

1500 V DC 180D aR/aBat Size 3 fuse links



Product description

Eaton's Bussmann series 180D aR and aBAT size 3 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



Powering Business Worldwide

Catalogue symbol

- 180D87xx, see details in table

Technical data

- Rated voltage: 1500 V DC
- Rated current: 350 A to 1400 A
- Fuse body size: 3
- 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

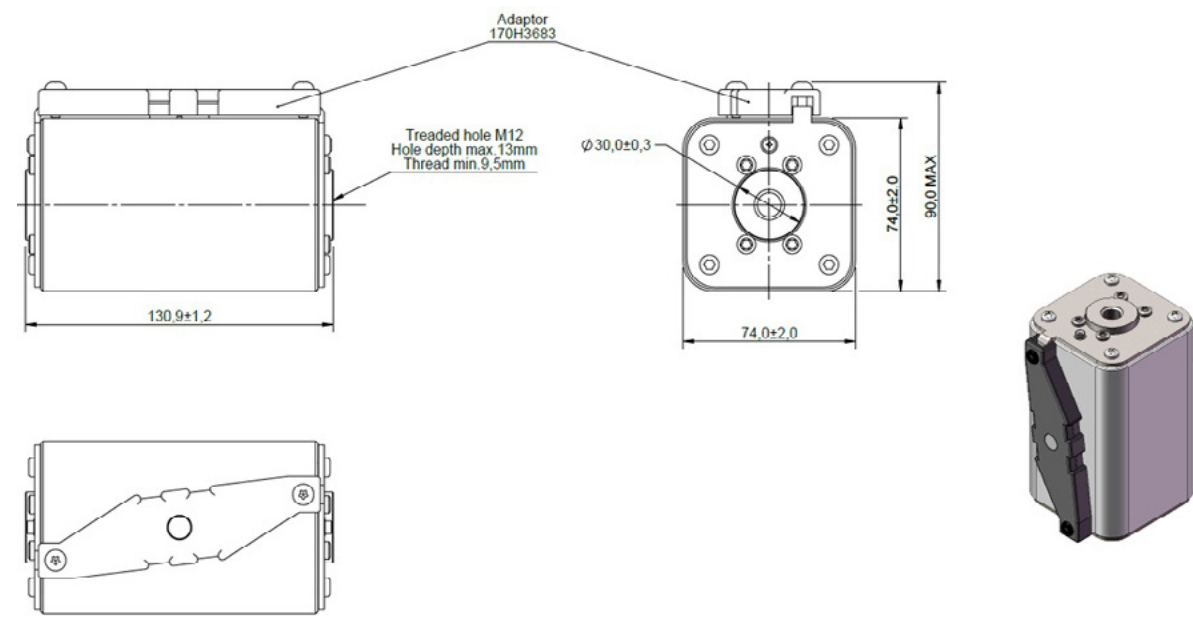
Microswitches

- 170H0069

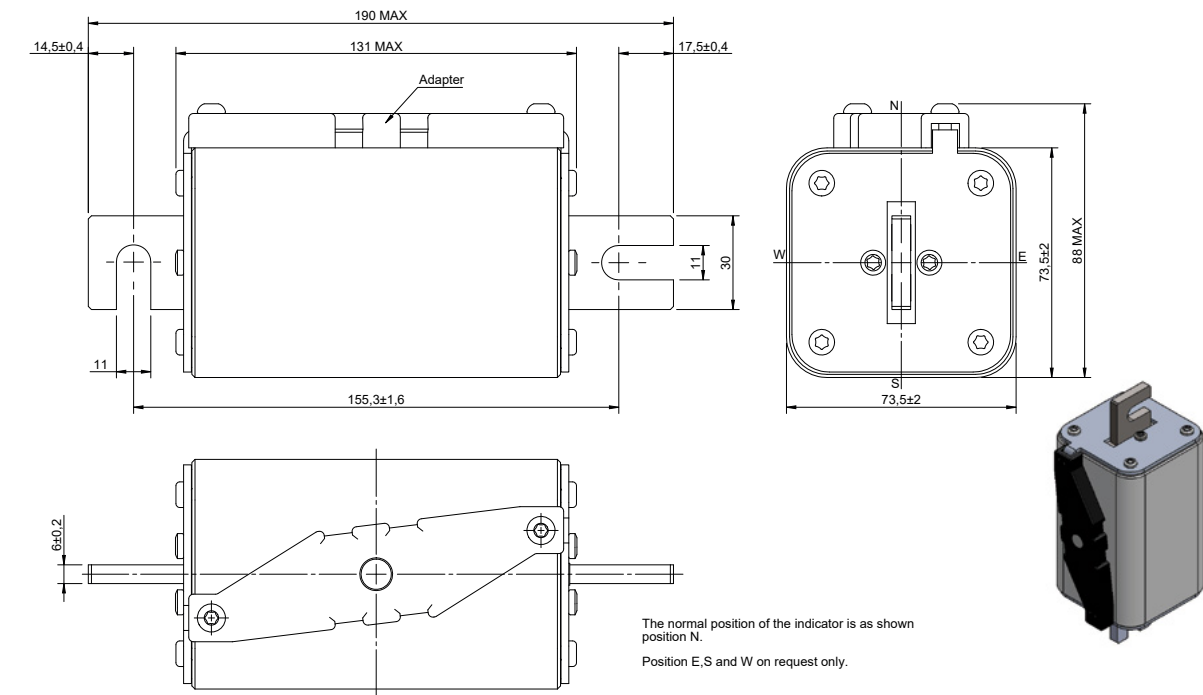
Technical data

Fuse body size	Rated voltage	Rated current (Amps)	Maximum Breaking capacity	Minimum breaking current (Amps)	Pre-arcing I ² t (A ² Sec)	Power loss at In (W)	Catalog numbers		
							Fuse type: 3BKN/130	Fuse type: 3KN/160	Fuse type: 3FKN/170
3	1500 V d.c. (IEC/UL)	350	100 kA at 10ms L/R# 250 kA at 3ms L/R	1400	25,000	132	180D8722	180D8735	180D8748
		400		1700	35,000	160	180D8723	180D8736	180D8749
		450		2000	45,000	175	180D8724	180D8737	180D8750
		500		2400	65,000	180	180D8725	180D8738	180D8751
		550		2750	85,000	190	180D8726	180D8739	180D8752
		630		3400	130,000	200	180D8727	180D8740	180D8753
		700		4000	180,000	203	180D8728	180D8741	180D8754
		800		4850	265,000	205	180D8729	180D8742	180D8755
		900		5700	375,000	225	180D8730	180D8743	180D8756
		1000		6650	510,000	238	180D8731	180D8744	180D8757
		1100		7750	695,000	247	180D8732	180D8745	180D8758
		1250		9500	1,030,000	262	180D8733	180D8746	180D8759
		1400		11,100	1,420,000	267	180D8734	180D8747	180D8760

