

SPF-S SILVER PLATED 10X38mm SOLAR FUSES

1000 Vdc • 1-30 A



Description

The SPF Solar Protection Fuse series has been specifically designed for the protection of photovoltaic (PV) systems. This family of Midget style fuses (10 x 38 mm) can safely protect PV modules and conductors from reverse-overcurrent conditions.

As PV systems have grown in size, so have the corresponding voltage requirements. This increase in system voltage has typically been intended to minimize power loss associated with long conductor runs. Standard circuit protection devices are not designed to completely protect photovoltaic panels. However, the SPF series is UL Listed to safely interrupt faulted circuits up to this demanding voltage level.

Features/Benefits

- UL 2579 Listed
- Meets IEC 60269-6 performance requirements for 1-25 A
- 1-30 A ratings available
- 20,000 A Interrupting Rating

Applications

- Inverters
- Combiner boxes
- Battery charge controllers

Recommended Fuse Holders

LPHV Series 1000 Vdc Dead-Front

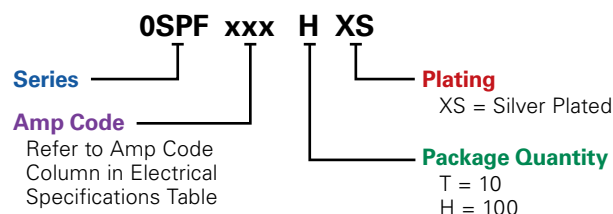
Web Resources

Download technical documents: littelfuse.com/spfs

Specifications

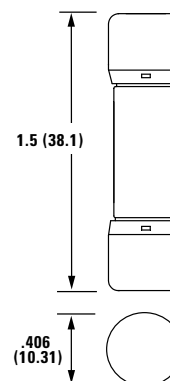
Voltage Rating	1000 VDC
Amperage Rating	1, 2, 3, 3.5, 4, 5, 6, 8, 10, 12, 15, 20, 25, 30
Interrupting Rating	20 kA
Time Constant	≤ 2ms
Material	Body: Melamine Caps: Copper Alloy (Silver Plated)
Approvals	UL 2579 Listed (File: E339112) CSA Certified (File: 029862_0_000)
Environmental	RoHS Compliant
Country of Origin	Mexico

Part Numbering System



SERIES	AMP	PACKAGE QUANTITY	MOUNTING METHOD	CATALOG NUMBER	ORDERING NUMBER
SPF-S	2	10	FERRULE	SPF002-S	0SPF002.TXS
SPF-S	3.5	10	FERRULE	SPF03.5-S	0SPF03.5.TXS

Dimensions Inches (mm)



Look for this logo to indicate products that are used in solar applications. Visit our website littelfuse.com/solar for the latest updates on approvals, certifications, and new products.

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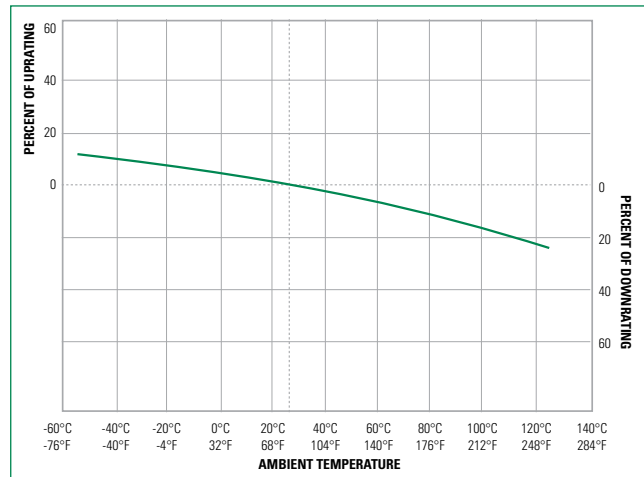
Ordering Information

