

180D 1500 V d.c. 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), DC common bus systems, regenerative drives and rectifiers.

Features

- 1500 V DC Voltage rating
- Low watts loss for energy efficiency
- Tested to 10 ms Time constant (suitable for most DC applications)
- Fast acting aR type protection
- Visual blown fuse indication as standard
- Optional microswitch indication available

Applications

- DC to AC Inverter protection
- DC to DC Converters
- Battery storage applications
- Electric Vehicle charging stations
- 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: 800 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

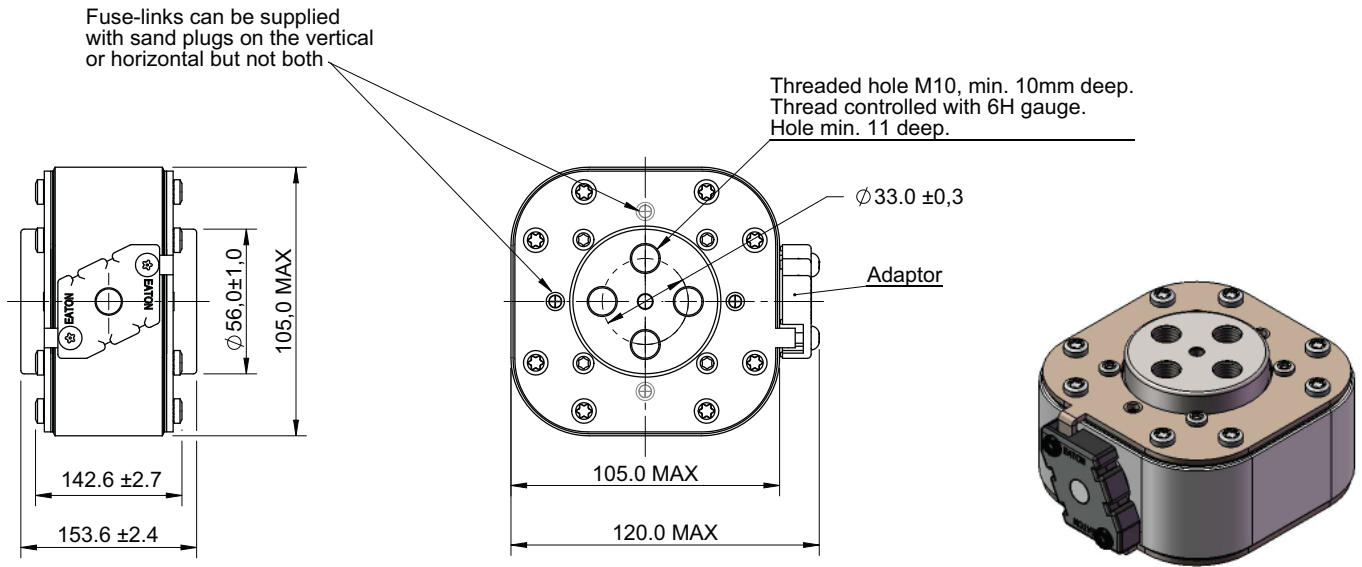
- 170H0069

Table 1. Technical data

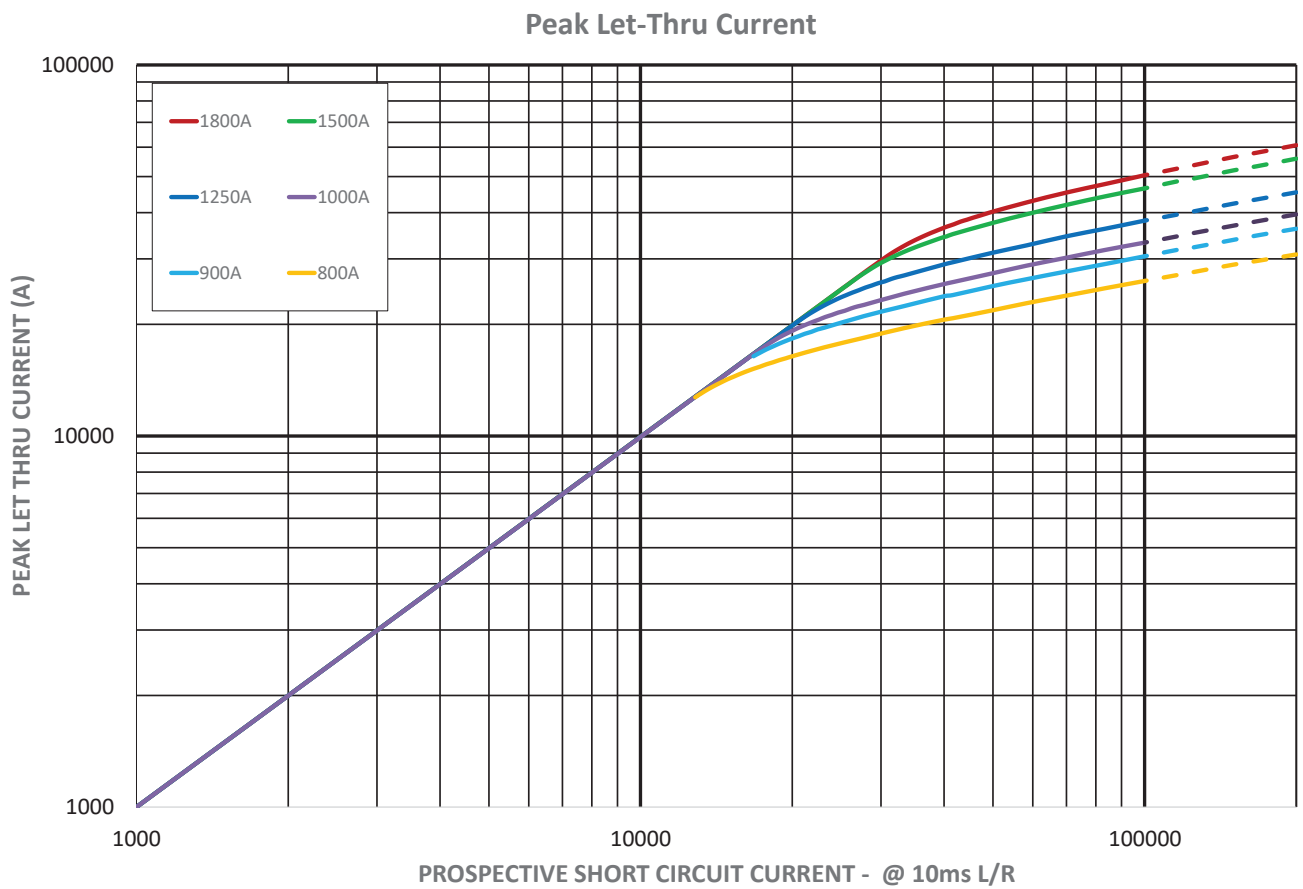
catalogue number 4BKN/155	Fuse link body size	Rated current (A)	Rated voltage (V d.c.)	Energy integrals I ² t (A ² s)		Minimum breaking current (A) 1500 V d.c.	Watts loss
				Pre-arcing at 1500 V d.c.	Clearing at 1500 V d.c.		I _n
180D7462	4	800	1500	512,000	2,930,000	5500	111
180D7463	4	900	1500	776,000	4,440,000	6750	120
180D7620	4	1000	1500	1,000,000	5,720,000	7600	164
180D7698	4	1250	1500	1,400,000	8,000,000	9100	185
180D7627	4	1500	1500	2,500,000	14,290,000	12,000	228
180D7477	4	1800	1500	3,500,000	20,000,000	14,500	313

