BOURNS®

PF-1NH100E SERIES

Energy Storage (aR Class) Power Fuses



*RoHS COMPLIANT & **HALOGEN FREE

Features

- Designed to meet IEC 60269-4 (aR class) fuse standard
- 1000 VDC rated voltage and 50 kA interrupting current
- RoHS compliant*
- Halogen free**

Applications

- Power conversion devices
- DC common bus systems
- Battery energy storage systems (BESS)
- DC charging piles

Sustainability

- Eco-logistics-friendly packing
- Energy-saving low-power design
- ISO 14001, low-impact energy

Product Overview

BOURNS® POWrFUSE™

Bourns® PF-1NH100E Series POWrFuse™ High-Power Fuses feature high-power industrial fuse links designed to meet semiconductor (aR class) protection standards to protect semiconductors against overcurrent conditions.

The PF-1NH100E Series is engineered to IEC 60269-4 and delivers dependable aR class fault protection at 1000 VDC with 50 kA interrupting capability—ideal for power conversion devices, DC common bus systems, battery energy storage systems, and DC charging piles.

Electrical Characteristics

Model***	Rated Current (A)	Rated Voltage	Interrupting Rating	I^2t (A^2s)		Power Loss**** (W)	Agency Recognition
				Pre-arcing	Clearing		
PF-1NH100E400xx	400	1000 VDC	50 kA @ 1000 VDC	50150	250150	85	TÜV SÜD B 118437; CE N8A 118437
PF-1NH100E450xx	450			82900	413500	90	
PF-1NH100E500xx	500			112800	562800	100	
PF-1NH100E550xx	550			129500	646000	110	
PF-1NH100E600xx	600			153600	766000	130	
PF-1NH100E630xx	630			166400	829800	135	

*** xx = Mounting Type: B2 = Bolt Down (Type 2); DB = DIN Blade; FE = Flush End

**** Tested at rated current

Environmental Characteristics

Specification	Value
Operating Temperature	-40 °C to +85 °C

How to Order

PF - 1NH 100E 400 DB

- POWrFuse™ Product Designator
- Size
  - 1NH = NH1
- Rated Voltage
  - 100E = 1000 VDC
- Rated Current
  - 400 = 400 A
- Mounting Type
  - B2 = Bolt Down (Type 2)
  - DB = DIN Blade
  - FE = Flush End

Contact Information

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* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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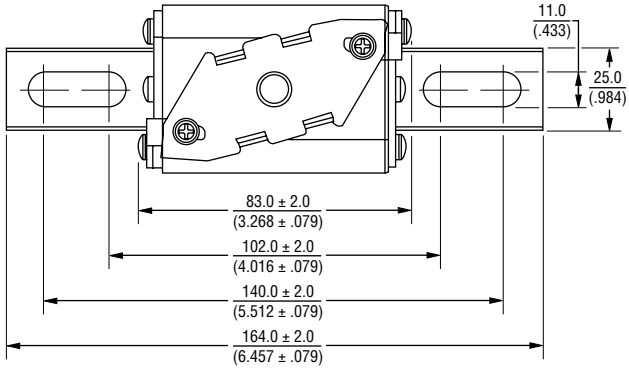
Energy Storage (aR Class) Power Fuses

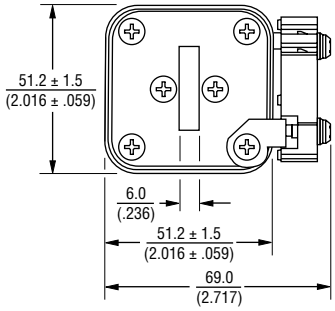


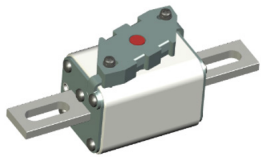
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&
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Product Dimensions

