

# SPXI SERIES IN-LINE SOLAR FUSES

1500 Vdc • 2.5-30 A (Patent Pending)



## Description

The Littelfuse SPXI solar fuse is designed to integrate into an in-line assembly within a wire harness. The fuse provides photovoltaic (PV) protection that meets UL 2579 for photovoltaic applications. The SPXI can be electrically insulated by either overmolding or using heat-shrink.

## Features/Benefits

- UL 2579 Recognized
- Meets IEC 60269-6 electrical performance requirements
- 30,000 A interrupting rating
- No fuse holder required

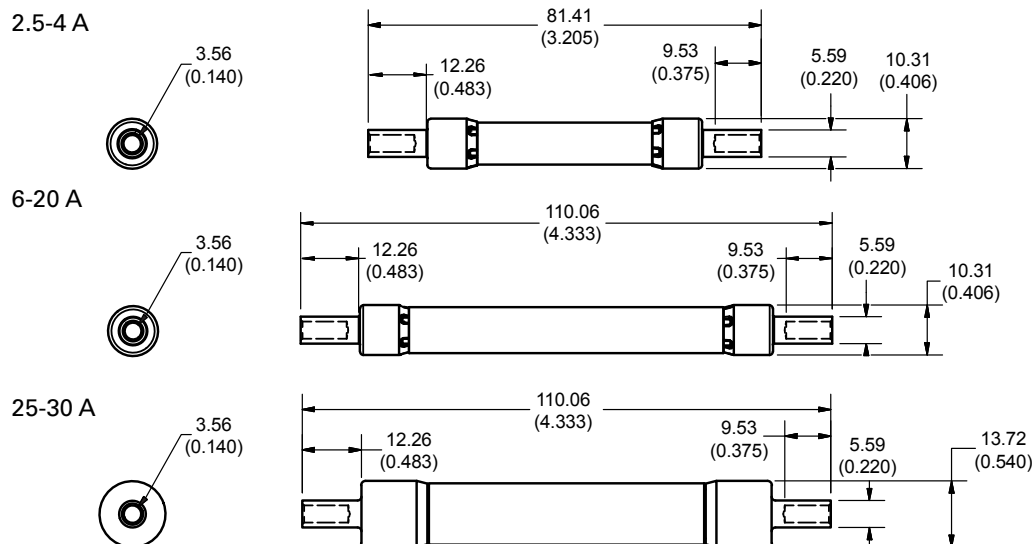
## Applications

- Photovoltaic wire harness

## Recommended Crimping Tool

T&B Sta-Kon ERG4002

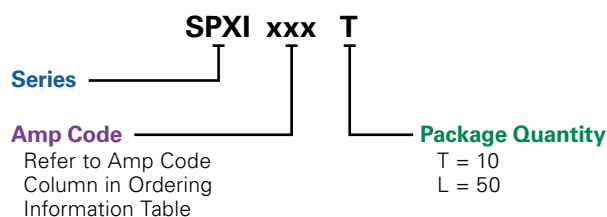
## Dimensions mm (in)



## Specifications

|                              |                                                      |
|------------------------------|------------------------------------------------------|
| <b>Voltage Rating:</b>       | 1500 Vdc                                             |
| <b>Ampere Rating:</b>        | 2.5, 3.5, 4, 6, 8, 10, 12, 15, 20, 25, 30 A          |
| <b>Interrupting Ratings:</b> | 15 kA (UL 2579)<br>30 kA (Self-Certified)            |
| <b>Time Constant</b>         | ≤ 1ms                                                |
| <b>Material:</b>             | Body: Melamine<br>Caps: Copper Alloy (Nickel Plated) |
| <b>Approvals:</b>            | UL 2579 Recognized (File: E339112)                   |
| <b>Environmental:</b>        | RoHS Compliant<br>REACH                              |
| <b>Country of Origin:</b>    | Mexico                                               |

