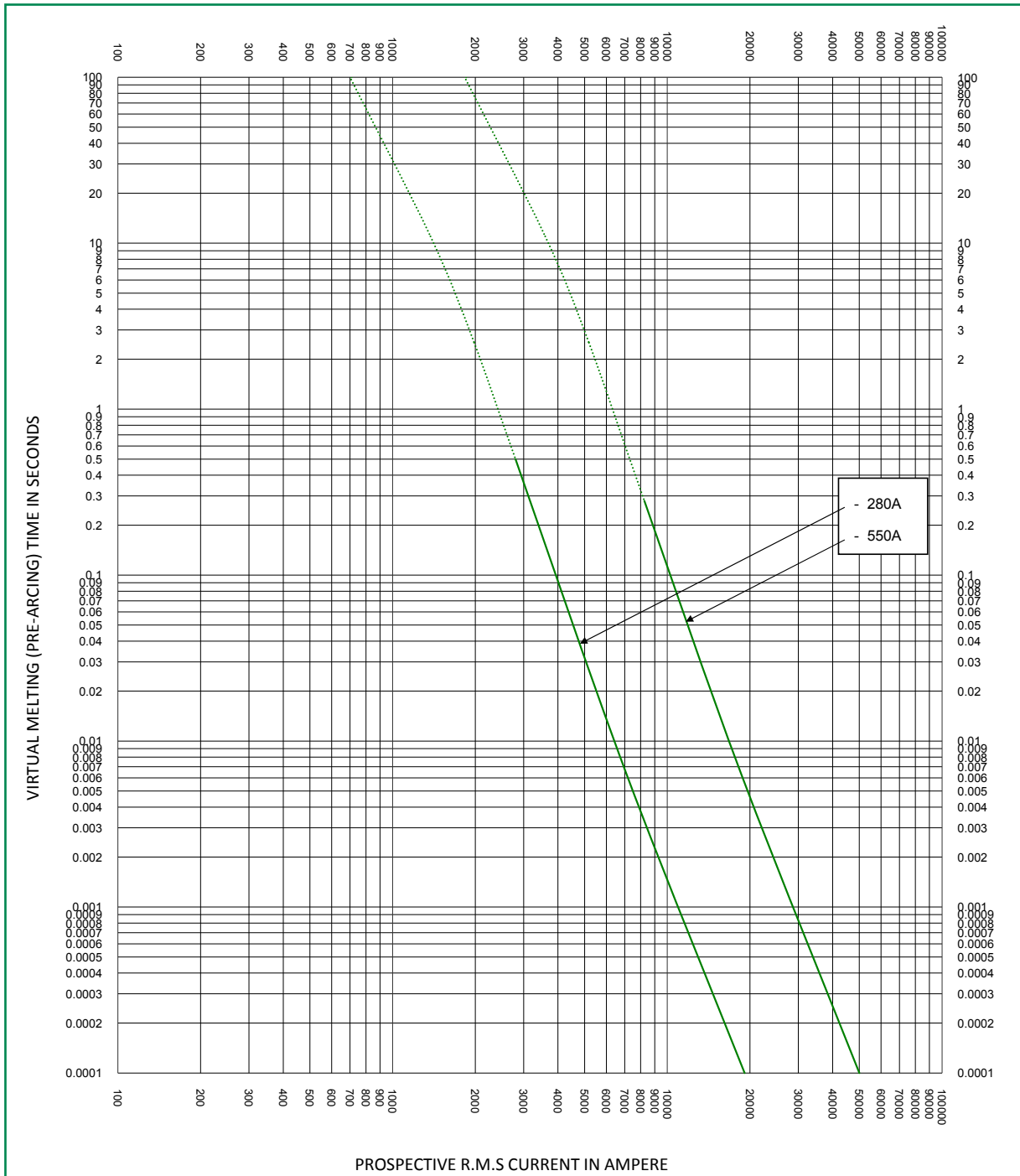
### Time Current Curve (1XL Case Size 450 A–630 A)