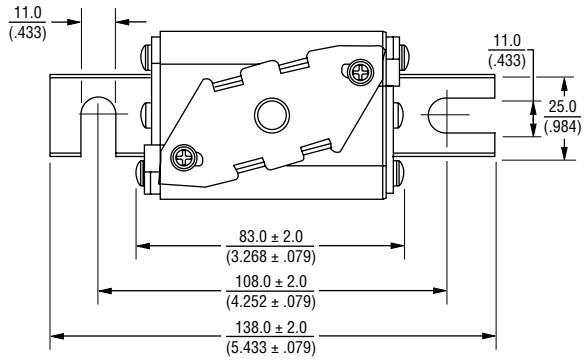
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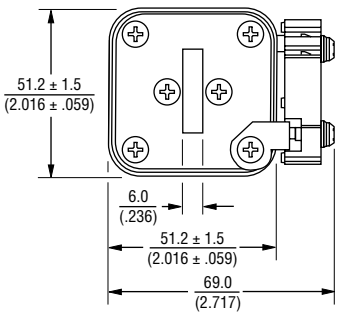


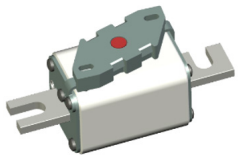




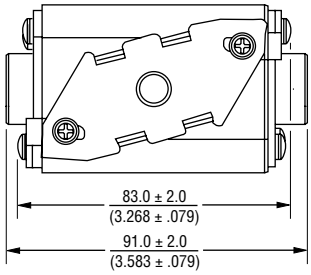
DB: DIN Blade

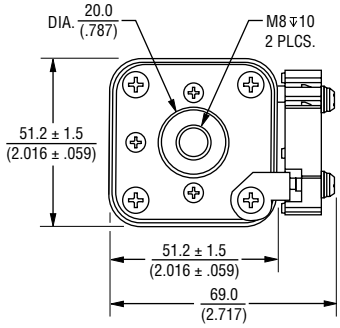


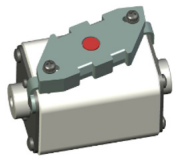




FE: Flush End







DIMENSIONS: MM / (INCHES)

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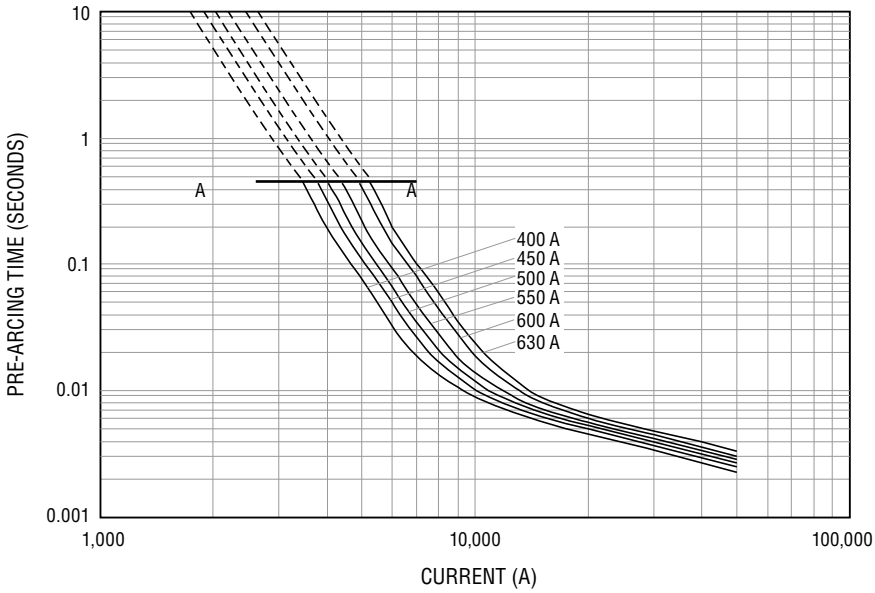
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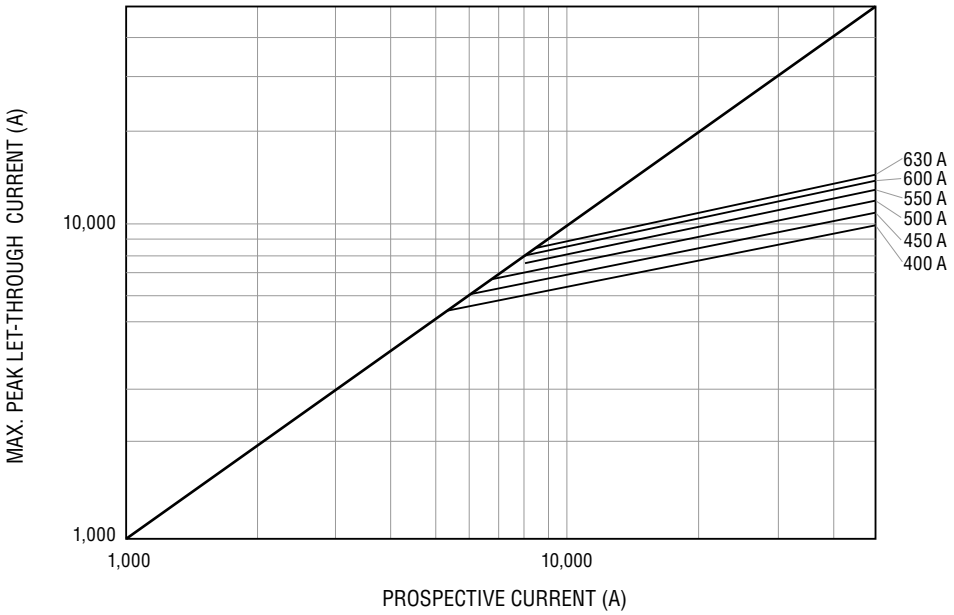


