Square body fuse links

500 V d.c. (IEC/UL) - 50 A to 500 A - 180D - Flush end contact fuse body size 1*

Specifications



Description

Eaton's Bussmann™ series 500 V d.c. aR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 500 V d.c. (IEC/UL)
- Rated current: 50 A to 500 A
- Breaking capacity: 100 kA
- Operating class: aR

Standards / Agency information

Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

Catalog numbers - BN/50 and BKN/50

								Catalog number	
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity (kA)**	**Minimum pre-arcing I^2t (A^2 Sec)**	**Max clearing integral A2s at 500 VDC 10 ms L/R**	**Minimum breaking current (A) @ 500VDC**	**Power loss at In (W)**	**Fuse type: BN/50**	**Fuse type: BKN/50***
1*	500 V d.c. (IEC/UL)	50	100	77	308	125	13	180D0009	180D3459*
		63	100	115	460	150	17	180D0010	180D3460*
		80	100	185	740	200	21	180D0011	180D3461*
		100	100	360	1440	250	24	180D0012	180D3462*
		125	100	550	2200	350	30	180D0013	180D3463*
		160	100	1100	4400	450	34	180D0014	180D3464*
		200	100	2200	8800	650	41	180D0015	180D3465*
		215	100	4200	16,800	850	47	180D0016	180D3466*
		315	100	7000	28,000	1100	61	180D0017	180D3467*
		350	100	10,000	40,000	1300	64	180D0018	180D3468*
		400	100	15,000	60,000	1600	69	180D0019	180D3469*
		450	100	21,000	84,000	1800	75	180D0020	180D3470*
		500	100	27,000	108,000	2000	83	180D0021	180D3471*

* Available on request, please contact bulehighspeedtechnical@eaton.com

Data sheets 180K0032 BN/50, 180K0032 BKN/50, 180K0032 GN/50 and GKN/50

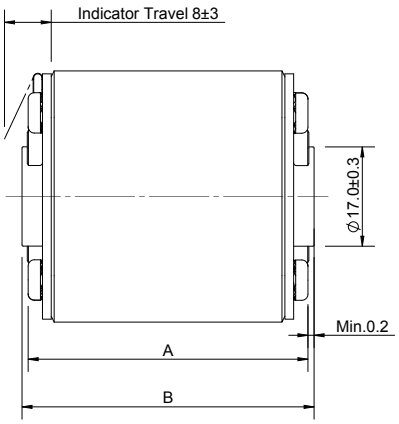
Square body fuse links

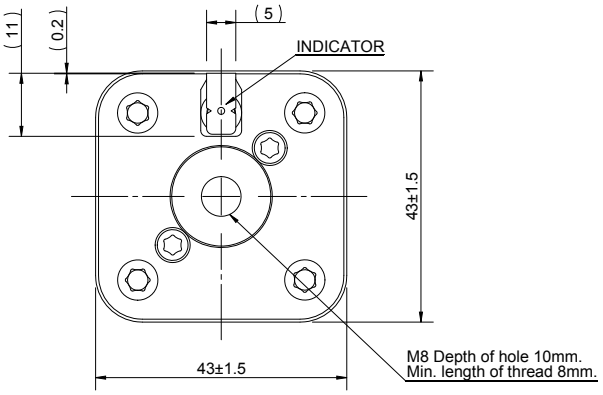
500 V d.c. (IEC/UL) - 50 A to 500 A - 180D - Flush end contact fuse body size 1*

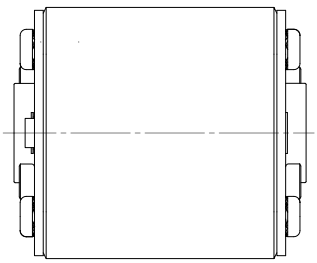
Catalog numbers - GN/50 and GKN/50

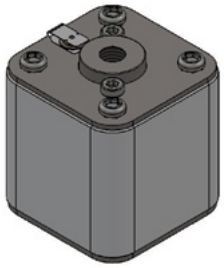
Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA)	Minimum pre-arcing I^2t (A^2 Sec)	Max clearing integral A2s at 500 VDC 10 ms L/R	Minimum breaking current (A) @ 500VDC	Power loss at In (W)	Catalog number	
								Fuse type: GN/50	Fuse tyoe: GKN/50
1*	500 V d.c. (IEC/UL)	50	100	77	308	125	13	180D3509	180D3559
		63	100	115	460	150	17	180D3510	180D3560
		80	100	185	740	200	21	180D3511	180D3561
		100	100	360	1440	250	24	180D3512	180D3562
		125	100	550	2200	350	30	180D3513	180D3563
		160	100	1100	4400	450	34	180D3514	180D3564
		200	100	2200	8800	650	41	180D3515	180D3565
		215	100	4200	16,800	850	47	180D3516	180D3566
		315	100	7000	28,000	1100	61	180D3517	180D3567
		350	100	10,000	40,000	1300	64	180D3518	180D3568
		400	100	15,000	60,000	1600	69	180D3519	180D3569
		450	100	21,000	84,000	1800	75	180D3520	180D3570
		500	100	27,000	108,000	2000	83	180D3521	180D3571

Dimensions (mm) - BN/50







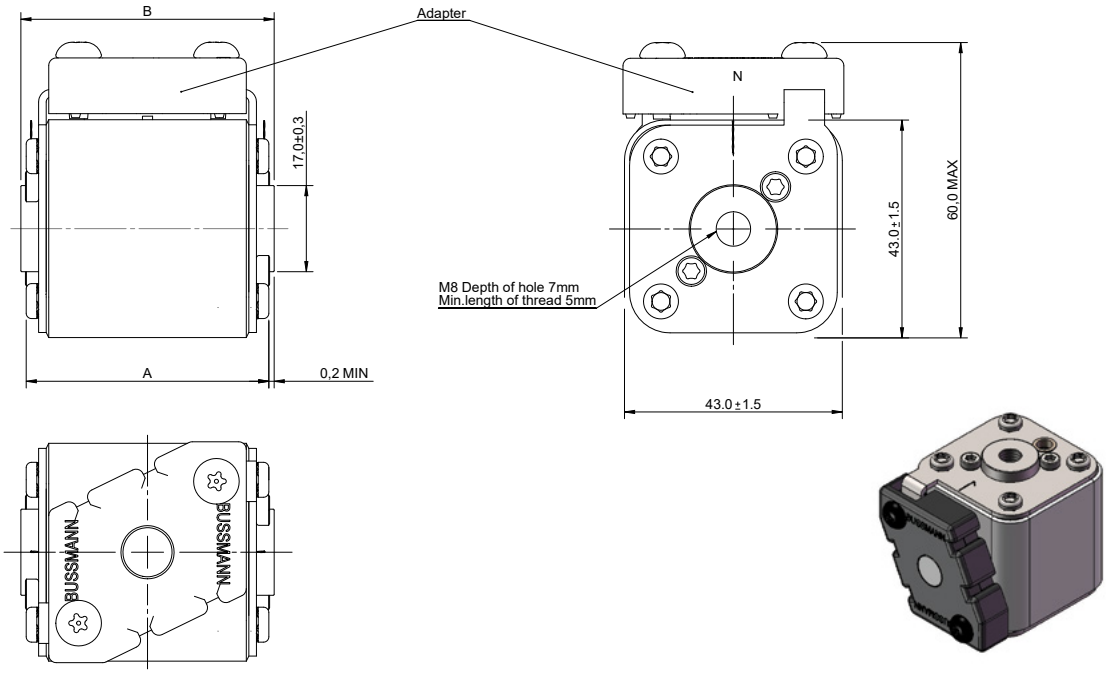


A	B
48.5 ± 1.5	50 ± 1.2

Data sheets 180K0032 BN/50, 180K0032 BKN/50, 180K0032 GN/50 and GKN/50

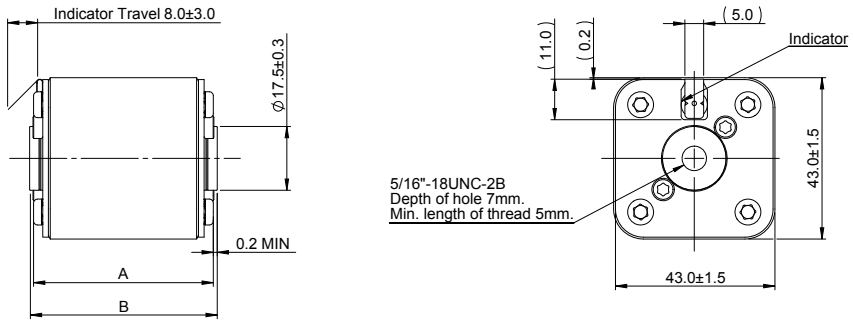
500 V d.c. (IEC/UL) - 50 A to 500 A - 180D - Flush end contact fuse body size 1*

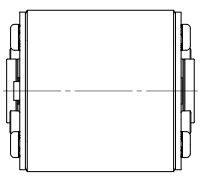
Dimensions (mm) - BKN/50

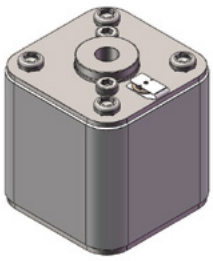


A	B
48.5 ±1.5	50 ±1.2

Dimensions (mm) - GN/50







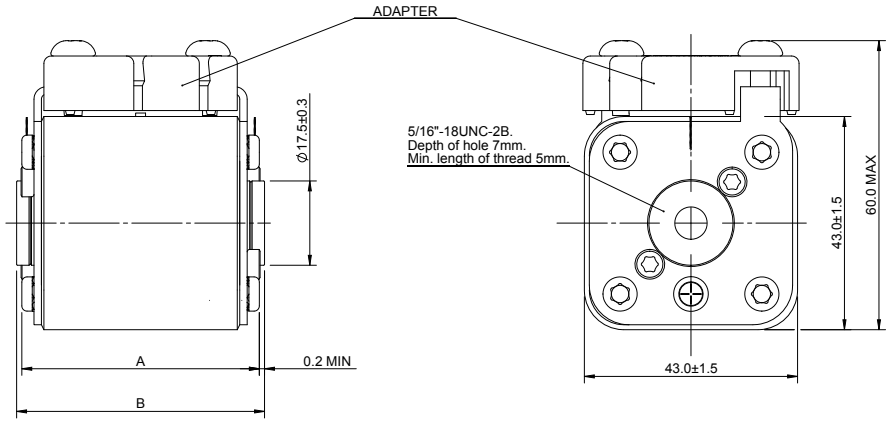
A	B
48.5 ±1.5	50 ±1.2

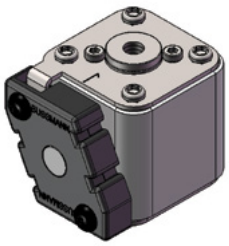
Data sheets 180K0032 BN/50, 180K0032 BKN/50, 180K0032 GN/50 and GKN/50

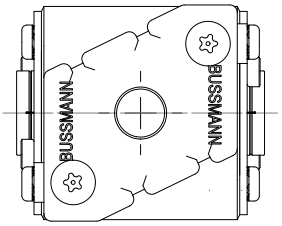
Square body fuse links

500 V d.c. (IEC/UL) - 50 A to 500 A - 180D - Flush end contact fuse body size 1*

Dimensions (mm) - GKN/50





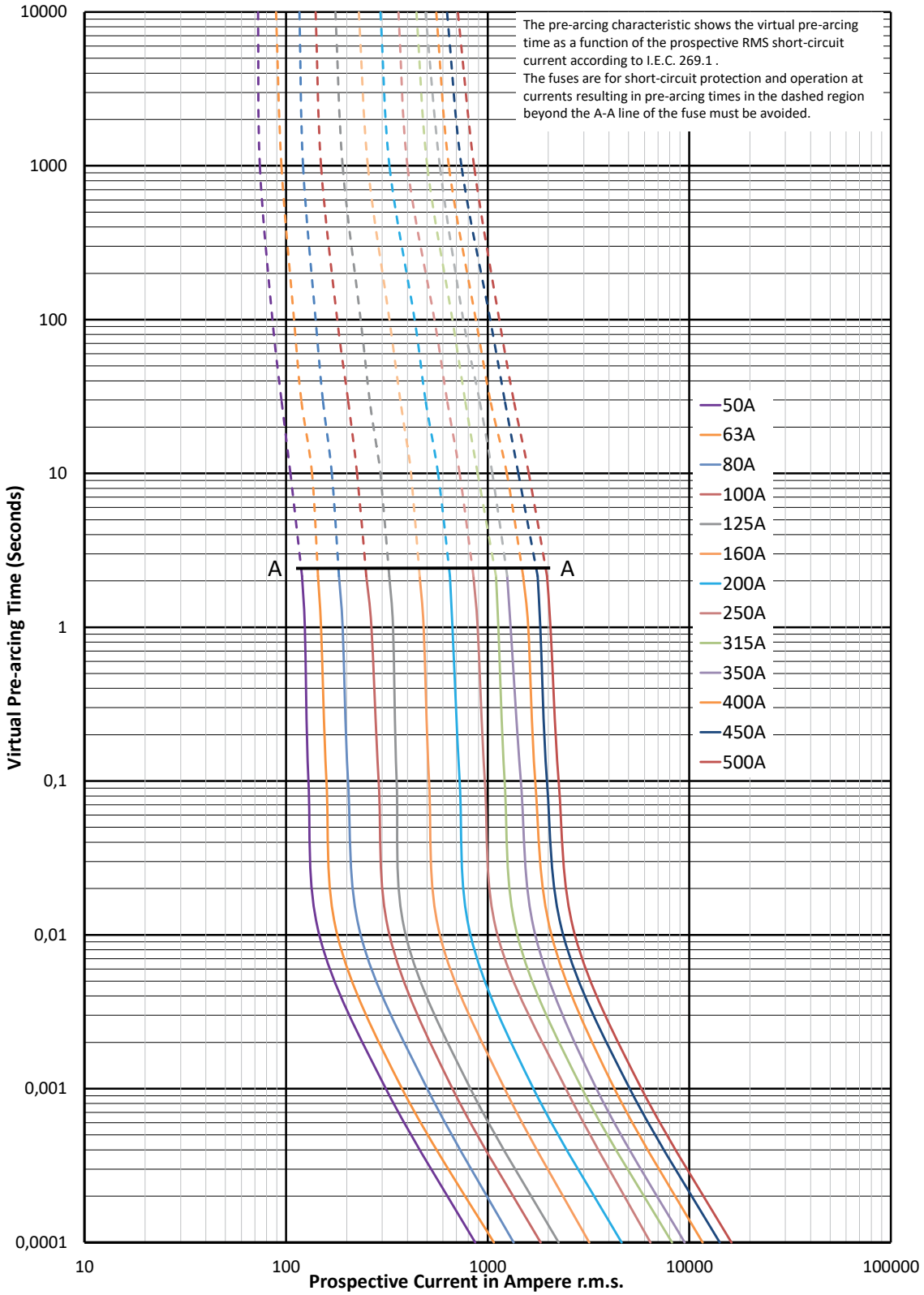


A	B
48.5 ± 1.5	50 ± 1.2

Data sheets 180K0032 BN/50, 180K0032 BKN/50, 180K0032 GN/50 and GKN/50

500 V d.c. (IEC/UL) - 50 A to 500 A - 180D - Flush end contact fuse body size 1*

Time-current curve

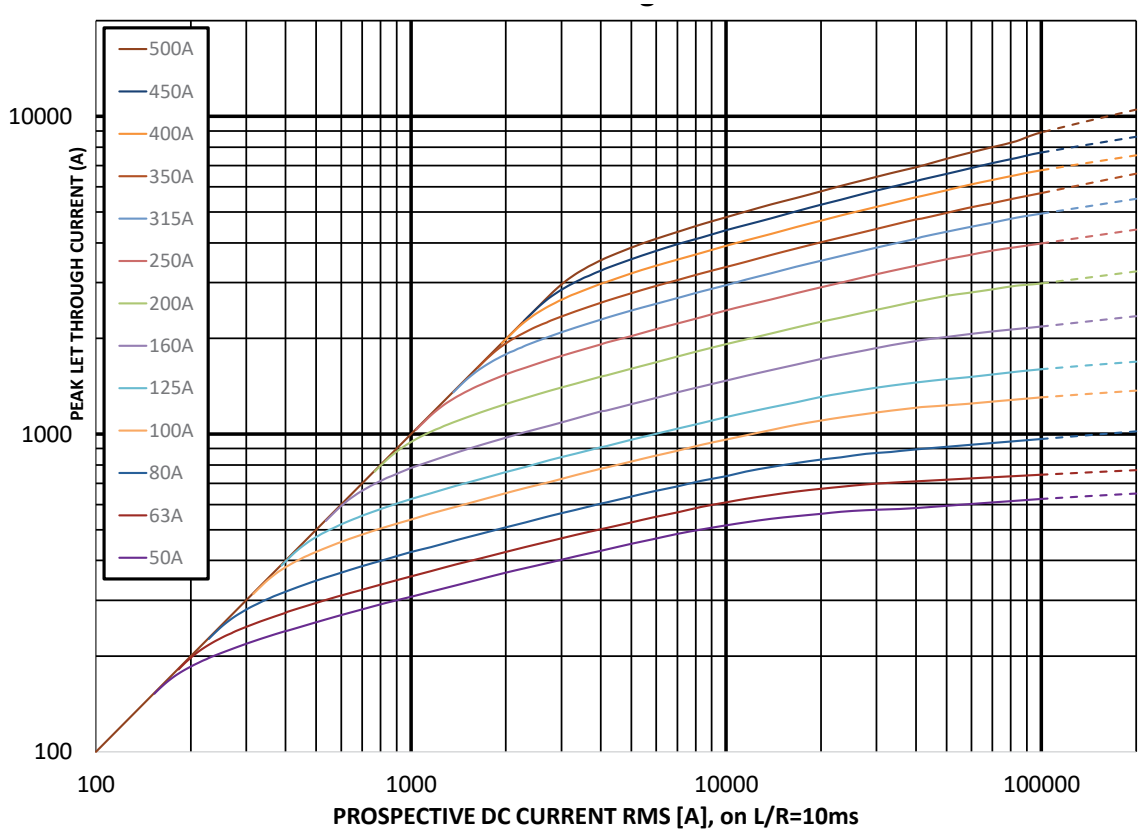


K_b = 1

Data sheets 180K0032 BN/50, 180K0032 BKN/50, 180K0032 GN/50 and GKN/50

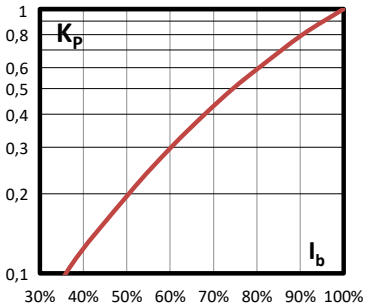
500 V d.c. (IEC/UL) - 50 A to 500 A - 180D - Flush end contact fuse body size 1*

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.



Data sheets 180K0032 BN/50, 180K0032 BKN/50, 180K0032 GN/50 and GKN/50

800 V d.c. (IEC/UL) - 32 A to 50 A - 180D - DIN1HT Fuse body size 1

Specifications

Description
Eaton's Bussmann™ series 800 V d.c. gR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.



Technical data
- Rated voltage: 800 V d.c. (IEC and UL)
- Rated current: 32 A to 50 A
- Breaking capacity: 100 kA
- Operating class: gR

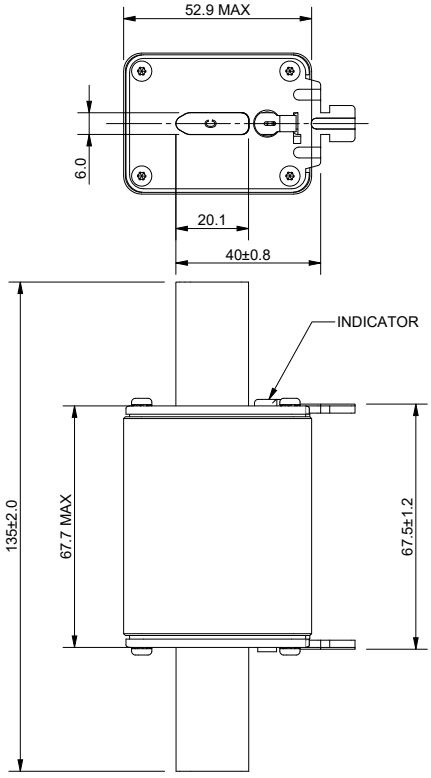
Compatible fuse base
SD1-D-PV

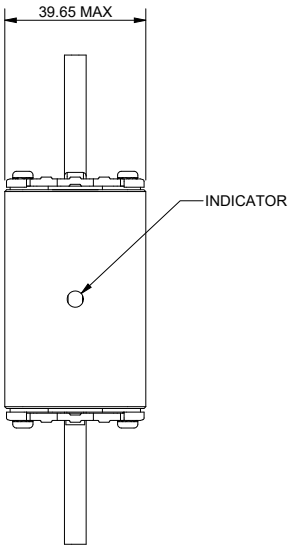
Standards / Agency information
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

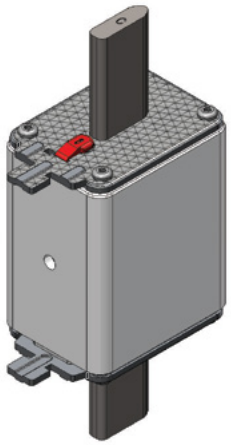
Catalog numbers

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 10ms)	Minimum pre-arcing integral (from cold) A^2S	Maximum clearing integral A2S @ 800 V d.c. 10 ms L/R	Minimum breaking current (A) @ 800 V d.c.	Power loss at In (W)	Catalog number
DIN1HT	800 V d.c. (IEC/UL)	32	100	80	690	64	8.5	180D1506
		40	100	185	1600	80	9	180D1507
		50	100	400	3450	100	11	180D1508

Dimensions (mm)



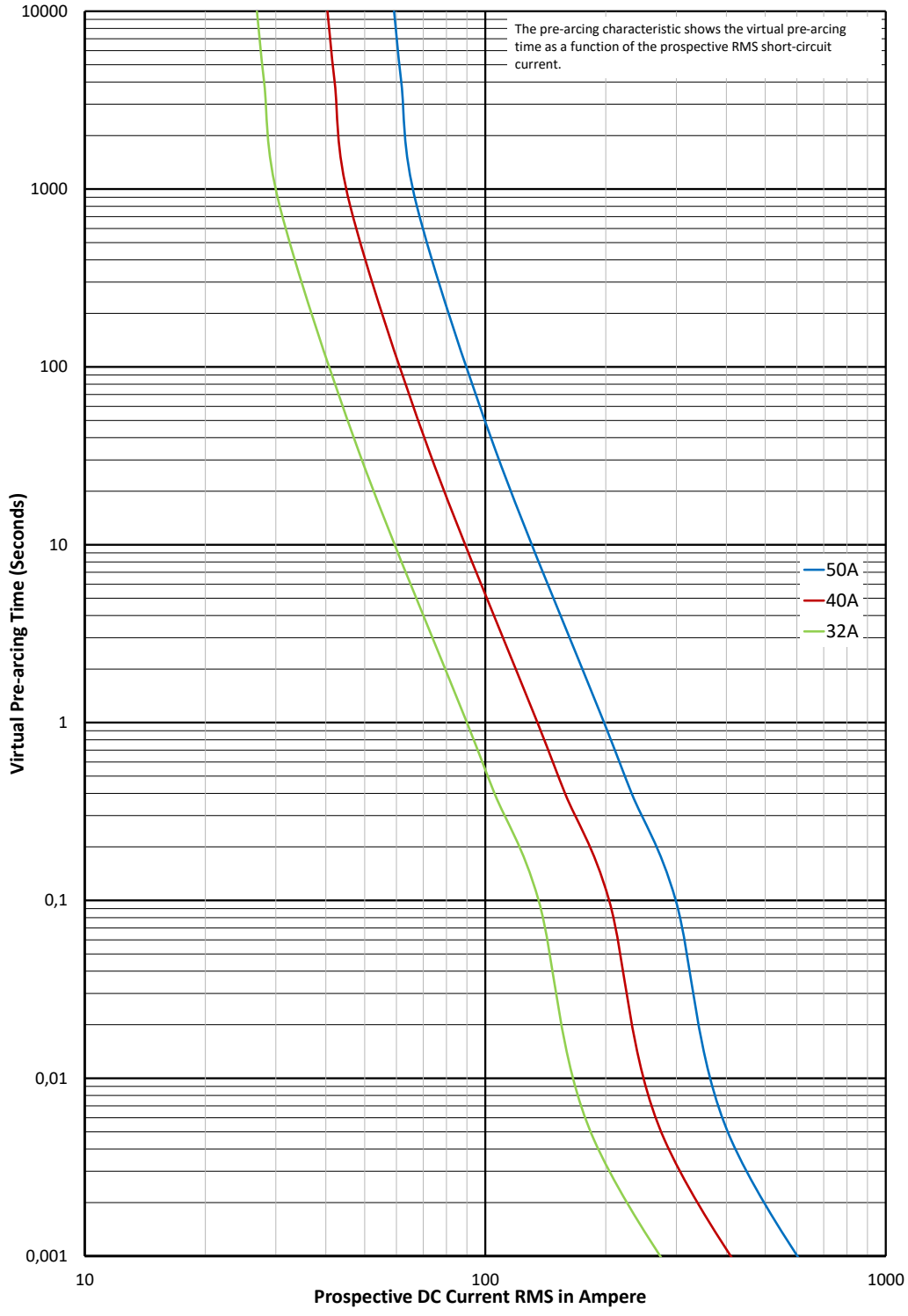




Data sheet: TD135014EN

800 V d.c. (IEC/UL) - 32 A to 50 A - 180D - DIN1HT Fuse body size 1

Time-current curve

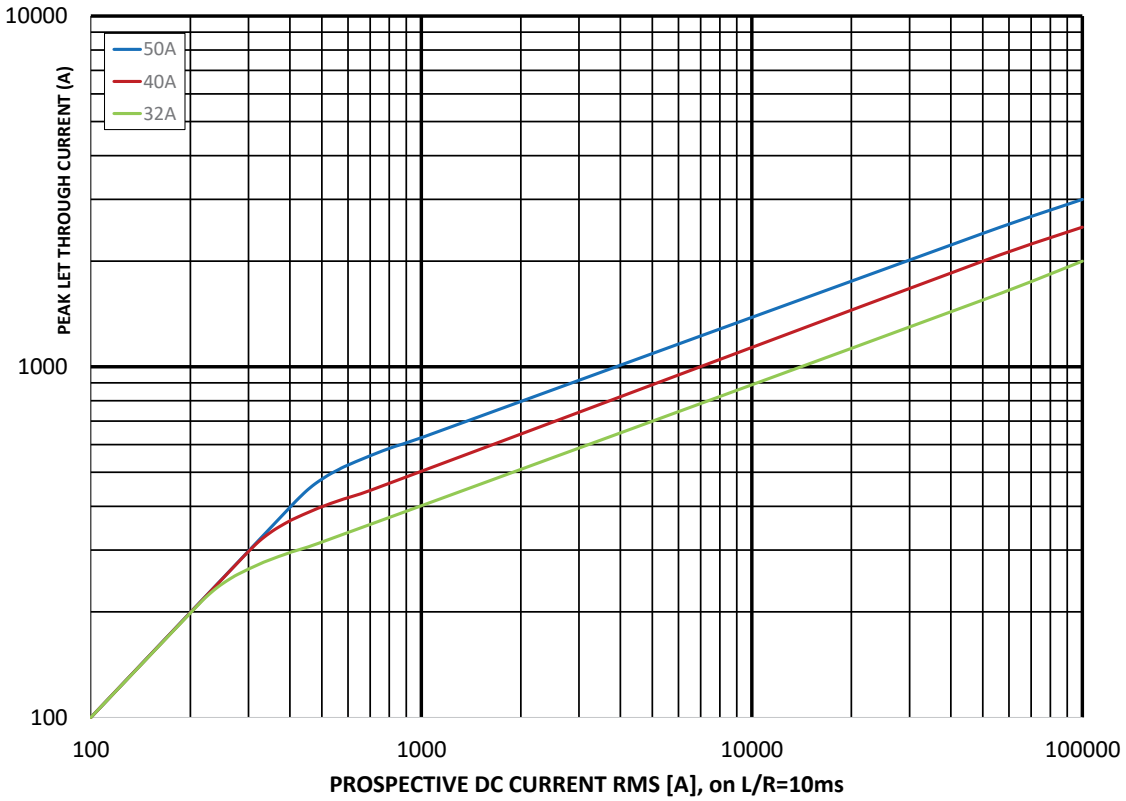


K_b = 1 N = 1,6

Data sheet: TD135014EN

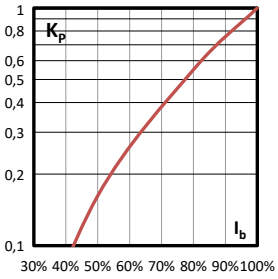
800 V d.c. (IEC/UL) - 32 A to 50 A - 180D - DIN1HT Fuse body size 1

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.