# POWR-SPEED® Fuse

## PSX\_C Series High-Speed Square Body

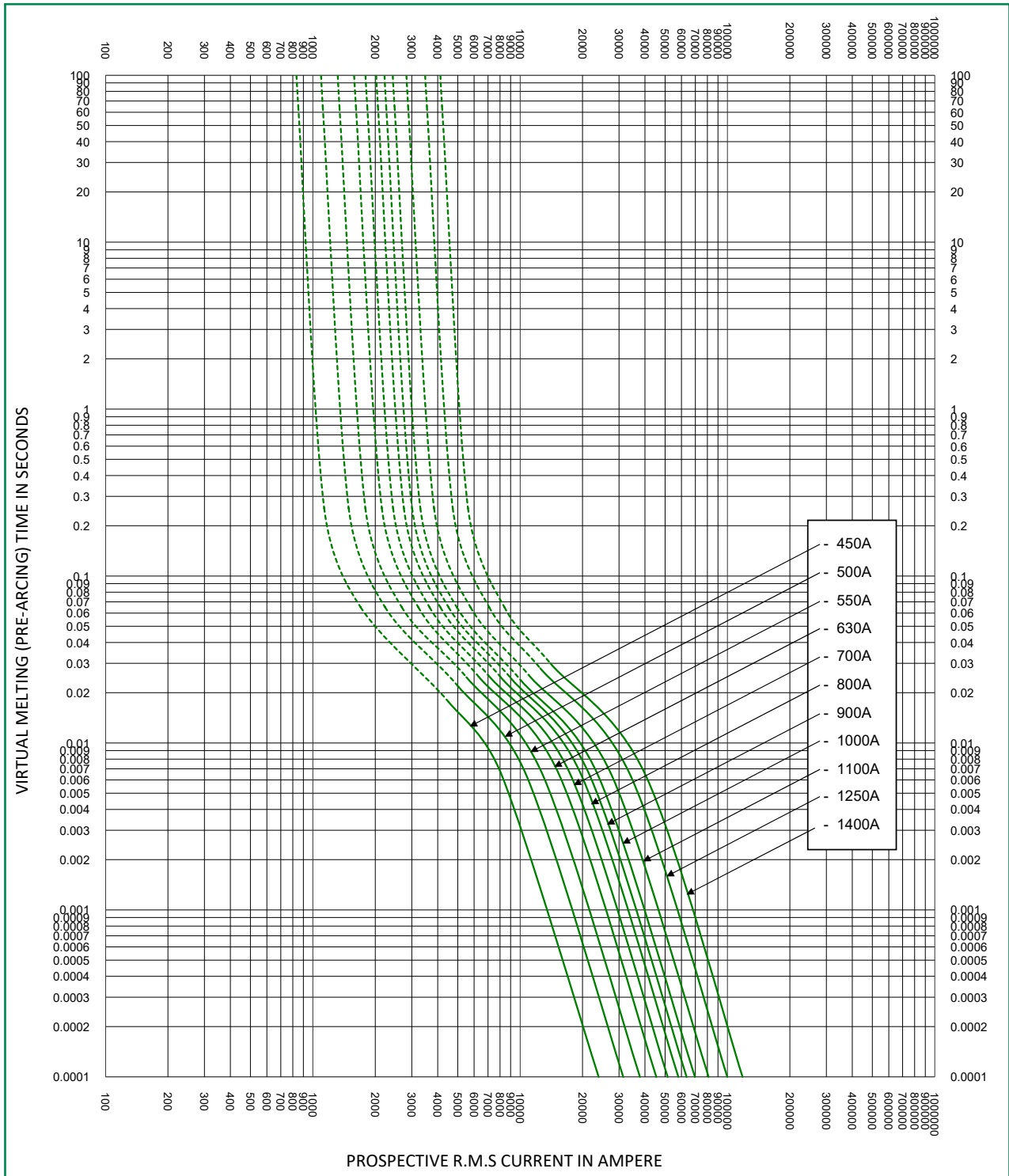
### Time Current Curve (1XL Case Size 280 A and 550 A)



