

1500 V DC 180D aR/aBat Size 1 fuse links



Product description

Eaton's Bussmann series 180D aR and aBAT size 1 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

- 180D74xx, e.g 180D7432

Technical data

- Rated voltage: 1500 V DC
- Rated current: 100 A to 315 A
- Fuse body size: 1
- 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

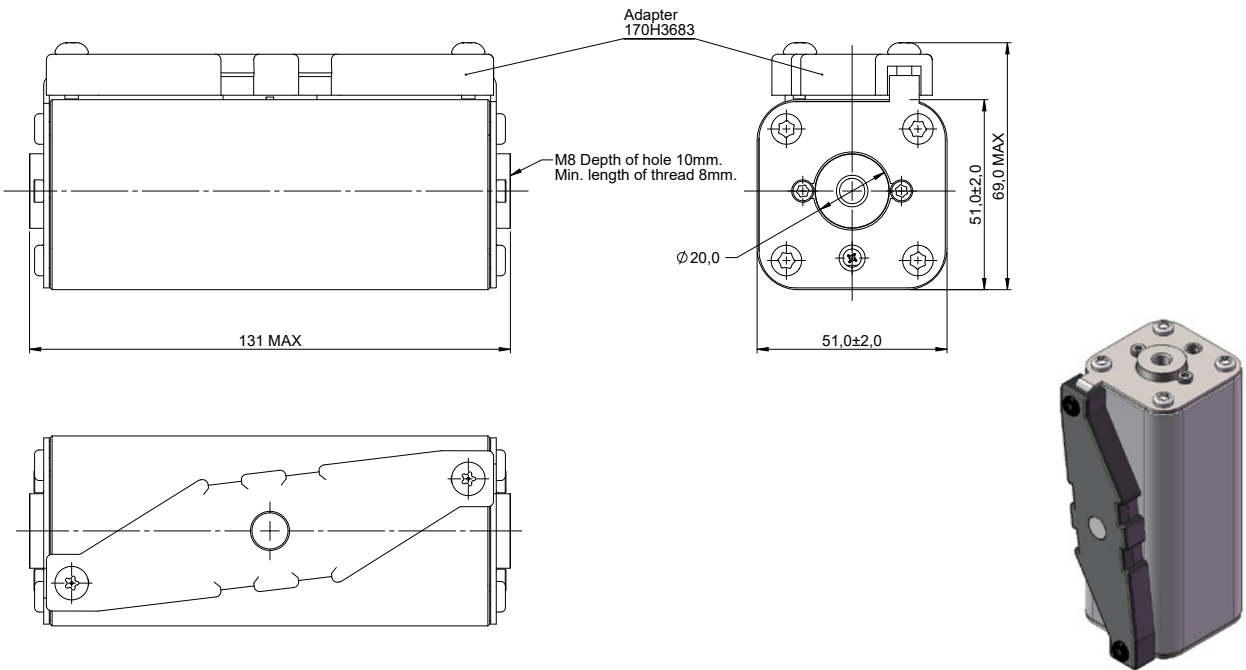
Microswitches

- 170H0069

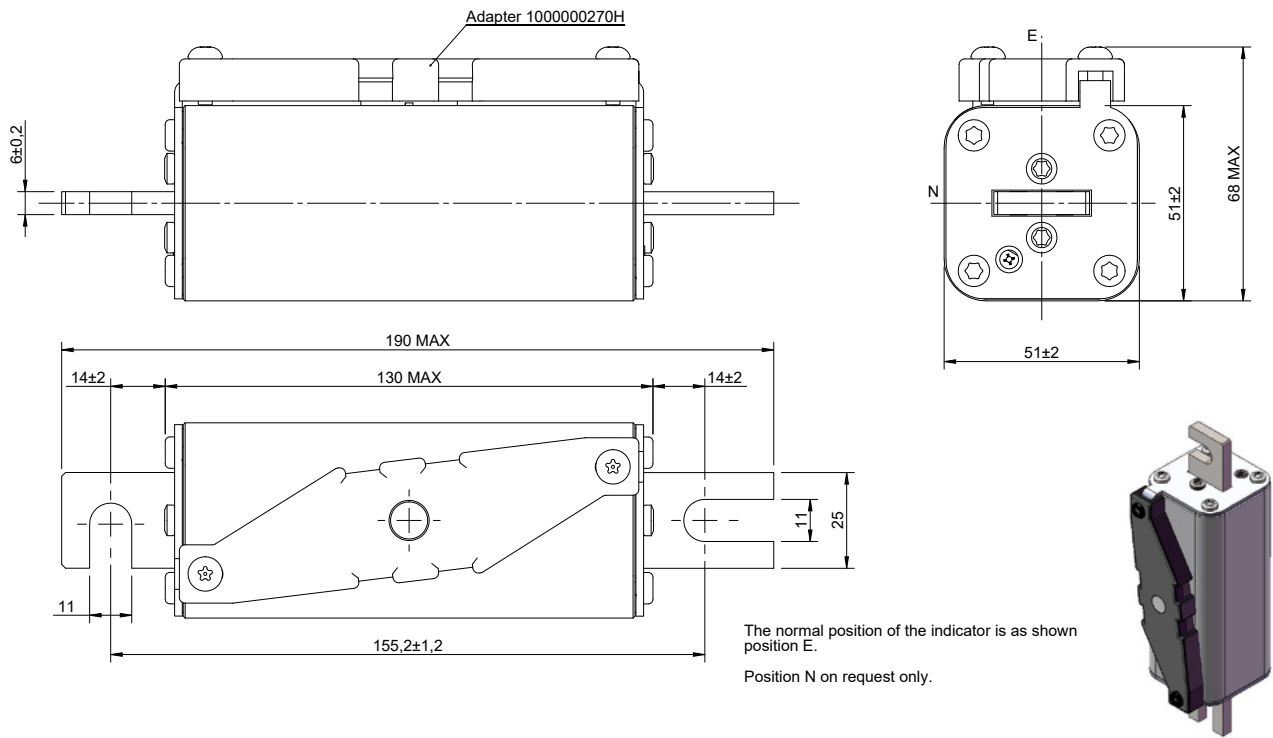
Technical data

							Catalog number		
Fuse body size	Rated voltage	Rated current (Amps)	Minimum breaking capacity (Amps)	Maximum breaking capacity	Pre-arcing I²t (A² Sec)	Power loss at In (W)	Fuse type: Flush end 1BKN/130	Fuse type: DIN 43653 1KE/160	Fuse type: US Style 1FKE/170
1	1500 V d.c. (IEC/UL)	100	205	100kA @10ms L/R	815	56	180D7420	180D7426	180D7432
		125	300	250kA @3ms L/R	1700	65	180D7421	180D7427	180D7433
		160	435		3800	70	180D7422	180D7428	180D7434
		200	605		7300	80	180D7423	180D7429	180D7435
		250	875		15,000	90	180D7424	180D7430	180D7436
		315	1245		31,000	100	180D7425	180D7431	180D7437