Data sheet: TD135014EN

Square body fuse links

800 V d.c. (IEC/UL) - 500 A to 630 A - 180D - Flush end contact and DIN Fuse body size 1

Specifications



Description

Eaton's Bussmann™ series 800 V d.c. aR and aBat square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 800 V d.c. (IEC and UL)
- Rated current: 500 A to 630 A
- Breaking capacity: 100 kA
- Operating class: aR and aBat

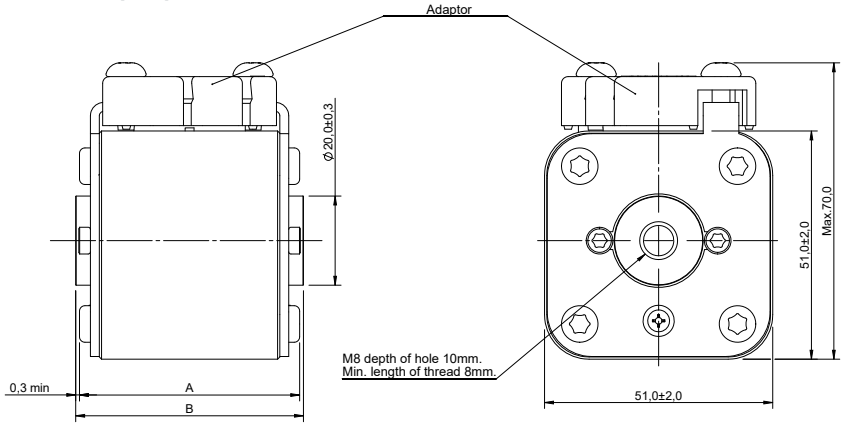
Standards / Agency information

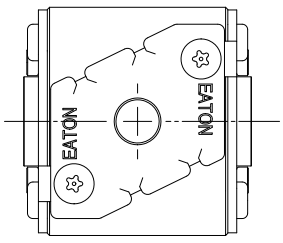
Designed and tested to IEC 60269 part 4 and 7, UL 248-13
Recognised, RoHS compliant

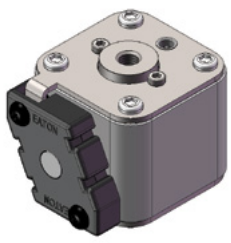
Catalog numbers

						Catalog number	
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity (kA at 10ms)**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**Fuse type: BKN/75**	**Fuse type: GKN/75**
1	800 V d.c. (IEC/UL)	500	100	69,500	91	180D4395	180D4495
		550	100	95,000	100	180D4396	180D4496
		630	100	130,000	119	180D4397	N/A
		630	100	130,000	119	180D4497	N/A

Dimensions (mm) - 1BKN/75



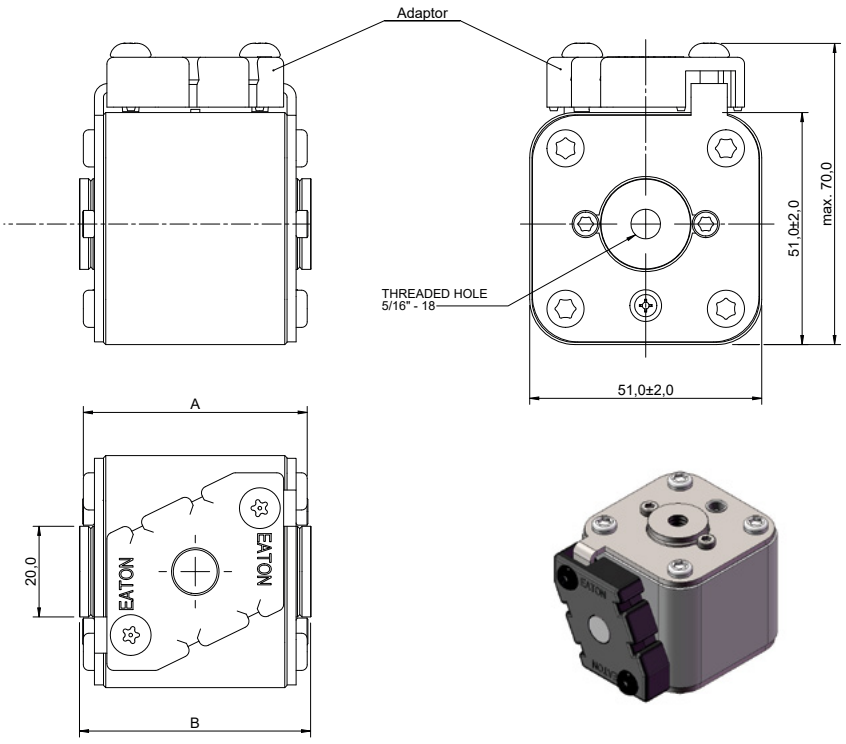




A	B
72.9 ± 1.6	74.6 ± 1.3

800 V d.c. (IEC/UL) - 500 A to 630 A - 180D - Flush end contact and DIN Fuse body size 1

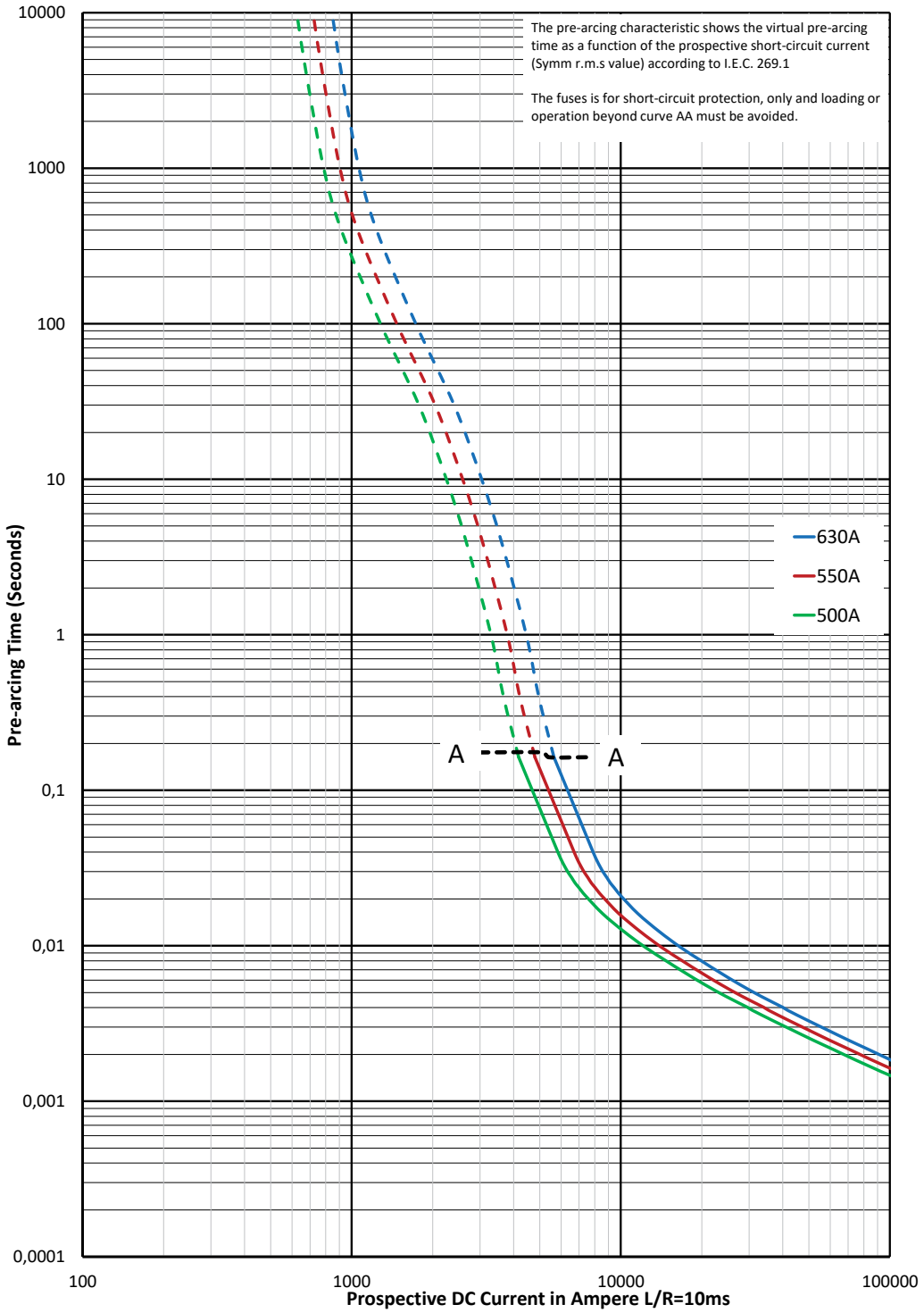
Dimensions (mm) - 1GKN/75



A	B
72.9 ± 1.6	74.6 ± 1.1

800 V d.c. (IEC/UL) - 500 A to 630 A - 180D - Flush end contact and DIN Fuse body size 1

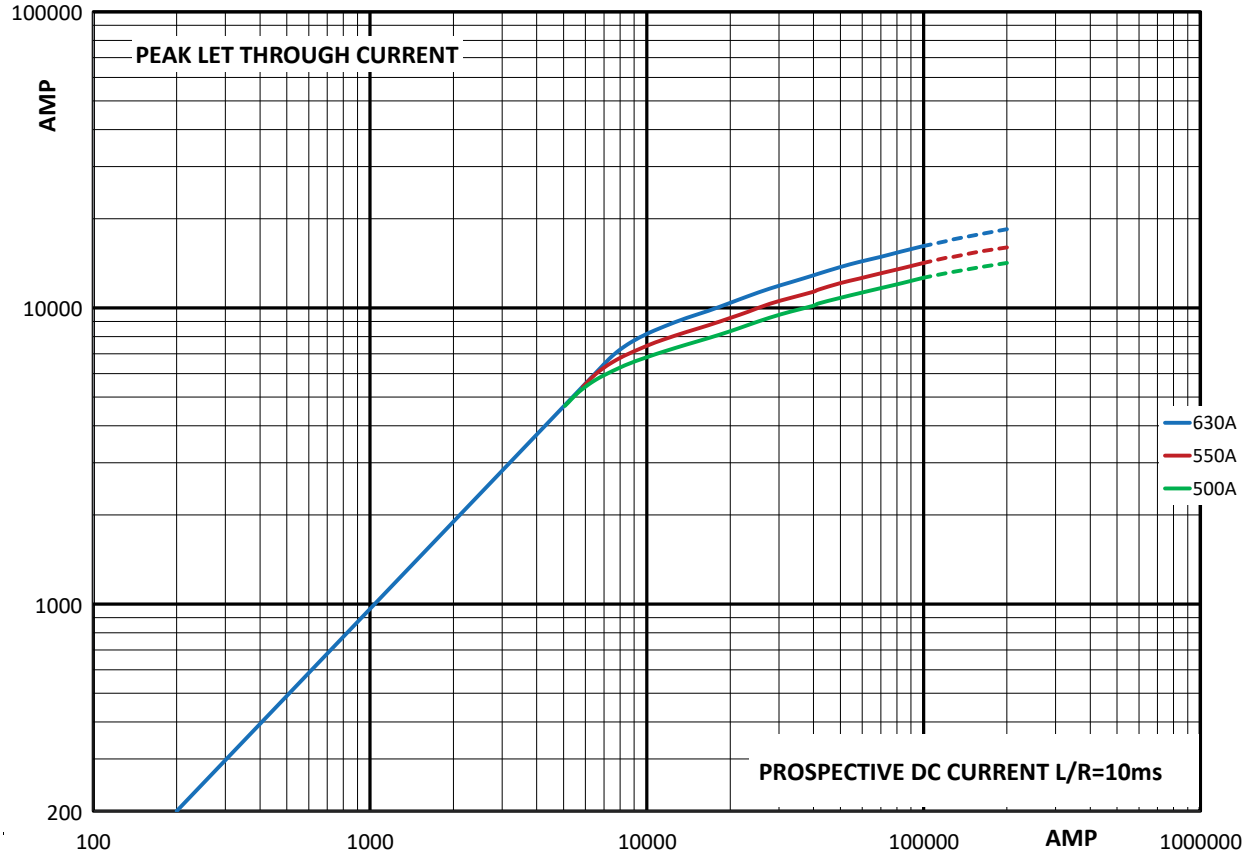
Time-current curve



K_b = 1 N = 1,5

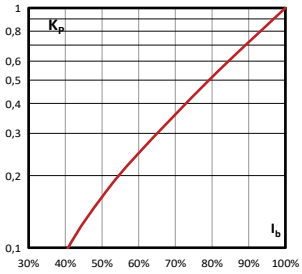
800 V d.c. (IEC/UL) - 500 A to 630 A - 180D - Flush end contact and DIN Fuse body size 1

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.



Square body fuse links

800 V d.c. (IEC), 900 V d.c. (UL) - 50 A to 350 A - 180D - Flush end contact fuse body size 1*

Specifications



Description

Eaton's Bussmann™ series 800 V d.c./900 V d.c. aR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 800 V d.c. (IEC), 900 V d.c. (UL)
- Rated current: 50 A to 350 A
- Breaking capacity: 100 kA
- Operating class: aR

Standards / Agency information

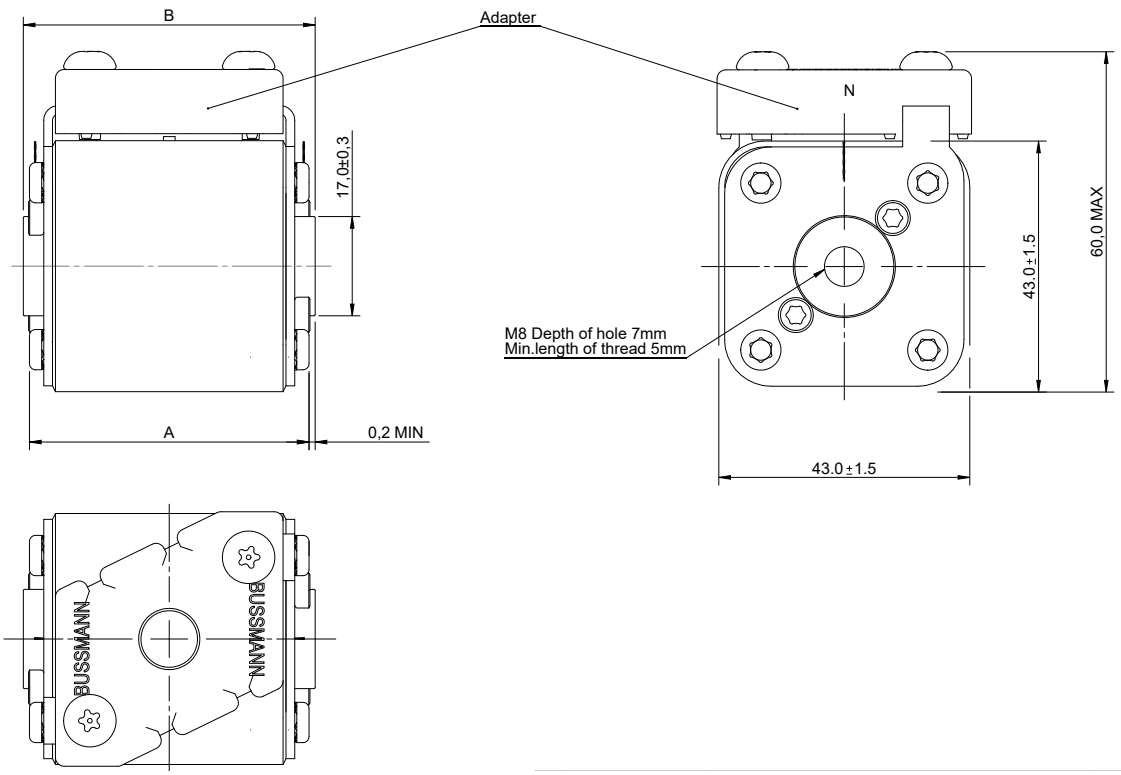
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

Catalog numbers

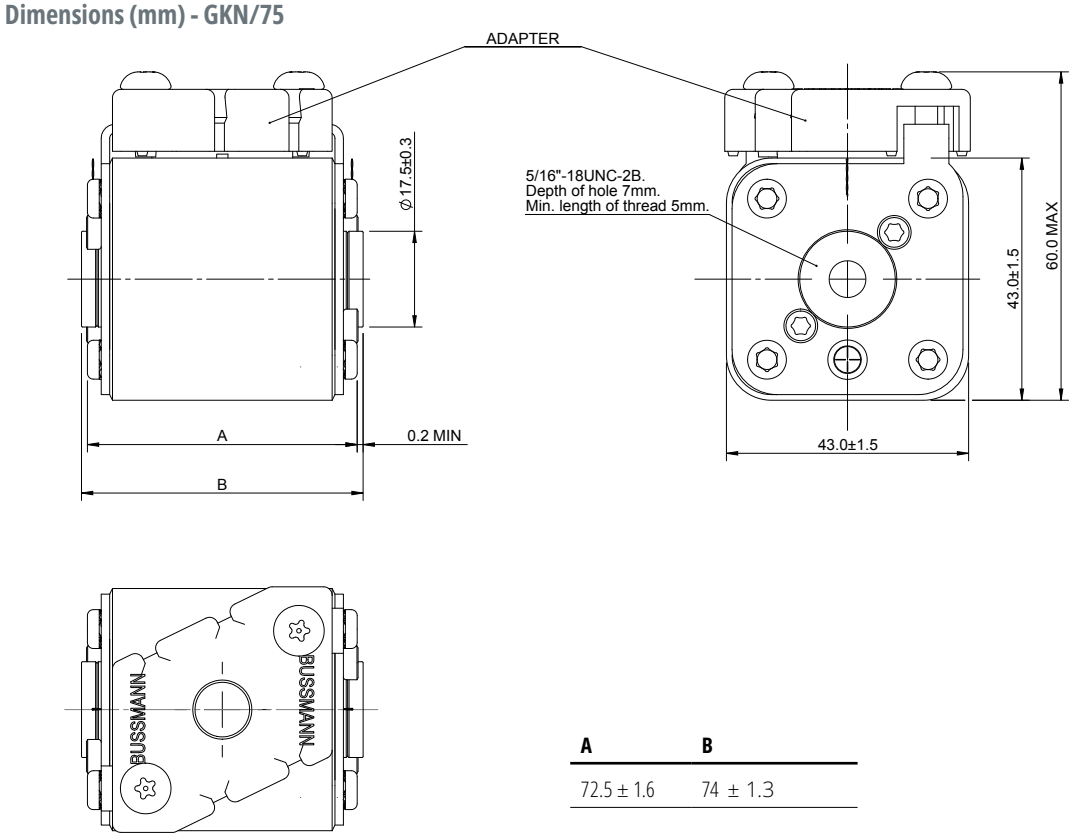
						Catalog number			
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity (kA at 10ms)**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**Fuse type: BKN/75**	**Fuse type: GKN/75**	**Fuse type: FU/115**	**Fuse type: FKE/115**
1*	800 V d.c. (IEC)	50	100	135	15	180D3388	180D3488	180D3688	180D3738
	900 V d.c. (UL)	63	100	215	20	180D3389	180D3489	180D3689	180D3739
		80	100	420	25	180D3390	180D3490	180D3690	180D3740
		100	100	750	30	180D3391	180D3491	180D3691	180D3741
		125	100	1450	35	180D3392	180D3492	180D3692	180D3742
		160	100	2600	40	180D3393	180D3493	180D3693	180D3743
		200	100	5150	45	180D3394	180D3494	180D3694	180D3744
		250	100	9200	55	180D3395	180D3495	180D3695	180D3745
		315	100	18,500	60	180D3396	180D3496	180D3696	180D3746
		350	100	27,000	65	180D3397	180D3497	180D3697	180D3747

800 V d.c. (IEC), 900 V d.c. (UL) - 50 A to 350 A - 180D - Flush end contact fuse body size 1*

Dimensions (mm) - BKN/75



Dimensions (mm) - GKN/75

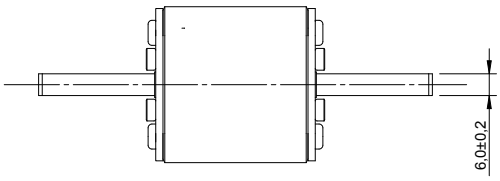


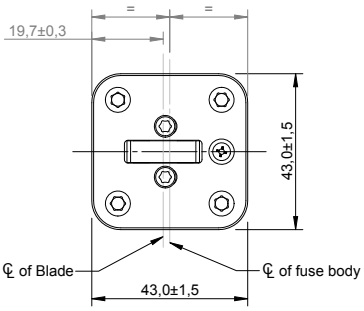
A	B
72.5 ± 1.6	74 ± 1.3

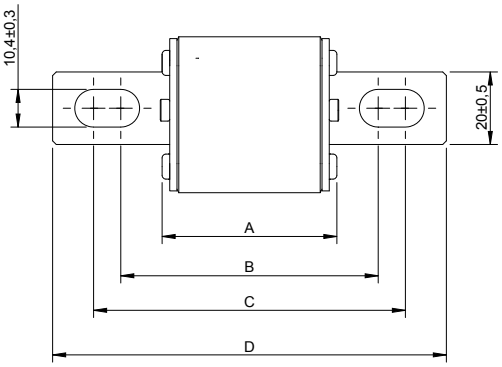
Square body fuse links

800 V d.c. (IEC), 900 V d.c. (UL) - 50 A to 350 A - 180D - Flush end contact fuse body size 1*

Dimensions (mm) - FU/115

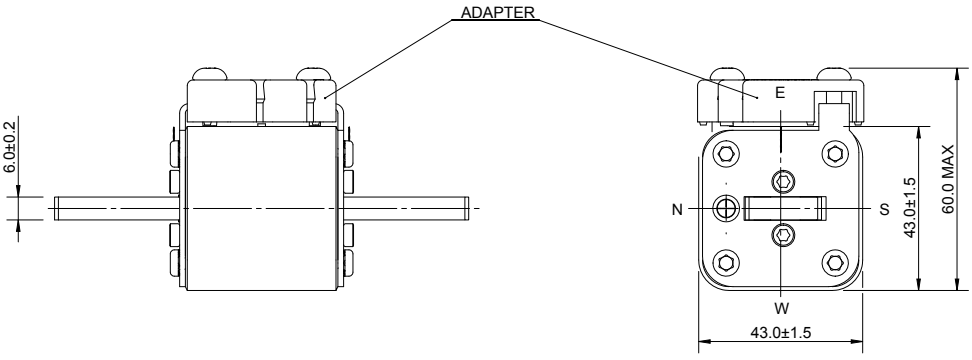




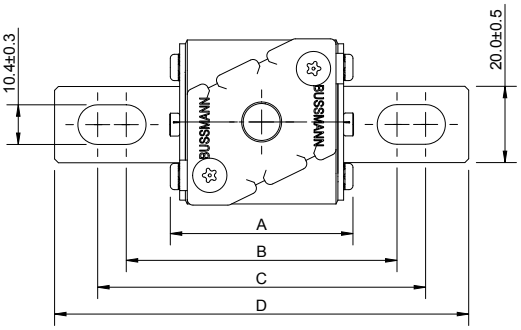


A	B	C	D
74	101 ± 1.2	130 ± 1.6	153 ± 3

Dimensions (mm) - FKE/115



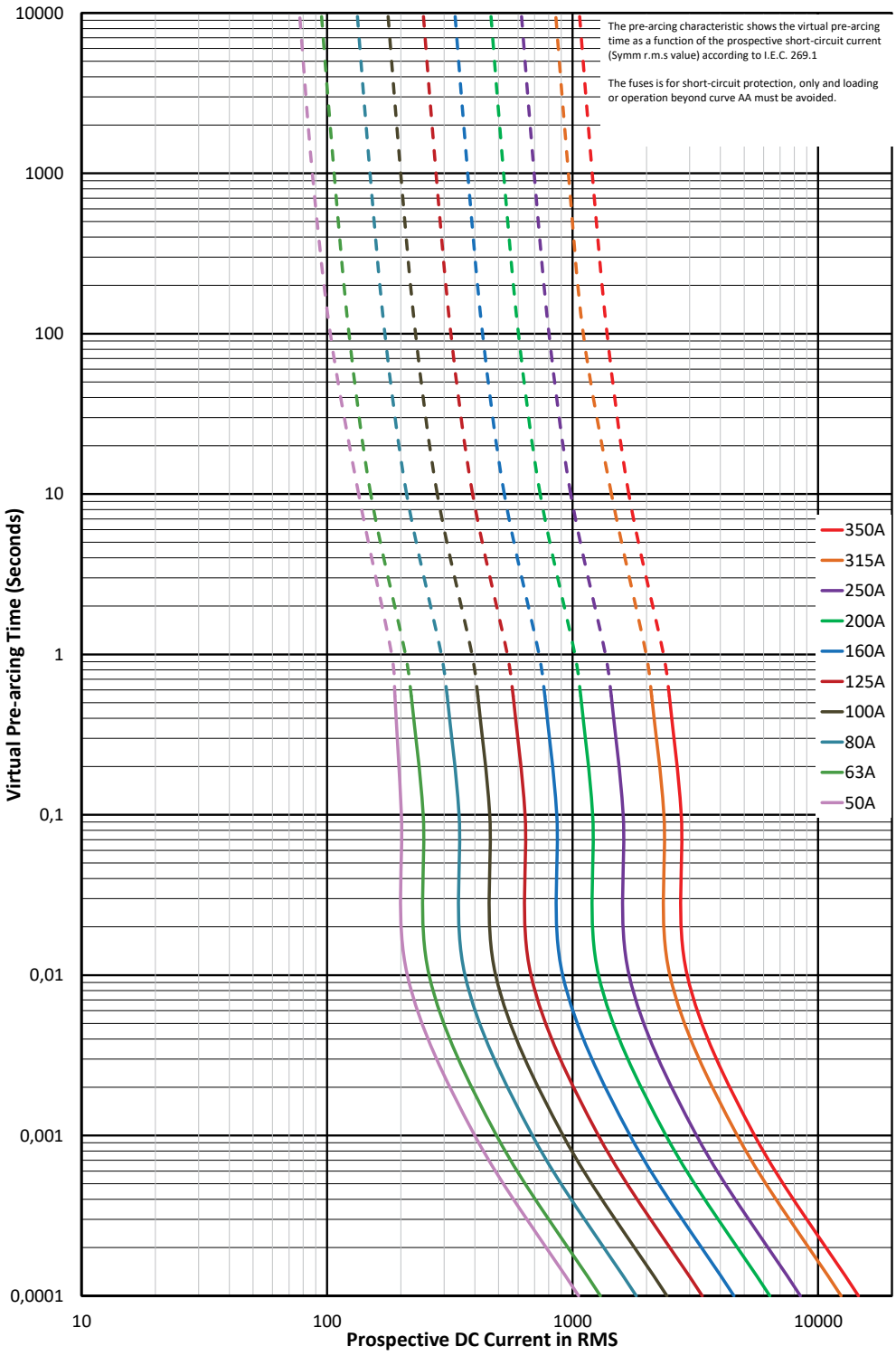
The normal position of the indicator is as shown position E.
position S, N and W on request only.



