

1500 V DC 180D aR/aBat Size 24 fuse links



Product description

Eaton's Bussmann series 180D aR and aBAT size 24 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.
- aR and aBat operating class

Catalogue symbol

- 180D87xx, see details in table

Technical data

- Rated voltage: 1500 V DC
- Rated current: 1600 A to 3000 A
- Fuse body size: 24
- Operating class:
 - aR
 - aBat
- Breaking capacity: 250 kA at 3ms L/R

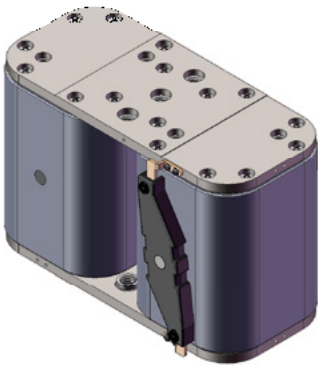
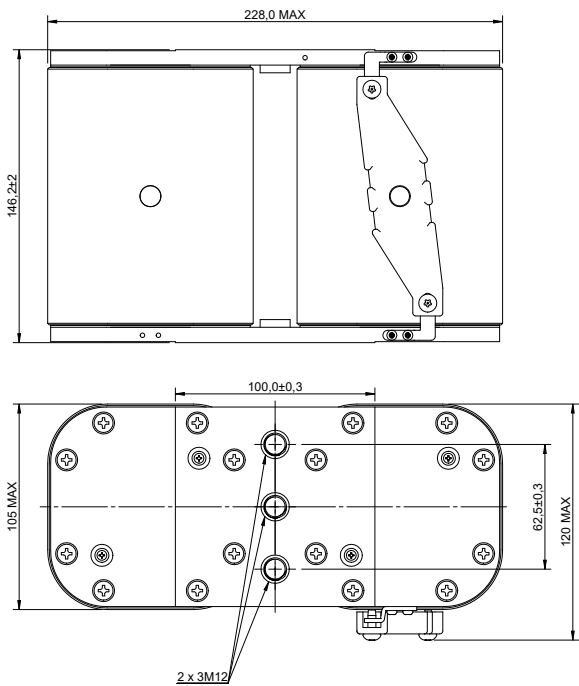
Standards/Approvals

