

1500 V DC 180D aR/aBat Size 2 fuse links



Product description

Eaton's Bussmann series 180D aR and aBAT size 2 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 microswitches 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: 125 A to 500 A
- Fuse body size: 2
- 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

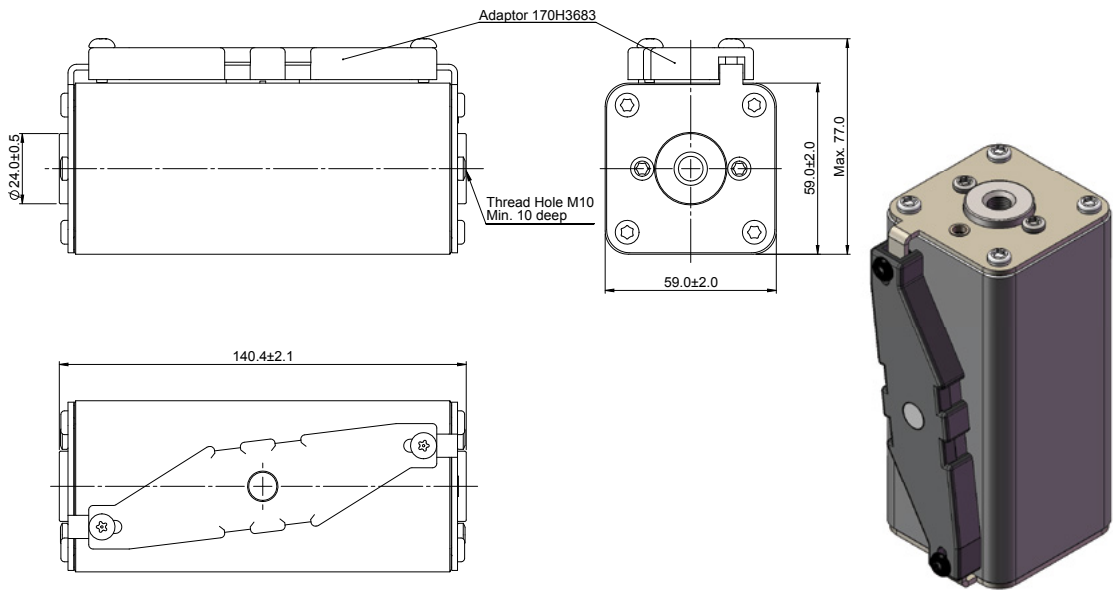
Microswitches

- Flush end: 170H0069
- DIN and US Style tag: 170H0235

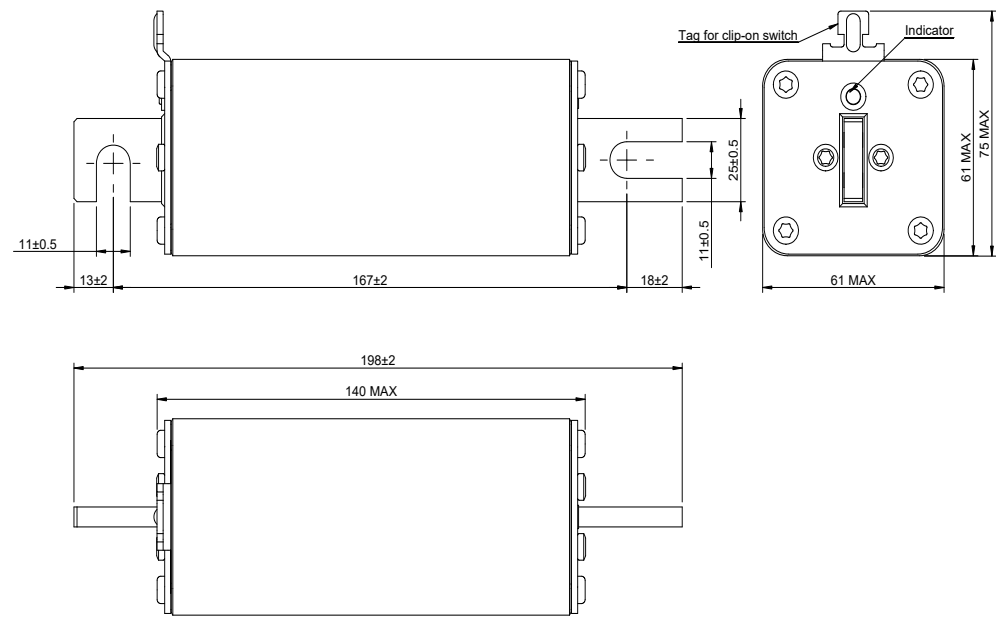
Technical data

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity	Minimum breaking current (Amps)	Pre-arcing I²t (A² Sec)	Power loss at In (W)	Catalog number		
							Fuse type: Flush end 2BKN/140	Fuse type: DIN 43653 2TN/170	Fuse type: US Style 2FTN/180
2	1500 V d.c. (IEC/UL)	125	100 kA at 10ms L/R 250 kA at 3ms L/R	400	1500	71	180D5699	180D5849	180D5949
		160		600	3500	77	180D5700	180D5850	180D5950
		200		800	6000	90	180D5701	180D5851	180D5951
		250		1250	24,000	56	180D5702	180D5852	180D5952
		315		1750	48,500	63	180D5703	180D5853	180D5953
		350		2050	67,000	70	180D5704	180D5854	180D5954
		400		2450	94,500	79	180D5705	180D5855	180D5955
		450		3200	138,000	83	180D5706	180D5856	180D5956
		500		3430	190,000	88	180D5707	180D5857	180D5957