A	B	C	D
74	101 ± 1.2	130 ± 1.6	156

800 V d.c. (IEC), 900 V d.c. (UL) - 50 A to 350 A - 180D - Flush end contact fuse body size 1*

Time-current curve

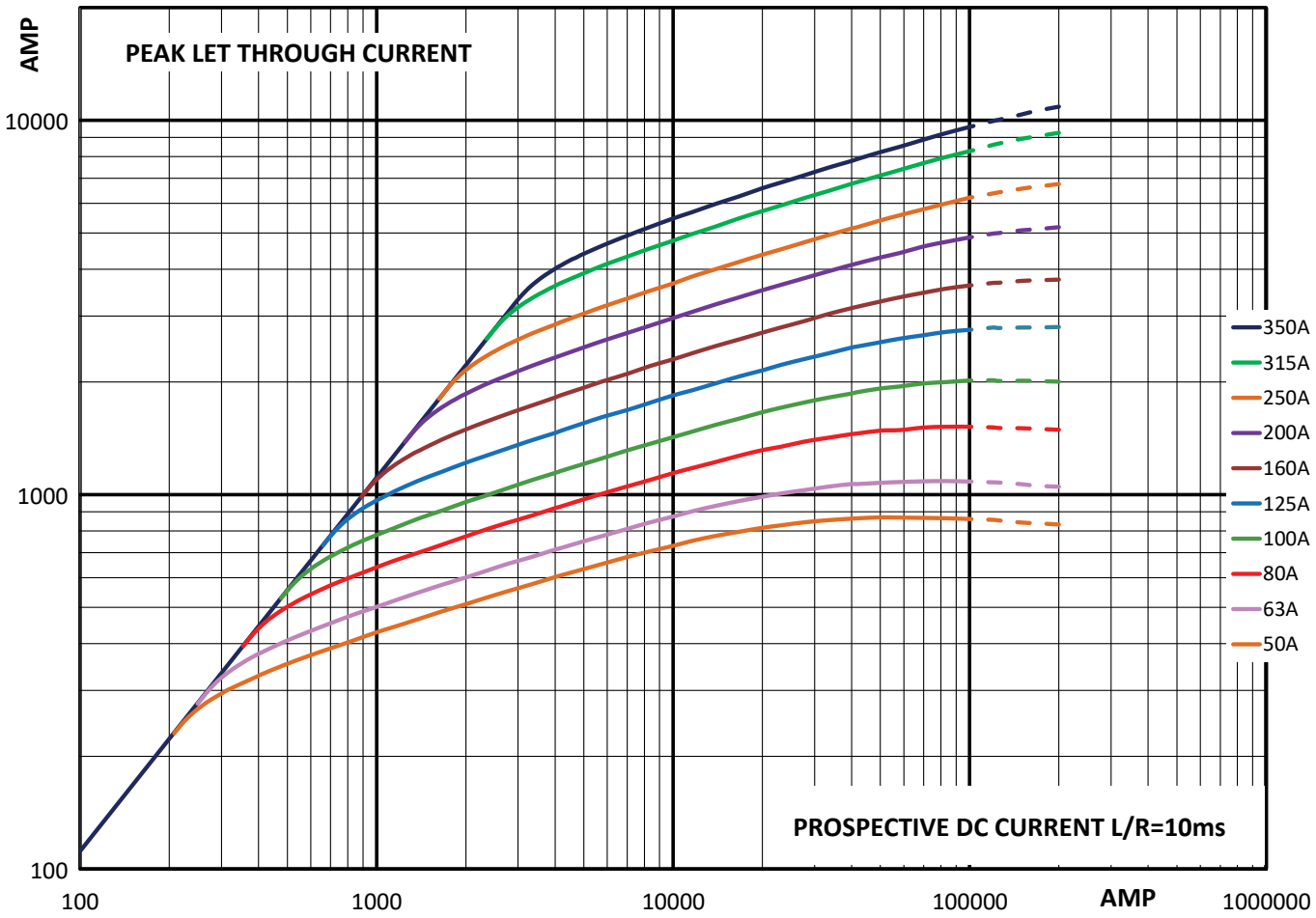


K_b = 1 N = 1,5

Square body fuse links

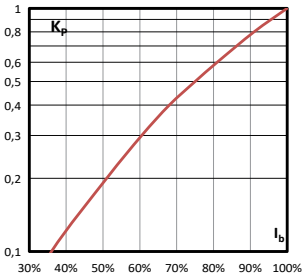
800 V d.c. (IEC), 900 V d.c. (UL) - 50 A to 350 A - 180D - Flush end contact fuse body size 1*

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.



800 V d.c. (IEC), 900 V d.c. (UL) - 160 A to 450 A - 180D - Flush end contact and DIN Fuse body size 1

Specifications

Description

Eaton's Bussmann™ series 800 V d.c./900 V d.c. aR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.



Technical data

- Rated voltage: 800 V d.c. (IEC), 900 V d.c. (UL)
- Rated current: 160 A to 450 A
- Breaking capacity: 100 kA
- Operating class: aR

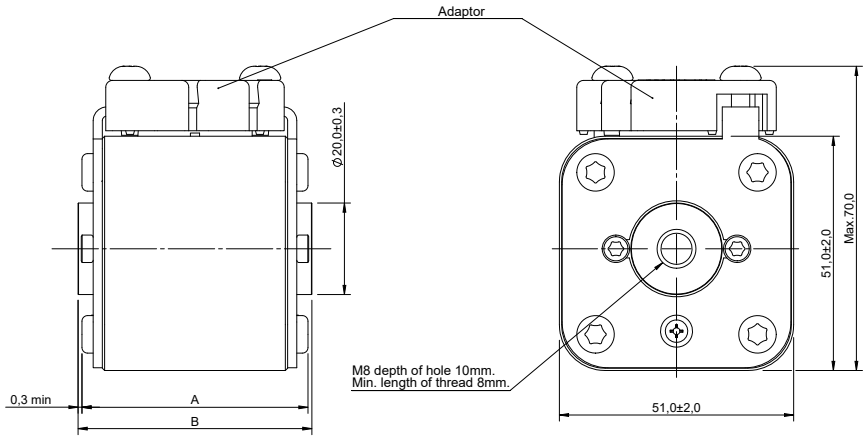
Standards / Agency information

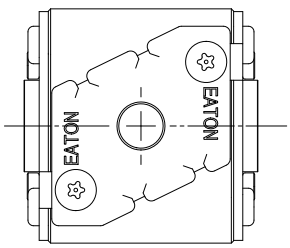
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

Catalog numbers

						Catalog number					
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity (kA at 10ms)**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**Fuse type: BKN/75**	**Fuse type: BKN/80**	**Fuse type: GKN/75**	**Fuse type: 1/110**	**Fuse type: TN/110**	**Fuse type: KN/110**
1	800 V d.c. (IEC)	160	100	1900	45	180D4388	180D4438	180D4488	180D4138	180D4188	180D4238
	900 V d.c. (UL)	200	100	3800	50	180D4389	180D4439	180D4489	180D4139	180D4189	180D4239
		250	100	7750	60	180D4390	180D4440	180D4490	180D4140	180D4190	180D4240
		315	100	15,000	65	180D4391	180D4441	180D4491	180D4141	180D4191	180D4241
		350	100	20,000	70	180D4392	180D4442	180D4492	180D4142	180D4192	180D4242
		400	100	29,500	75	180D4393	180D4443	180D4493	180D4143	180D4193	180D4243
		450	100	42,000	80	180D4394	180D4444	180D4494	180D4144	180D4194	180D4244

Dimensions (mm) - BKN/75



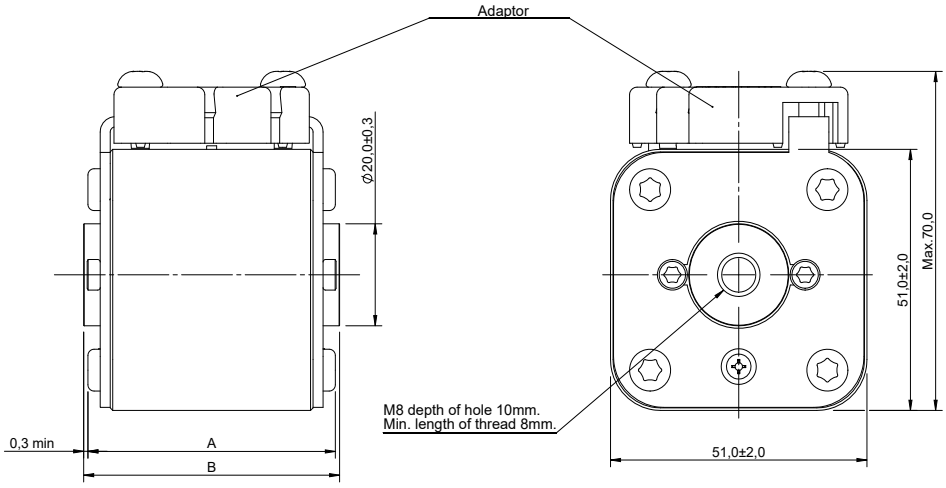


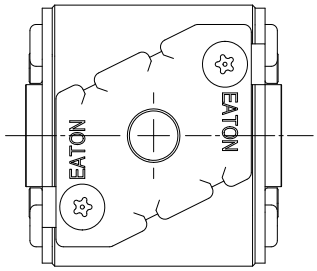
A	B
72.9 ± 1.6	74.6 ± 1.3

Square body fuse links

800 V d.c. (IEC), 900 V d.c. (UL) - 160 A to 450 A - 180D - Flush end contact and DIN Fuse body size 1

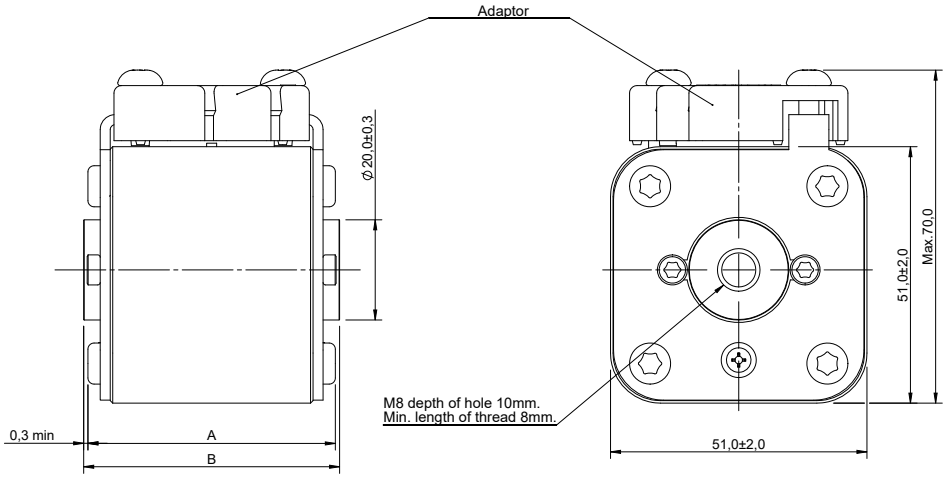
Dimensions (mm) - BKN/80

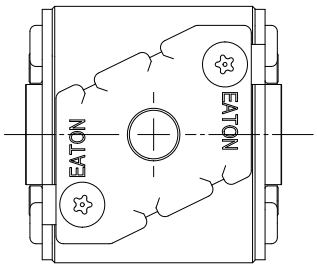




A	B
79.4 ± 1.8	81.1 ± 1.4

Dimensions (mm) - GKN/75

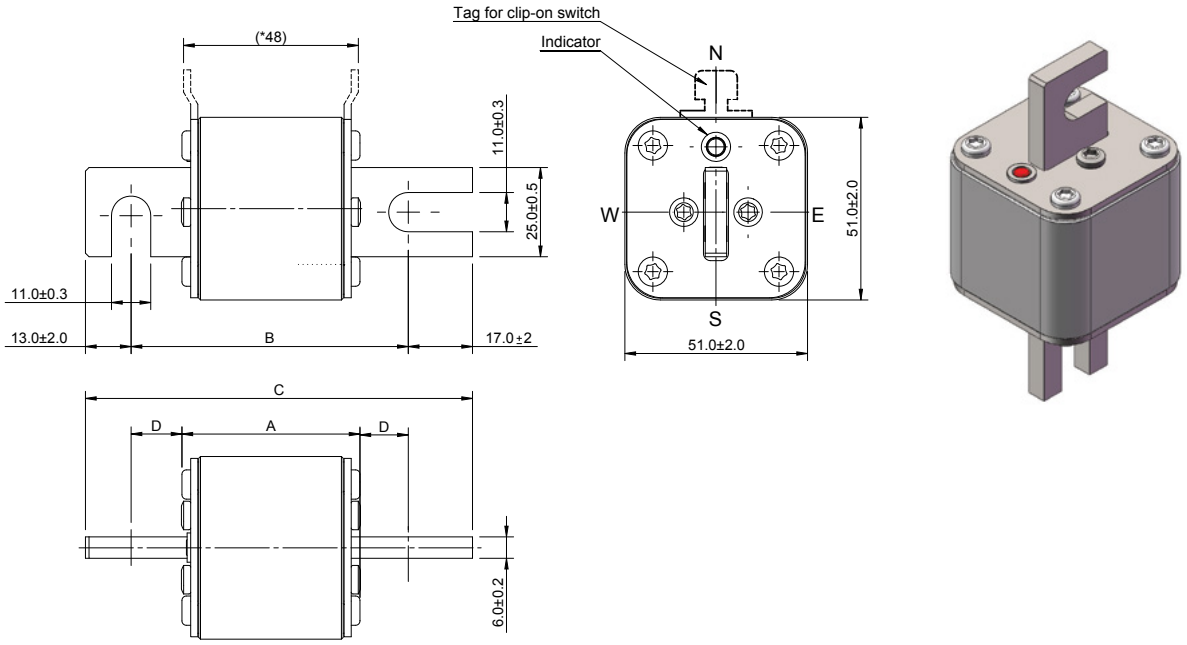




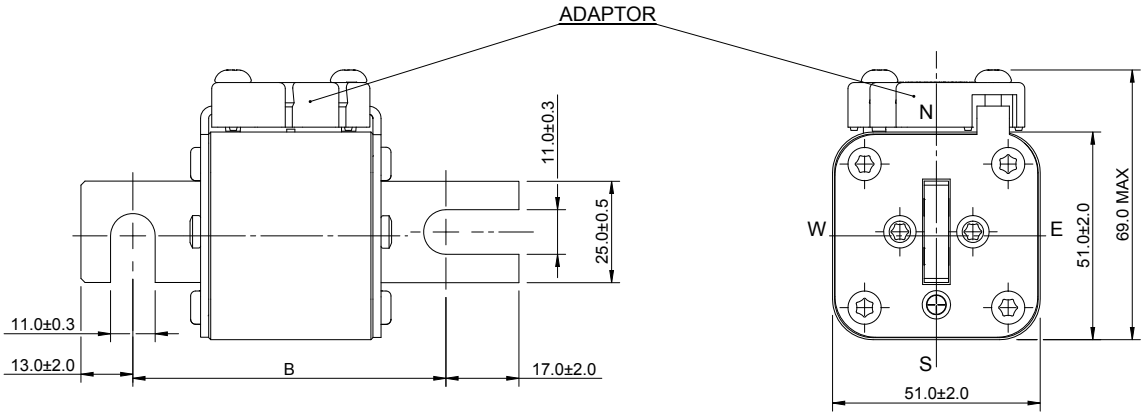
A	B
72.6 ± 1.6	74.6 ± 1.1

800 V d.c. (IEC), 900 V d.c. (UL) - 160 A to 450 A - 180D - Flush end contact and DIN Fuse body size 1

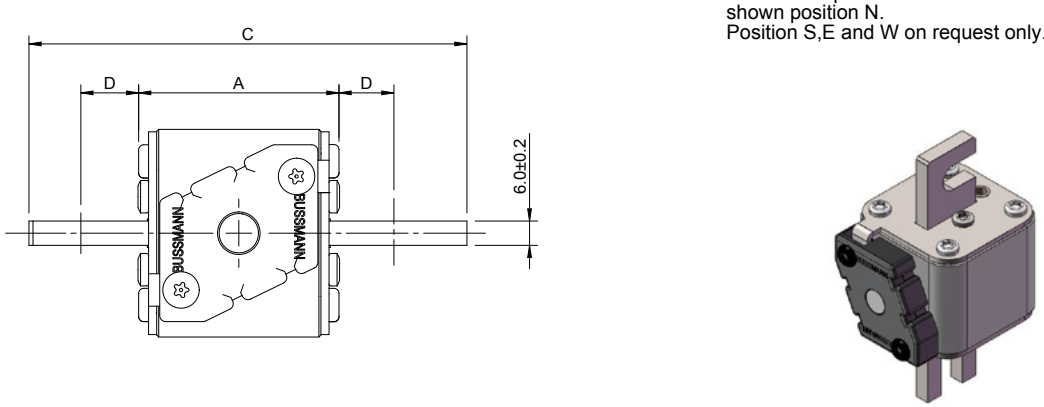
Dimensions (mm) - 1/110 and TN/110



Dimensions (mm) - KN/110



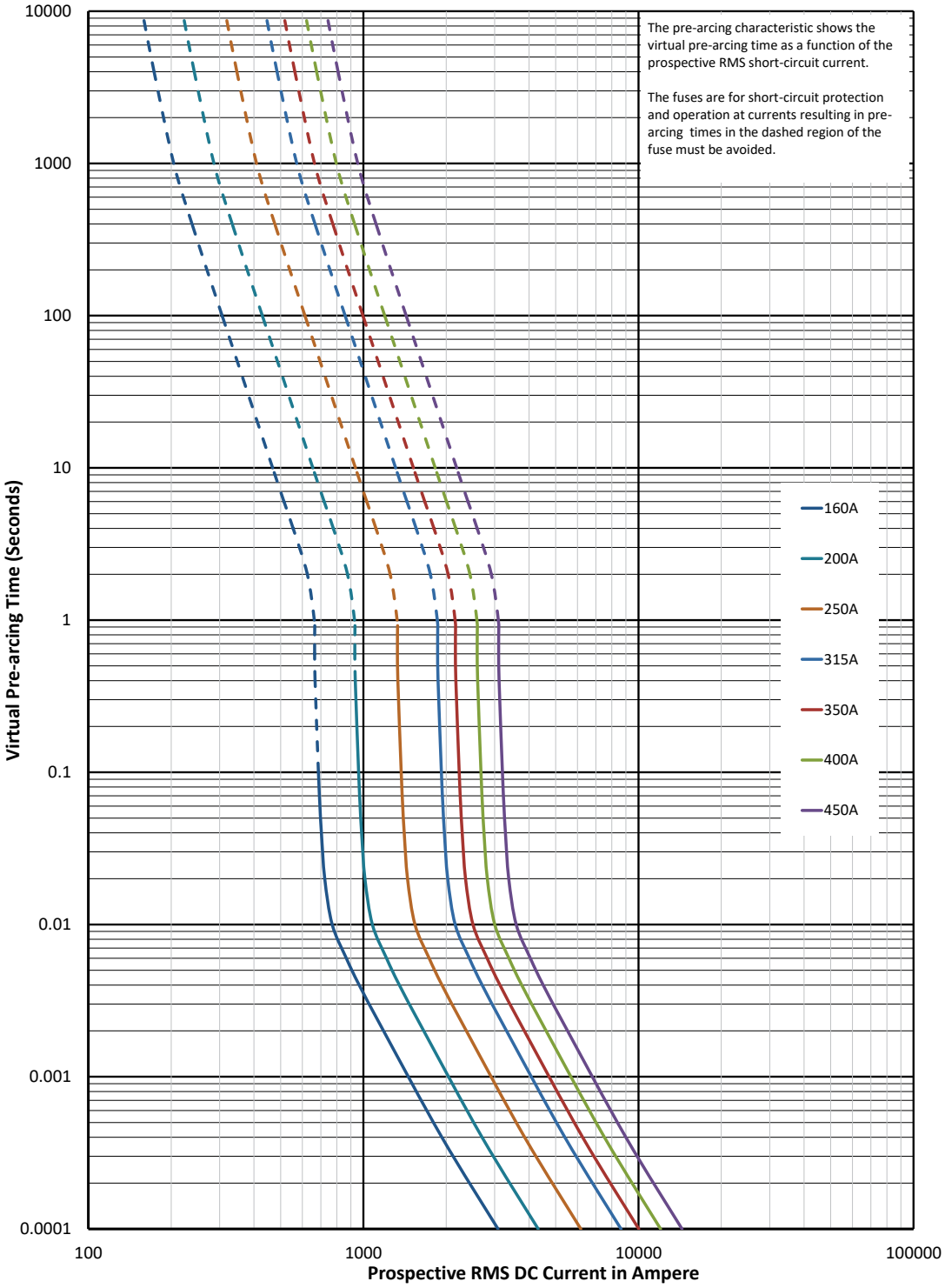
The normal position of the indicator is as shown position N.
Position S,E and W on request only.



A	B	C	D
49.6 ± 1.2	108 ± 1.8	138.5 ± 2.0	29 ± 2

800 V d.c. (IEC), 900 V d.c. (UL) - 160 A to 450 A - 180D - Flush end contact and DIN Fuse body size 1

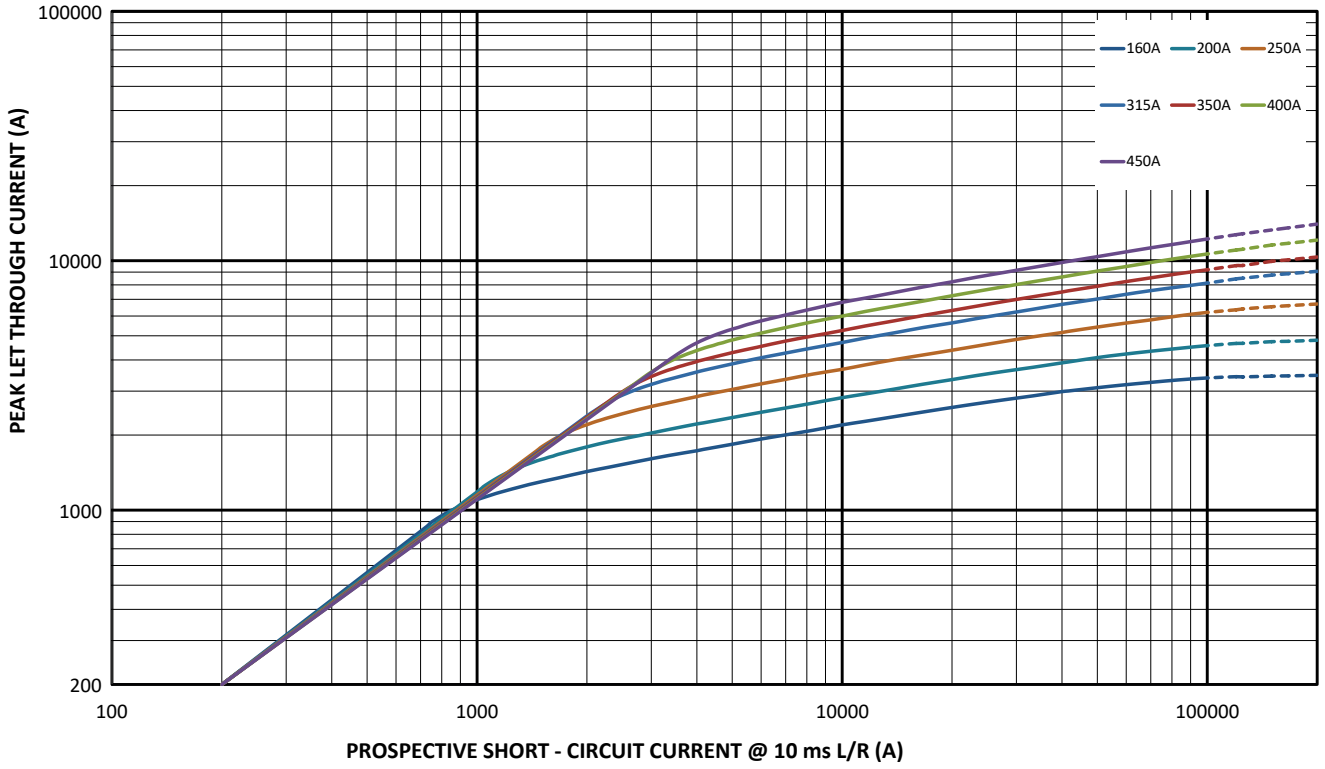
Time-current curve



K_b = 1 N = 1.6

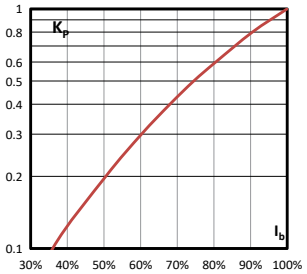
800 V d.c. (IEC), 900 V d.c. (UL) - 160 A to 450 A - 180D - Flush end contact and DIN Fuse body size 1

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.



Square body fuse links

800 V d.c. (IEC), 900 V d.c. (UL) - 315 A to 800 A - 180D - Flush end contact and DIN Fuse body size 3

Specifications

Description

Eaton's Bussmann™ series 800 V d.c./900 V d.c. aR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.