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

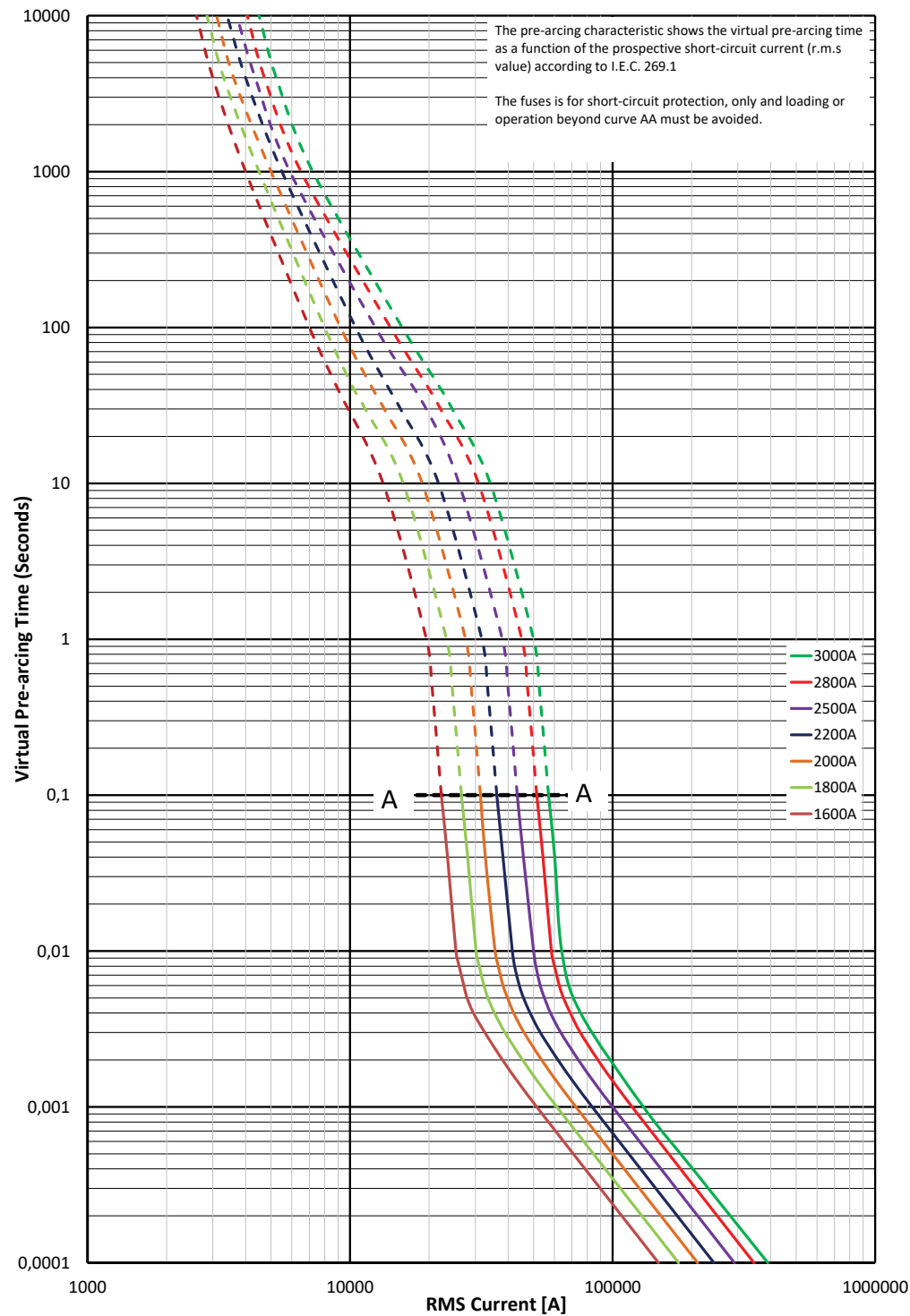
Technical data

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 3ms)	Minimum breaking current (Amps)	Pre-arcing I ² t (A ² Sec)	Power loss at I _n (W)	Catalog number
24	1500 V d.c. (IEC/UL)	1600	250	23,000	2,139,000	270	180D7739
		1800	250	27,500	3,044,000	300	180D7740
		2000	250	32,500	4,251,000	315	180D7741
		2200	250	37,500	5,660,000	330	180D7742
		2500	250	45,000	8,100,000	390	180D7743
		2800	250	53,500	11,407,000	410	180D7744
		3000	250	59,100	14,021,000	425	180D7745

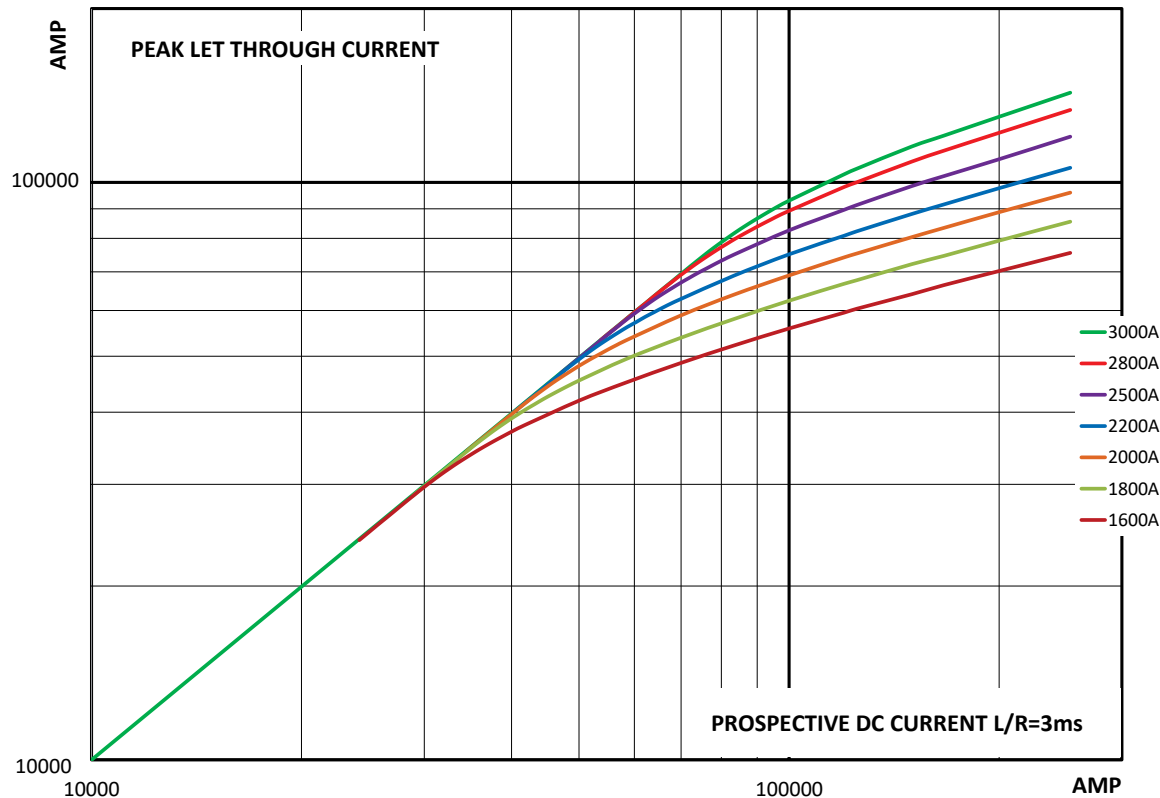
Dimensions (mm)



Time-current curve

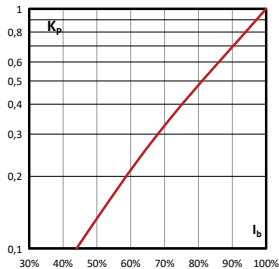


Peak let-through curve



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_b , in percent of the rated current.



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