# POWR-SPEED® Fuse

## PSX\_C Series High-Speed Square Body

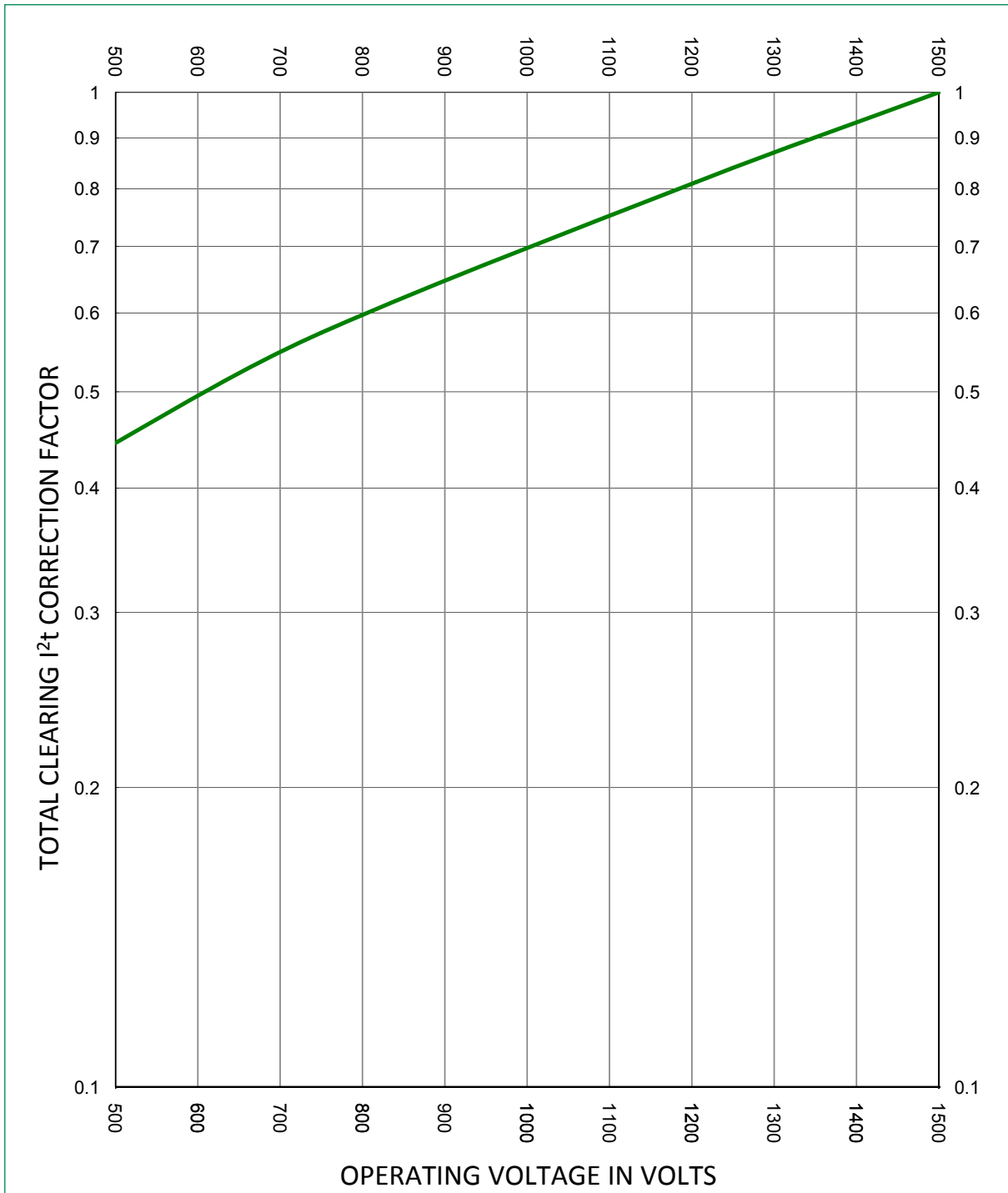
### Time Current Curve (3XL Case Size 450 A–1400 A)