Technical data

- Rated voltage: 800 V d.c. (IEC), 900 V d.c. (UL)
- Rated current: 315 A to 800 A
- Breaking capacity: 100 kA
- Operating class: aR

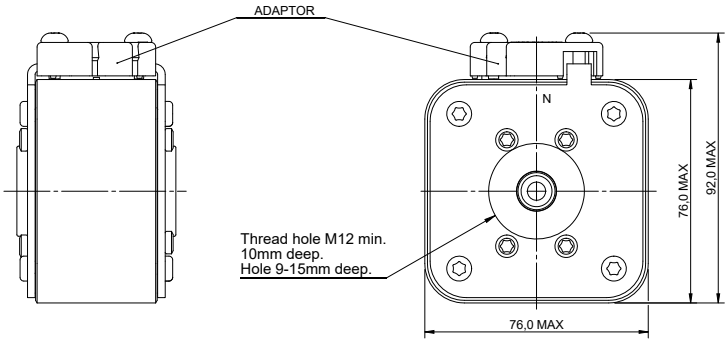
Standards / Agency information

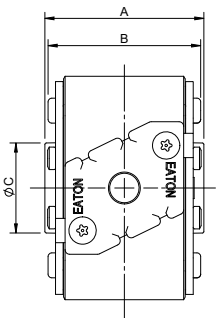
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

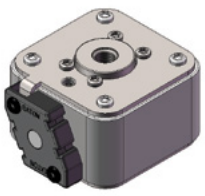
Catalog numbers

						Catalog number	
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity (kA at 10ms)**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**Fuse type: BKN/80**	**Fuse type: TN/110**
3	800 V d.c. (IEC)	315A	100	9500	85	180D6538	180D6188
	900 V d.c. (UL)	350A	100	13,500	90	180D6539	180D6189
		400A	100	19,500	95	180D6540	180D6190
		450A	100	31,000	100	180D6541	180D6191
		500A	100	39,000	105	180D6542	180D6192
		550A	100	55,000	110	180D6543	180D6193
		630A	100	835,00	115	180D6544	180D6194
		700A	100	115,000	120	180D6545	180D6195
		800A	100	205,000	125	180D6546	N/A

Dimensions (mm) - BKN/80



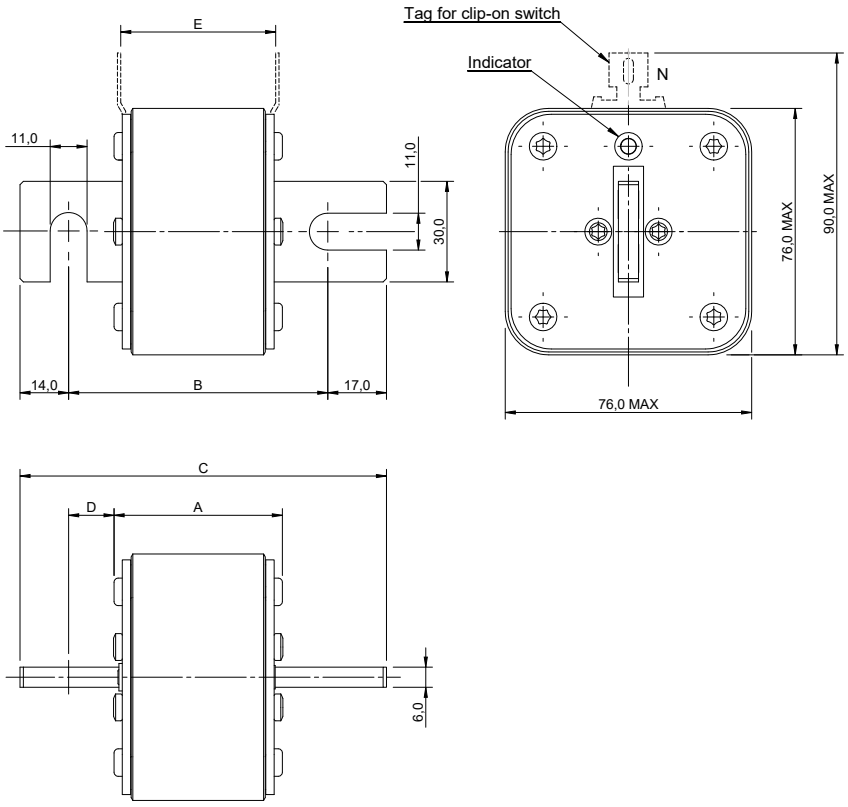




A	B	C
82.4 ± 1.5	82.5	29.6

800 V d.c. (IEC), 900 V d.c. (UL) - 315 A to 800 A - 180D - Flush end contact and DIN Fuse body size 3

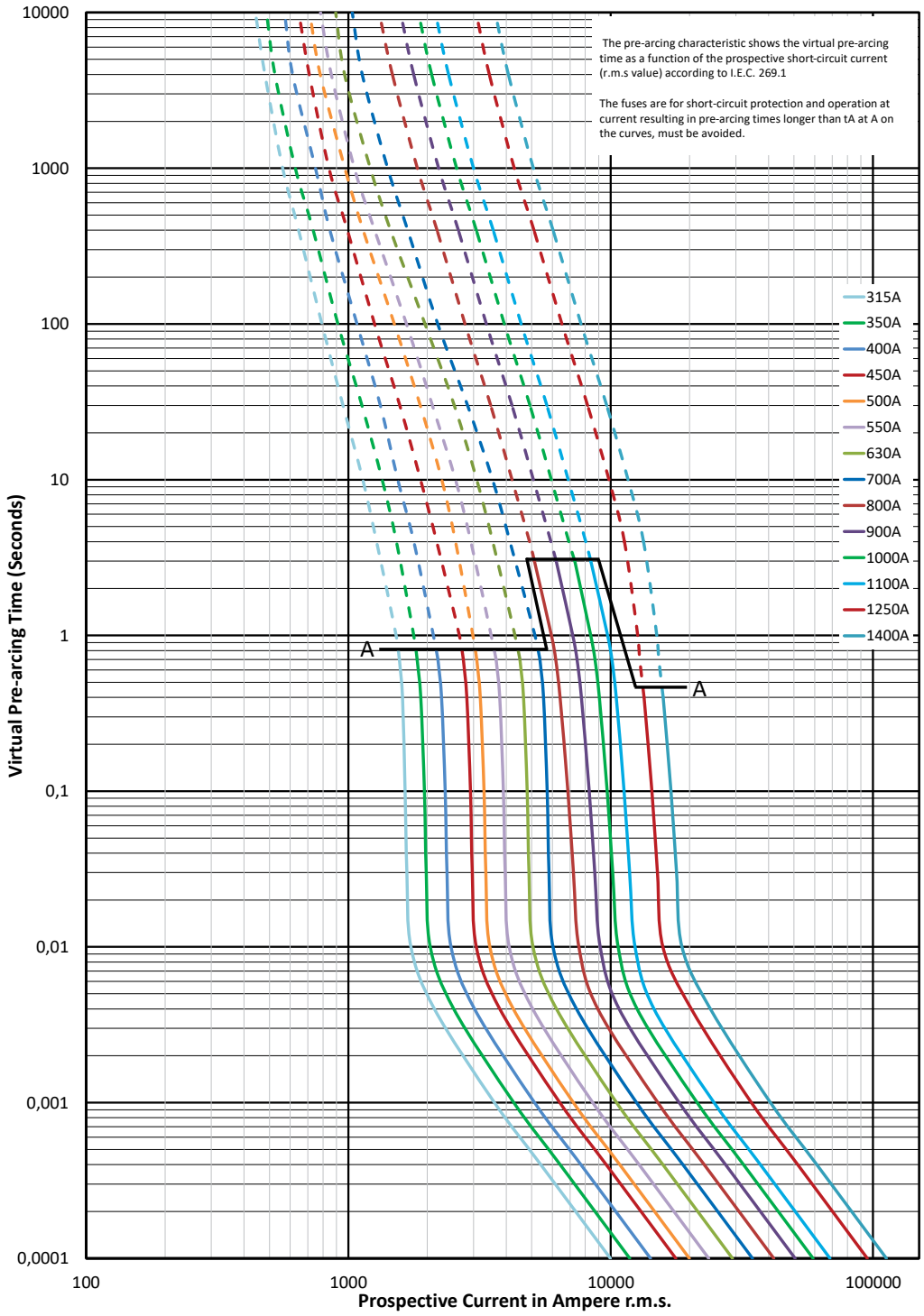
Dimensions (mm) - TN/110



A	B	C	D
82.5	108 ± 2	141	14 ± 2

800 V d.c. (IEC), 900 V d.c. (UL) - 315 A to 800 A - 180D - Flush end contact and DIN Fuse body size 3

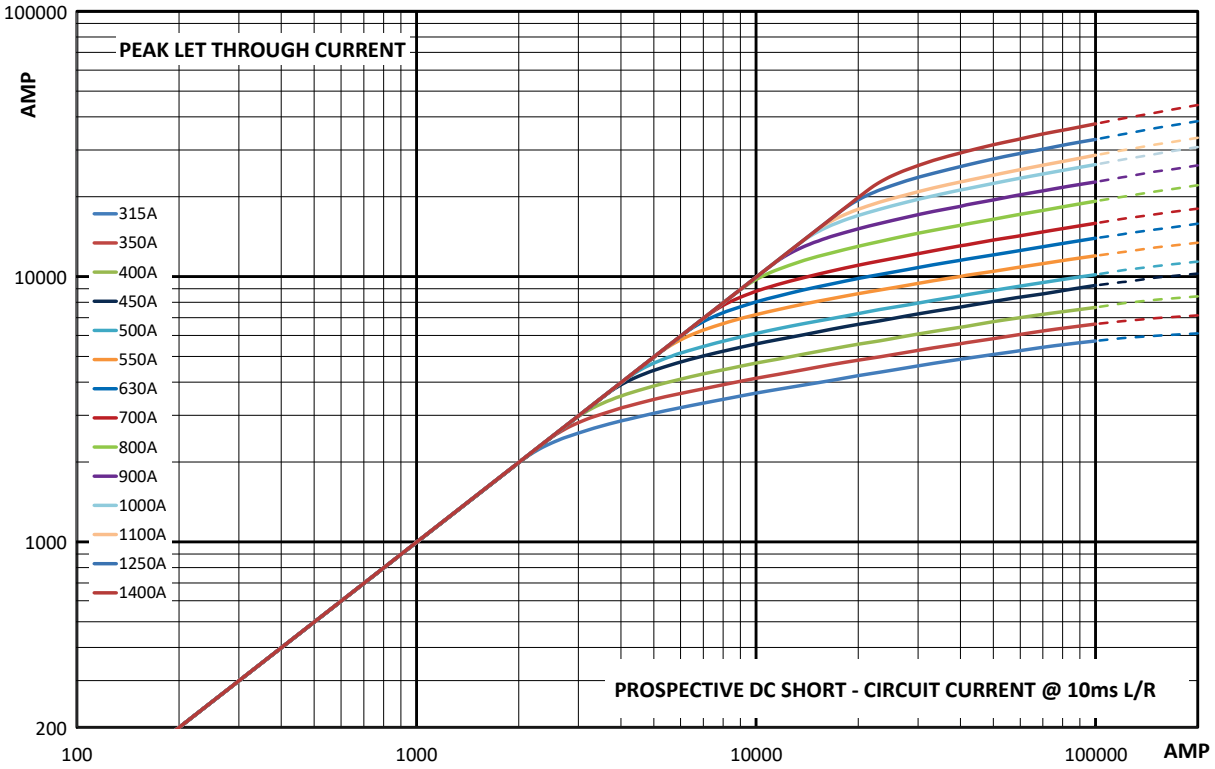
Time-current curve



K_b = 1 N = 1,6

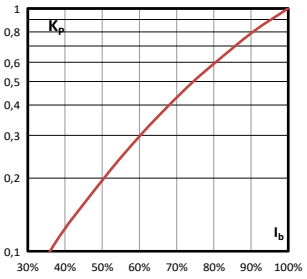
800 V d.c. (IEC), 900 V d.c. (UL) - 315 A to 800 A - 180D - Flush end contact and DIN Fuse body size 3

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.



Square body fuse links

800 V d.c. (IEC), 900 V d.c. (UL) - 1000 A to 1600 A - 180D - Flush end contact fuse body size 23

Specifications

Description

Eaton's Bussmann series 800 V d.c./900 V d.c. gR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.



Technical data

- Rated voltage: 800 V d.c. (IEC), 900 V d.c. (UL)
- Rated current: 1000 A to 1600 A
- Breaking capacity: 100 kA
- Operating class: gR

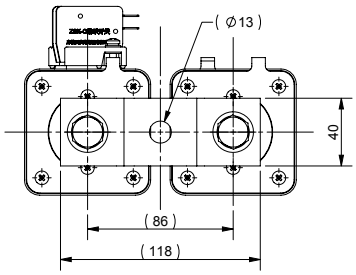
Standards / Agency information

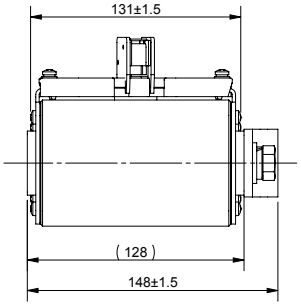
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

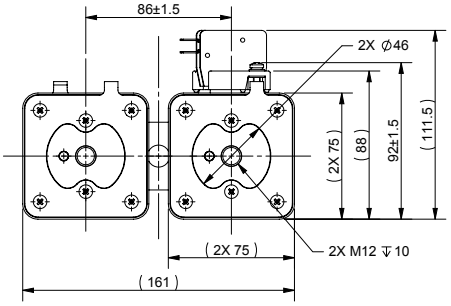
Catalog numbers

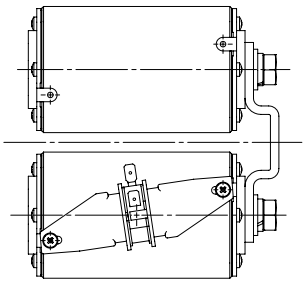
Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA)	Minimum Pre-arcing I^2t (A^2 Sec)	Maximum Clearing Integral A2s @ 800Vdc 10ms L/R	Minimum Breaking Current (A) @ 800VDC	Power loss at In (W)	Catalog number
23	800 V d.c. (IEC)	1000	100	476,300	1,488,000	2000	247	180D2017
	900 V d.c. (UL)	1250	100	694,000	2,168,000	2500	349	180D2018
		1400	100	1,071,600	3,357,000	2800	353	180D2019
		1500	100	1,230,200	3,842,000	3000	377	180D2020
		1600	100	1,399,700	4,371,000	3200	383	180D2021

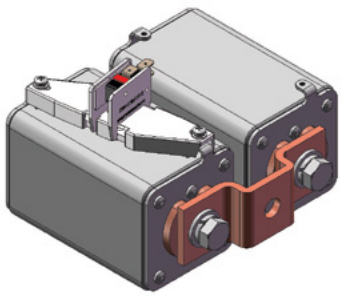
Dimensions (mm)







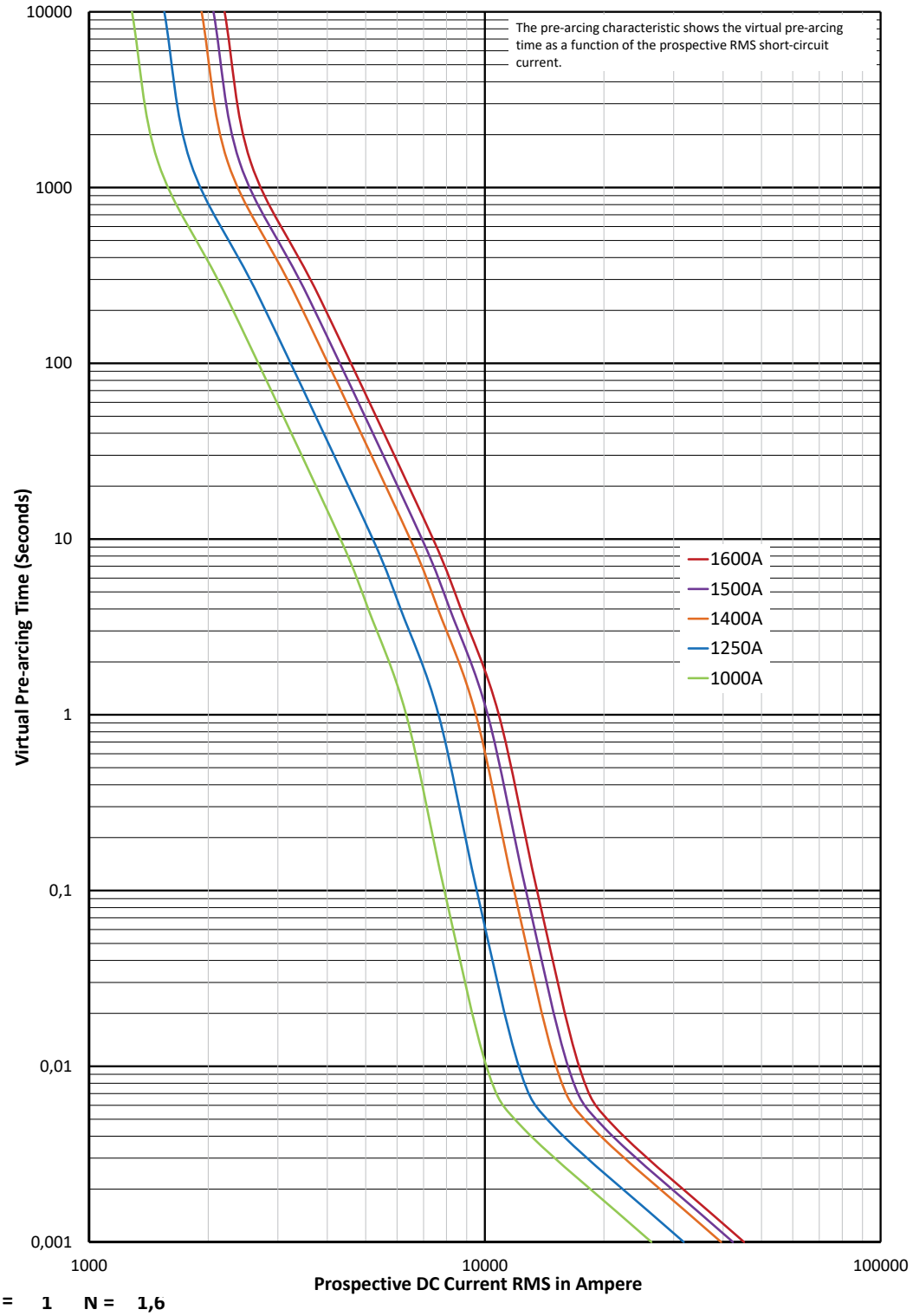




Data sheet: 5785657

800 V d.c. (IEC), 900 V d.c. (UL) - 1000 A to 1600 A - 180D - Flush end contact fuse body size 23

Time-current curve

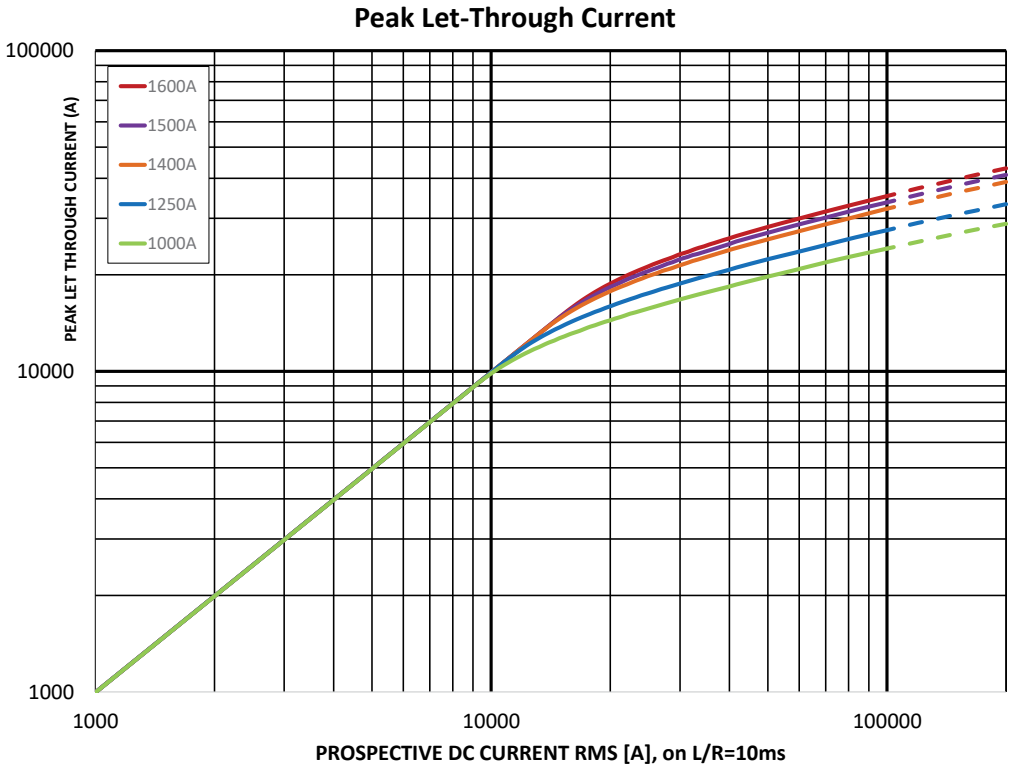


K_b = 1 N = 1,6

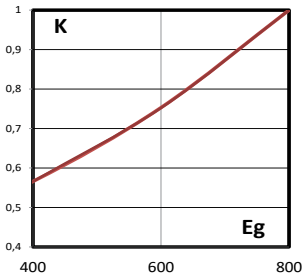
Data sheet: 5785657

800 V d.c. (IEC), 900 V d.c. (UL) - 1000 A to 1600 A - 180D - Flush end contact fuse body size 23

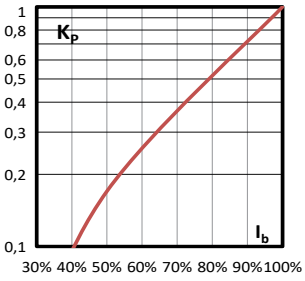
Peak let-through curve



Total clearing I²t
The total clearing I²t at rated voltage and tested DC time constant are given in electrical characteristics. For other voltages the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltages, E.



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.



Data sheet: 5785657

800 V d.c. (IEC), 900 V d.c. (UL) - 630 A to 2200 A - 180D - Flush end contact fuse body size 23

Specifications



Description

Eaton's Bussmann series 800 V d.c./900 V d.c. aR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 800 V d.c. (IEC), 900 V d.c. (UL)
- Rated current: 630 A to 2200 A
- Breaking capacity: 100 kA
- Operating class: aR

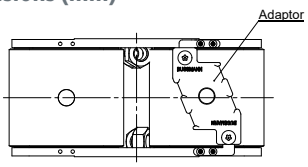
Standards / Agency information

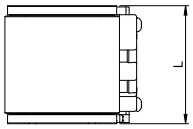
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

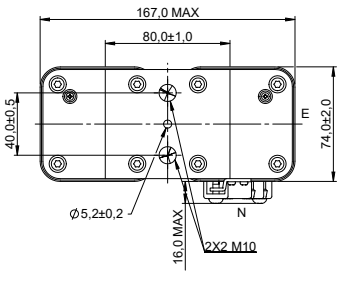
Catalog numbers

						Catalog number	
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity (kA at 10ms)**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**Fuse type: BKN/75**	**Fuse type: BKN/80**
23	800 V d.c. (IEC)	630	100	38,000	185	180D6785	N/A
	900 V d.c. (UL)	700	100	54,000	195	180D6786	N/A
		800	100	78,000	205	180D6787	N/A
		900	100	120,000	215	180D6806	N/A
		1000	100	155,000	225	180D6788	N/A
		1100	100	220,000	235	180D6789	N/A
		1250	100	330,000	245	180D6790	N/A
		1400	100	460,000	255	180D6791	N/A
		2000	100	1,800,000	285	N/A	180D6794
		2200	100	2,300,000	300	N/A	180D6827

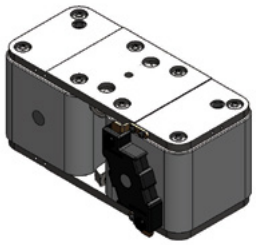
Dimensions (mm)







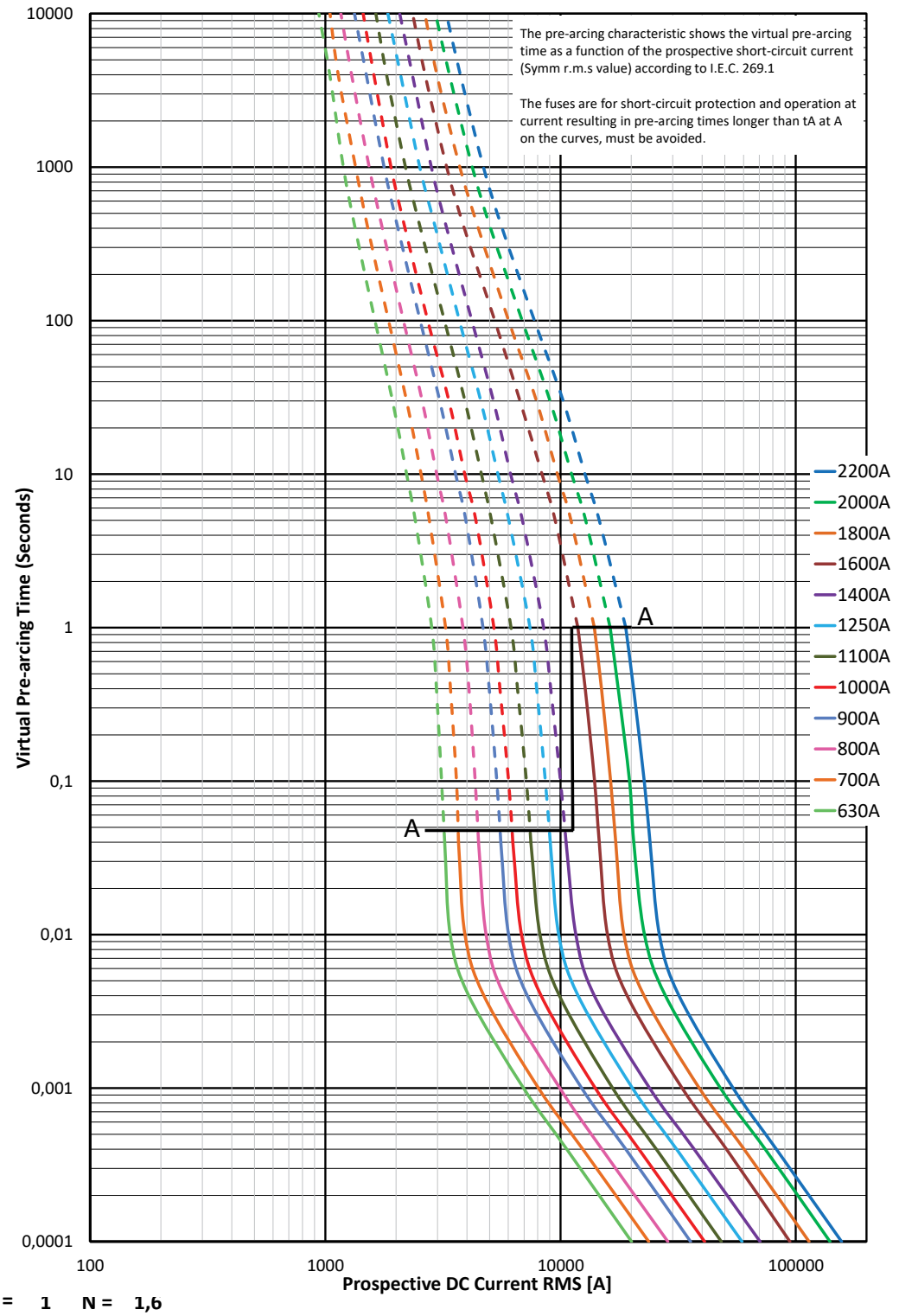
The normal Position of the indicator is as shown position N, Position E only on request.



	L
BKN/75	75 ± 1
BKN/80	82 ± 1.1

800 V d.c. (IEC), 900 V d.c. (UL) - 630 A to 2200 A - 180D - Flush end contact fuse body size 23

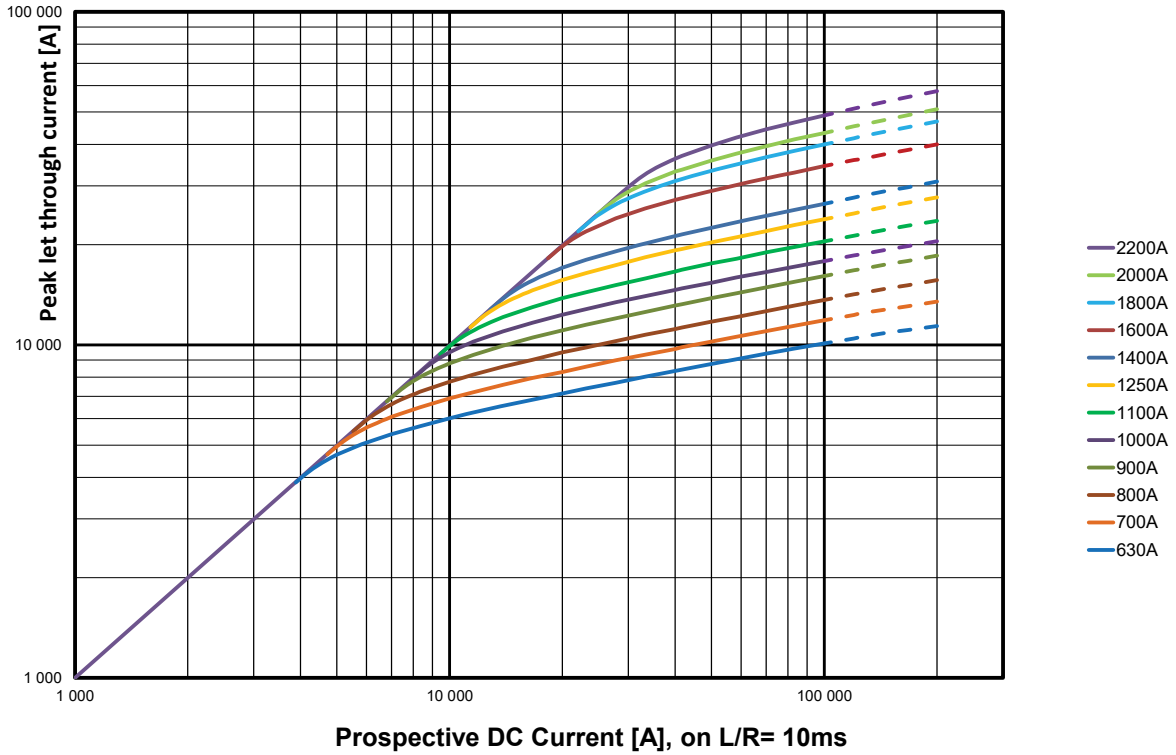
Time-current curve



K_b = 1 N = 1,6

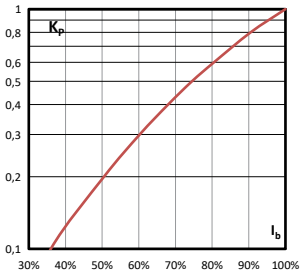
800 V d.c. (IEC), 900 V d.c. (UL) - 630 A to 2200 A - 180D - Flush end contact fuse body size 23

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.



