

180D Flush end high speed fuse links



Product description

Eaton's Bussmann series flush end mounted 180D 1500 V d.c. range of high-speed square body fuses are specifically designed to provide DC short circuit over current protection for a variety of applications including, DC to AC inverters used as part of Battery Energy storage systems (BESS), photovoltaic installations, DC common bus systems, regenerative drives and rectifiers.

Features

- DC Voltage rating up to 1500 V d.c.
- 100 kA Breaking capacity
- Low watts loss for energy efficiency
- Fast acting aR type protection
- Visual blown fuse indication as standard
- Optional microswitch indication available

Applications

- DC to AC Inverter protection (BESS, PV)
- Power conversion systems
- Regenerative drives
- DC Common bus system

Catalogue symbol

- 180D7xxx

Fuse body size

- 4

Technical data

- Rated voltage: 1500 V d.c.
- Rated current: 1000 A to 1800 A
- Class of operation: aR
- Breaking capacity: 100 kA
- Time constant: 10 ms

Standards/Approvals

- Designed and tested to IEC 60269 Part 4
- CE
- UL 248-13 Recognised
- RoHS compliant

Packaging

- 1

Compatible microswitch

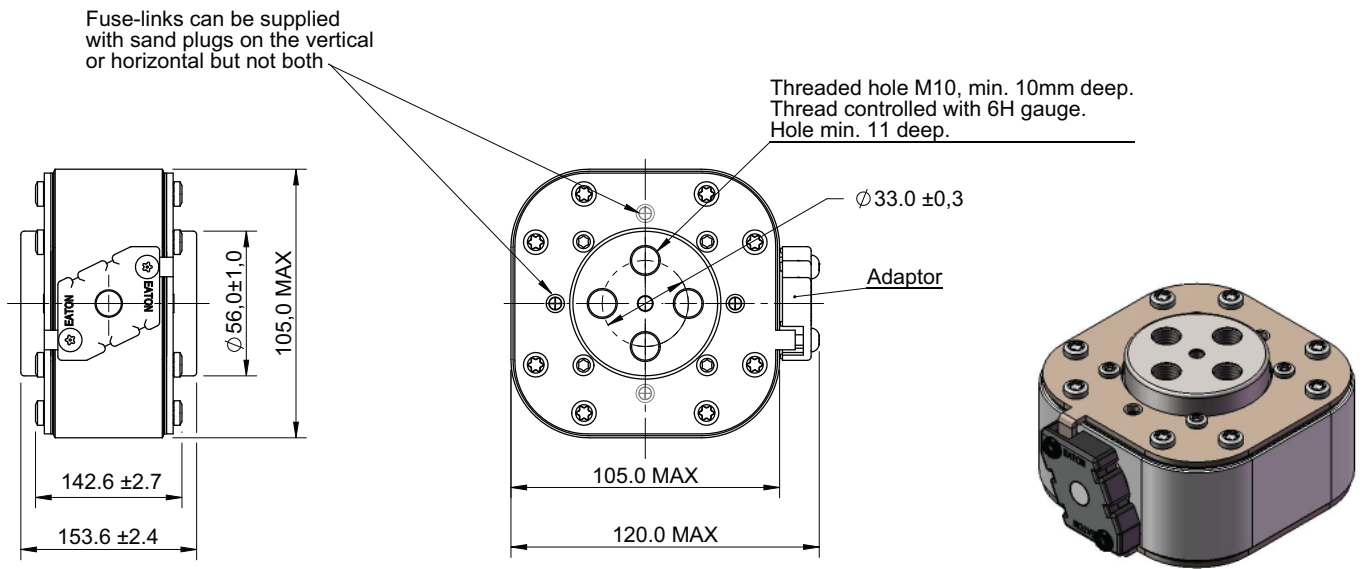
- 170H0069

Table 1. Technical data

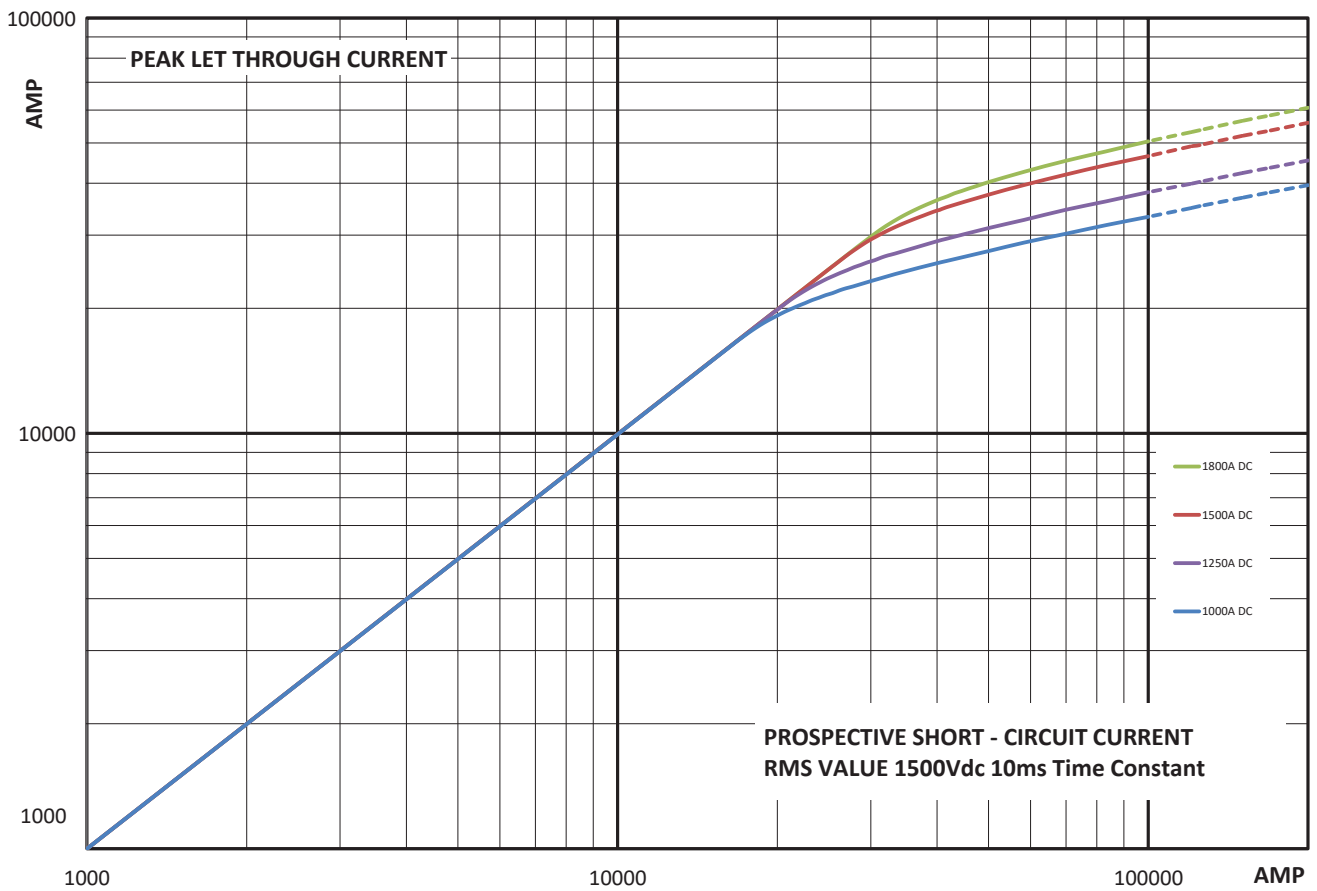
catalogue number 4BKN/155	Fuse link body size	Rated current (A)	Rated voltage (V d.c.)	Energy integrals I ² t (A ² s)		Watts loss
				Pre-arcing at 1500 V d.c.	Clearing at 1500 V d.c.	I _n
180D7620	4	1000	1500	1,000,000	5,900,000	164
180D7698	4	1250	1500	1,400,000	8,450,000	185
180D7627	4	1500	1500	2,500,000	15,000,000	228
180D7477	4	1800	1500	3,500,000	21,000,000	313