SERIES	AMPERAGE	AMP CODE	CATALOG NUMBER	PRODUCT MARKING	PACK QUANTITY	ORDERING NUMBER	UPC
SPF-S	1	001.	SPF001-S	SPF 1A-S	10	OSPF001.TXS	07945884195
					100	OSPF001.HXS	07945884194
SPF-S	2	002.	SPF002-S	SPF 2A-S	10	OSPF002.TXS	07945884197
					100	OSPF002.HXS	07945884196
SPF-S	3	003.	SPF003-S	SPF 3A-S	10	OSPF003.TXS	07945884199
					100	OSPF003.HXS	07945884198
SPF-S	3.5	03.5	SPF03.5-S	SPF 3 ½A-S	10	OSPF03.5.TXS	07945884219
					100	OSPF03.5.HXS	07945884218
SPF-S	4	004.	SPF004-S	SPF 4A-S	10	OSPF004.TXS	07945884201
					100	OSPF004.HXS	07945884298
SPF-S	5	005.	SPF005-S	SPF 5A-S	10	OSPF005.TXS	07945884203
					100	OSPF005.HXS	07945884202
SPF-S	6	006.	SPF006-S	SPF 6A-S	10	OSPF006.TXS	07945884205
					100	OSPF006.HXS	07945884204
SPF-S	8	008.	SPF008-S	SPF 8A-S	10	OSPF008.TXS	07945884207
					100	OSPF008.HXS	07945884206
SPF-S	10	010.	SPF010-S	SPF 10A-S	10	OSPF010.TXS	07945884209
					100	OSPF010.HXS	07945884208
SPF-S	12	012.	SPF012-S	SPF 12A-S	10	OSPF012.TXS	07945884211
					100	OSPF012.HXS	07945884210
SPF-S	15	015.	SPF015-S	SPF 15A-S	10	OSPF015.TXS	07945884213
					100	OSPF015.HXS	07945884212
SPF-S	20	020.	SPF020-S	SPF 20A-S	10	OSPF020.TXS	07945884215
					100	OSPF020.HXS	07945884214
SPF-S	25	025.	SPF025-S	SPF 25A-S	10	OSPF025.TXS	07945884217
					100	OSPF025.HXS	07945884216
SPF-S	30	030.	SPF030-S	SPF 30A-S	10	OSPF030.TXS	07945884221
					100	OSPF030.HXS	07945884220

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
1-25	Temperature Stabilization	60 Min	60 Max	60 Max	4 Max
30	Temperature Stabilization	—	60 Max	—	4 Max

Temperature Derating Curve (Temperature of Air Immediately Surrounding Fuse)

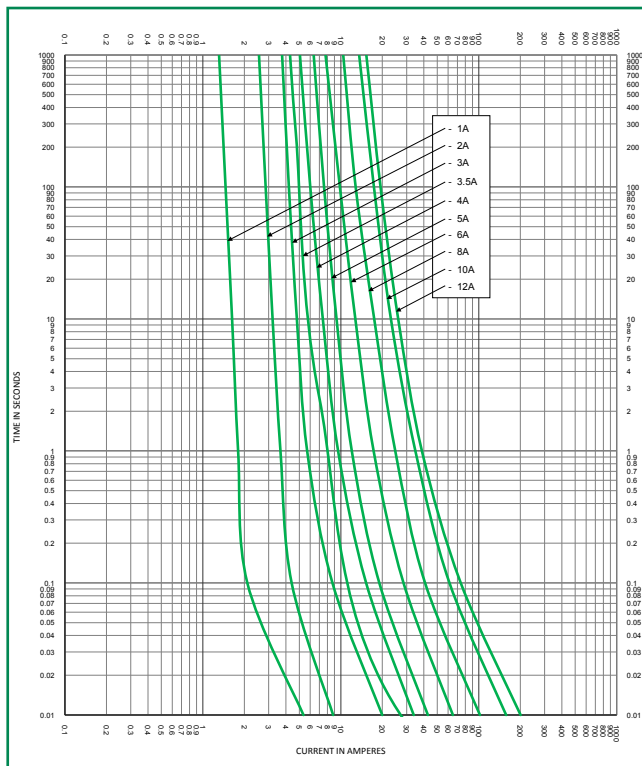


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Electrical Specifications

AMPERAGE	VOLTAGE	INTERRUPTING RATING (kA)		NOM COLD RESISTANCE (ohm)	WATTS LOSS AT 100% RATED CURRENT (W)	WATTS LOSS AT 80% RATED CURRENT (W)	TOTAL CLEARING I ² t (A ² s) 20 kA
		AC	DC				
1	1000	—	20kA DC	0.394	0.60	0.41	0.6
2	1000	—	20kA DC	0.237	1.59	0.85	5
3	1000	—	20kA DC	0.11	1.50	0.82	7.9
3.5	1000	—	20kA DC	0.07787	1.37	0.78	11
4	1000	—	20kA DC	0.06127	1.49	0.84	23
5	1000	—	20kA DC	0.04086	1.47	0.86	43
6	1000	—	20kA DC	0.0281	1.35	0.77	80
8	1000	—	20kA DC	0.0178	1.61	0.91	199
10	1000	—	20kA DC	0.0125	1.76	1.00	401
12	1000	—	20kA DC	0.00993	1.97	1.11	642
15	1000	—	20kA DC	0.00799	2.28	1.38	505
20	1000	—	20kA DC	0.0045	2.81	1.57	1313
25	1000	—	20kA DC	0.00353	2.98	1.75	2371
30	1000	—	20kA DC	0.00284	3.92	2.13	2679

Time Current Curve (1-12 A)



Time Current Curve (15-30 A)