Square body fuse links

1000 V d.c. (IEC) - 63 A to 400 A - BSF-NH - NH Style

Specifications



Description
Eaton's Bussmann series NH battery storage fuses are specifically designed to protect and isolate battery array combiners and disconnects. These fuse links are capable of interrupting low overcurrents associated with faulted battery storage systems (reverse current, multi-array fault).

Technical data
- Rated voltage: 1000 V d.c.
- Rated current: 63 A to 400 A
- Operating class: gBat proposed for full range fuse links for protection of battery storage systems
- Breaking capacity: 100 kA
- Time constant: 4.5ms at 100 kA

Microswitches
- For bladed fuse links only
  - 170H0236
  - 170H0238

Fuse holders
- For bladed fuse links only
  - SD1-D-PV
  - SD2-D-PV
  - SD3-D-PV

Standards / Agency information
IEC 60269-7

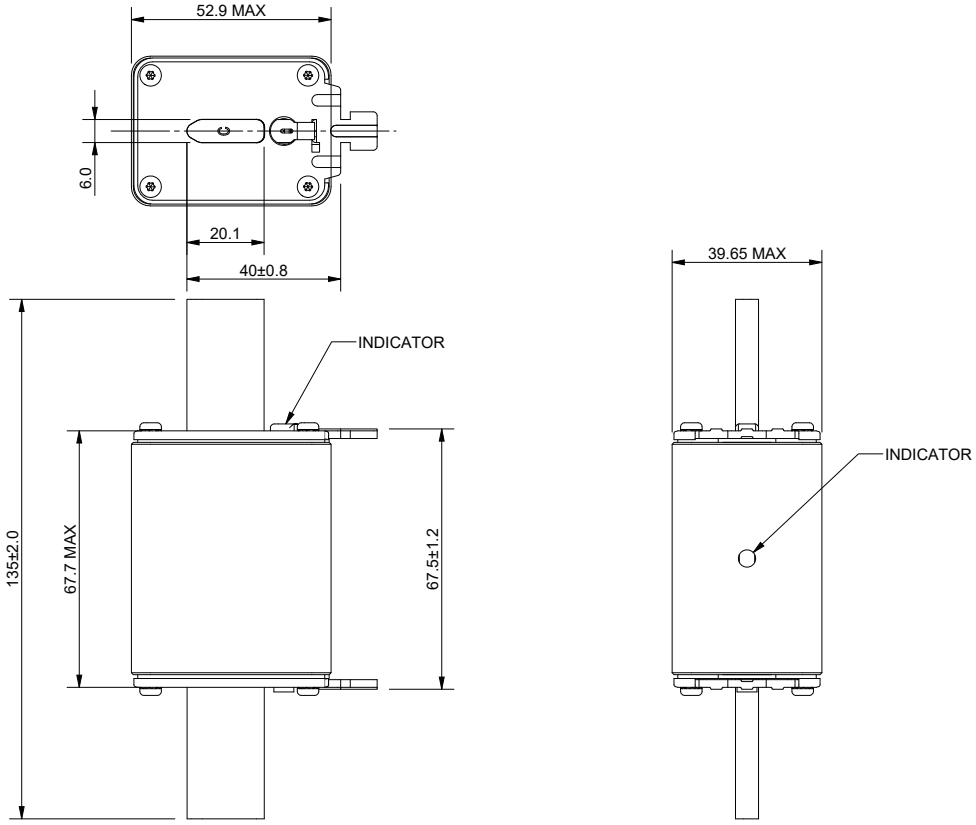
Catalog numbers

Fuse link body size	Rated voltage	Rated current (Amps)	I^2t (A^2 Sec) Pre-arcing	I^2t (A^2 Sec) Total at 1000 V d.c.	Watts loss (W) 0.7 I_n	Watts loss (W) I_n	Catalog numbers Bladed version	Catalog numbers Bolted version
1	1000 V d.c.	63	470	4300	5	12	BSF-063G-NH110	BSF-063G-NH110-B
		80	640	5760	6	15.5	BSF-080G-NH110	BSF-080G-NH110-B
		100	1300	11,700	7	16.5	BSF-100G-NH110	BSF-100G-NH110-B
		125	2600	23,400	7	17.5	BSF-125G-NH110	BSF-125G-NH110-B
		160	5200	46,800	11	27.5	BSF-160G-NH110	BSF-160G-NH110-B
		200	10,200	82,000	10	25	BSF-200G-NH110	BSF-200G-NH110-B
2	1000 V d.c.	160	4600	37,000	11	28	BSF-160G-NH210	BSF-160G-NH210-B
		200	9500	76,000	13	32	BSF-200G-NH210	BSF-200G-NH210-B
		250	17,000	136,000	15	38	BSF-250G-NH210	BSF-250G-NH210-B
3	1000 V d.c.	315	32,000	260,000	18	44	BSF-315G-NH310	BSF-315G-NH310-B
		355	44,500	370,000	18	46	BSF-355G-NH310	BSF-355G-NH310-B
		400	67,500	550,000	20	50	BSF-400G-NH310	BSF-400G-NH310-B

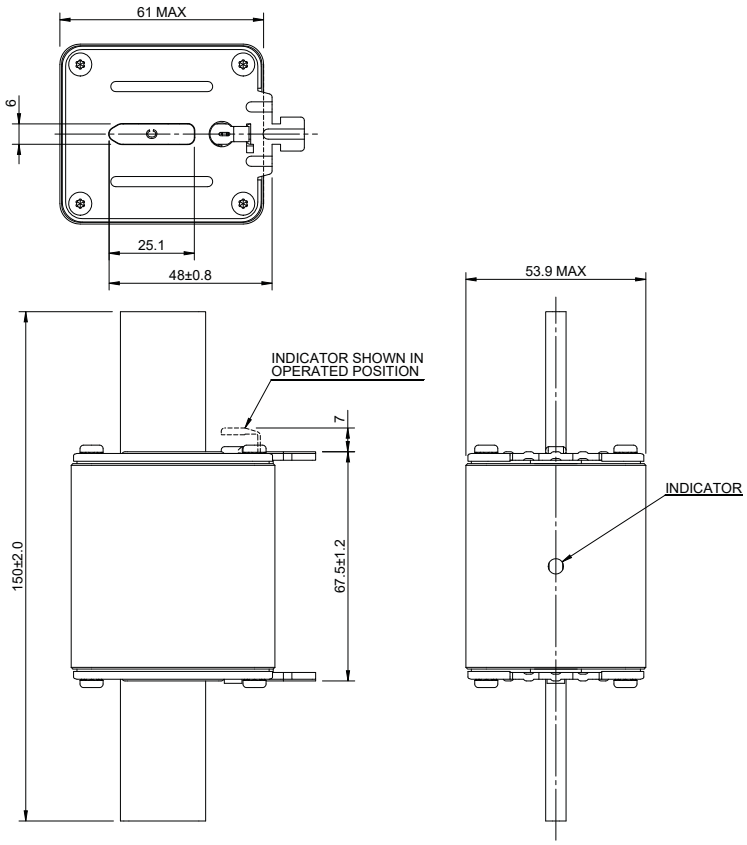
Data sheet: 135001

1000 V d.c. (IEC) - 63 A to 400 A - BSF-NH - NH Style

Dimensions (mm) - Size 1, bladed



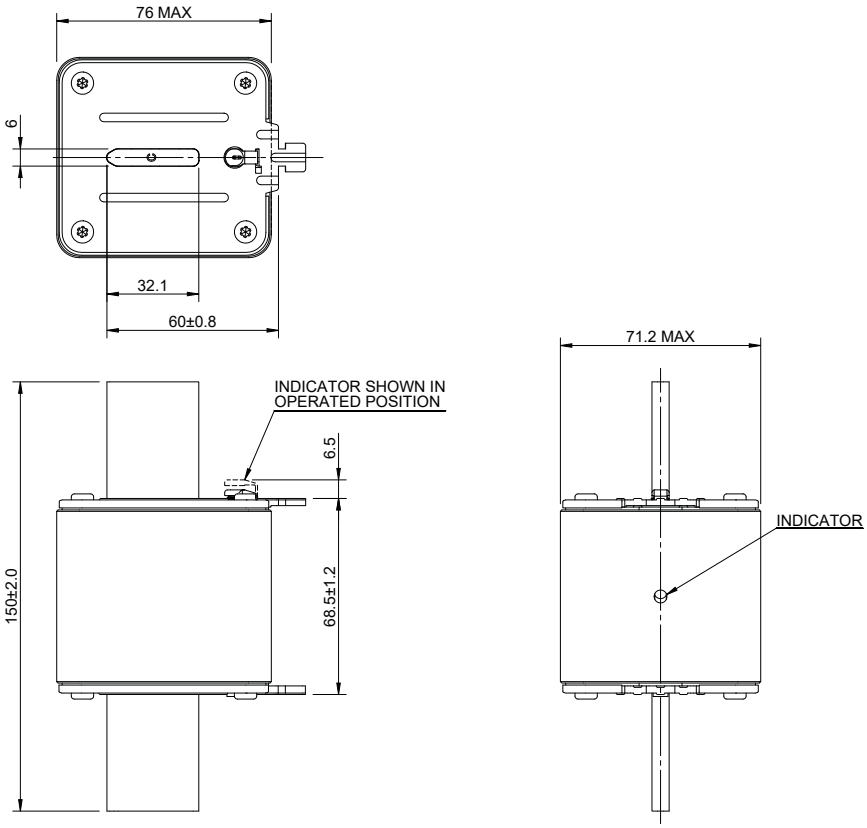
Dimensions (mm) - Size 2, bladed



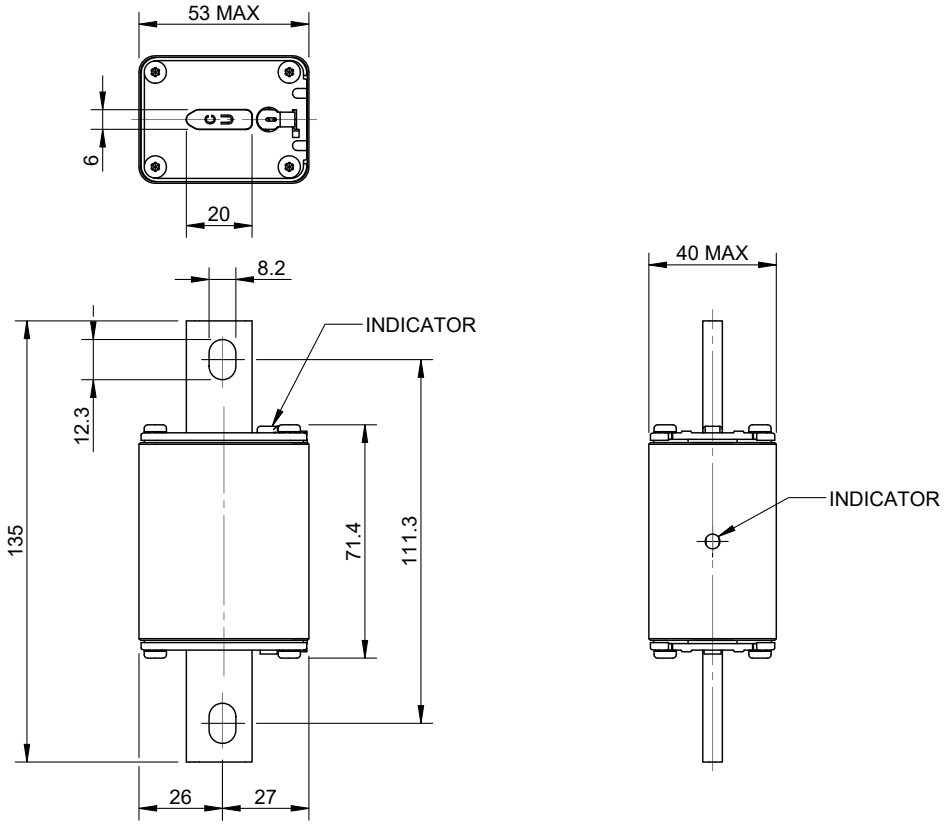
Data sheet: 135001

1000 V d.c. (IEC) - 63 A to 400 A - BSF-NH - NH Style

Dimensions (mm) - Size 3, bladed



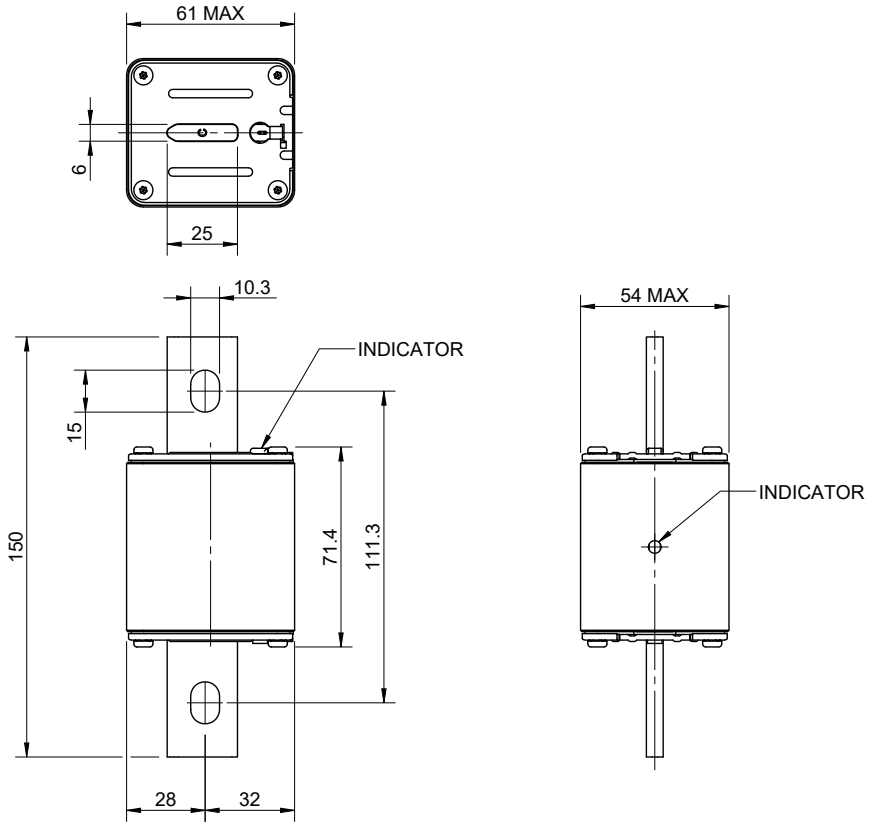
Dimensions (mm) - Size 1, bolted



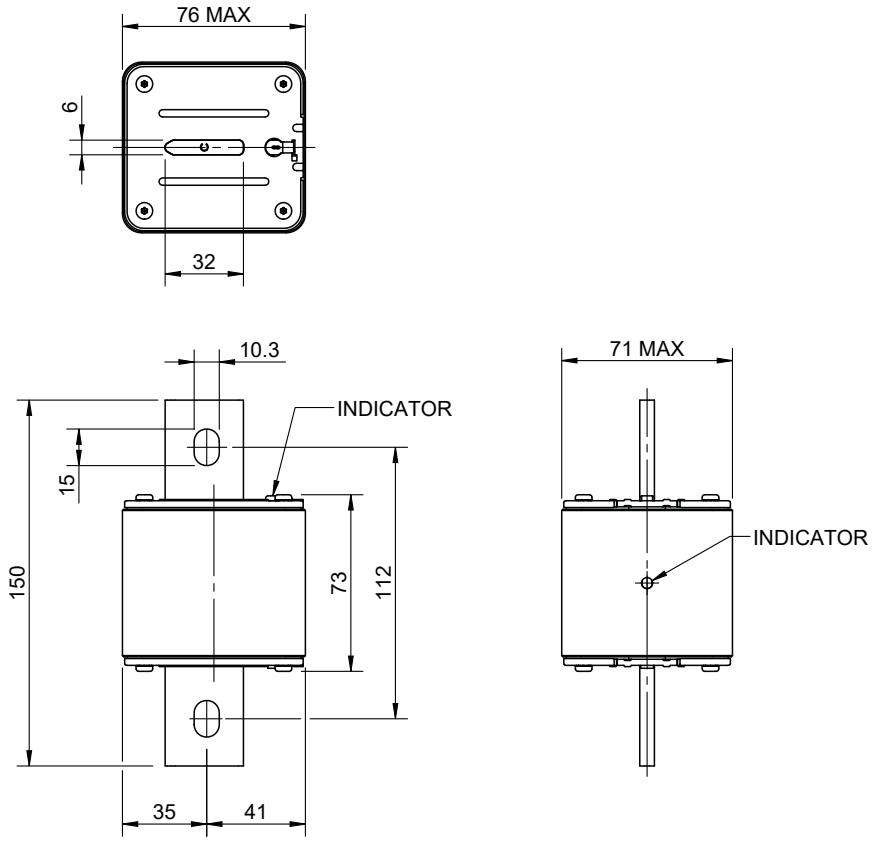
Data sheet: 135001

1000 V d.c. (IEC) - 63 A to 400 A - BSF-NH - NH Style

Dimensions (mm)- Size 2, bolted



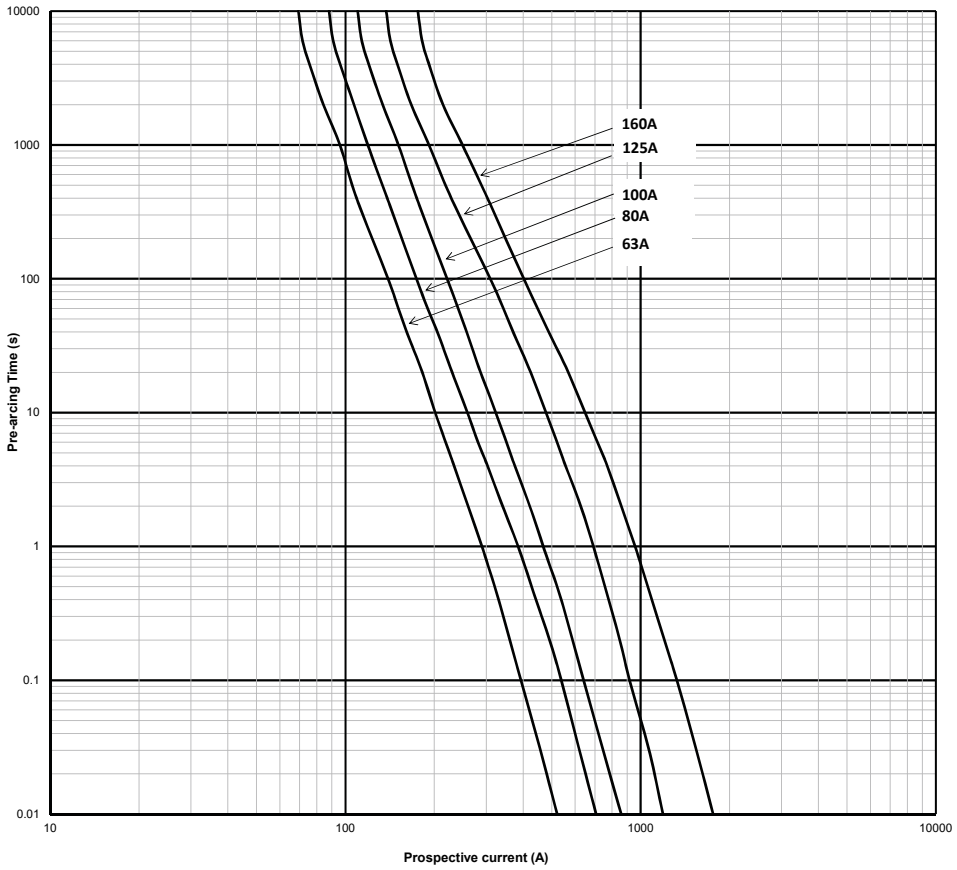
Dimensions (mm) - Size 3, bolted



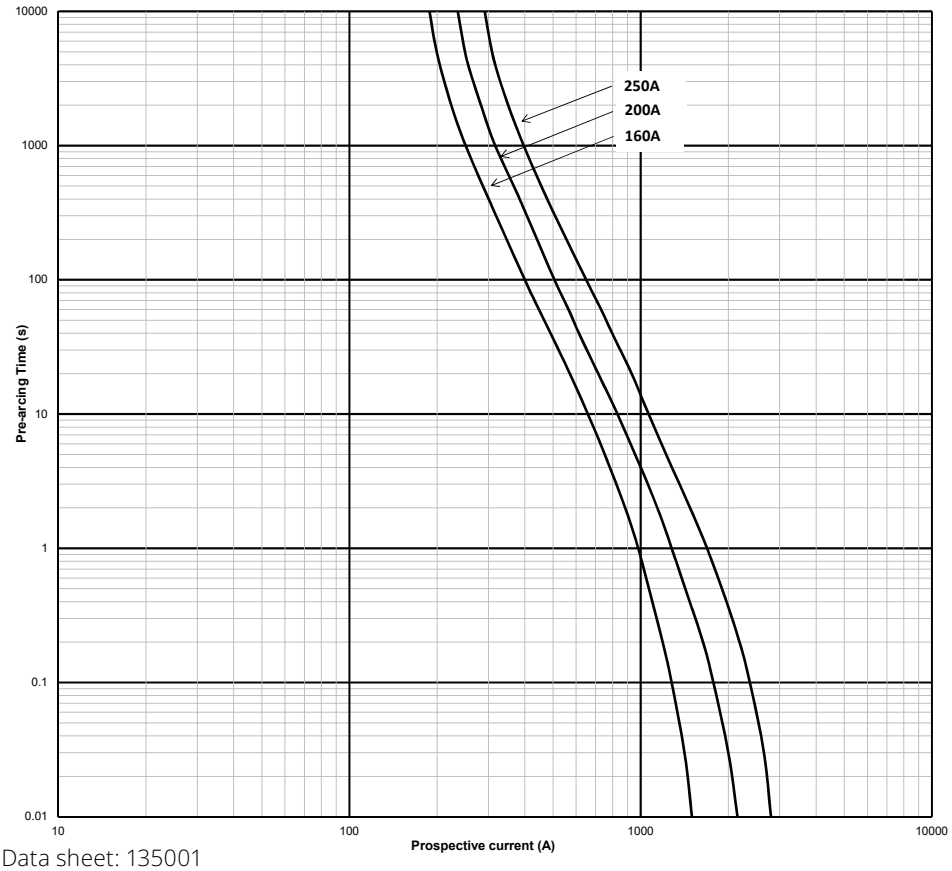
Data sheet: 135001

1000 V d.c. (IEC) - 63 A to 400 A - BSF-NH - NH Style

Time-current curve - Size 1, 63 A to 200 A



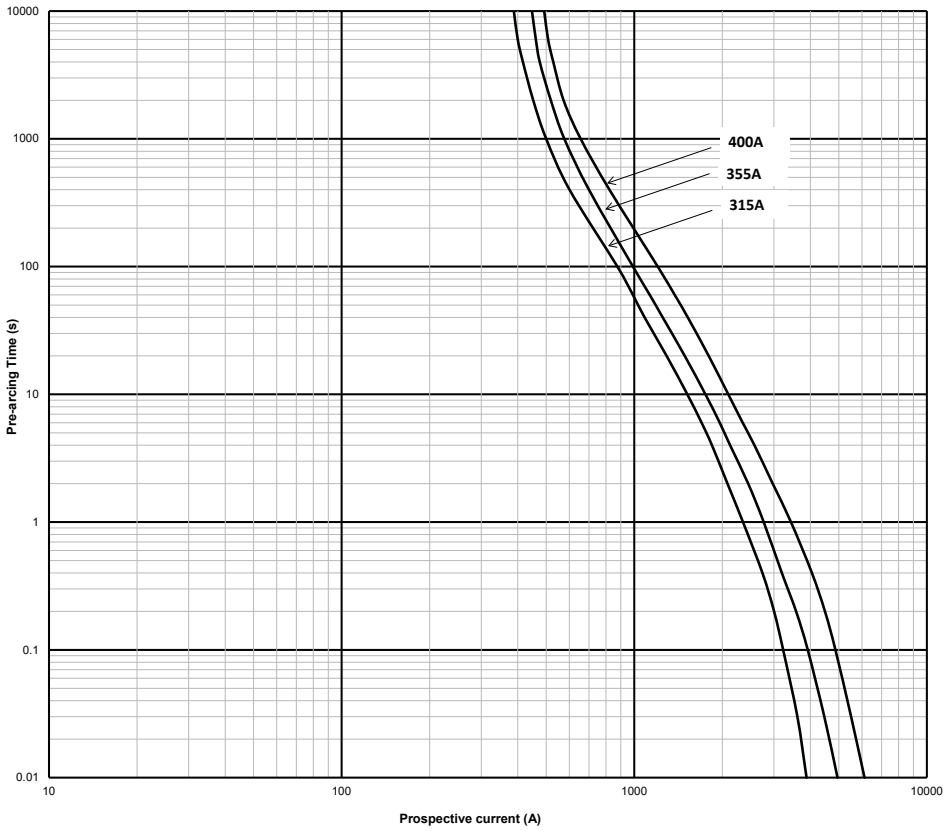
Time-current curve - Size 2, 160 A to 250 A



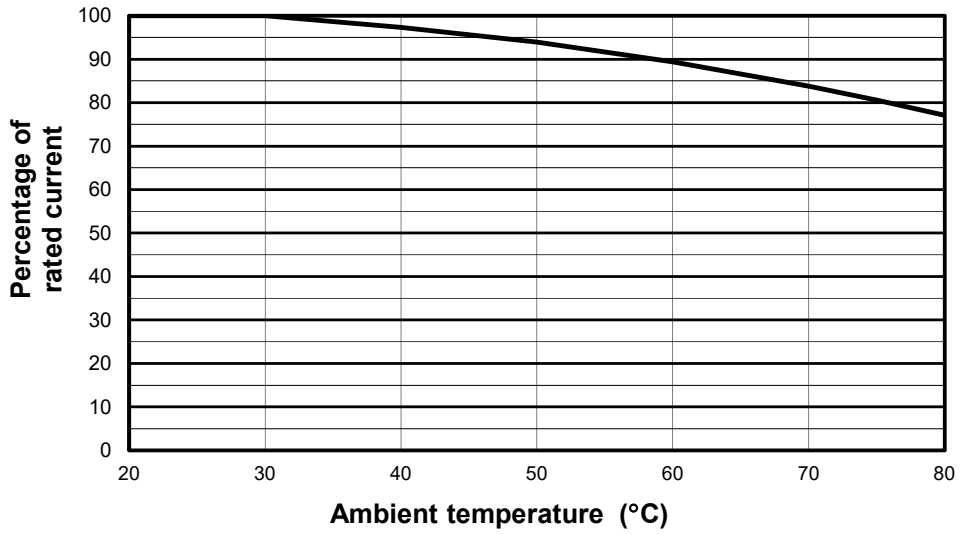
Data sheet: 135001

1000 V d.c. (IEC) - 63 A to 400 A - BSF-NH - NH Style

Time-current curve - Size 3, 315 A to 400 A



Temperature derating



(The ambient temperature is that local to the fuse link)

Data sheet: 135001

Square body fuse links

1000 V d.c. (IEC/UL) - 250 A to 550 A - 180D - Flush end contact fuse body size 2

Specifications



Description

Eaton's Bussmann series 1000 V d.c. aR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 1000 V d.c. (IEC/UL)
- Rated current: 250 A to 550 A
- Breaking capacity: 100 kA
- Operating class: aR