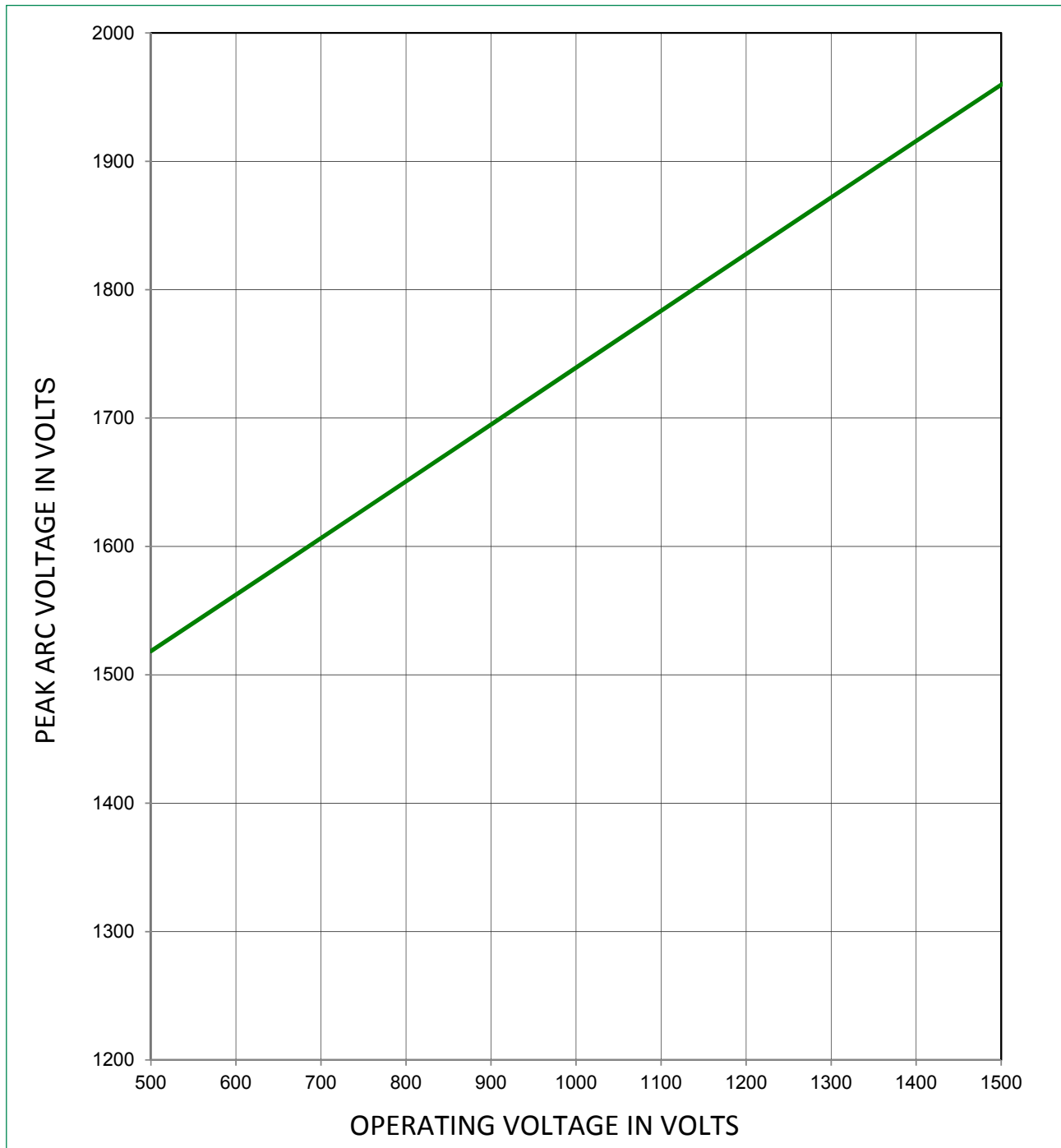
# POWR-SPEED® Fuse

PSX\_C Series High-Speed Square Body

## Total Clearing I<sup>2</sup>t Correction Factor Curve (1XL and 3XL)



**Peak Arc Voltage Curve 1XL and 3XL**

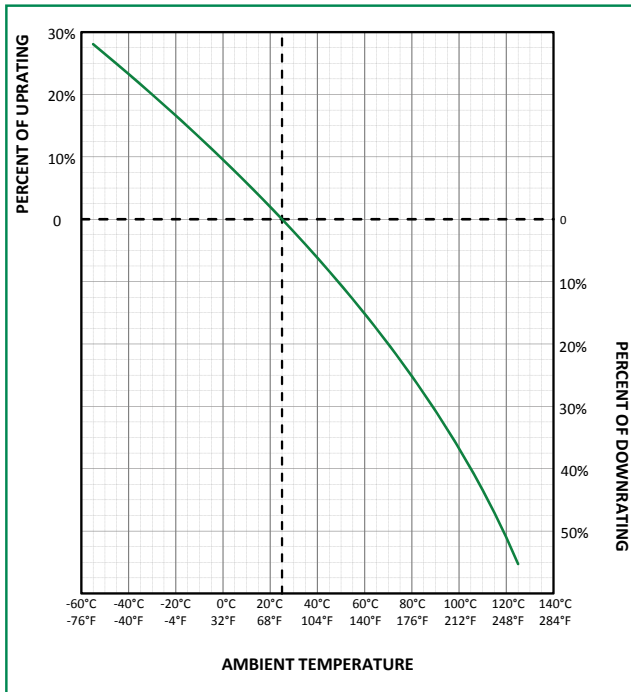


