

POWR-GARD® Fuse

SPXI_CN SERIES IN-LINE SOLAR FUSE

1500 V dc • 1–32 A



Description

The Littelfuse SPXI_CN solar fuse is specifically designed for the protection of photovoltaic (PV) systems. It integrates into an in-line assembly within a wire harness and can be electrically insulated by either overmolding or using heat-shrink.

Littelfuse offers multiple ampere ratings to match specific requirements in a variety of applications.

Features/Benefits

- Offers higher amperage protection in less space for increased design flexibility
- One-piece cap design, without joints, offers easier wire crimping and more streamlined molding
- No fuse holder required helps save space, time, and money
- 50,000 A interrupting rating

Applications

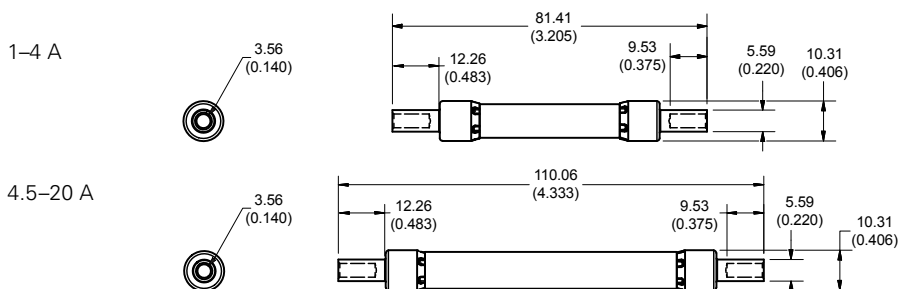
- Photovoltaic high-capacity homerun, truck harness, and wire harness

Recommended Crimping Tool

10–12 AWG: T&B Sta-Kon ERG4002

8 AWG: T&B Sta-Kon ERG4

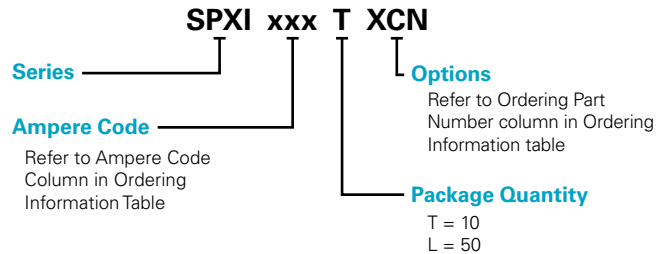
SPXI_CN Dimensions mm (in)



Specifications

Voltage Rating	1500 V dc
Amperage Rating	1, 2, 2.25, 2.5, 3, 3.5, 4, 4.5, 5, 6, 8, 10, 12, 15, 16, 20, 25, 30, 32 A
Interrupting Ratings	SPXI_CN 1–20 A: 30 kA (50 kA self-certified) SPXI-M_CN and SPXI-BM_CN 25–32 A: 50 kA SPXI-M_CN 5-6 A: 30 kA
Time Constant	≤ 1 ms
Material	Body: melamine Caps: copper alloy (nickel plated)
Approval	UL Recognized (File: E339112) TUV (Cert: J 50495785)
Applicable Standards	UL and cUL 248-1, 248-19 IEC 60269-6 (electrically only)
Environmental	RoHS Compliant REACH
Country of Origin	China
US Patent	9,564,281

Part Numbering System



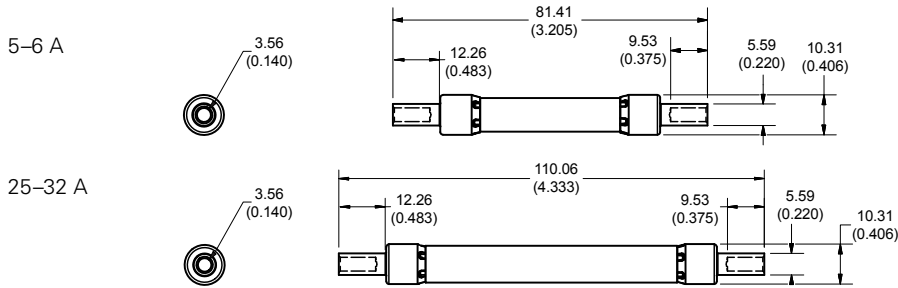
Web Resources

Download additional technical information and view the complete solar portfolio: Littelfuse.com/Solar

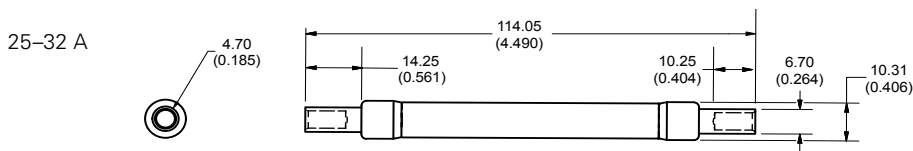
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SPXI-M_CN Dimensions mm (in)



SPXI-BM_CN Dimensions mm (in)