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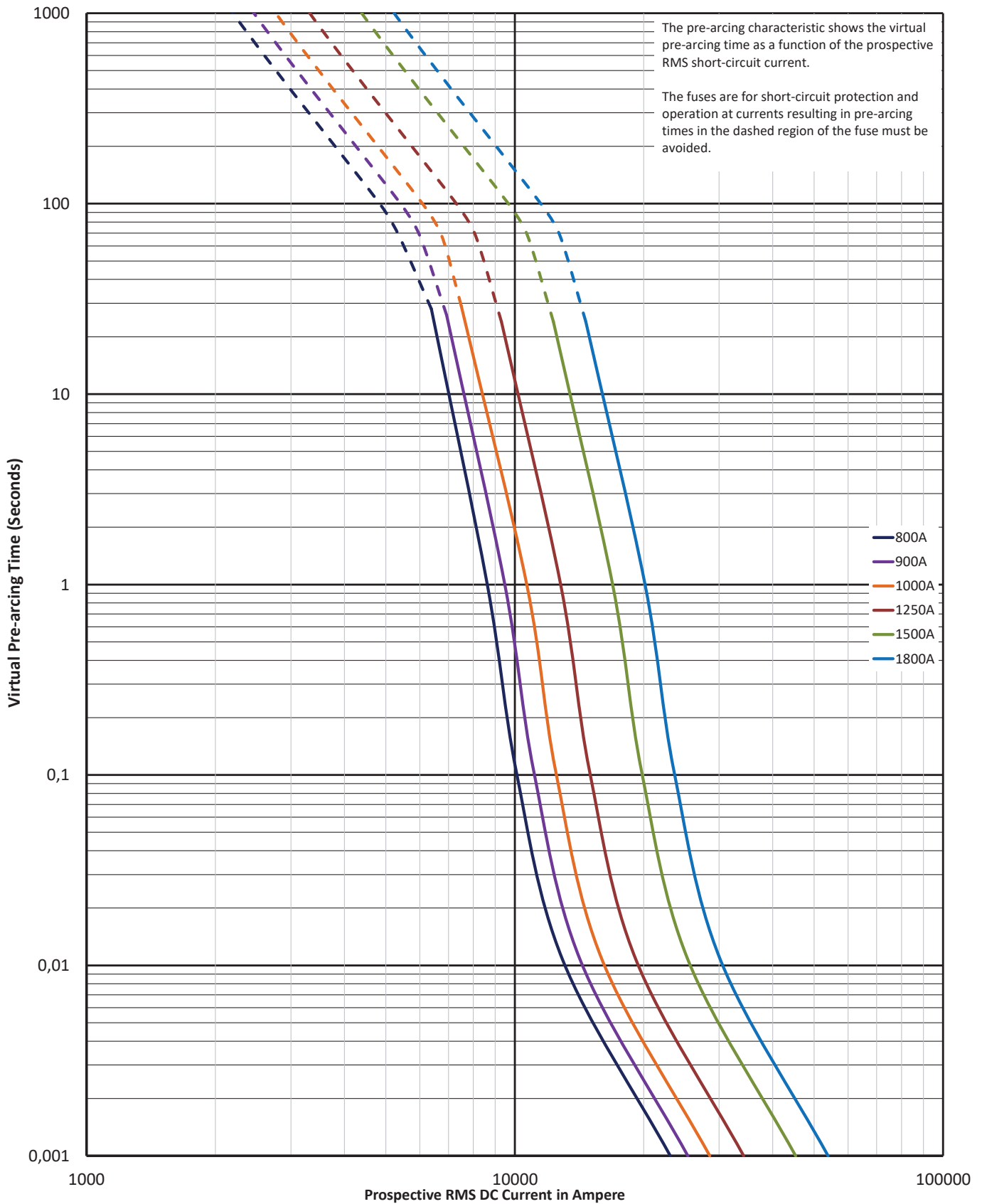
Dimensions - mm



Cut-off curve



Time current curve



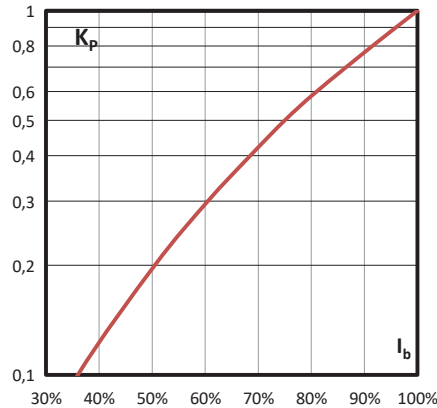
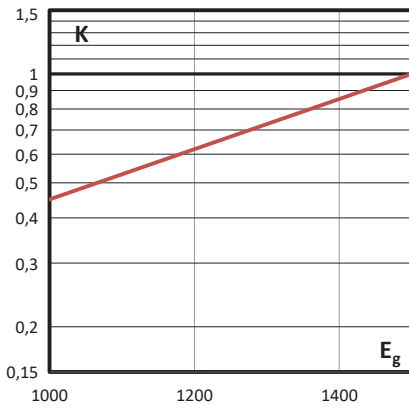
$K_b = 1 \quad N = 1,5$

Total clearing curve

The total clearing I^2t at rated voltage and tested DC time constant are given in electrical characteristics. For other voltages the clearing I^2t is found by multiplying by correction factor, K, given as a function of applied working voltages, E_g .

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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