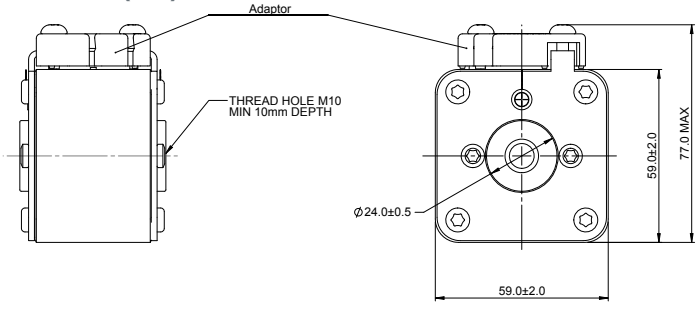
Standards / Agency information

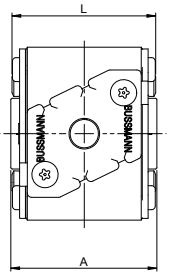
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

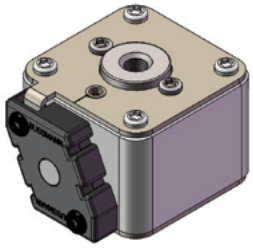
Catalog numbers

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 10ms)	Pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Fuse type: BKN/75
2	1000 V d.c. (IEC/UL)	250A	100	6500	65	180D5388
		280A	100	9350	70	180D5389
		315A	100	13,000	75	180D5390
		350A	100	16,500	80	180D5391
		400A	100	23,000	85	180D5392
		450A	100	34,000	90	180D5393
		500A	100	48,000	95	180D5394
		550A	100	62,000	100	180D5395

Dimensions (mm)



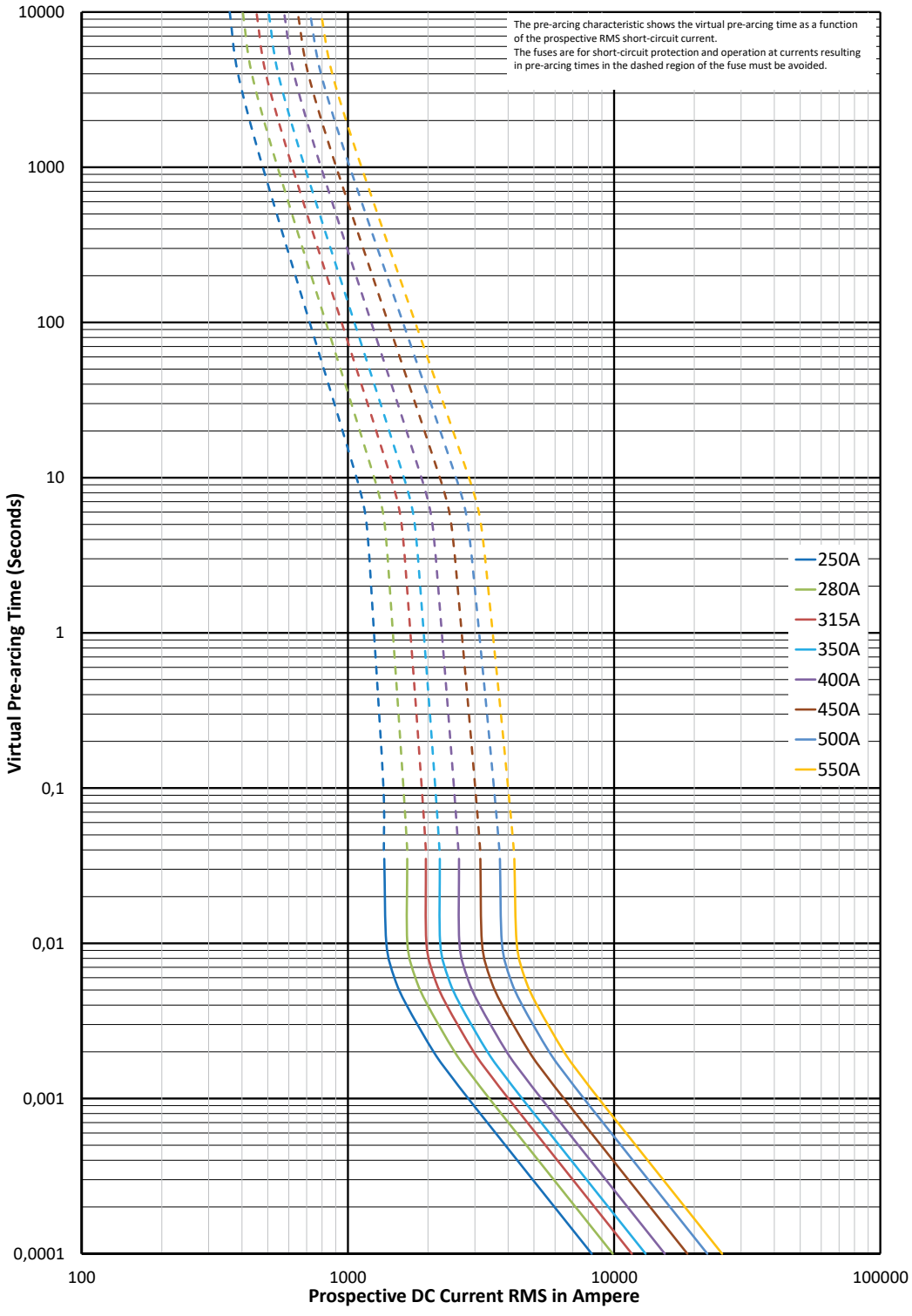




A	L
74.3±1.4	75 ± 1

1000 V d.c. (IEC/UL) - 250 A to 550 A - 180D - Flush end contact fuse body size 2

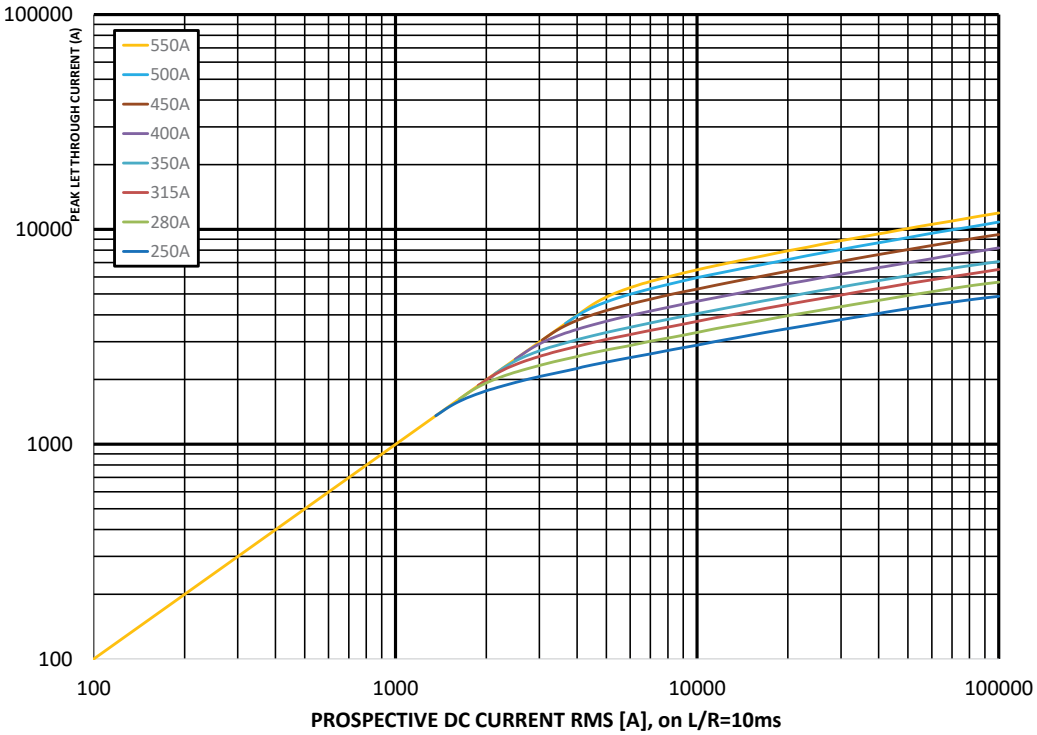
Time-current curve



K_b = 1 N = 1,6

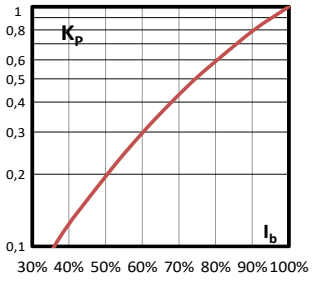
1000 V d.c. (IEC/UL) - 250 A to 550 A - 180D - Flush end contact fuse body size 2

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.



1000 V d.c. (UL) - 700 A to 1000 A - 180D - Flush end contact fuse body size 2

Specifications



Description

Eaton's Bussmann series 1000 V d.c. aR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage:
  - 1000 V d.c. (UL) for 700 A and 800 A
  - 900 V d.c. (UL) for 1000 A
- Rated current: 700 A to 1000 A
- Breaking capacity: 70 kA
- Operating class: aR

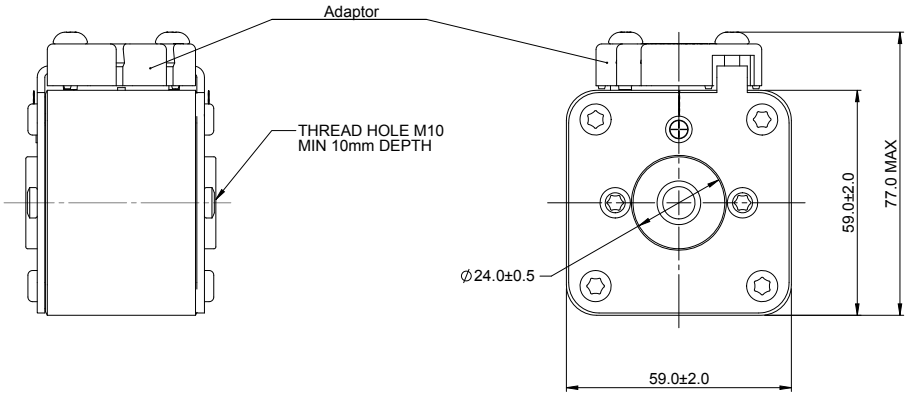
Standards / Agency information

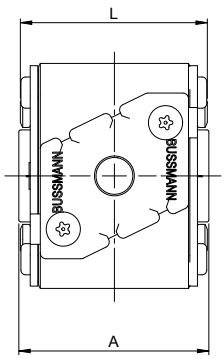
Designed and tested to UL 248-13 Recognised, RoHS compliant

Catalog numbers

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA)	Minimum pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Catalog number
2	1000 V d.c. (UL)	700	70	160,000	125	180D5447
		800	70	245,000	130	180D5448
	900 V d.c. (UL)	1000	70	480,000	145	180D5500

Dimensions (mm)



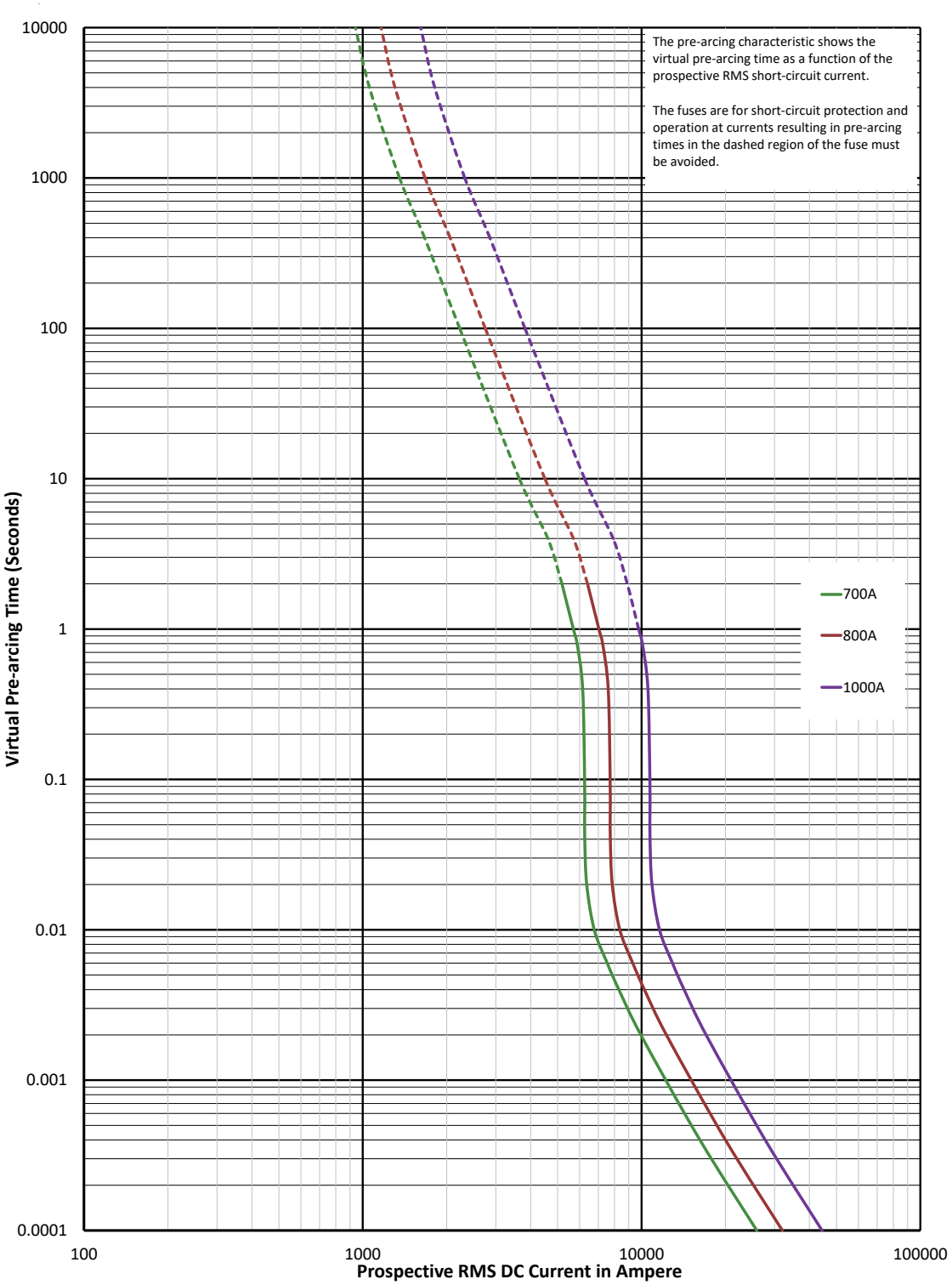


	A	L
700 A and 800 A	80.3 ± 1.5	79.5 ± 1.3
1000 A	91.3 ± 1.5	79.5 ± 1.3

Data sheet 180K2004

1000 V d.c. (UL) - 700 A to 1000 A - 180D - Flush end contact fuse body size 2

Time-current curve



K_b = 1 N = 1.6

Data sheet 180K2004

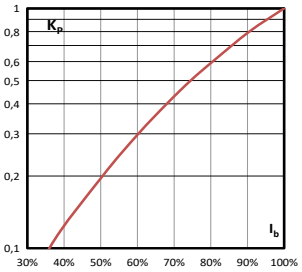
1000 V d.c. (UL) - 700 A to 1000 A - 180D - Flush end contact fuse body size 2

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.



Data sheet 180K2004

Square body fuse links

1000 V d.c. (IEC), 1125 V d.c. (UL) - 50 A to 125 A - 180D - Square body bladed size 01HT

Specifications



Description
Eaton's Bussmann series 1000 V d.c./1125 V d.c. gR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.

Technical data
- Rated voltage: 1000 V d.c. (IEC) 1125 V d.c. (UL)
- Rated current: 50 A to 125 A
- Breaking capacity: 100 kA
- Operating class: gR

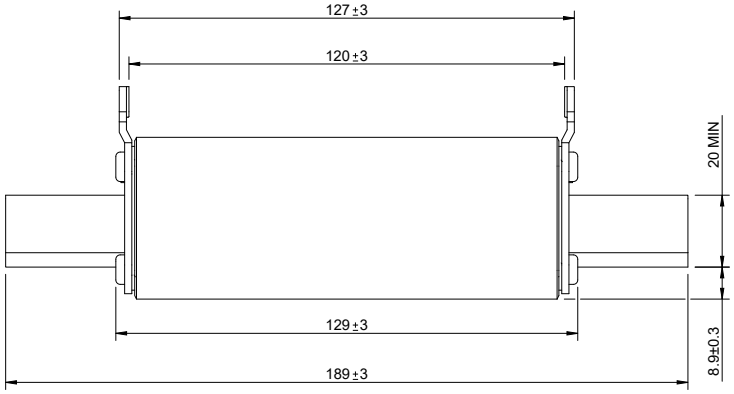
Compatible fuse holder
- SD1XL-S-PV

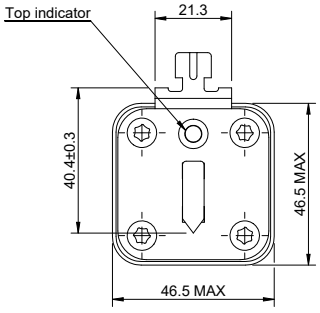
Standards / Agency information
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

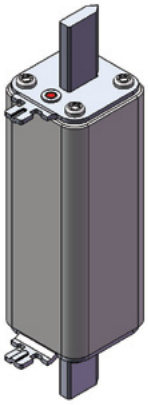
Catalog numbers

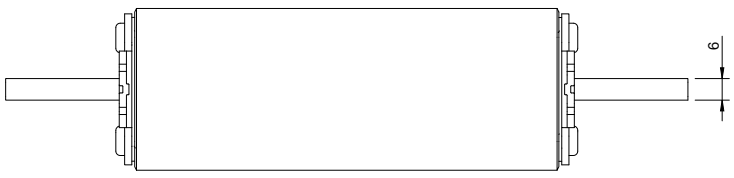
Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 10ms)	Pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Catalog number
01HT	1000 V d.c. (IEC)	50	100	175	25	180D1608
	1125 V d.c. (UL)	63	100	362	26	180D1609
		80	100	565	35	180D1610
		100	100	1100	40	180D1611
		125	100	2200	44	180D1612

Dimensions (mm)





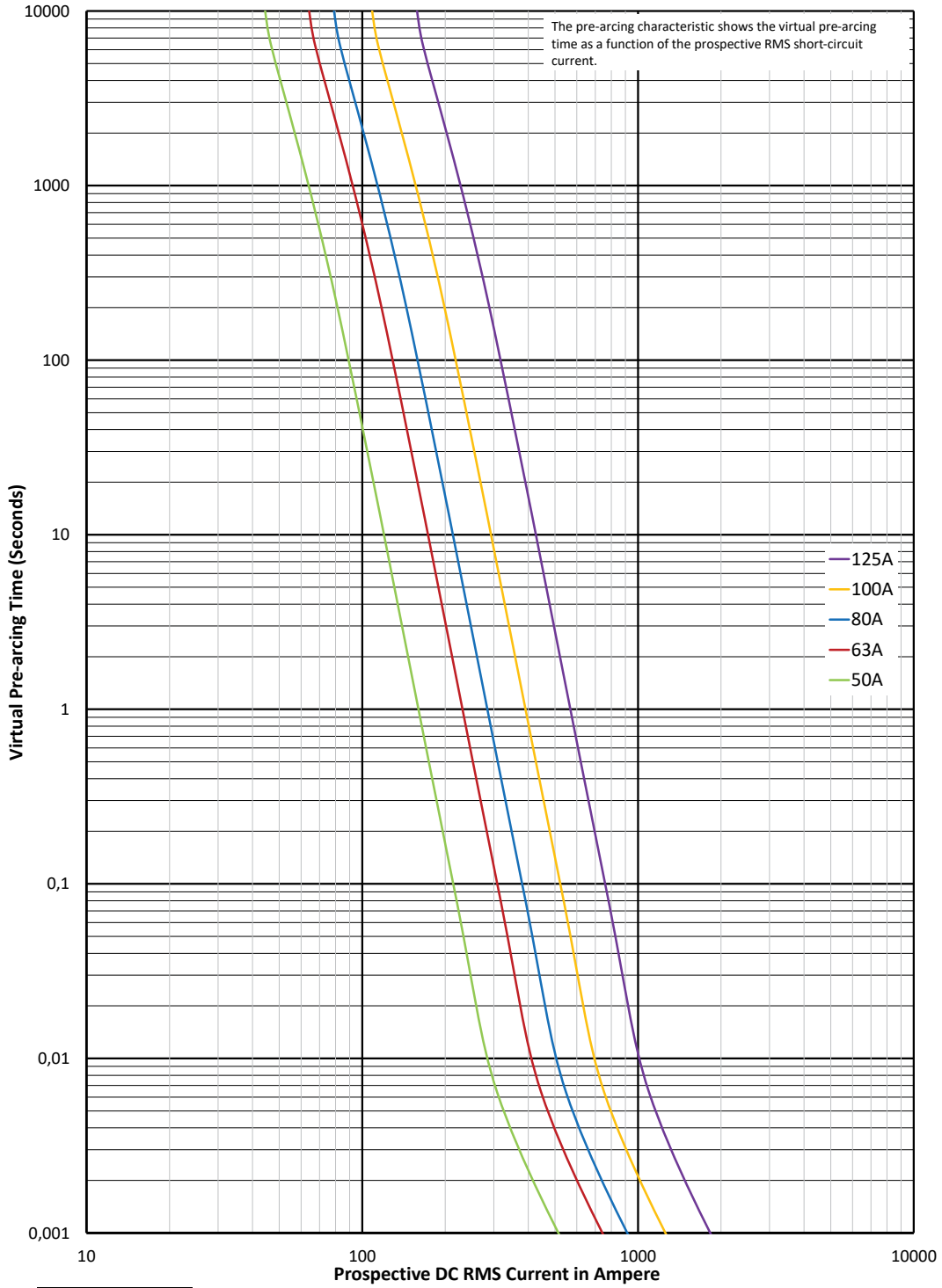




Data sheet: TD135016EN

1000 V d.c. (IEC), 1125 V d.c. (UL) - 50 A to 125 A - 180D - Square body bladed size 01HT

Time-current curve

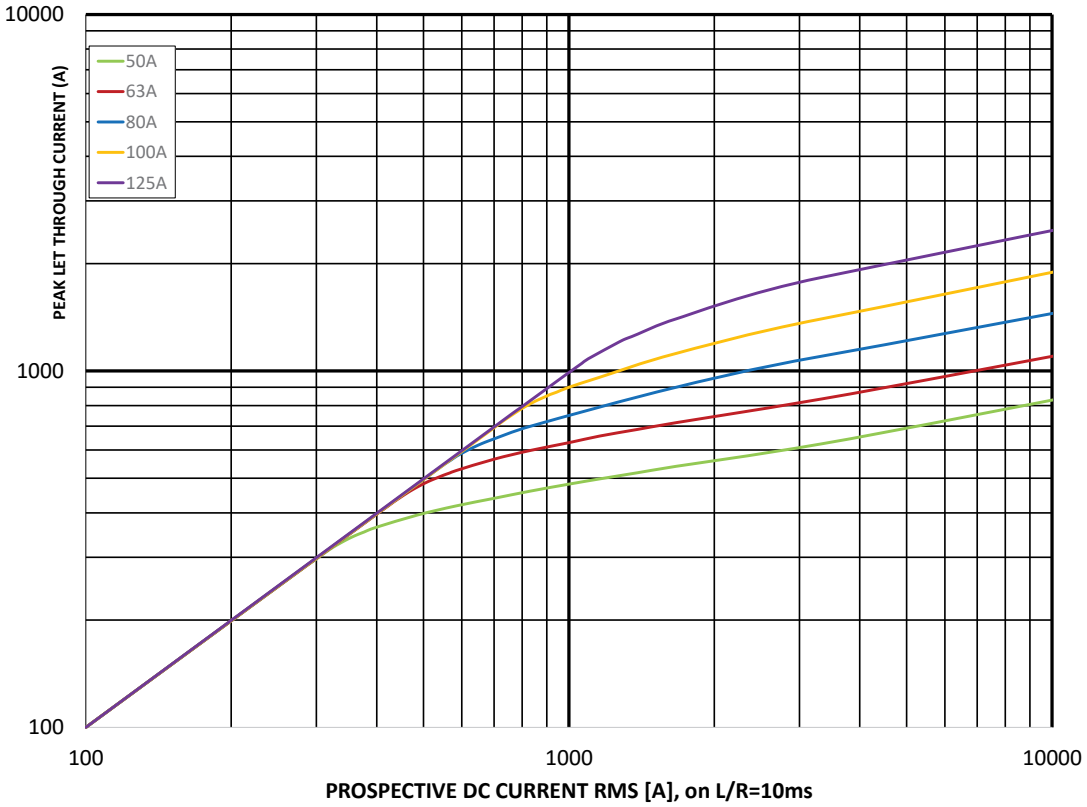


$K_b = \frac{1}{N = 1,6}$

Data sheet: TD135016EN

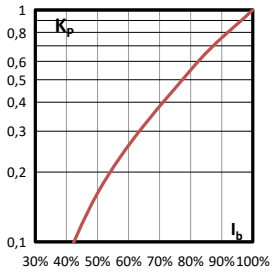
1000 V d.c. (IEC), 1125 V d.c. (UL) - 50 A to 125 A - 180D - Square body bladed size 01HT

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.