SPXI_CN Ordering Information (Standard Crimp Barrel)

SERIES	AMPERAGE	AMPERE CODE	CATALOG NUMBER	PACK QUANTITY	ORDERING PART NUMBER	UPC
SPXI	1	001.	SPXI001CN	10	SPXI001.TXCN	07945829369
				50	SPXI001.LXCN	07945829368
SPXI	2	002.	SPXI002CN	10	SPXI002.TXCN	07945829371
				50	SPXI002.LXCN	07945829370
SPXI	2.25	2.25	SPXI2.25CN	10	SPXI2.25TXCN	07945829373
				50	SPXI2.25LXCN	07945829372
SPXI	2.5	02.5	SPXI02.5CN	10	SPXI02.5TXCN	07945826549
				50	SPXI02.5LXCN	07945826560
SPXI	3	003.	SPXI003CN	10	SPXI003.TXCN	07945829375
				50	SPXI003.LXCN	07945829374
SPXI	3.5	03.5	SPXI03.5CN	10	SPXI03.5TXCN	07945826550
				50	SPXI03.5LXCN	07945826561
SPXI	4	004.	SPXI004CN	10	SPXI004.TXCN	07945826551
				50	SPXI004.LXCN	07945826562
SPXI	4.5	04.5	SPXI04.5CN	10	SPXI04.5TXCN	07945826552
				50	SPXI04.5LXCN	07945826563
SPXI	5	005.	SPXI005CN	10	SPXI005.TXCN	07945826553
				50	SPXI005.LXCN	07945826564
SPXI	6	006.	SPXI006CN	10	SPXI006.TXCN	07945826554
				50	SPXI006.LXCN	07945826565
SPXI	8	008.	SPXI008CN	10	SPXI008.TXCN	07945826555
				50	SPXI008.LXCN	07945826566
SPXI	10	010.	SPXI010CN	10	SPXI010.TXCN	07945826556
				50	SPXI010.LXCN	07945826567
SPXI	12	012.	SPXI012CN	10	SPXI012.TXCN	07945826557
				50	SPXI012.LXCN	07945826568
SPXI	15	015.	SPXI015CN	10	SPXI015.TXCN	07945826558
				50	SPXI015.LXCN	07945826569
SPXI	16	016.	SPXI016CN	10	SPXI016.TXCN	07945829377
				50	SPXI016.LXCN	07945829376
SPXI	20	020.	SPXI020CN	10	SPXI020.TXCN	07945826559
				50	SPXI020.LXCN	07945826570

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SPXI-M_CN Ordering Information (Standard Crimp Barrel)

SERIES	AMPERAGE	AMPERE CODE	CATALOG NUMBER	PACK QUANTITY	ORDERING PART NUMBER	UPC
SPXI	5	005.	SPXI005MCN	10	SPXI005.TXMCN	07945863626
				50	SPXI005.LXMCN	07945838251
SPXI	6	006.	SPXI006MCN	10	SPXI006.TXMCN	07945806327
				50	SPXI006.LXMCN	07945838252
SPXI	25	025.	SPXI025MCN	10	SPXI025.TXMCN	07945826599
				50	SPXI025.LXMCN	07945826602
SPXI	30	030.	SPXI030MCN	10	SPXI030.TXMCN	07945826600
				50	SPXI030.LXMCN	07945826603
SPXI	32	032.	SPXI032MCN	10	SPXI032.TXMCN	07945826601
				50	SPXI032.LXMCN	07945826604

SPXI-BM_CN Ordering Information (Bigger Crimp Barrel)

SERIES	AMPERAGE	AMPERE CODE	CATALOG NUMBER	PACK QUANTITY	ORDERING PART NUMBER	UPC
SPXI-BM	25	025.	SPXI025BMCN	10	SPXI025.TXBMCN	07945827750
				50	SPXI025.LXBMCN	07945827753
SPXI-BM	30	030.	SPXI030BMCN	10	SPXI030.TXBMCN	07945827751
				50	SPXI030.LXBMCN	07945827754
SPXI-BM	32	032.	SPXI032BMCN	10	SPXI032.TXBMCN	07945827752
				50	SPXI032.LXBMCN	07945827755

SPXI_CN and SPXI-M_CN Electrical Specifications (Standard Crimp Barrel)

