

1500 V DC 180D aR/aBat Size 4 fuse links



Product description

Eaton's Bussmann series 180D aR and aBAT size 4 square body fuse links, are specifically designed for the protection of inverters, converters and battery racks.

Applications

- DC to AC Inverters
- DC to DC Converters
- Battery storage applications
- Electric Vehicle charging stations
- Power conversion systems
- Regenerate drives
- DC common bus protection

Features and benefits

- The surge in solar photovoltaic (PV) installations and energy storage systems has driven the adoption of 1500 VDC systems, as higher voltages reduce power losses and enable longer string lengths. Our 1500 V DC Fuses are therefore indispensable in protecting PV strings, battery racks, inverters and combiners
- Low power dissipation, to prevent abnormal temperature rise, increases energy efficiency and lowers running cost
- Designed and tested to IEC 60269-4 and -7 and UL 248-13
- Handles extreme fault currents: In large-scale photovoltaic arrays, railway traction systems, energy storage facilities, or industrial DC networks, fault currents can quickly escalate to catastrophic levels. Our 180D fuses with a 250 kA breaking capacity ensure that, even in worst-case scenarios, the system is protected from the full spectrum of short-circuit events.
- Minimizes arc energy: The ability to interrupt high currents rapidly minimizes the duration and energy of electrical arcs. This is especially important in DC circuits, where arcs tend to persist longer than in AC circuits because there is no zero-crossing.
- 400% In minimum breaking current offers easy coordination within DC applications and reduces dimensioning requirements of DC contactors to optimize space and decrease overall cost of the installation.
- Optional microswitch available for indication of fuse operation
- aR and aBat operating class

Catalogue symbol

- See details in table

Technical data

- Rated voltage: 1500 V DC
- Rated current: 800 A to 1800 A
- Fuse body size: 4
- Operating class:
 - aR
 - aBat
- Breaking capacity:
 - 100 kA at 10ms L/R
 - 250 kA at 3ms L/R

Standards/Approvals

- Designed and tested to IEC 60269 part 4 and part 7
- CE
- UL 248-13 Recognised
- RoHS Compliant

Microswitches

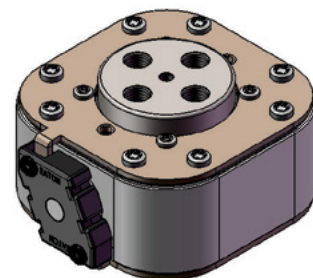
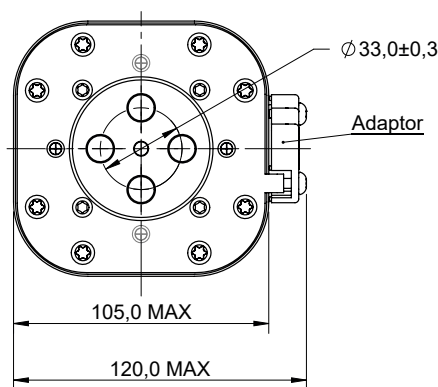
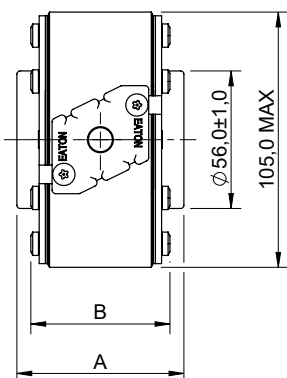
- 170H0069

Technical data

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 10ms)	Pre-arcing I ² t (A ² Sec)	Power loss at In (W)	Catalog number
4	1500 V d.c. (IEC/UL)	800	100	512,000	111	180D7462
		900	100	776,000	120	180D7463
		1000	100	1,000,000	164	180D7620
		1250	100	1,400,000	185	180D7698
		1500	100	2,500,000	228	180D7627
		1800	100	3,500,000	313	180D7477