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Average Pre-Arcing Time vs. Current Curves



Truncated Current Curve (For Reference Only)



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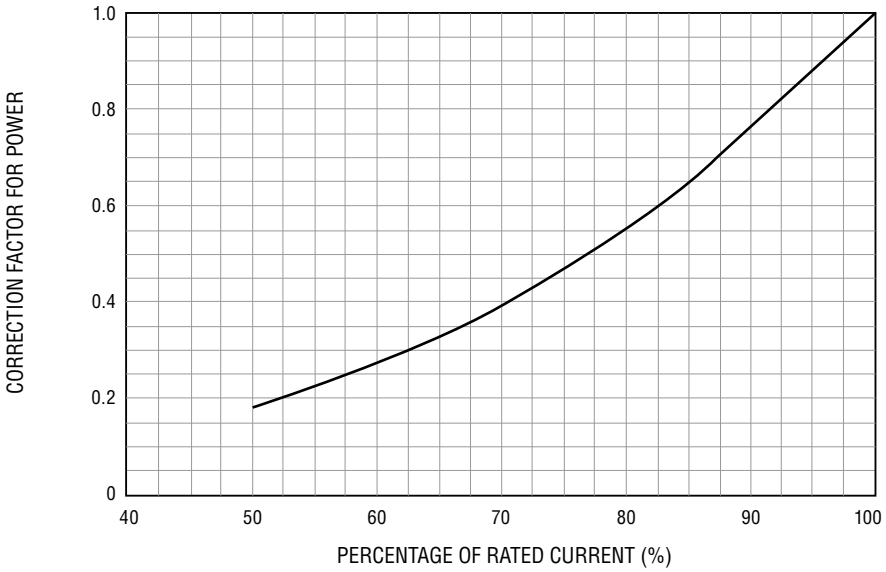
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Energy Storage (aR Class) Power Fuses