AMPERAGE	AMPERE CODE	CATALOG NUMBER	FUSE LABEL ID	VOLTAGE		NOM COLD RESISTANCE (OHM)	WATTS LOSS AT 100 % RATED CURRENT (W)	WATTS LOSS AT 80 % RATED CURRENT (W)	MELTING I _t (A ² s) (1500 V DC)	TOTAL CLEARING I ² t (A ² s) 15 KA (1500 V DC)	TOTAL CLEARING I ² t (A ² s) 50 KA (1500 V DC)	AGENCY APPROVALS	
				DC	DC							cURus	TUV
1	001.	SPXI001CN	SPXI 1A-CN	1500	50 kA*	0.625	1.07	0.56	0.9	0.53	-	•	•
2	002.	SPXI002CN	SPXI 2A-CN	1500	50 kA*	0.191	1.32	0.7	1.55	5.13	-	•	•
2.25	2.25	SPXI2.25CN	SPXI 2 ¼A-CN	1500	50 kA*	0.125	0.9	0.5	5	13	-	•	•
2.5	02.5	SPXI02.5CN	SPXI 2 ½A-CN	1500	50 kA*	0.100	0.86	0.48	7	16	-	•	•
3	003.	SPXI003CN	SPXI 3A-CN	1500	50 kA*	0.072	0.92	0.51	14	40	-	•	•
3.5	03.5	SPXI03.5CN	SPXI 3 ½A-CN	1500	50 kA*	0.071	1.56	0.81	25	50	-	•	•
4	004.	SPXI004CN	SPXI 4A-CN	1500	50 kA*	0.044	0.95	0.54	57	95	-	•	•
4.5	04.5	SPXI04.5CN	SPXI 4 ½A-CN	1500	50 kA*	0.0899	2.84	1.54	34	55	-	•	•
5	005.	SPXI005CN	SPXI 5A-CN	1500	50 kA*	0.0644	3.04	1.59	48	71	-	•	•
5	005.	SPXI005MCN	SPXI 5A-MCN**	1500	50 kA*	0.0475	2.22	1.1	38	130	-	•	•
6	006.	SPXI006CN	SPXI 6A-CN	1500	50 kA*	0.0576	3.05	1.71	49	75	-	•	•
6	006.	SPXI006MCN	SPXI 6A-MCN**	1500	50 kA*	0.0351	2.24	1.1	69	176	-	•	•
8	008.	SPXI008CN	SPXI 8A-CN	1500	50 kA*	0.035	3.26	1.84	121	214	-	•	•
10	010.	SPXI010CN	SPXI 10A-CN	1500	50 kA*	0.022	3.25	1.82	407	509	-	•	•
12	012.	SPXI012CN	SPXI 12A-CN	1500	50 kA*	0.016	3.34	1.89	798	951	-	•	•
15	015.	SPXI015CN	SPXI 15A-CN	1500	50 kA*	0.013	5.27	3.05	299	637	-	•	•
16	016.	SPXI016CN	SPXI 16A-CN	1500	50 kA*	0.013	5.32	3.08	404	666	-	•	•
20	020.	SPXI020CN	SPXI 20A-CN	1500	50 kA*	0.009	5.38	3.14	701	1464	-	•	•
25	025.	SPXI025MCN	SPXI 25A-MCN	1500	50 kA	0.00665	5.80	3.20	2304	-	3255	•	•
30	030.	SPXI030MCN	SPXI 30A-MCN	1500	50 kA	0.00526	6.80	3.80	3792	-	5543	•	•
32	032.	SPXI032MCN	SPXI 32A-MCN	1500	50 kA	0.00459	6.90	3.80	4350	-	6654	•	•

*Self-certified

**No fuse label ID. Cap laser-engraving only.

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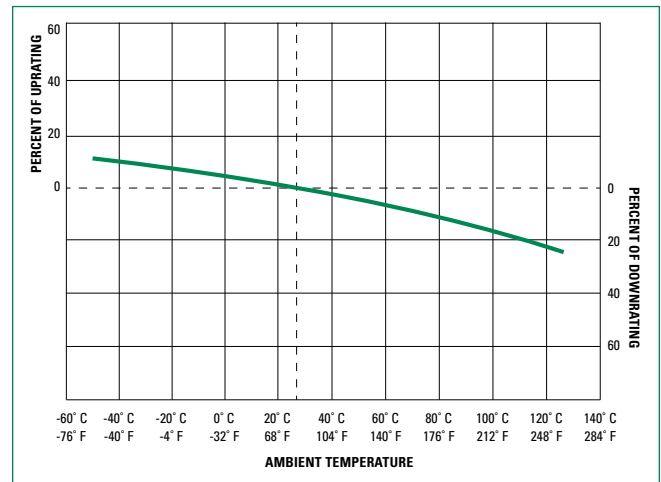
SPXI-BM_CN Electrical Specifications (Bigger Crimp Barrel)

AMPERAGE	AMPERE CODE	CATALOG NUMBER	FUSE LABEL ID	VOLTAGE		NOM COLD RESISTANCE (OHM)	WATTS LOSS AT 100 % RATED CURRENT (W)	WATTS LOSS AT 80 % RATED CURRENT (W)	MELTING I ² t (A ² s) (1500 V DC)	TOTAL CLEARING I ² t (A ² s) 15 KA (1500 V DC)	TOTAL CLEARING I ² t (A ² s) 50 KA (1500 V DC)	AGENCY APPROVALS	
				DC	DC							cURus	TUV
25	025	SPXI025BMCN	SPXI 25A-BMCN	1500	50 kA	0.0067	5.80	3.20	2304	–	3255	•	•
30	030	SPXI030BMCN	SPXI 30A-BMCN	1500	50 kA	0.0053	6.80	3.80	3792	–	5543	•	•
32	032	SPXI032BMCN	SPXI 32A-BMCN	1500	50 kA	0.0046	6.90	3.80	4350	–	6654	•	•