Data sheet: TD135016EN

1000 V d.c. (IEC), 1125 V d.c. (UL) - 125 A to 250 A - 180D - Square body bladed size 2HT

Specifications



Description

Eaton's Bussmann series 1000 V d.c./1125 V d.c. gR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 1000 V d.c. (IEC) 1125 V d.c. (UL)
- Rated current: 125 A to 250 A
- Breaking capacity: 100 kA
- Operating class: gR

Compatible fuse holder

- SD2XL-S-PV

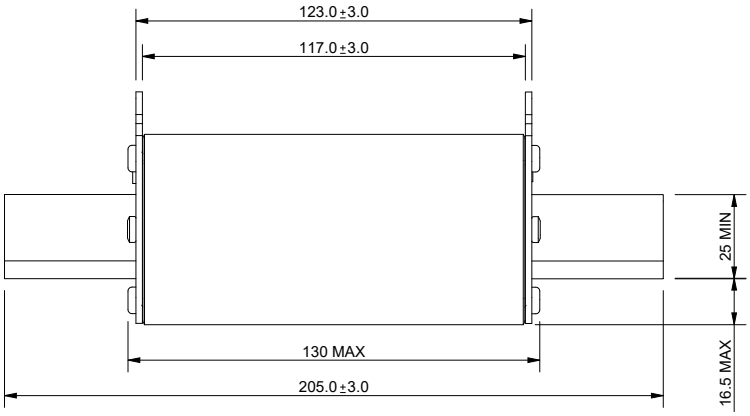
Standards / Agency information

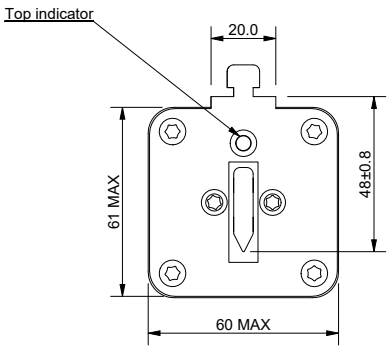
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

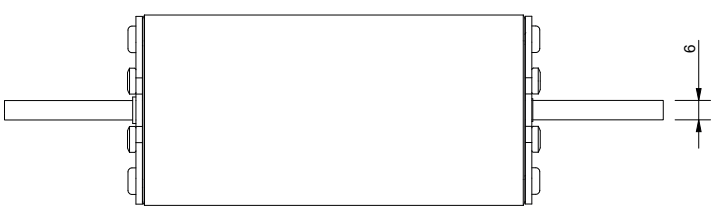
Catalog numbers

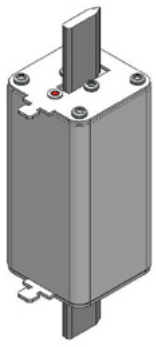
Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 10ms)	Pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Catalog number
2HT	1000 V d.c. (IEC)	125	100	2200	44	180D2612
	1125 V d.c. (UL)	160	100	5000	48	180D2613
		200	100	8800	57	180D2614
		250	100	16,600	70	180D2615

Dimensions (mm)





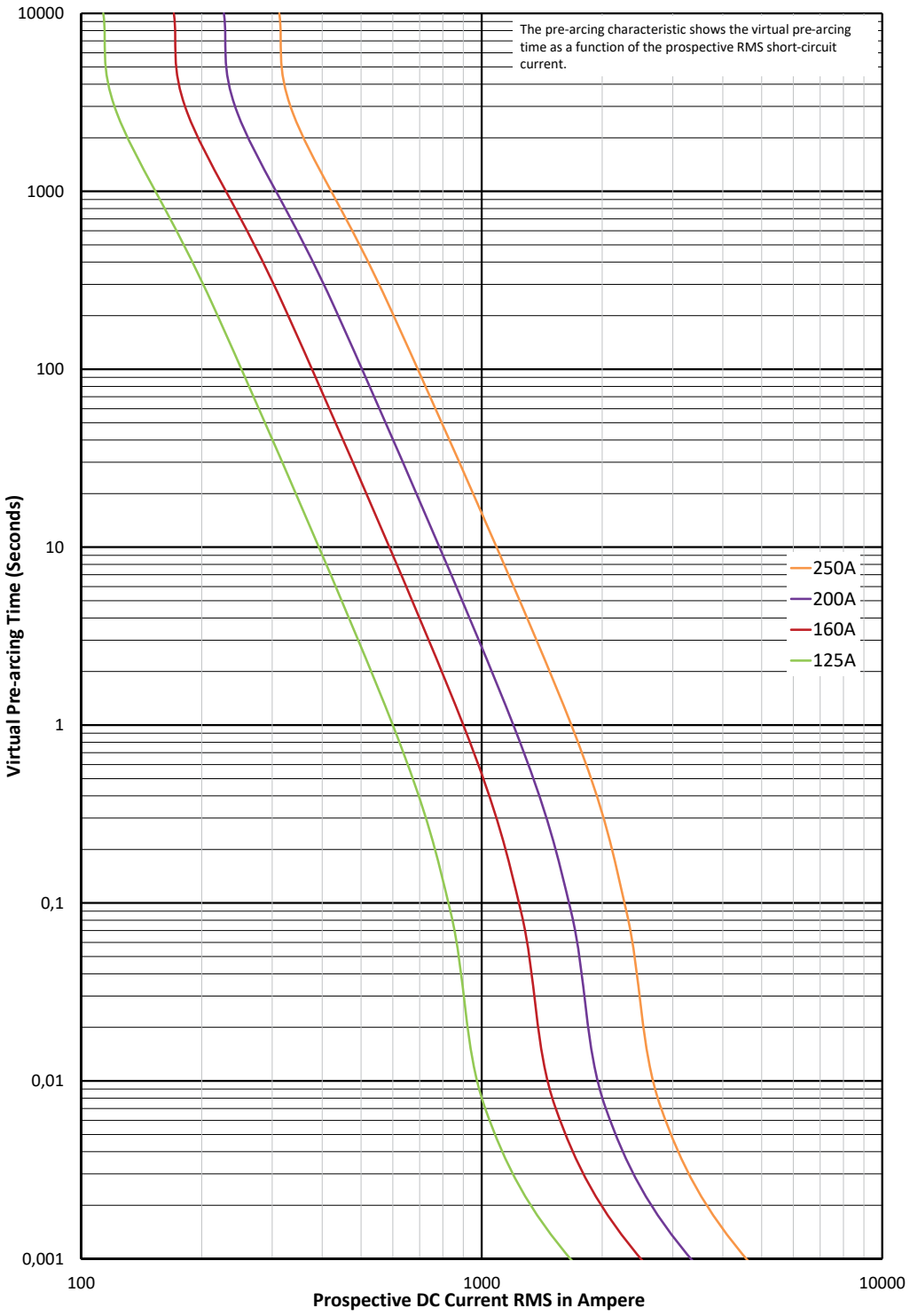




Data sheet: TD135017EN

1000 V d.c. (IEC), 1125 V d.c. (UL) - 125 A to 250 A - 180D - Square body bladed size 2HT

Time-current curve

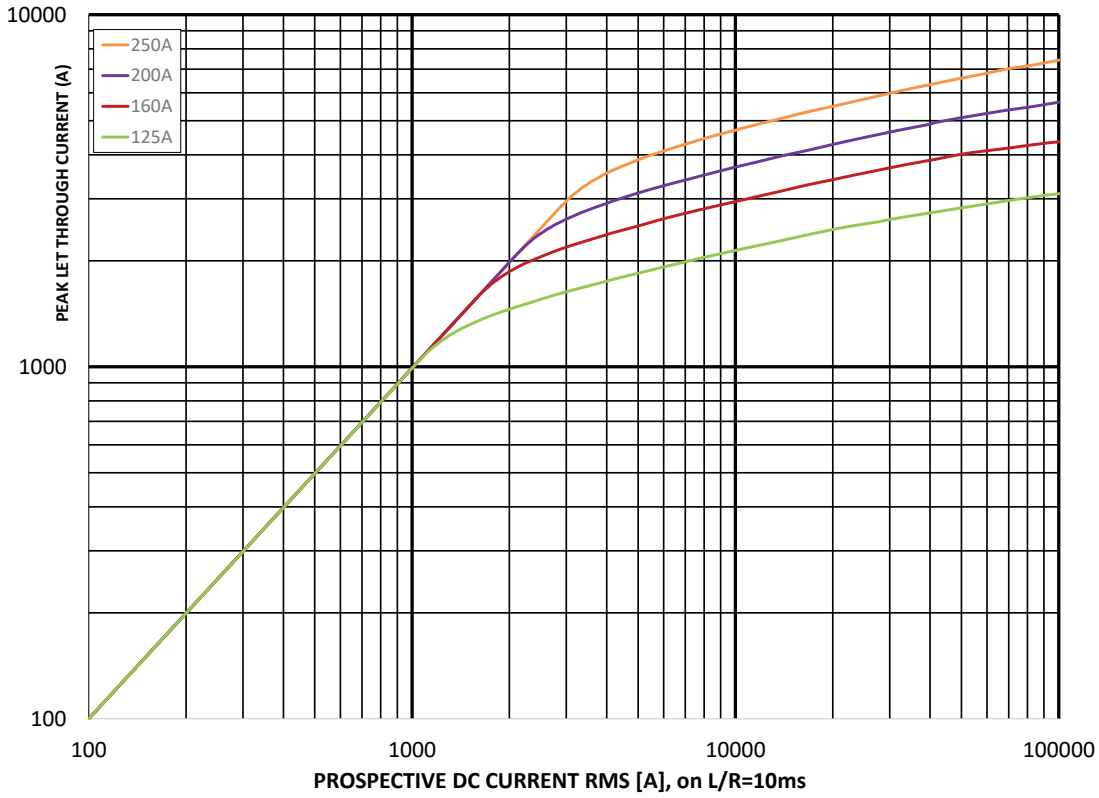


K_b = 1 N = 1,6

Data sheet: TD135017EN

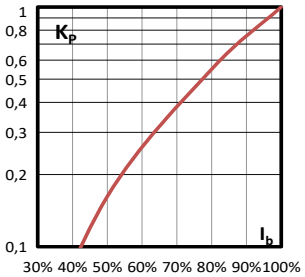
1000 V d.c. (IEC), 1125 V d.c. (UL) - 125 A to 250 A - 180D - Square body bladed size 2HT

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.



Data sheet: TD135017EN

Square body fuse links

1000 V d.c. (IEC), 1125 V d.c. (UL) - 250 A to 500 A - 180D Square body bladed size 3HT

Specifications



Description
Eaton's Bussmann series 1000 V d.c./1125 V d.c. gR square body fuse links deliver fast, dependable protection for advanced DC systems, including DC common bus, EV charging infrastructure, DC drives, and power conversion applications.

Technical data
- Rated voltage: 1000 V d.c. (IEC) 1125 V d.c. (UL)
- Rated current: 250 A to 500 A
- Breaking capacity: 100 kA
- Operating class: gR

Compatible fuse holder
- SD3L-S-PV

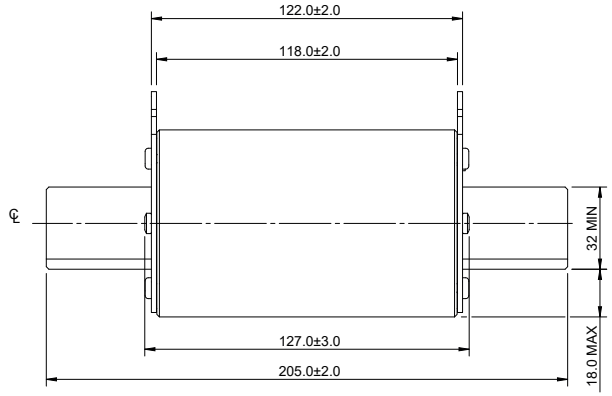
Compatible microswitch
- 170H0236

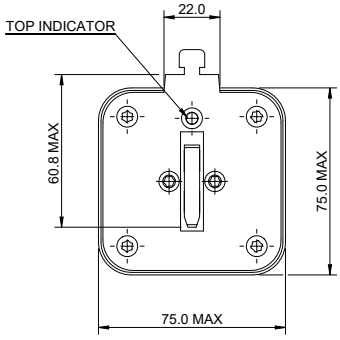
Standards / Agency information
Designed and tested to IEC 60269 part 4, UL 248-13 Recognised, RoHS compliant

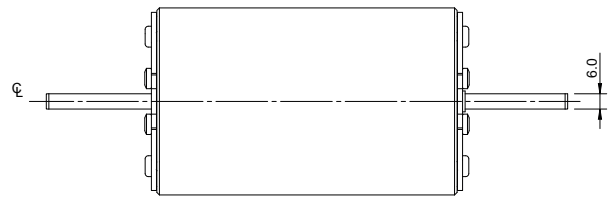
Catalog numbers

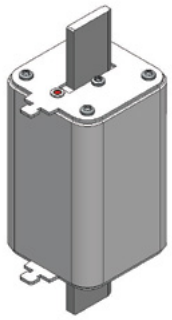
Fuse body size	Rated voltage	Rated current Amps)	Breaking capacity (kA at 10ms)	Pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Catalog number
3HT	1000 V d.c. (IEC)	250	100	74,000	49	180D3615
	1125 V d.c. (UL)	315	100	150,000	52	180D3616
		355	100	195,000	59	180D3617
		400	100	296,000	61	180D3618
		450	100	412,000	67	180D3619
		500	100	532,000	73	180D3620

Dimensions (mm)





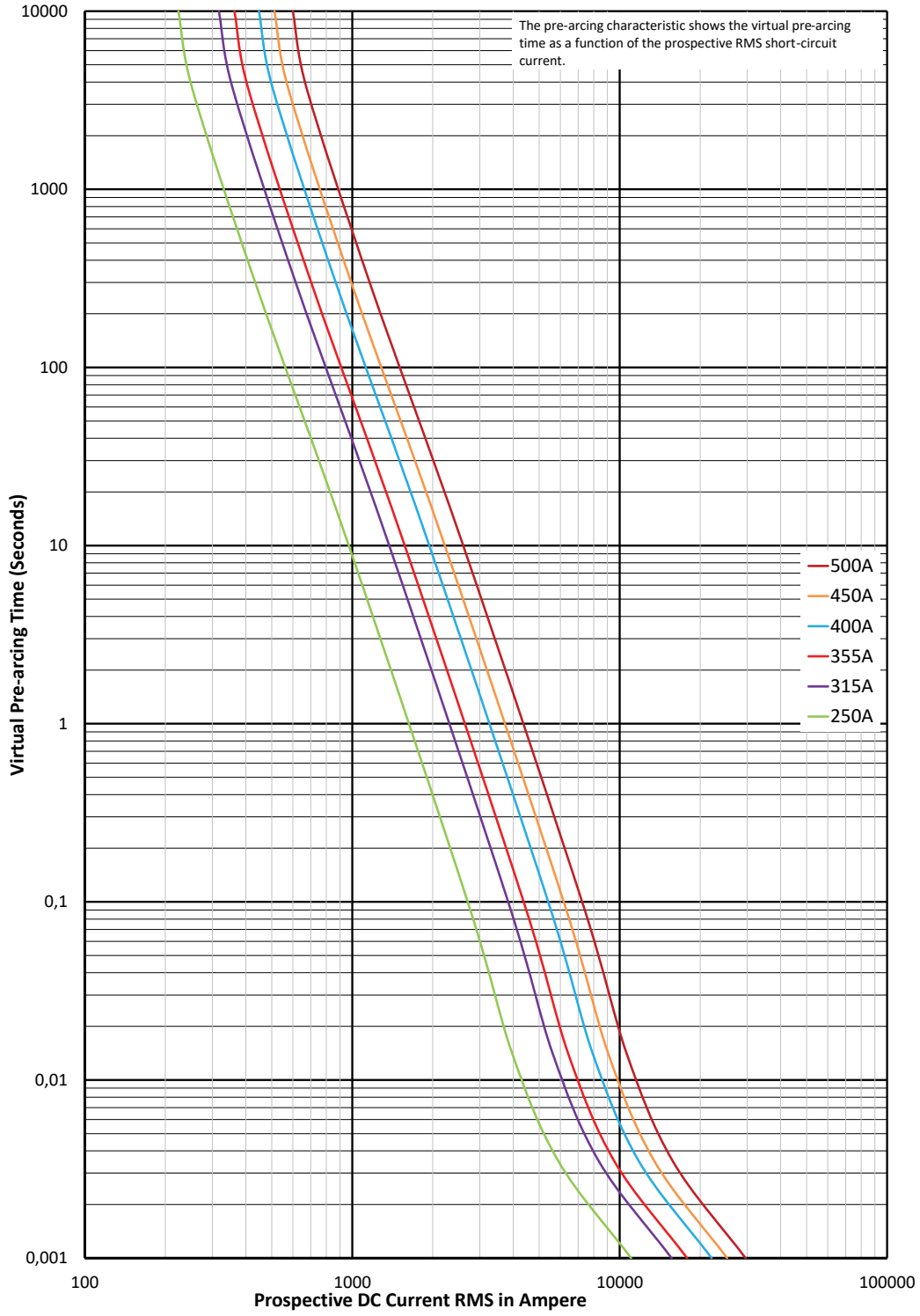




Data sheet: TD135018EN

1000 V d.c. (IEC), 1125 V d.c. (UL) - 250 A to 500 A - 180D Square body bladed size 3HT

Time-current curve

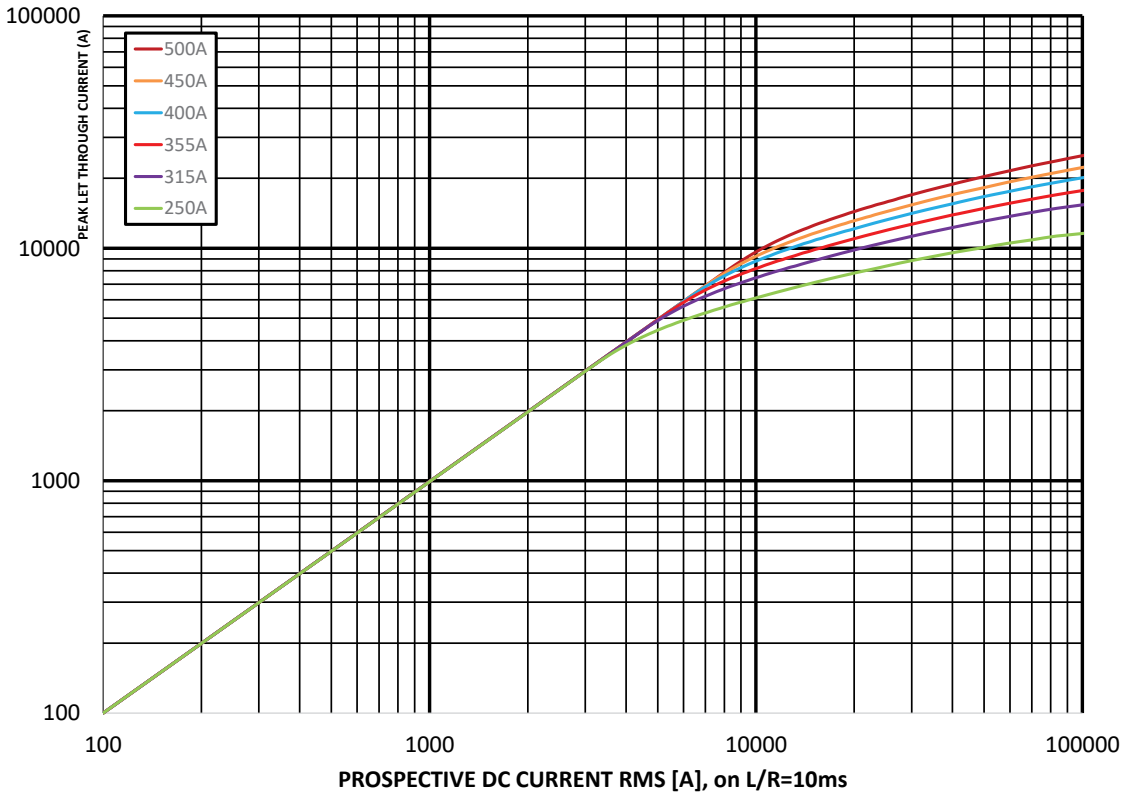


K_b = 1 N = 1,6

Data sheet: TD135018EN

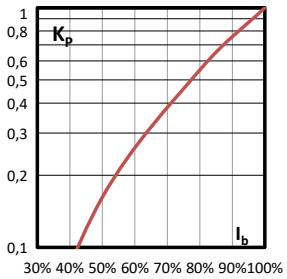
1000 V d.c. (IEC), 1125 V d.c. (UL) - 250 A to 500 A - 180D Square body bladed size 3HT

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.



Data sheet: TD135018EN

1500 V d.c. (IEC/UL) - 100 A to 315 A - 180D - Flush end, DIN and US Style contact fuse size 1

Specifications

Description

Eaton's Bussmann series 1500 V d.c. aR and aBAT square body fuse links provide fast, reliable protection for modern DC systems including BESS, EV charging infrastructure, DC drives, and power conversion applications.



Technical data

- Rated voltage: 1500 V d.c. (IEC/UL)
- Rated current: 100 A to 315 A
- Breaking capacity:
  - 100 kA at 10 ms L/R
  - 250 kA at 3ms L/R
- Operating class: aR and aBat

Compatible microswitch

- 170H0069

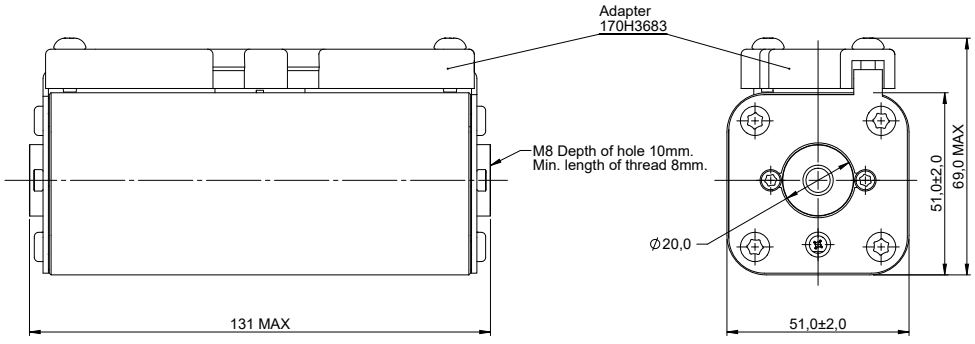
Standards / Agency information

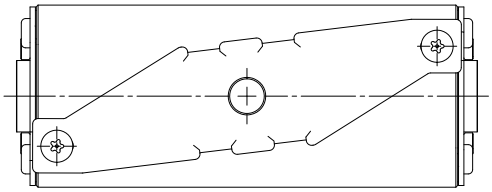
Designed and tested to IEC 60269 part 4 and 7, UL 248-13
Recognised, RoHS compliant

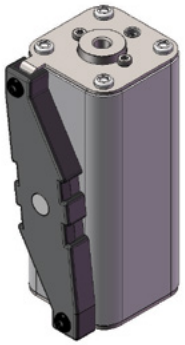
Catalog numbers

							Catalog number		
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Minimum breaking capacity (A)**	**Maximum breaking capacity**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**Fuse type: 1BKN/130 (Flush end)**	**Fuse type: 1KE/160 (DIN)**	**Fuse type: 1FKE/170 (US Style)**
1	1500 V d.c. (IEC/UL)	100	205	100kA at 10ms L/R	815	56	180D7420	180D7426	180D7432
		125	300	250kA at 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) - 1BKN/130 (Flush end)



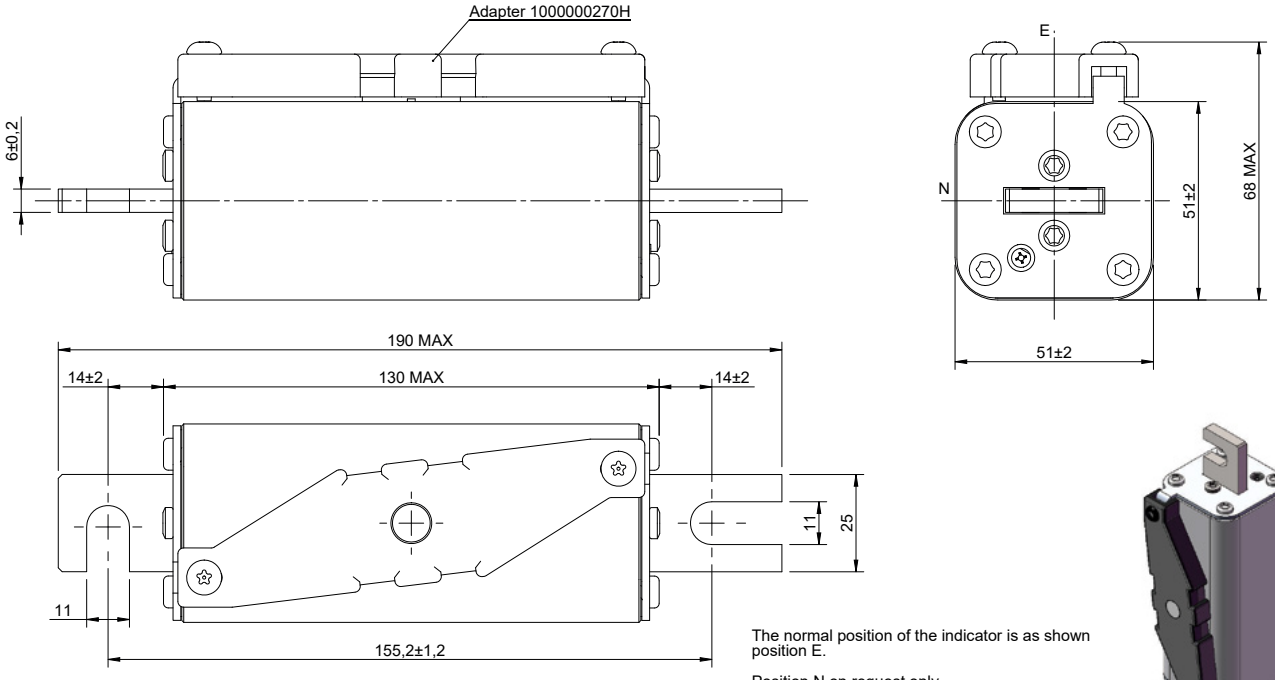




Data sheet: TD135025EN

1500 V d.c. (IEC/UL) - 100 A to 315 A - 180D - Flush end, DIN and US Style contact fuse size 1

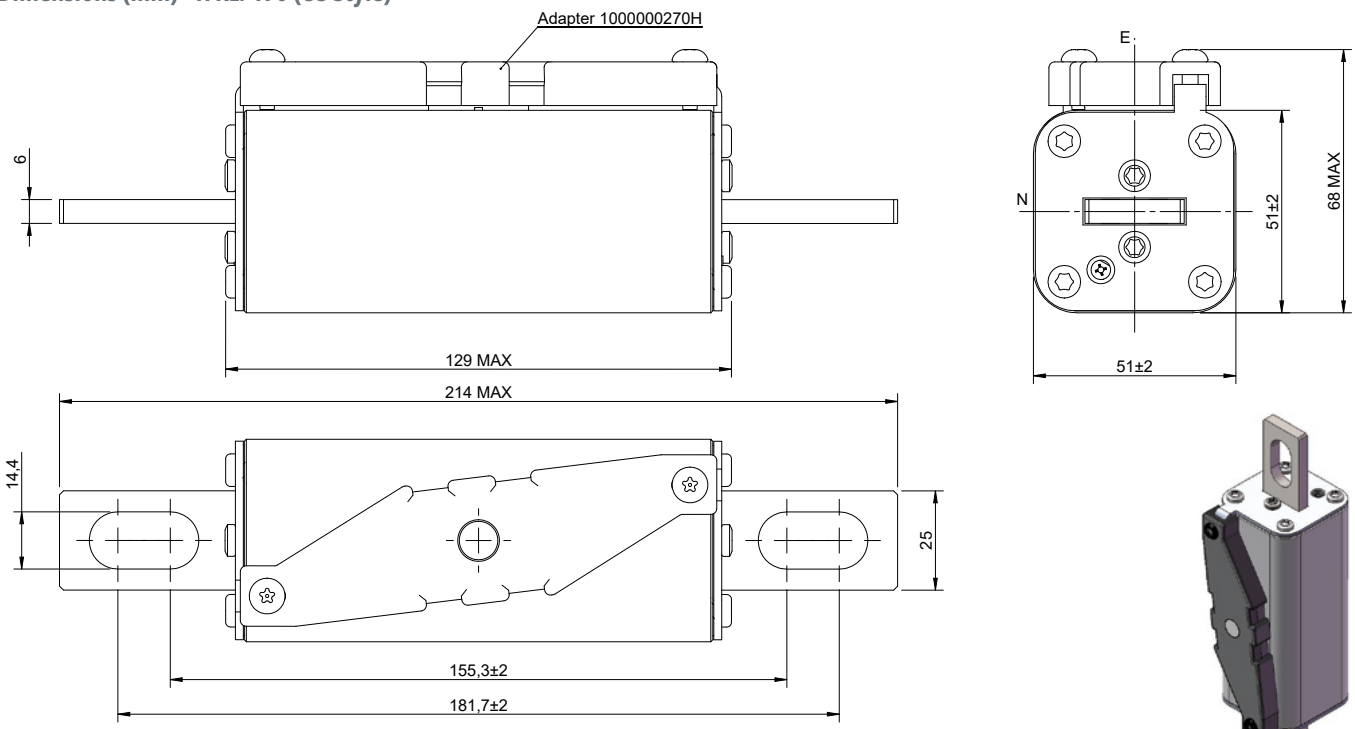
Dimensions (mm) - 1KE/160 (DIN)



The normal position of the indicator is as shown position E.

Position N on request only.