# POWR-SPEED® Fuse

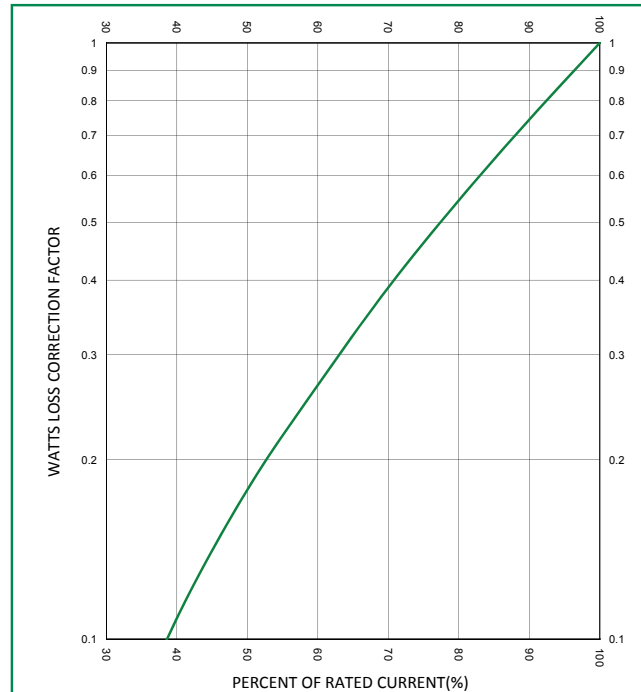
## PSX\_C Series High-Speed Square Body

### Temperature Derating Curve

(temperature of air immediately surrounding fuse)



### Watts Loss Correction Factor Curve



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