Electrical Specification – Agency Requirements

AMPERAGE RATING	OPENING TIME (MINUTES)			
	100 % of Amperes Rating per UL	105 % of Amperes Rating per IEC	135 % of Amperes Rating per UL	200 % of Amperes Rating per IEC
1–30	Temperature Stabilization	60 Min	60 Max	4 Max
32	Temperature Stabilization	60 Min	60 Max	6 Max

Temperature Derating Curve (temperature of air immediately surrounding fuse)

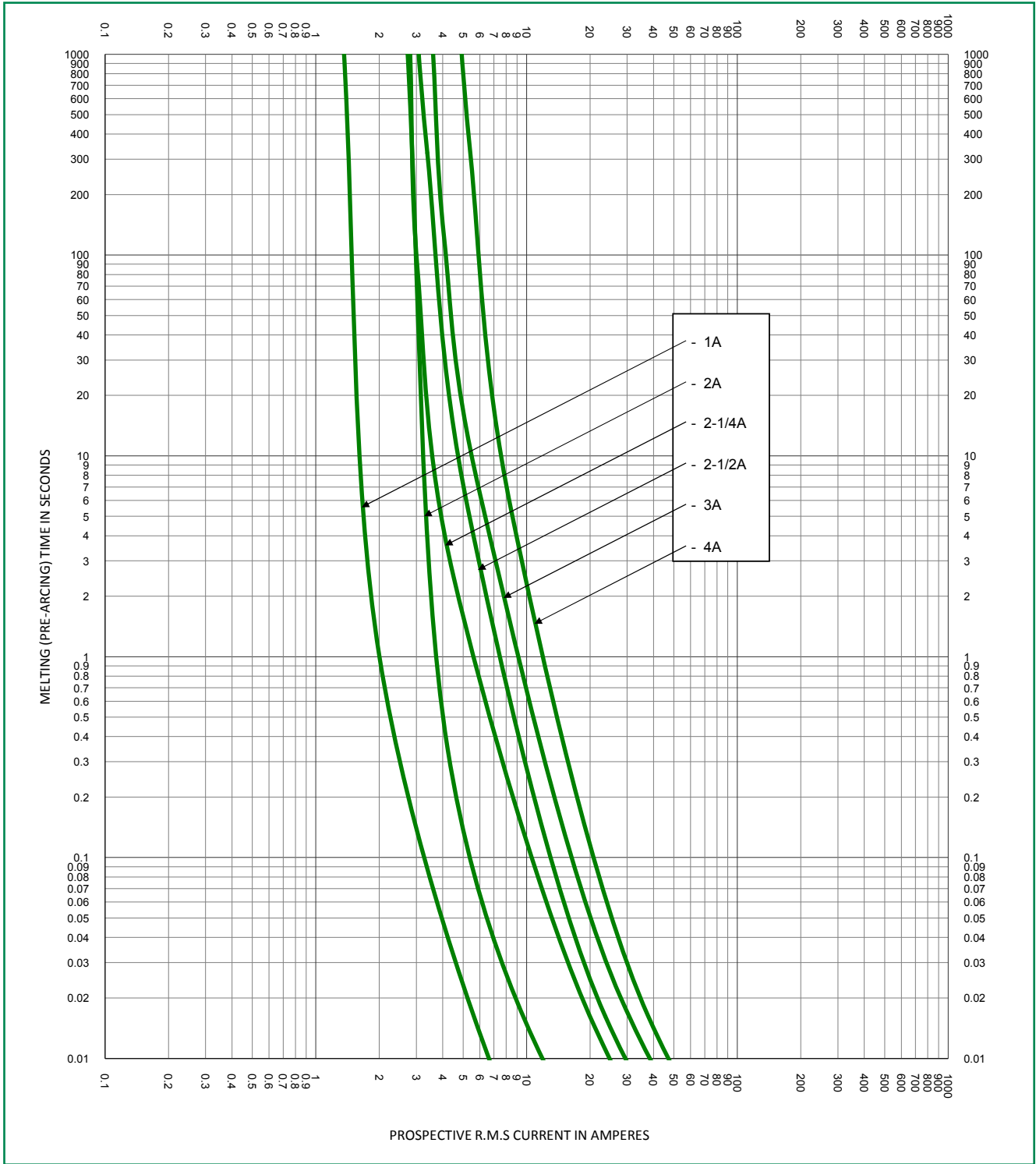


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Time Current Curve

SPXI_CN 1-4 A