## Part Numbering System



| SERIES | AMP | PACKAGE QUANTITY | CATALOG NUMBER | ORDERING NUMBER |
|--------|-----|------------------|----------------|-----------------|
| SPXI   | 3.5 | 10               | SPXI03.5       | SPXI03.5T       |
| SPXI   | 4   | 10               | SPXI004        | SPXI004.T       |
| SPXI   | 20  | 50               | SPXI020        | SPXI020.L       |

## Web Resources

Download additional technical information and view the complete solar portfolio: [littelfuse.com/spxi](http://littelfuse.com/spxi)

# SPXI SERIES IN-LINE SOLAR FUSE

## Ordering Information

| SERIES | AMPERAGE | AMP CODE | CATALOG NUMBER | PRODUCT MARKING | PACK QUANTITY | ORDERING NUMBER | UPC         |
|--------|----------|----------|----------------|-----------------|---------------|-----------------|-------------|
| SPXI   | 2.5      | 02.5     | SPXI02.5       | SPXI 2 ½ A      | 10            | SPXI02.5T       | 07945880950 |
|        |          |          |                |                 | 50            | SPXI02.5L       | 07945880949 |
| SPXI   | 3.5      | 03.5     | SPXI03.5       | SPXI 3 ½ A      | 10            | SPXI03.5T       | 07945880808 |
|        |          |          |                |                 | 50            | SPXI03.5L       | 07945880149 |
| SPXI   | 4        | 004.     | SPXI004        | SPXI 4 A        | 10            | SPXI004.T       | 07945884508 |
|        |          |          |                |                 | 50            | SPXI004.L       | 07945884509 |
| SPXI   | 6        | 006.     | SPXI006        | SPXI 6 A        | 10            | SPXI006.T       | 07945882658 |
|        |          |          |                |                 | 50            | SPXI006.L       | 07945882659 |
| SPXI   | 8        | 008.     | SPXI008        | SPXI 8 A        | 10            | SPXI008.T       | 07945882660 |
|        |          |          |                |                 | 50            | SPXI008.L       | 07945882661 |
| SPXI   | 10       | 010.     | SPXI010        | SPXI 10 A       | 10            | SPXI010.T       | 07945882662 |
|        |          |          |                |                 | 50            | SPXI010.L       | 07945882663 |
| SPXI   | 12       | 012.     | SPXI012        | SPXI 12 A       | 10            | SPXI012.T       | 07945882664 |
|        |          |          |                |                 | 50            | SPXI012.L       | 07945882665 |
| SPXI   | 15       | 015.     | SPXI015        | SPXI 15 A       | 10            | SPXI015.T       | 07945882666 |
|        |          |          |                |                 | 50            | SPXI015.L       | 07945882667 |
| SPXI   | 20       | 020.     | SPXI020        | SPXI 20 A       | 10            | SPXI020.T       | 07945882556 |
|        |          |          |                |                 | 50            | SPXI020.L       | 07945882557 |
| SPXI   | 25       | 025.     | SPXI025        | SPXI 25 A       | 10            | SPXI025.T       | 07945883059 |
|        |          |          |                |                 | 50            | SPXI025.L       | 07945883060 |
| SPXI   | 30       | 030.     | SPXI030        | SPXI 30 A       | 10            | SPXI030.T       | 07945883061 |
|        |          |          |                |                 | 50            | SPXI030.L       | 07945883062 |