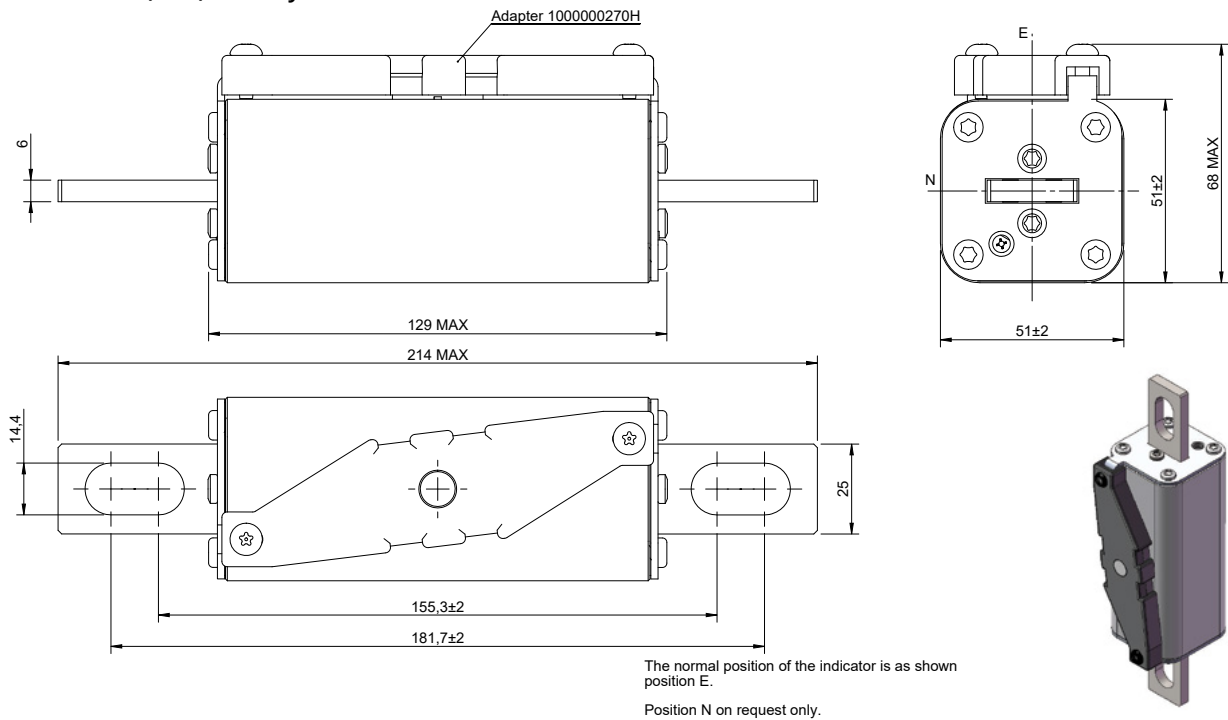
Dimensions mm - Flush end 1BKN/130



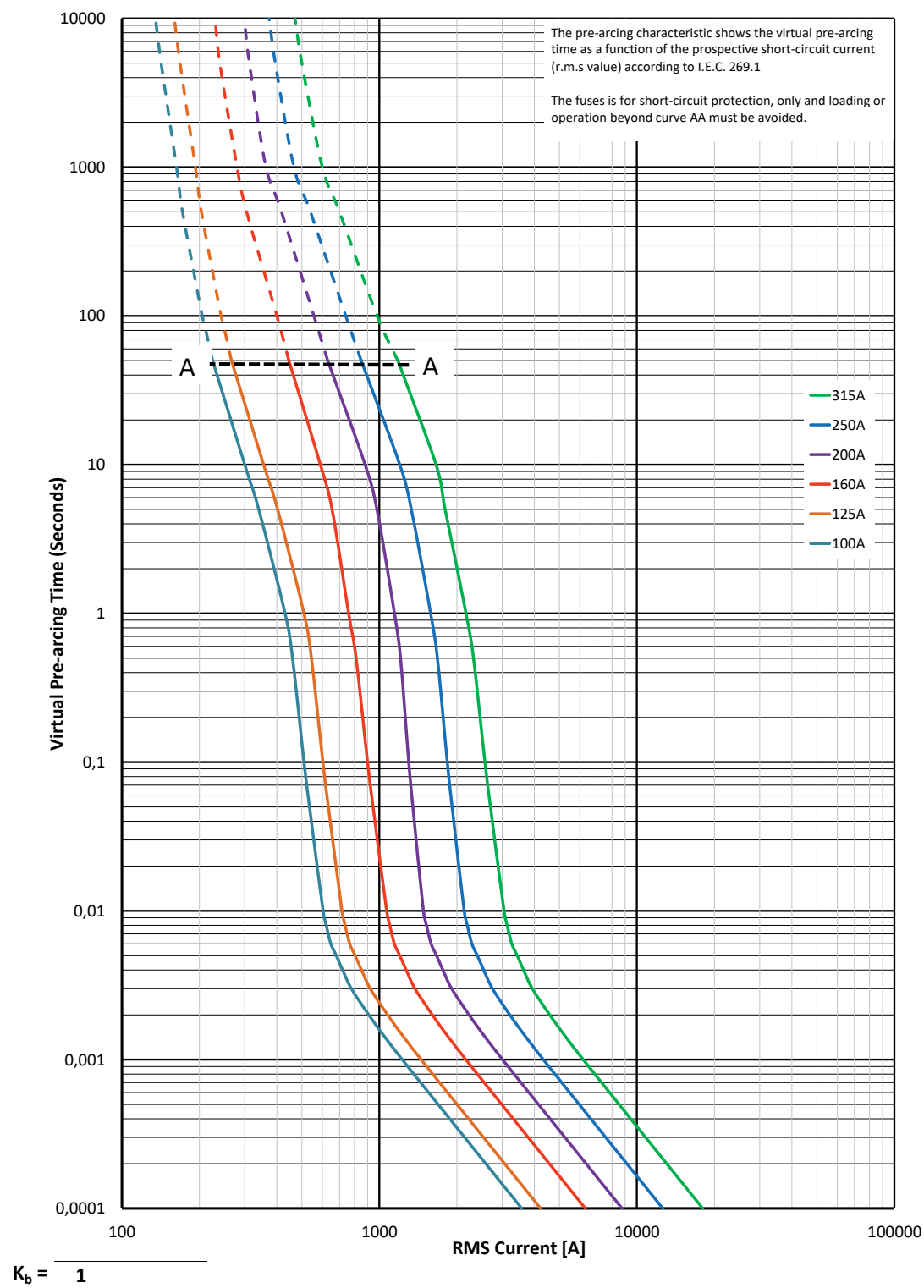
Dimensions (mm) - DIN 43653 1KE/160



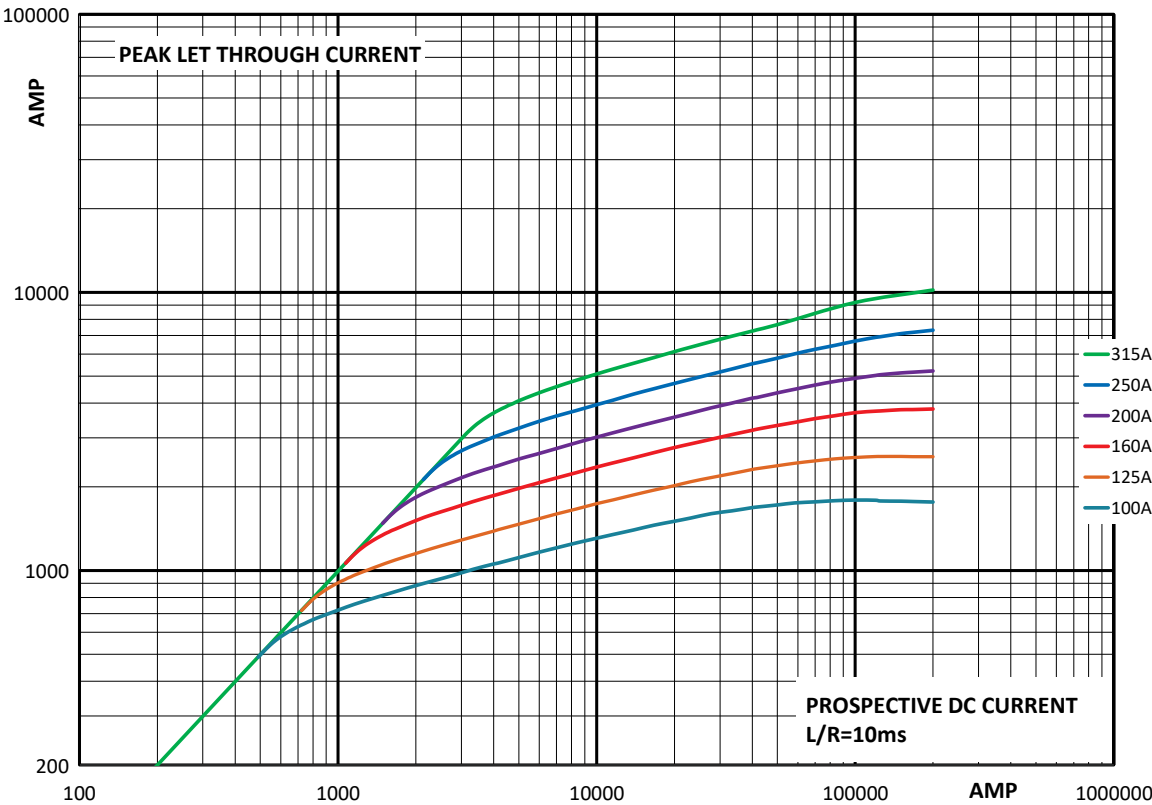
Dimensions (mm) - US Style 1FKE/170



Time-current curve

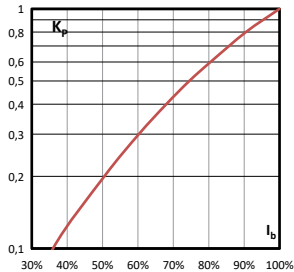


Peak let-through curve



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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