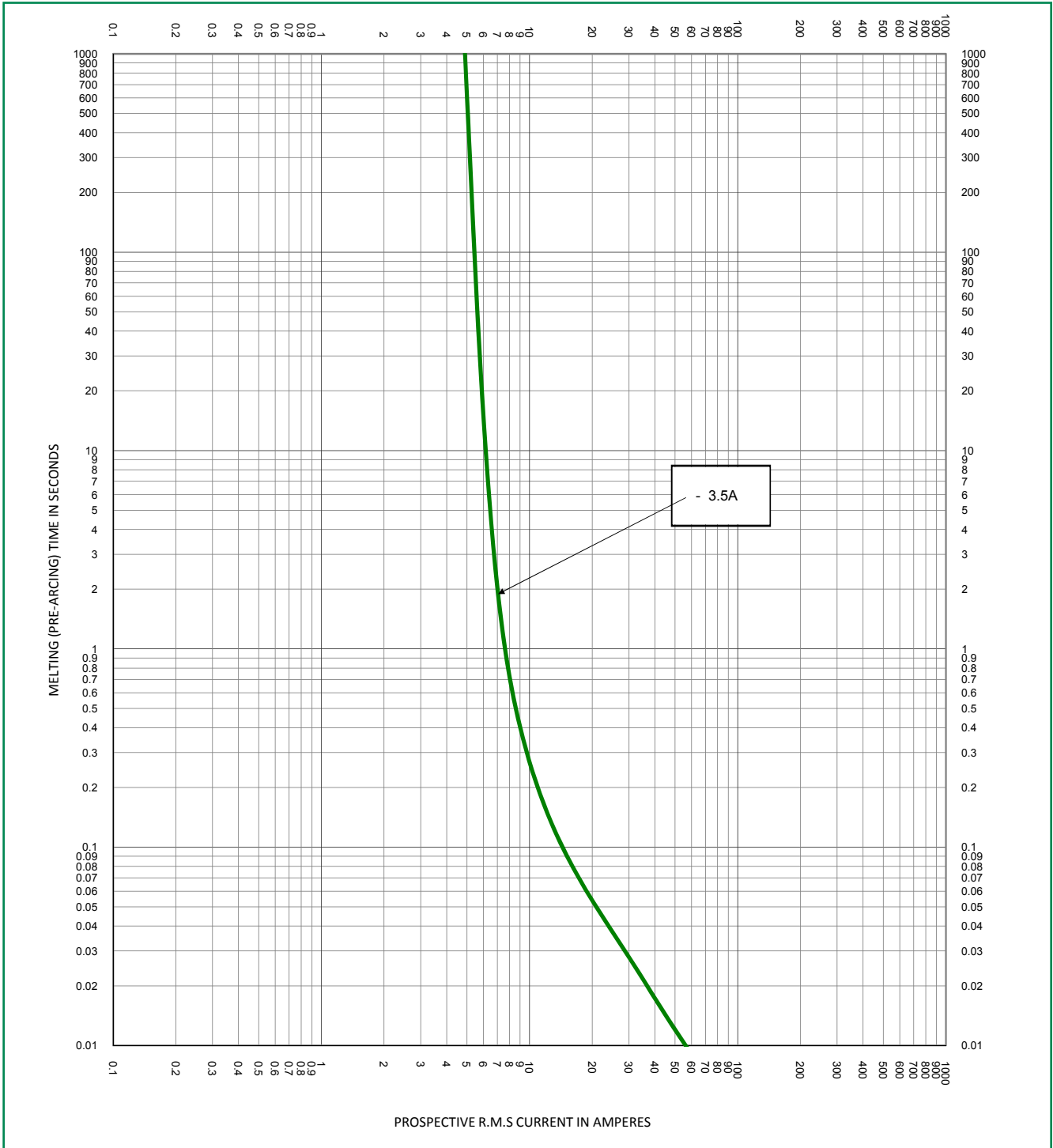


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Time Current Curve

SPXI_CN 3.5 A

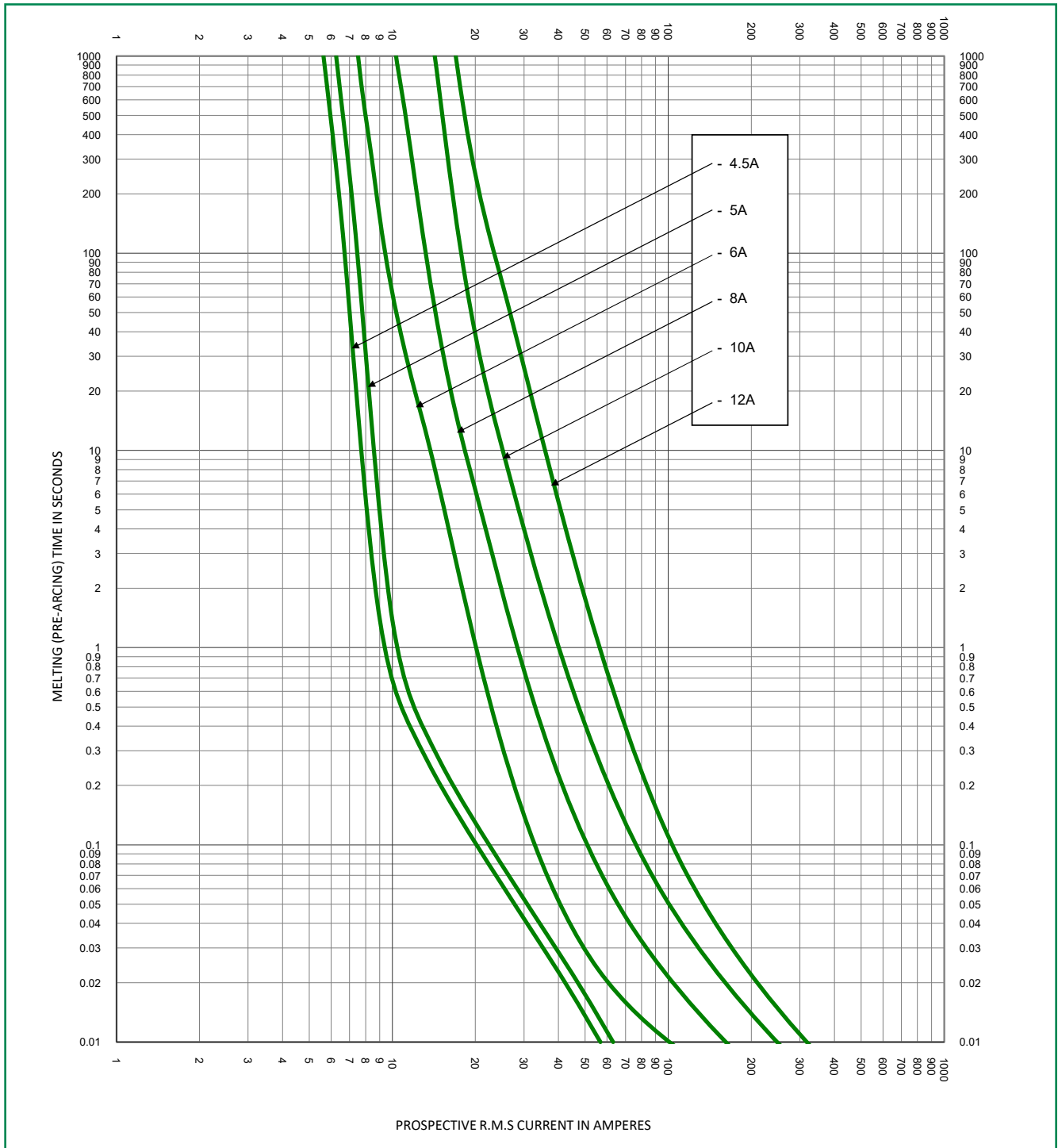


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SPXI_CN SERIES IN-LINE SOLAR FUSE