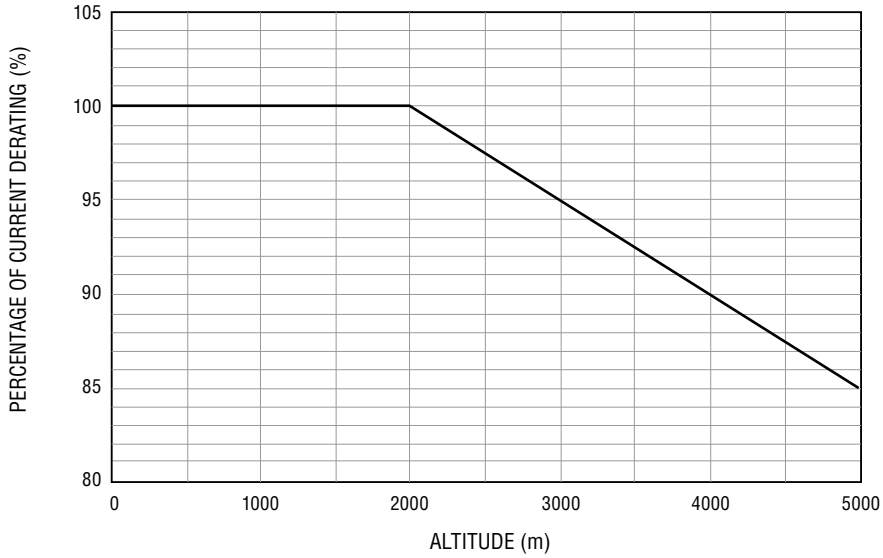


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Power Dissipation Curve (For Reference Only)



Power Dissipation Curve (For Reference Only)



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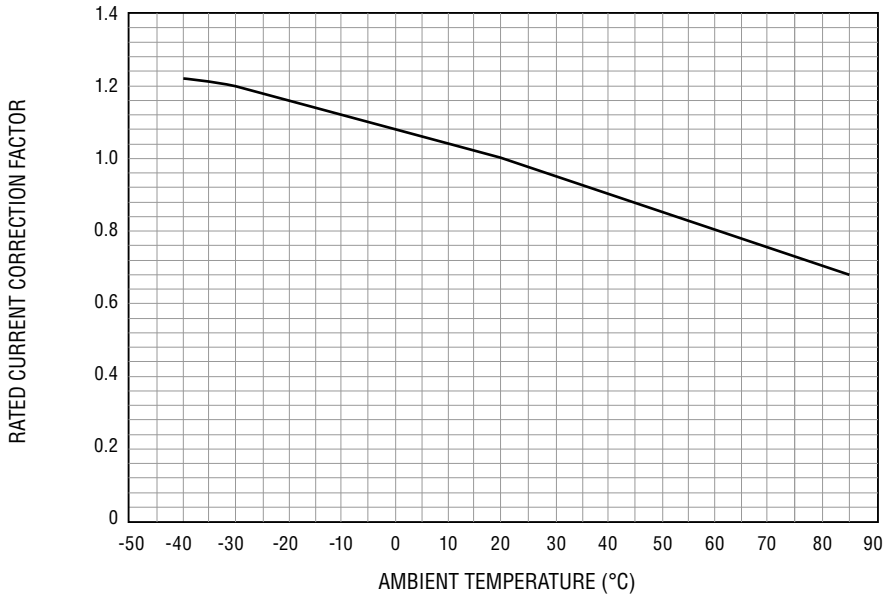
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Energy Storage (aR Class) Power Fuses



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Current Rating Thermal Derating Curve



Typical Part Marking

Current Rating (A)	Note 1	Note 2	Note 3	Note 4
400	400	DC Resistance	Date Code	Mounting Type (B2/DB/FE)
450	450			
500	500			
550	550			
600	600			
630	630			

Marking

BOURNS®
PF-1NH100E (Note 1) (Note 4)
(Note 1) A
1000 VDC
I1: 50 kA
aR
(Note 2) mΩ (20 °C)
(Note 3) 3625100231

Packaging Specifications

Model	Pearl Cotton Pallet	Carton
PF-1NH100E	6 Pieces	18 Pieces

Recommended Mounting Torque and Bolt Sizes

Mounting Type	Mounting Torque	Bolt Size
B2 / DB	21 ± 1 Nm	M10
FE	13.5 Nm	M8

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