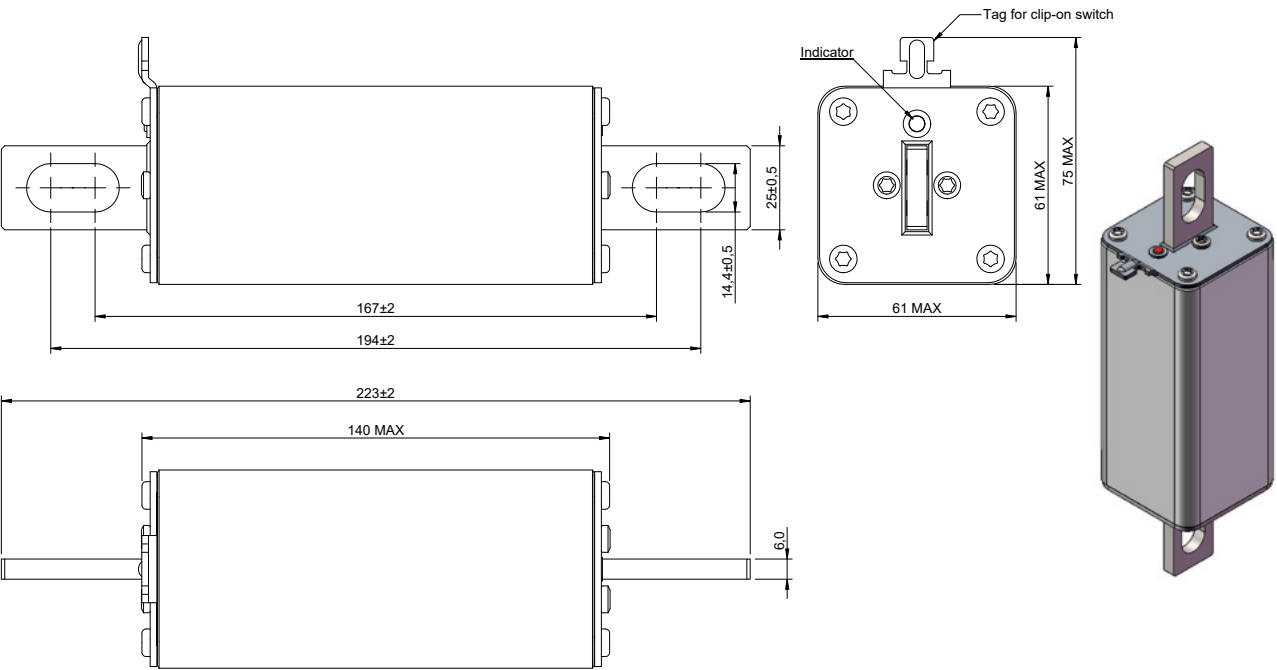
Dimensions mm - Flush end 2BKN/140



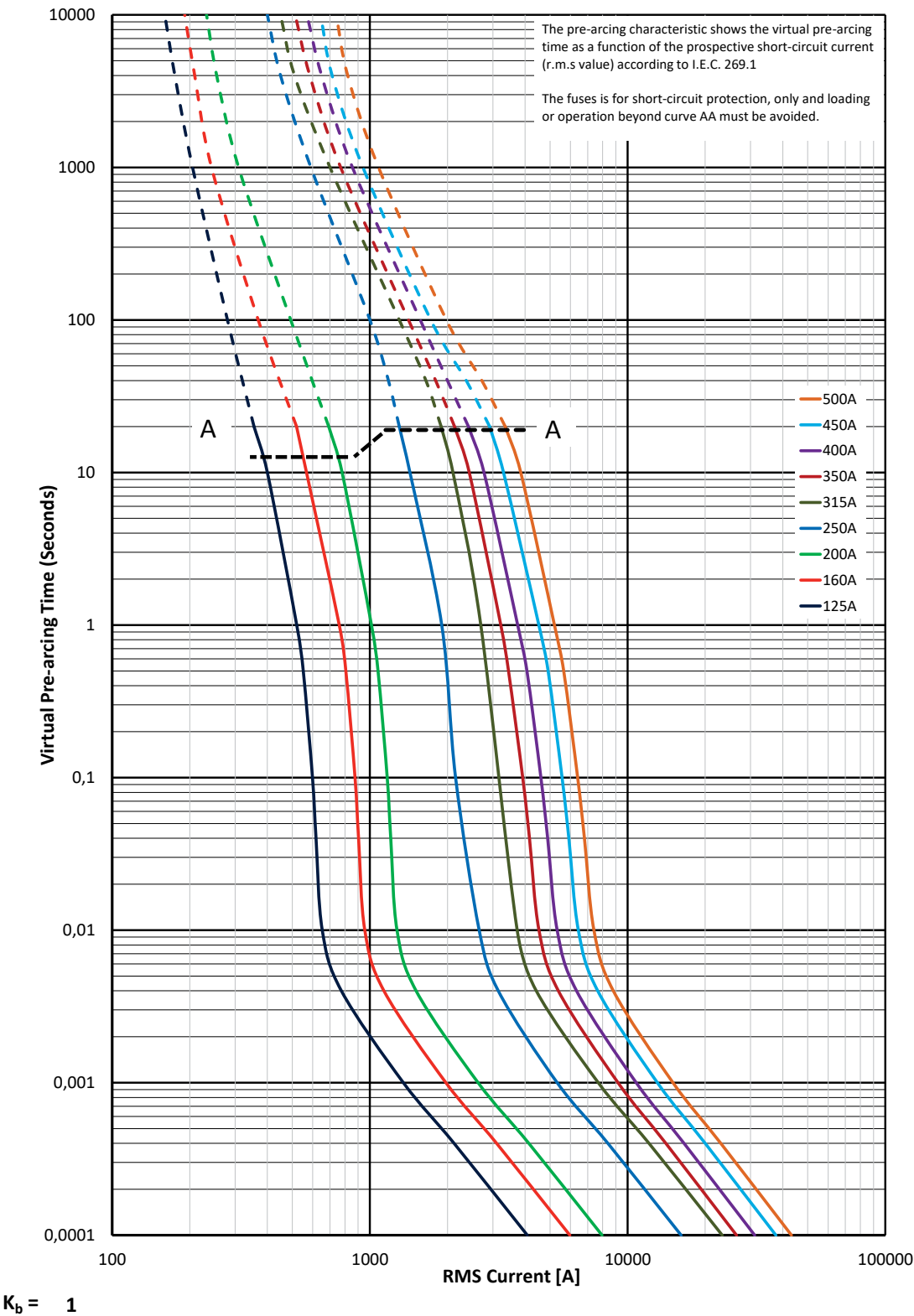
Dimensions (mm) - DIN 43653 2TN/170