Time Current Curve

SPXI_CN 4.5-12 A

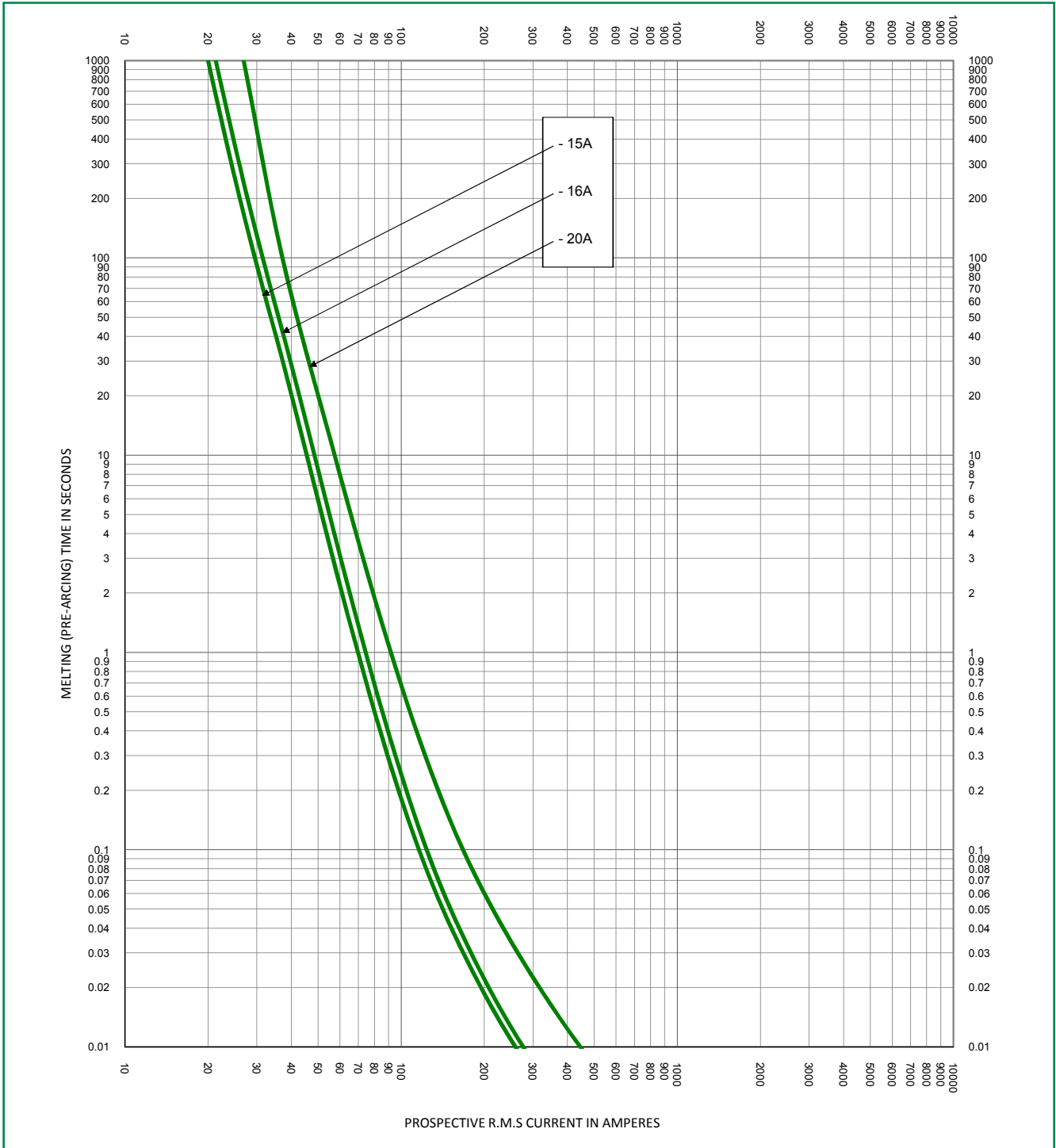


POWR-GARD® Fuse

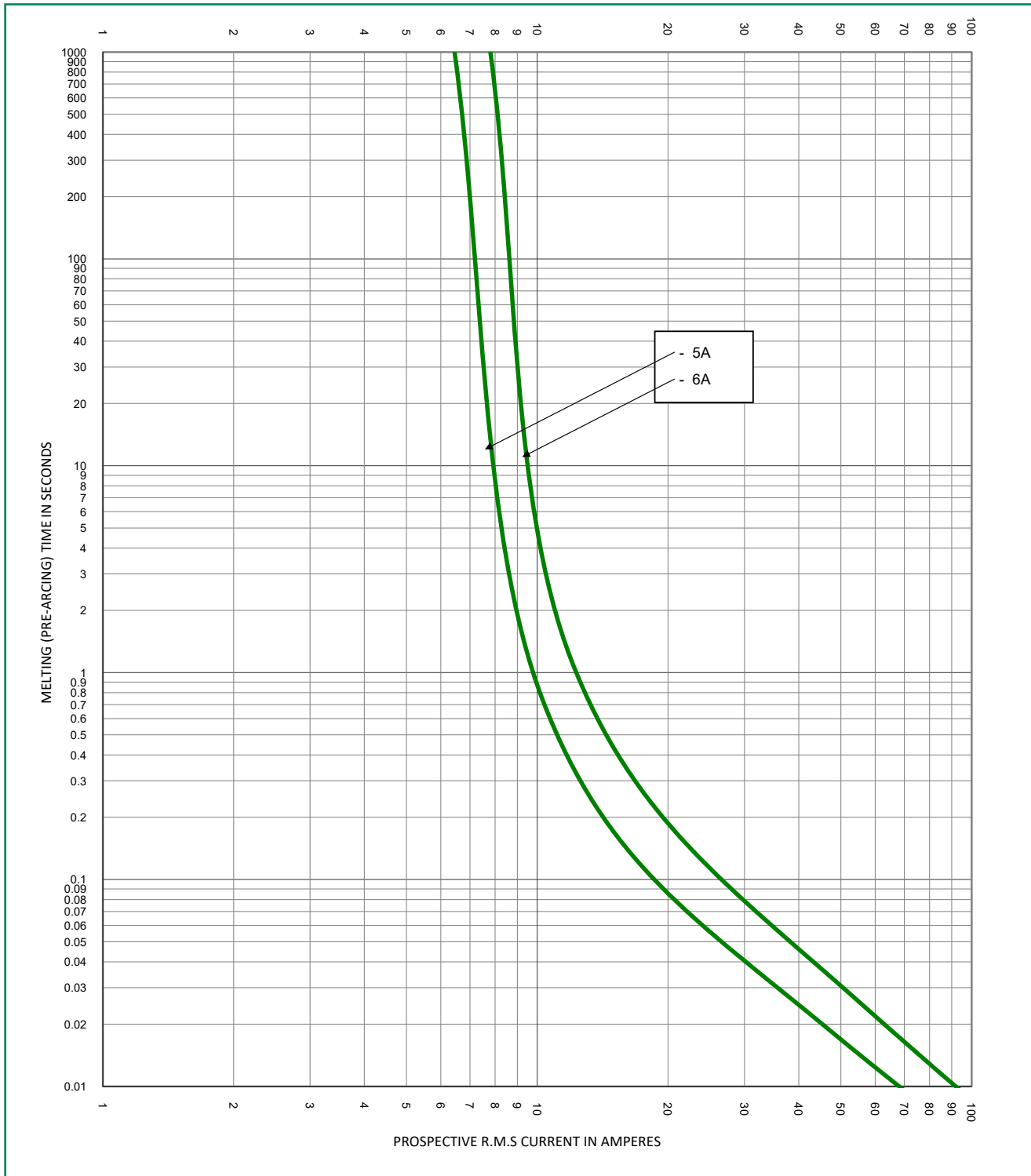
SPXI_CN SERIES IN-LINE SOLAR FUSE

Time Current Curve

SPXI_CN 15-20 A



Time Current Curve
 SPXI-M_CN 5-6 A