## Electrical Specifications

| AMPERAGE | VOLTAGE | INTERRUPTING RATING |       | WIRE RANGE<br>CU Only<br>(Solid/Stranded) | NOM COLD<br>RESISTANCE<br>(ohm) | WATTS LOSS<br>AT 100% RATED<br>CURRENT (W) | WATTS LOSS<br>AT 80% RATED<br>CURRENT (W) | MELTING<br>I <sup>2</sup> t (A <sup>2</sup> s) 15 kA<br>(1500VDC) | TOTAL CLEARING<br>I <sup>2</sup> t (A <sup>2</sup> s) 15 kA<br>(1500VDC) |
|----------|---------|---------------------|-------|-------------------------------------------|---------------------------------|--------------------------------------------|-------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------|
|          | DC      | AC                  | DC*   |                                           |                                 |                                            |                                           |                                                                   |                                                                          |
| 2.5      | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.099                           | 0.86                                       | 0.48                                      | 7                                                                 | 16                                                                       |
| 3.5      | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0711                          | 1.56                                       | 0.81                                      | 25                                                                | 50                                                                       |
| 4        | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0438                          | 0.95                                       | 0.54                                      | 57                                                                | 95                                                                       |
| 6        | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0576                          | 3.05                                       | 1.71                                      | 49                                                                | 75                                                                       |
| 8        | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0349                          | 3.26                                       | 1.84                                      | 121                                                               | 214                                                                      |
| 10       | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0223                          | 3.25                                       | 1.82                                      | 407                                                               | 509                                                                      |
| 12       | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0163                          | 3.34                                       | 1.89                                      | 798                                                               | 951                                                                      |
| 15       | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0131                          | 5.27                                       | 3.05                                      | 299                                                               | 637                                                                      |
| 20       | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0085                          | 5.38                                       | 3.14                                      | 701                                                               | 1464                                                                     |
| 25       | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0066                          | 6.28                                       | 3.55                                      | 2209                                                              | 2548                                                                     |
| 30       | 1500    | —                   | 30 kA | 10-12 AWG<br>(6-4 mm <sup>2</sup> )       | 0.0055                          | 7.60                                       | 4.25                                      | 3561                                                              | 4010                                                                     |