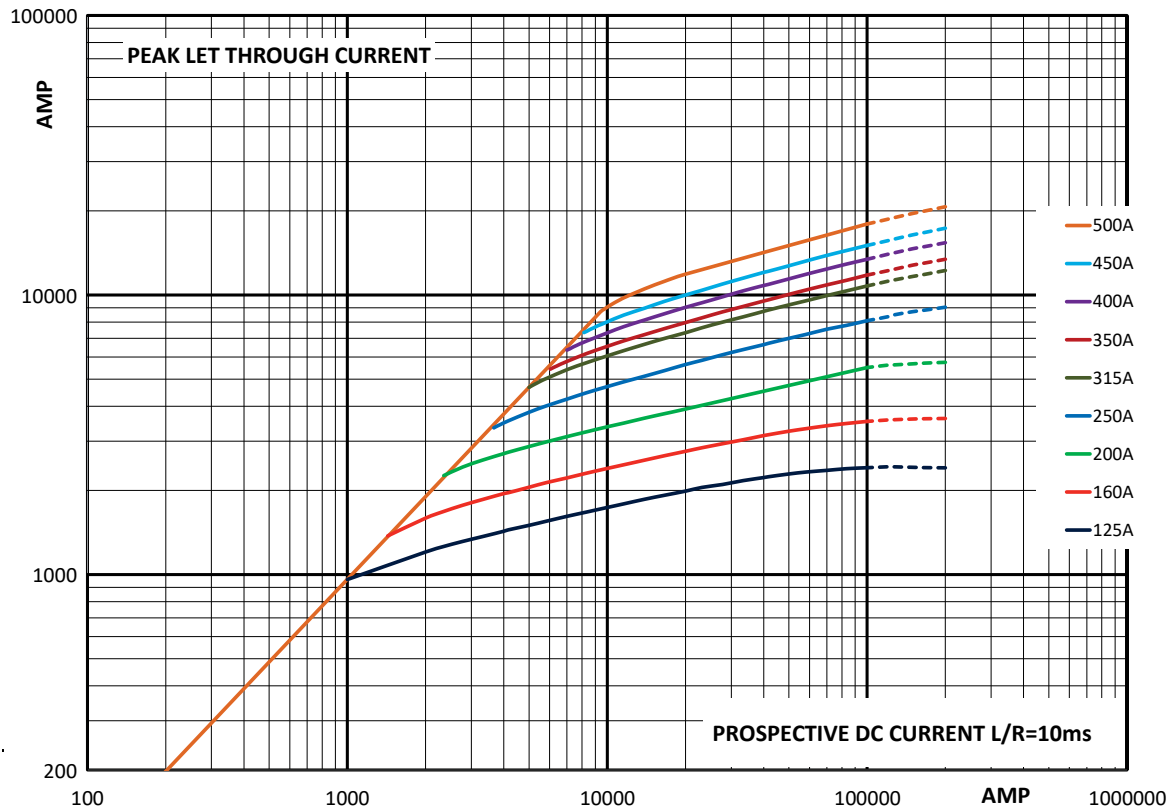
Dimensions (mm) - US Style 2FTN/180



Time-current curve

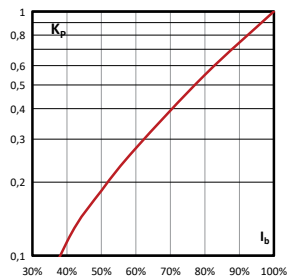


Peak let-through curve



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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