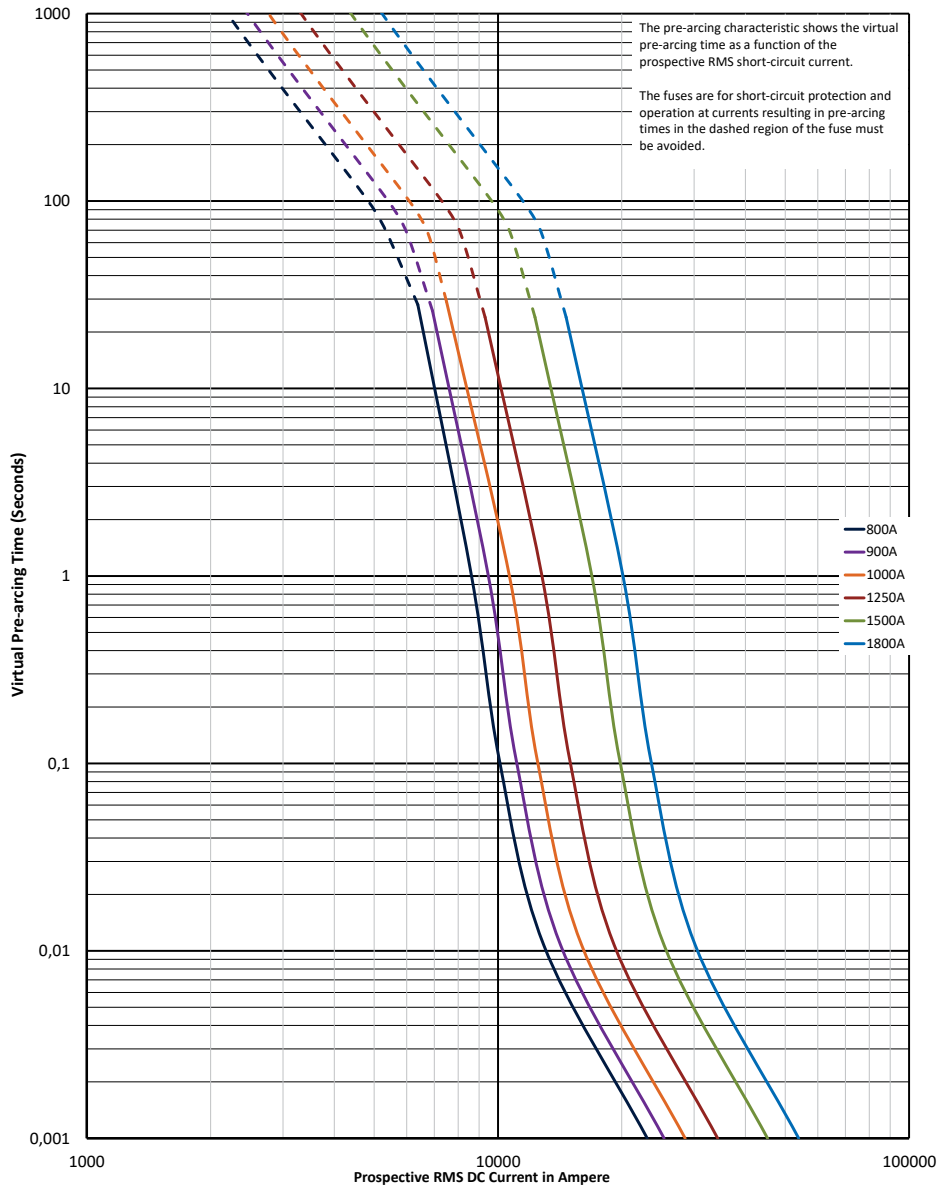
Dimensions (mm)

Threaded hole M10, min. 10mm deep.
Thread controlled with 6H gauge.
Hole min. 11 deep.