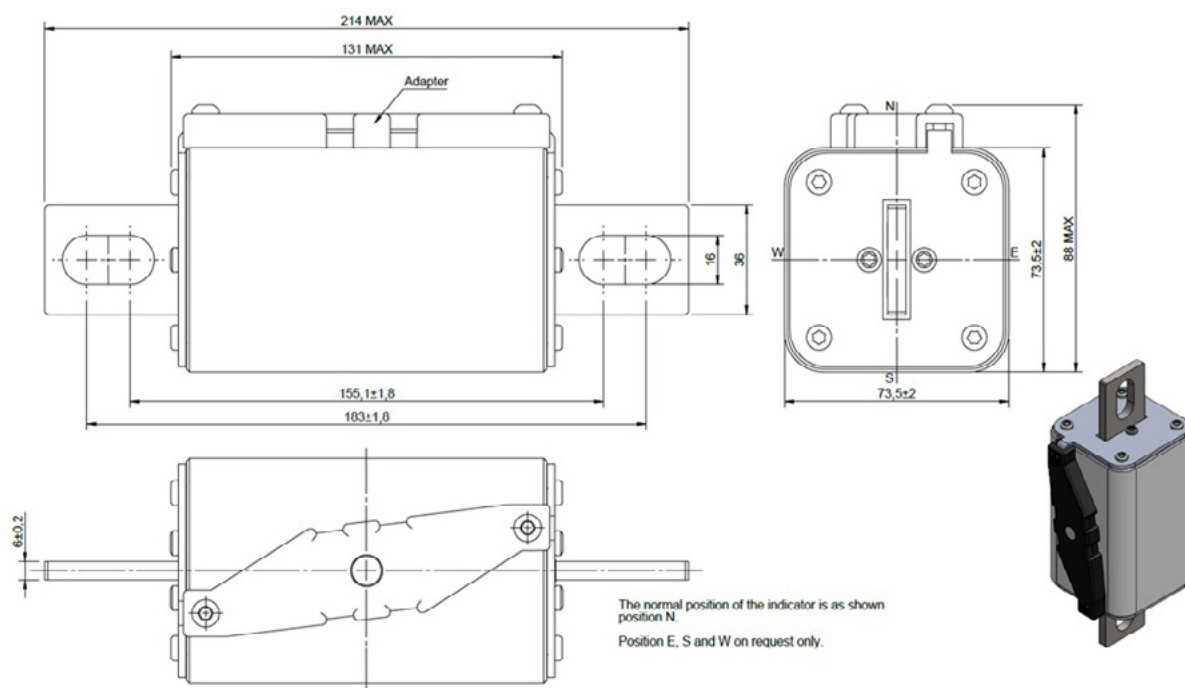
Dimensions mm - Flush end - 3BKN/130



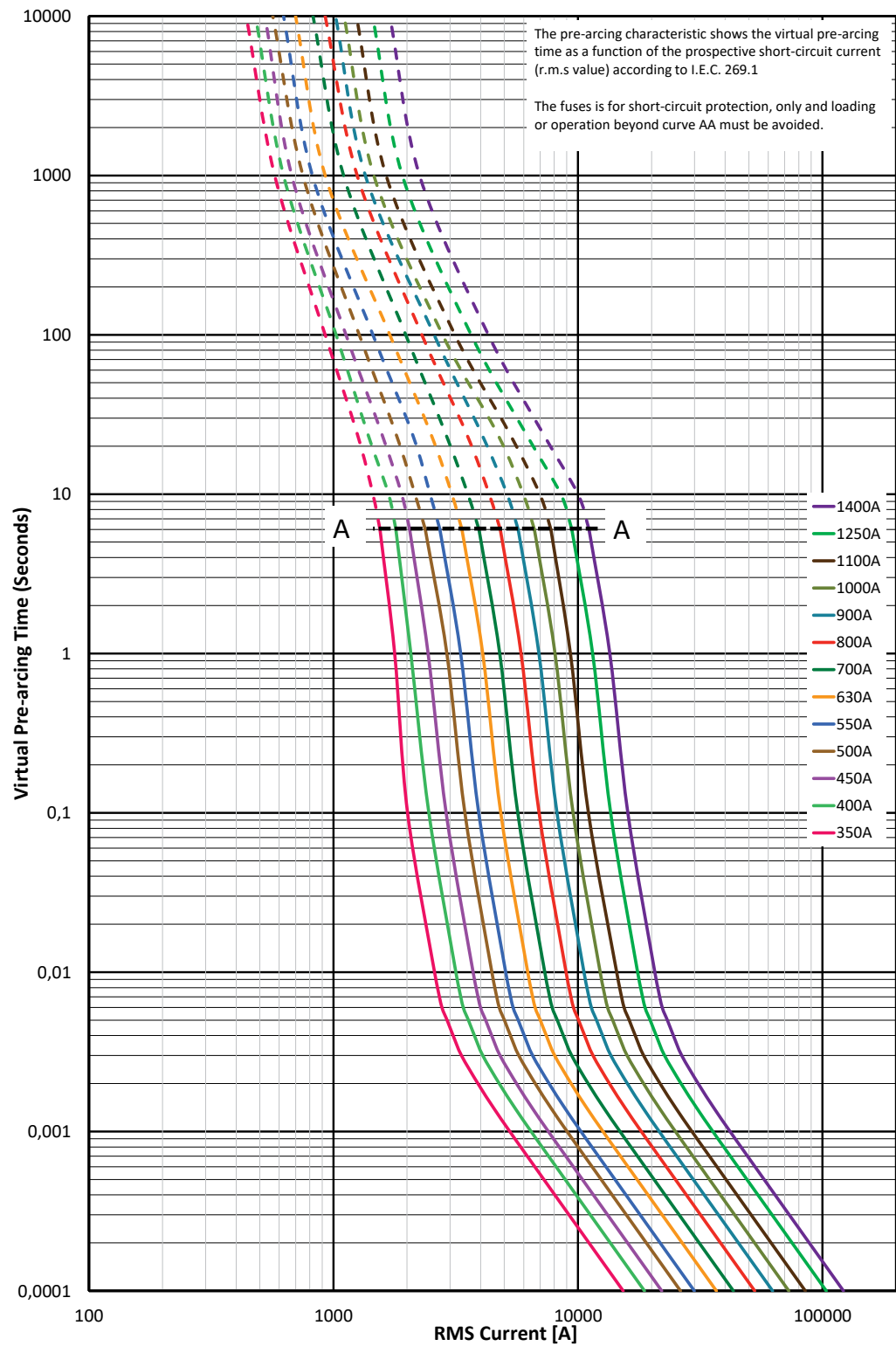
Dimensions (mm) - DIN 43653 - 3BKN/160



Dimensions (mm) - US Style - 3FKN/170