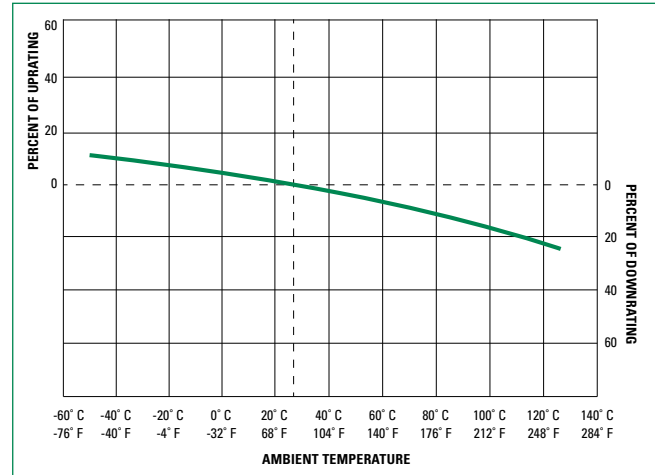
\* 15 kA per UL 2579

# SPXI SERIES IN-LINE SOLAR FUSE

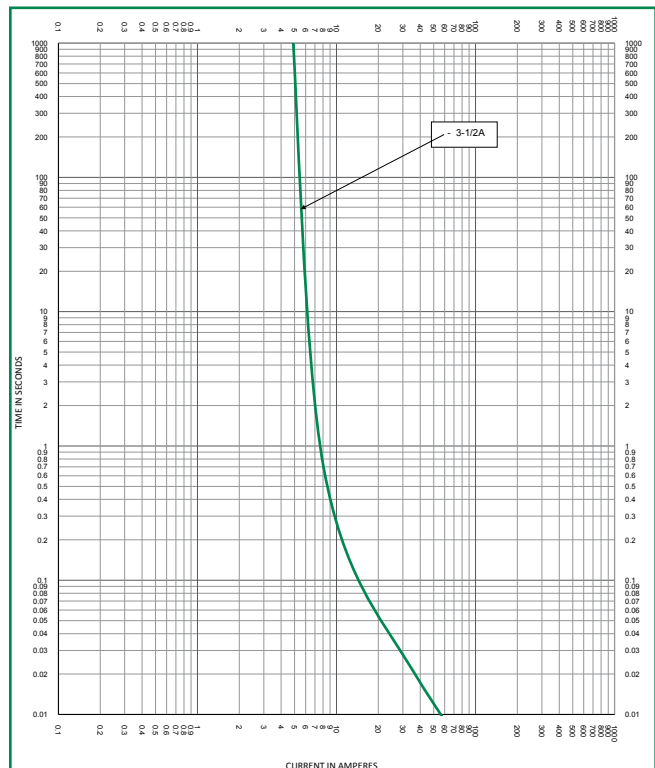
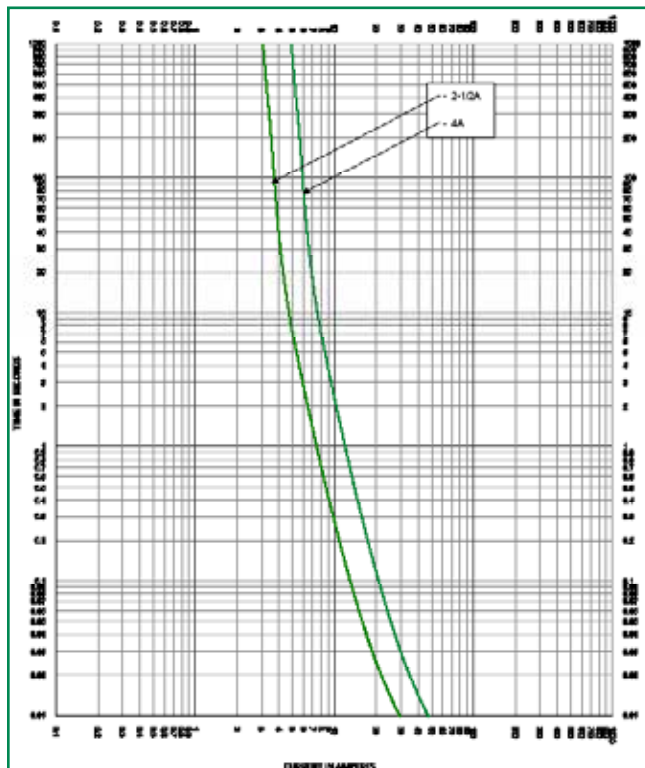
## Electrical Specification — Agency Requirements

| AMPERAGE RATING | OPENING TIME (MINUTES)    |                            |                           |                            |                           |
|-----------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
|                 | 100% of Amp Rating per UL | 113% of Amp Rating per IEC | 135% of Amp Rating per UL | 145% of Amp Rating per IEC | 200% of Amp Rating per UL |
| 2.5-30          | Temperature Stabilization | 60 Min                     | 60 Max                    | 60 Max                     | 4 Max                     |