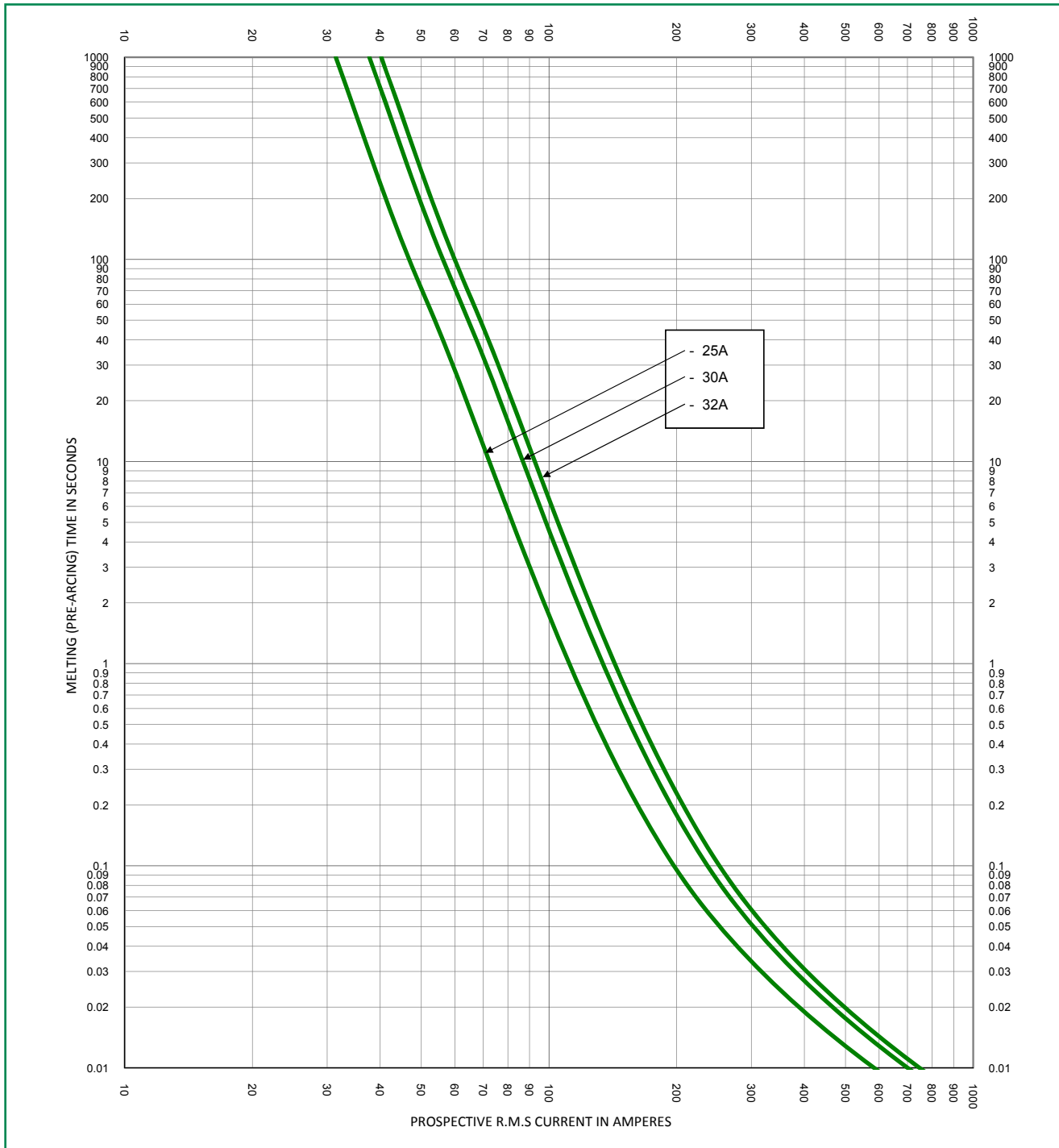


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SPXI_CN SERIES IN-LINE SOLAR FUSE

Time Current Curve

SPXI-M_CN and SPXI-BM_CN 25–32 A



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