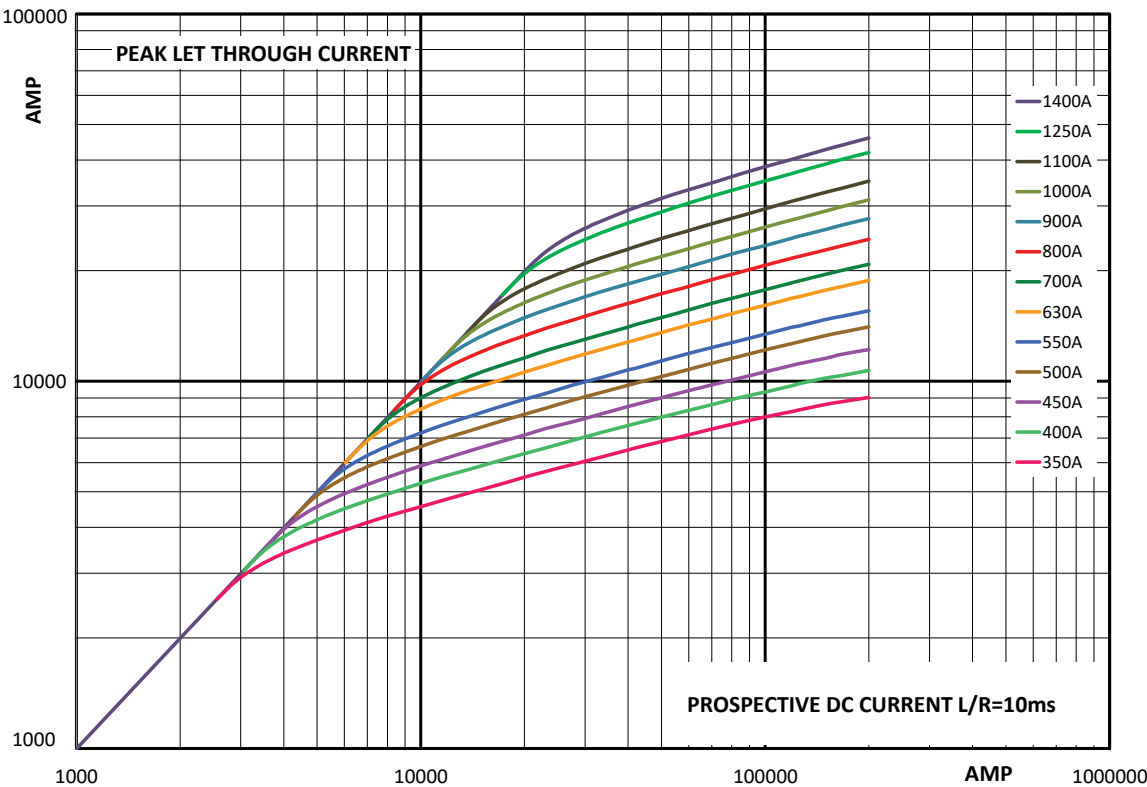


Time-current curve



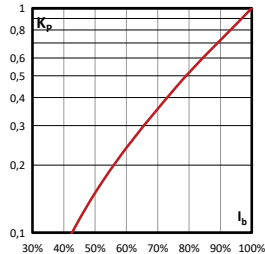
$K_b = 1$

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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