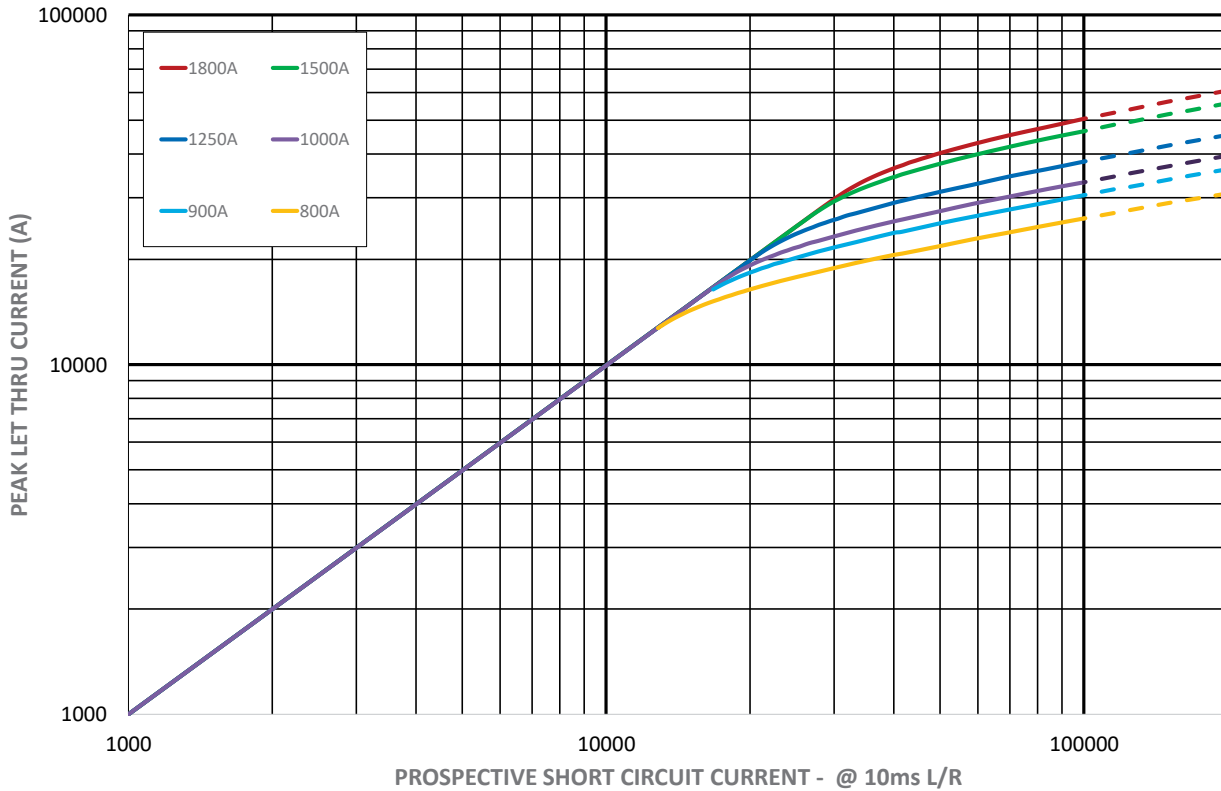
A	B
153.6 ± 2.4	142.6 ± 2.7

Time-current curve



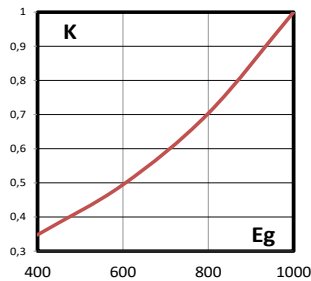
$K_b = 1$ $N = 1,5$

Peak let-through curve



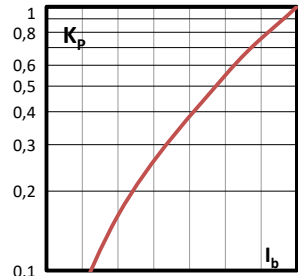
Total clearing I²t

The total clearing I²t at rated voltage and tested DC time constant are given in electrical characteristics. For other voltages the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltages, E.



Watts losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the watts losses at load currents lower than the rated current. The correction factor, K_p, is given as a function of the RMS load current, I_v, in percent of the rated current.



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