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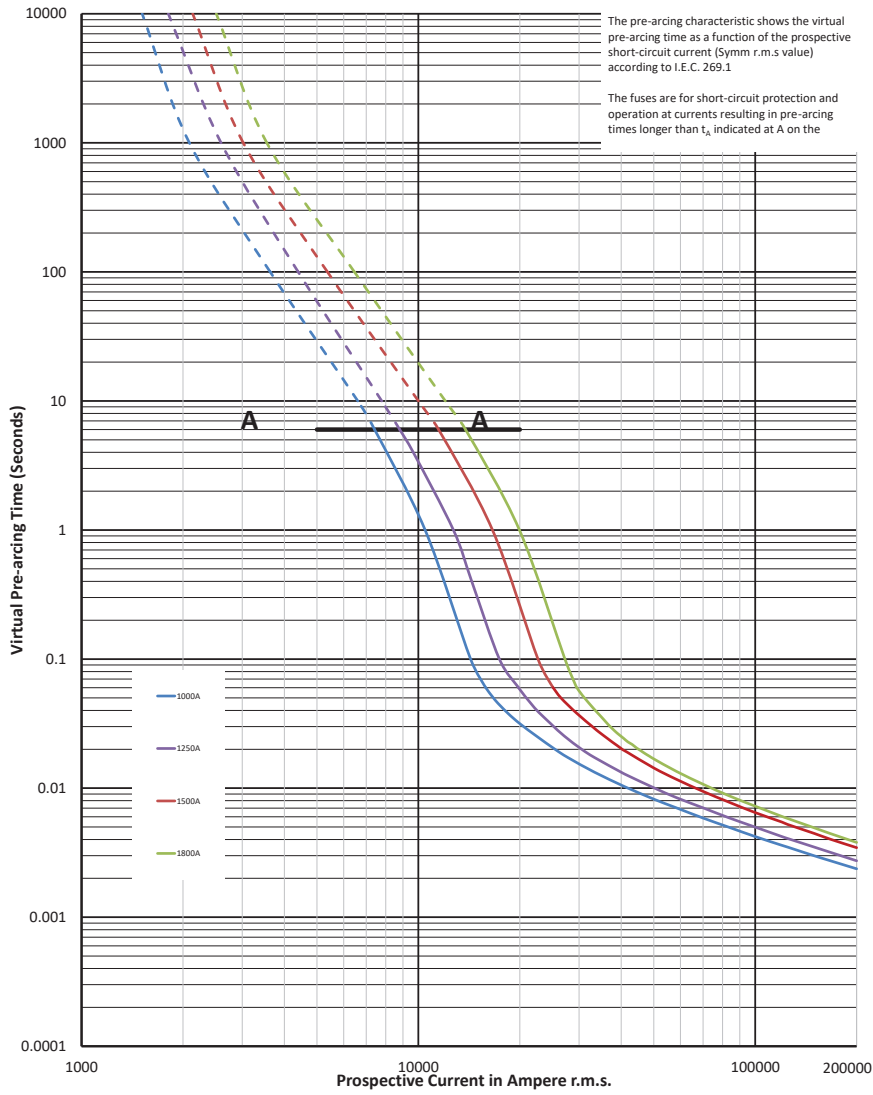
Dimensions - mm



Cut-off curve



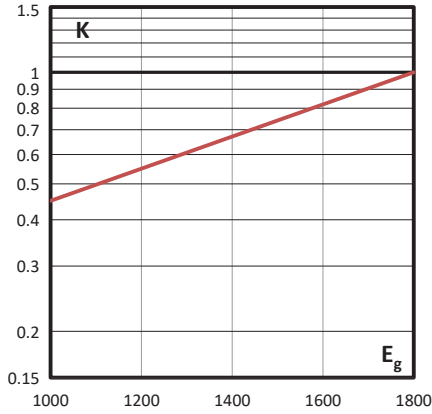
Time current curve



$K_b = 1 \quad N = 1.5$

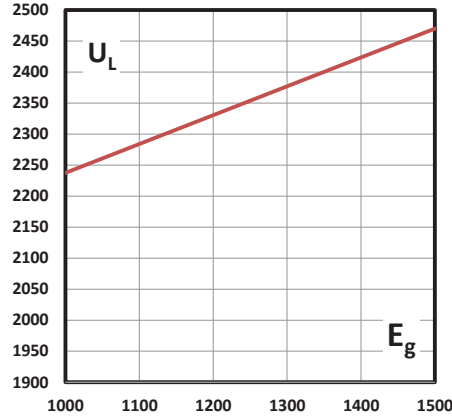
Total clearing curve

The total clearing I²t rated voltage and at a power factor of 15 percent are given in the electrical characteristics. For other voltages, the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltage E_g {RMS}



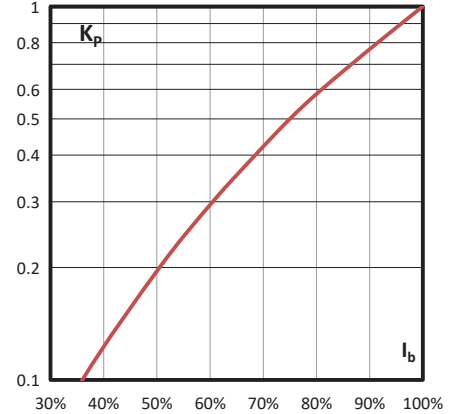
Arc voltage

This curve gives the peak arc voltage, U_L, which may appear across the fuse during its operation as a function of the applied working voltage E_g {RMS} at a power factor of 15 percent.



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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 Publication No. TD135006EN
 April 2021