## Temperature Derating Curve (Temperature of Air Immediately Surrounding Fuse)

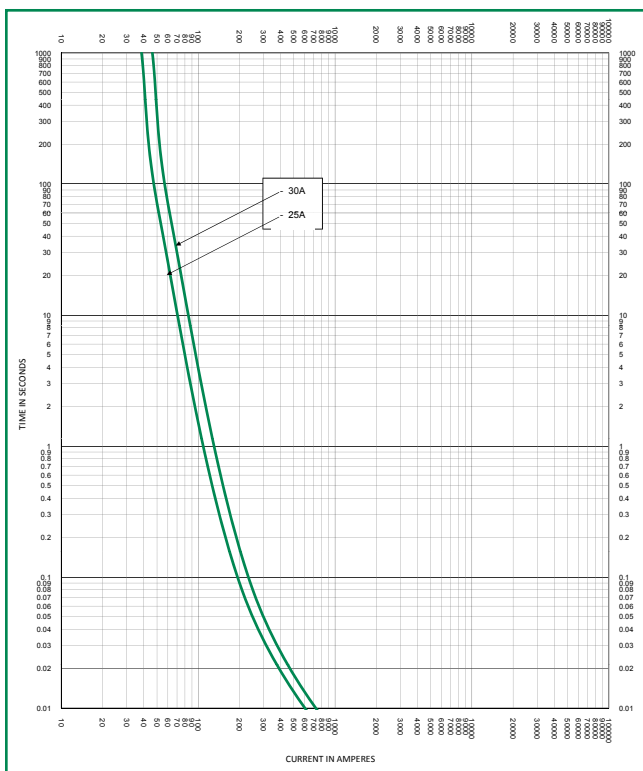
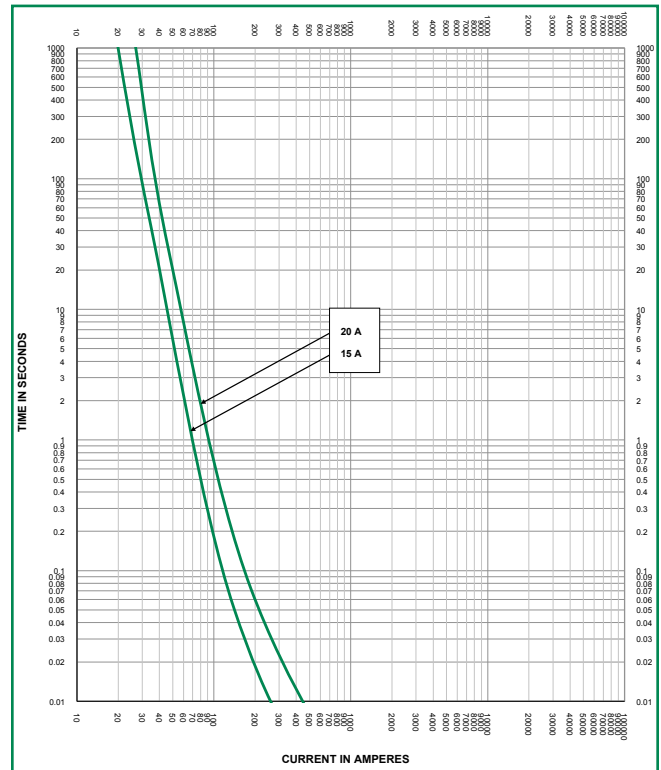
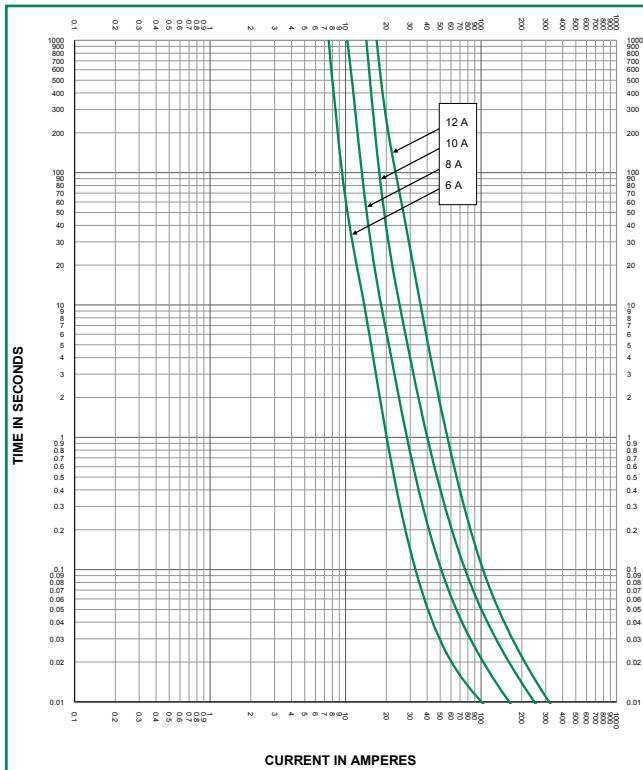


## Time Current Curves



# SPXI SERIES IN-LINE SOLAR FUSE

## Time Current Curves



# Mouser Electronics

Authorized Distributor

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Littelfuse:

[SPXI02.5L](#) [SPXI02.5T](#) [SPXI03.5L](#) [SPXI03.5T](#)