Dimensions (mm)- 1FKE/170 (US Style)



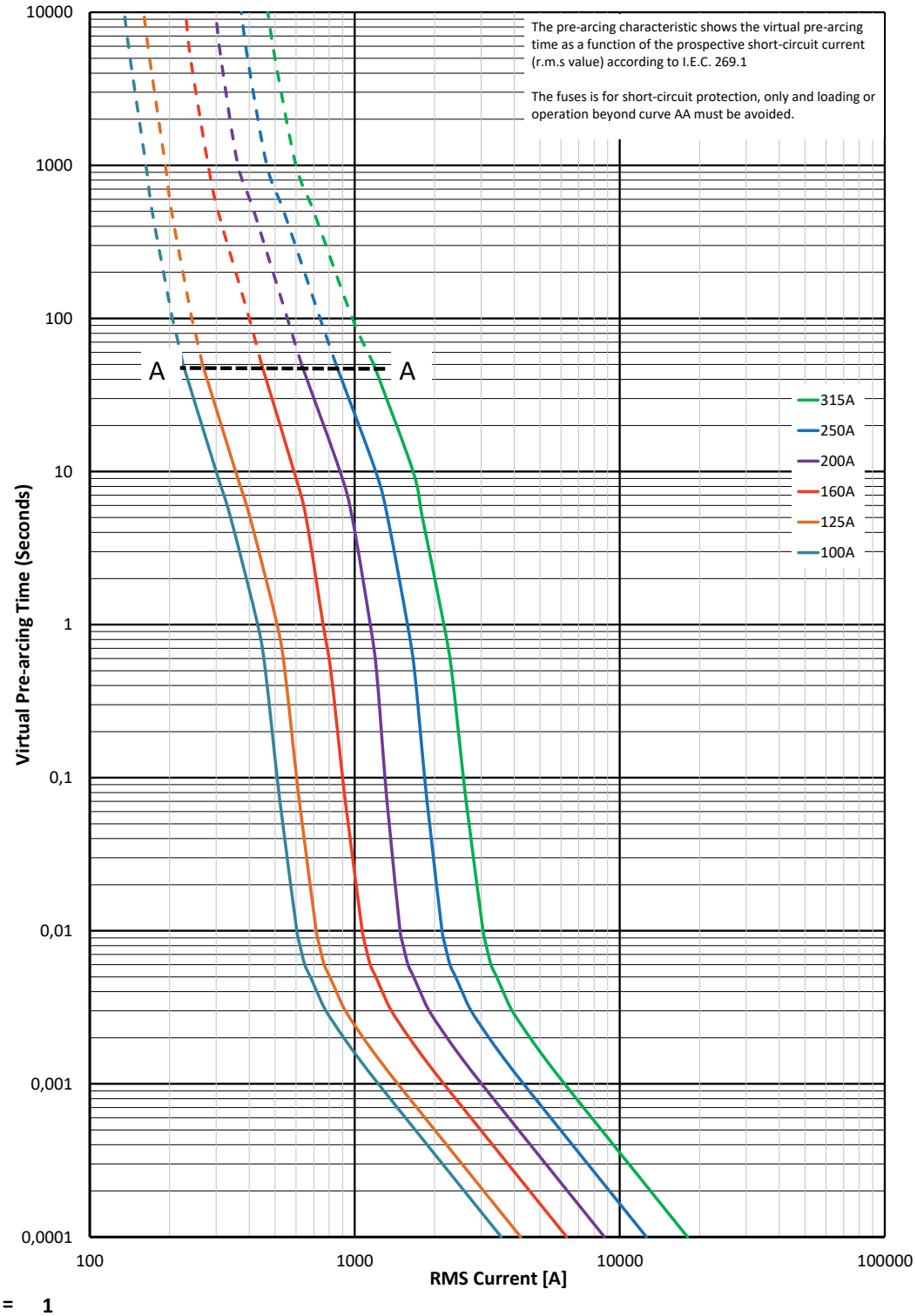
The normal position of the indicator is as shown position E.

Position N on request only.

Data sheet: TD135025EN

1500 V d.c. (IEC/UL) - 100 A to 315 A - 180D - Flush end, DIN and US Style contact fuse size 1

Time-current curve

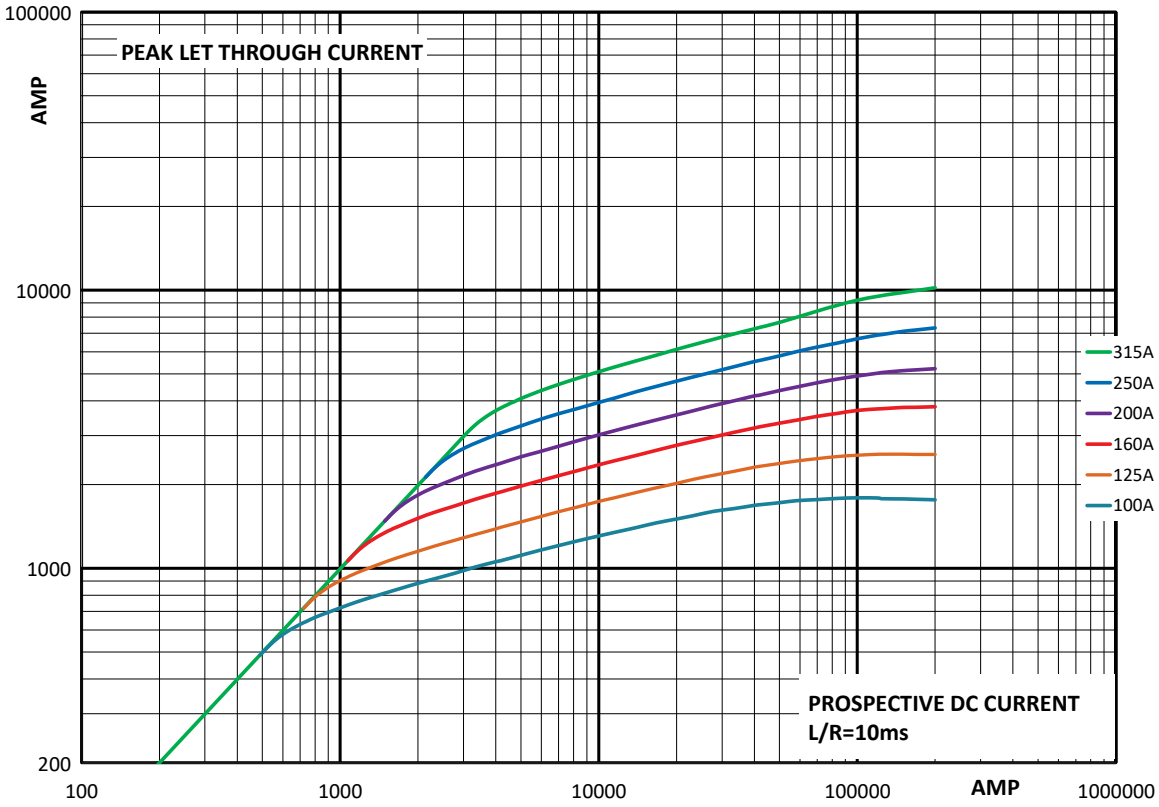


K_b = 1

Data sheet: TD135025EN

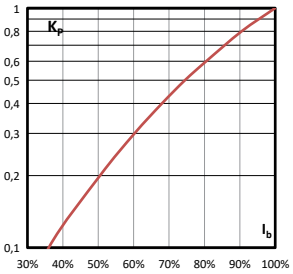
1500 V d.c. (IEC/UL) - 100 A to 315 A - 180D - Flush end, DIN and US Style contact fuse size 1

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.



Data sheet: TD135025EN

1500 V d.c. (IEC/UL) - 100 A to 450 A - ESS2 and ESS2-NI - Size 2

Specifications

Description

Eaton's Bussmann series 1500 V d.c. aR square body fuse links provide fast, reliable protection for modern DC systems including BESS, EV charging infrastructure, DC drives, and power conversion applications.



Technical data

- Rated voltage: 1500 V d.c. (IEC/UL)
- Rated current: 100 A to 450 A
- Breaking capacity:
  - 150 kA at 10ms L/R
  - 250 kA at 4ms L/R
- Operating class: aR and aBat

Standards / Agency information

Designed and tested to IEC 60269 part 4 and 7, UL 248-13
Recognised, RoHS compliant

Catalog numbers - ESS

							Catalog number				
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity**	**Minimum breaking current**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**Fuse type: 2L (Dual slotted)**	**Fuse type: 2H (US Style)**	**Fuse type: 2B (Flush end)**	**Fuse type: 2J (DIN 43653)**	**Fuse type: 2J-L (DIN 43653)**
2	1500 V d.c. (IEC/UL)	100	150 kA at 10ms L/R 250 kA at 4ms L/R	500	1000	50	ESS2L-100	ESS2H-100	ESS2B-100	ESS2J-100	ESS2J-100L
		125		625	3000	60	ESS2L-125	ESS2H-125	ESS2B-125	ESS2J-125	ESS2J-125L
		160		800	5300	74	ESS2L-160	ESS2H-160	ESS2B-160	ESS2J-160	ESS2J-160L
		200		1000	10,000	87	ESS2L-200	ESS2H-200	ESS2B-200	ESS2J-200	ESS2J-200L
		250		1250	19,000	94	ESS2L-250	ESS2H-250	ESS2B-250	ESS2J-250	ESS2J-250L
		315		1575	38,000	113	ESS2L-315	ESS2H-315	ESS2B-315	ESS2J-315	ESS2J-315L
		350		1750	53,000	117	ESS2L-350	ESS2H-350	ESS2B-350	ESS2J-350	ESS2J-350L
		400		2000	79,000	129	ESS2L-400	ESS2H-400	ESS2B-400	ESS2J-400	ESS2J-400L
		450		2250	111,000	139	ESS2L-450	ESS2H-450	ESS2B-450	ESS2J-450	ESS2J-450L

Catalog numbers - ESS-NI

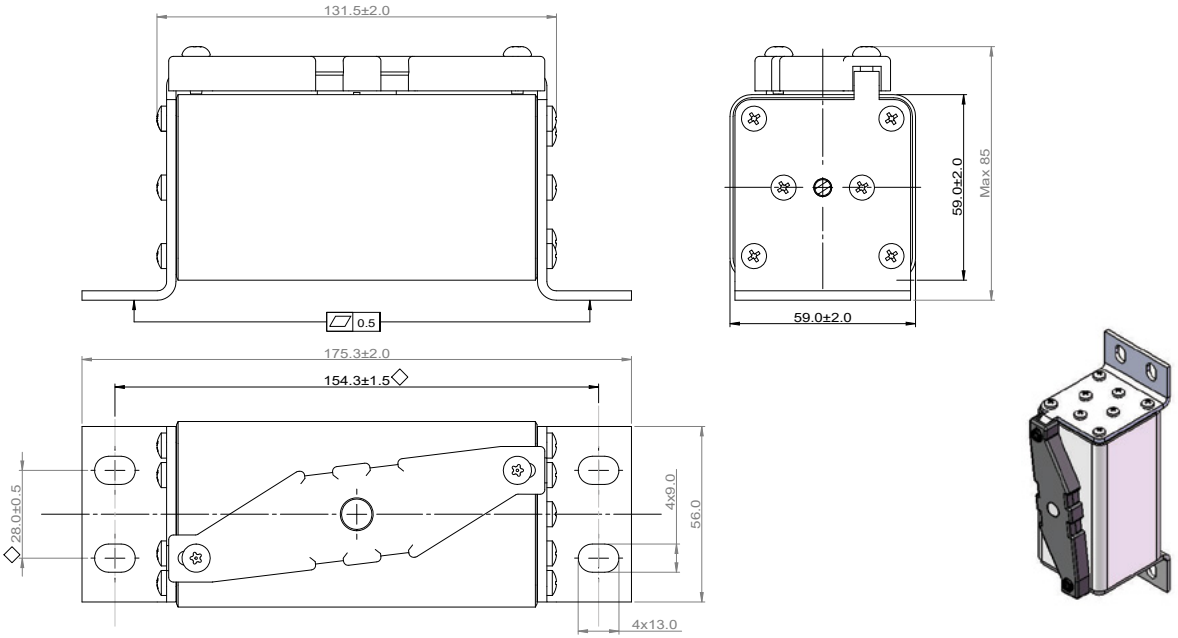
							Catalog number				
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity**	**Minimum breaking current**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**Fuse type: 2L (Dual slotted)**	**Fuse type: 2H (US Style)**	**Fuse type: 2B (Flush end)**	**Fuse type: 2J (DIN 43653)**	**Fuse type: 2J-L (DIN 43653)**
2	1500 V d.c. (IEC/UL)	100	150 kA at 10ms L/R 250 kA at 4ms L/R	500	1000	50	ESS2L-100-NI	ESS2H-100-NI	ESS2B-100-NI	ESS2J-100-NI	ESS2J-100L-NI
		125		625	3000	60	ESS2L-125-NI	ESS2H-125-NI	ESS2B-125-NI	ESS2J-125-NI	ESS2J-125L-NI
		160		800	5300	74	ESS2L-160-NI	ESS2H-160-NI	ESS2B-160-NI	ESS2J-160-NI	ESS2J-160L-NI
		200		1000	10,000	87	ESS2L-200-NI	ESS2H-200-NI	ESS2B-200-NI	ESS2J-200-NI	ESS2J-200L-NI
		250		1250	19,000	94	ESS2L-250-NI	ESS2H-250-NI	ESS2B-250-NI	ESS2J-250-NI	ESS2J-250L-NI
		315		1575	38,000	113	ESS2L-315-NI	ESS2H-315-NI	ESS2B-315-NI	ESS2J-315-NI	ESS2J-315L-NI
		350		1750	53,000	117	ESS2L-350-NI	ESS2H-350-NI	ESS2B-350-NI	ESS2J-350-NI	ESS2J-350L-NI
		400		2000	79,000	129	ESS2L-400-NI	ESS2H-400-NI	ESS2B-400-NI	ESS2J-400-NI	ESS2J-400L-NI
		450		2250	111,000	139	ESS2L-450-NI	ESS2H-450-NI	ESS2B-450-NI	ESS2J-450-NI	ESS2J-450L-NI

Data sheet: TD135030EN

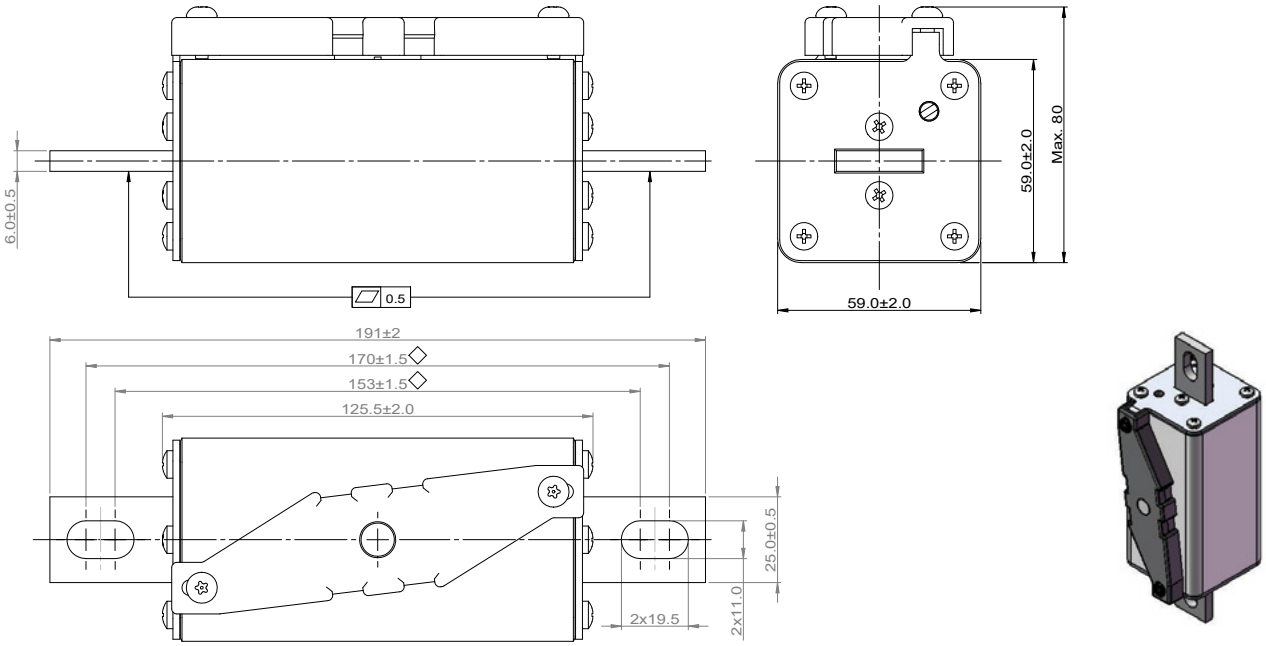
Square body fuse links

1500 V d.c. (IEC/UL) - 100 A to 450 A - ESS2 and ESS2-NI - Size 2

Dimensions (mm) - ESS 2L (Dual slotted)



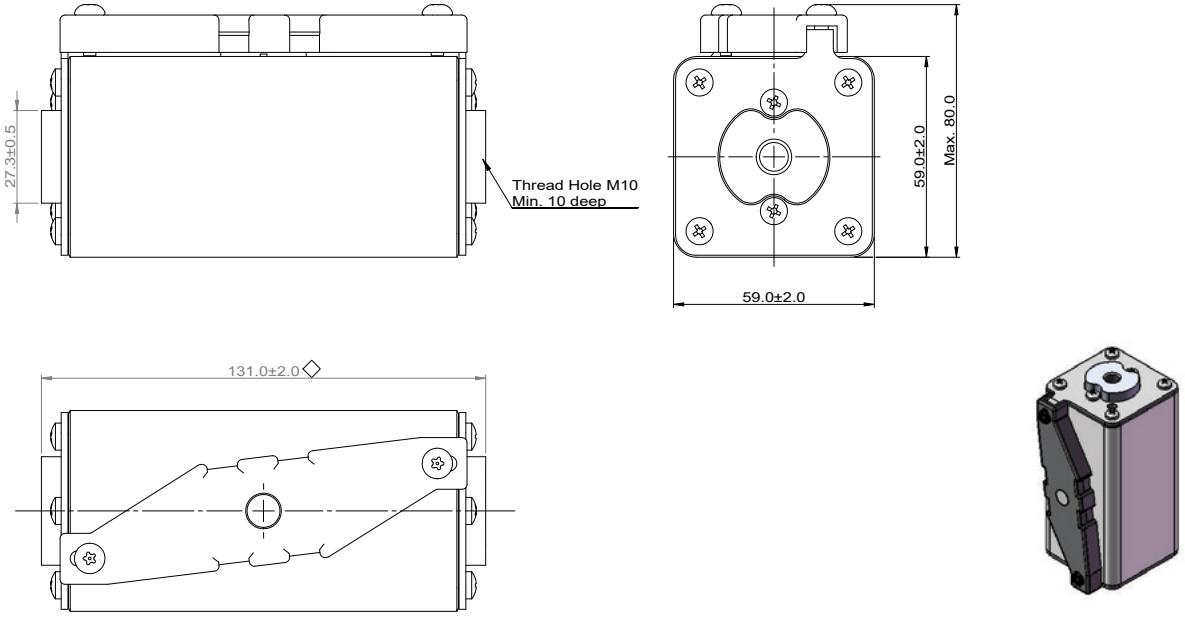
Dimensions (mm) - ESS 2H (US Style)



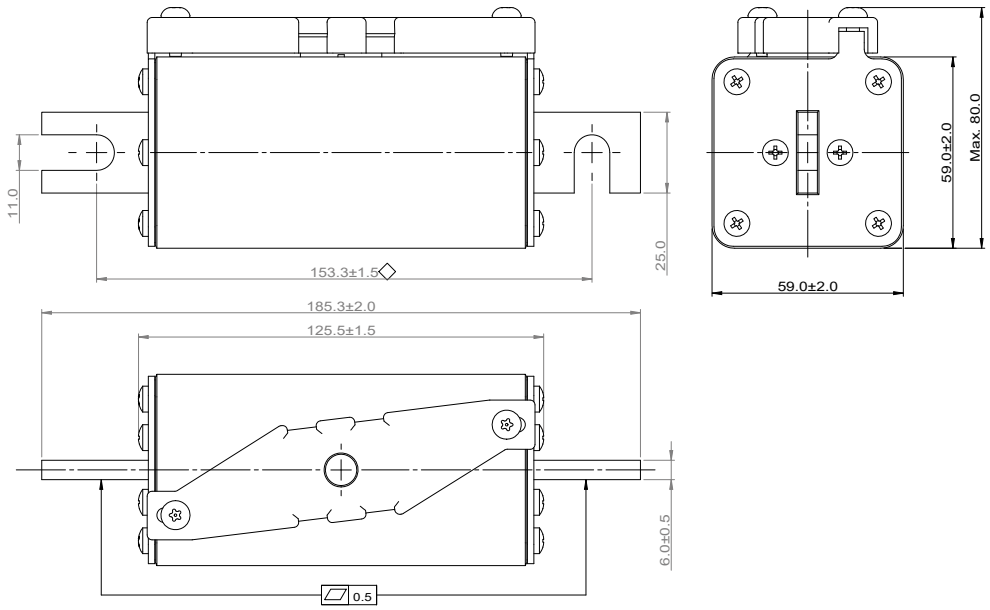
Data sheet: TD135030EN

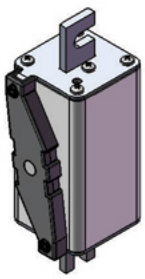
1500 V d.c. (IEC/UL) - 100 A to 450 A - ESS2 and ESS2-NI - Size 2

Dimensions (mm) - ESS 2B (Flush end)



Dimensions (mm) - ESS 2J (DIN 43653)



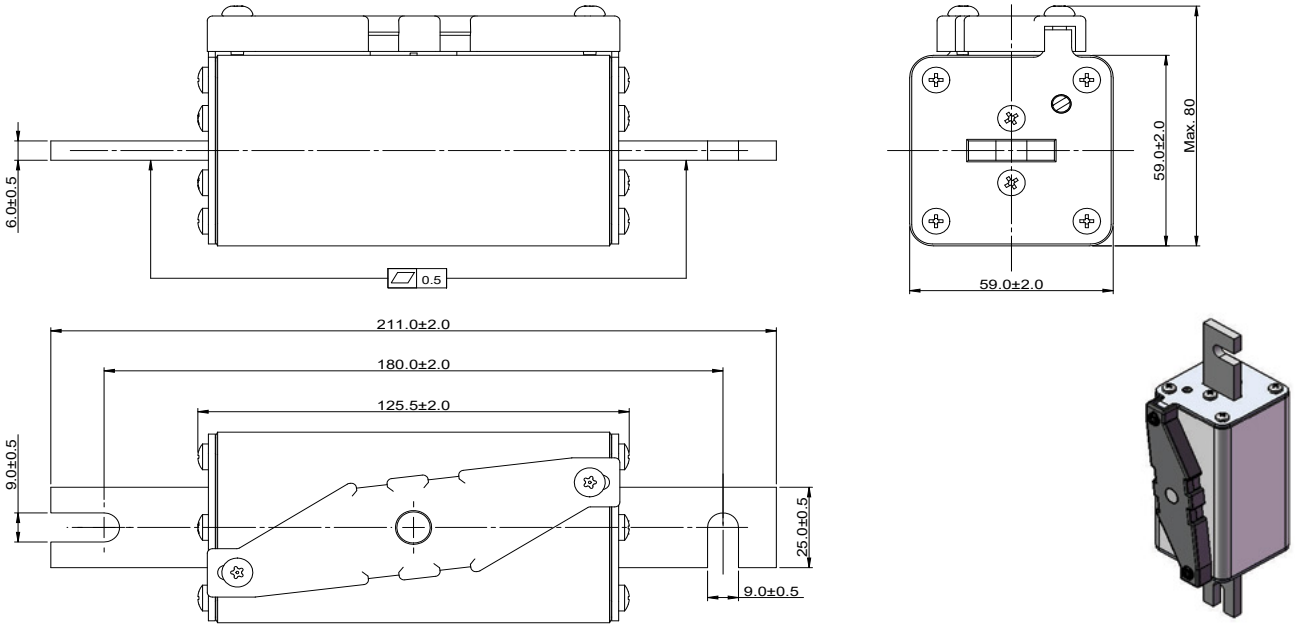


Data sheet: TD135030EN

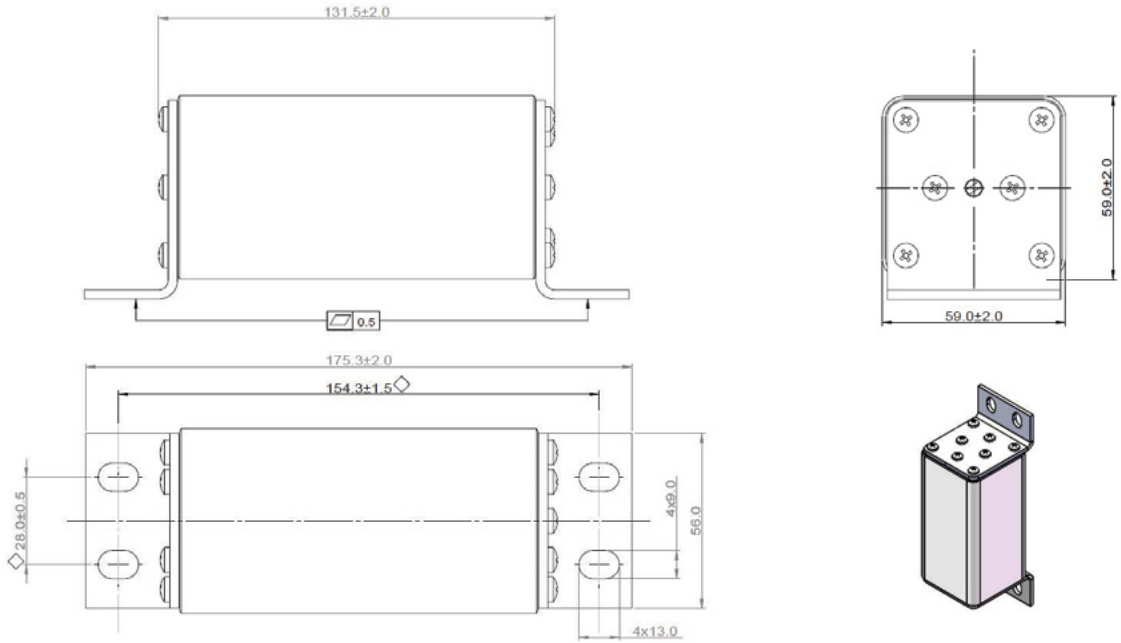
Square body fuse links

1500 V d.c. (IEC/UL) - 100 A to 450 A - ESS2 and ESS2-NI - Size 2

Dimensions (mm) - ESS 2J-L (DIN 43653)



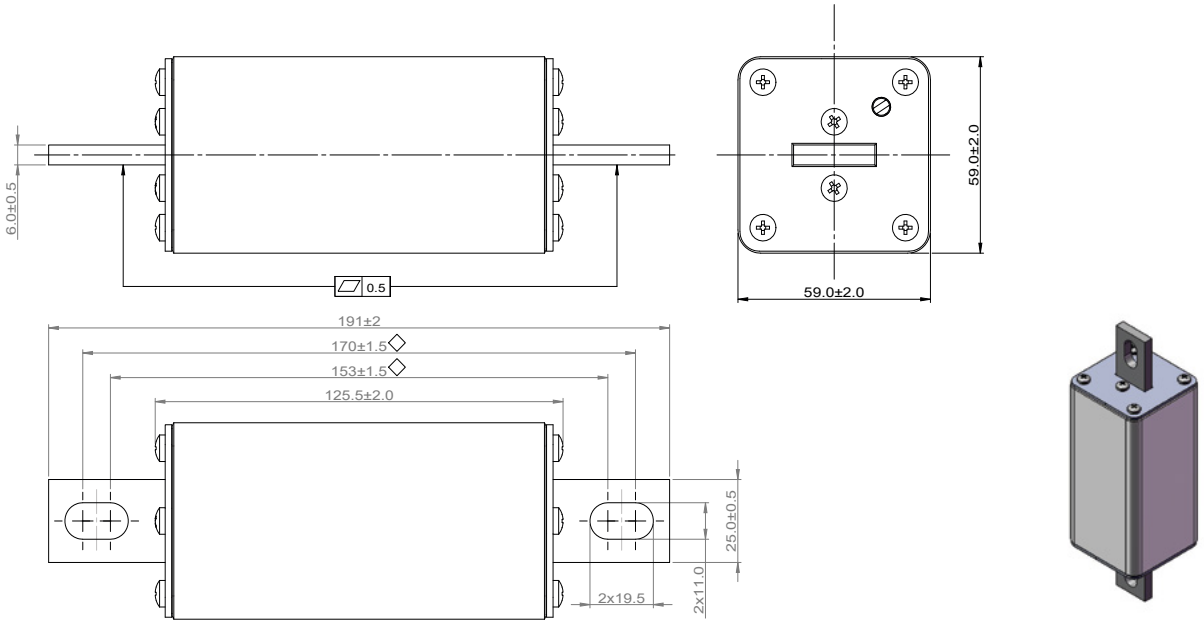
Dimensions (mm) - ESS-NI 2L (Dual slotted)



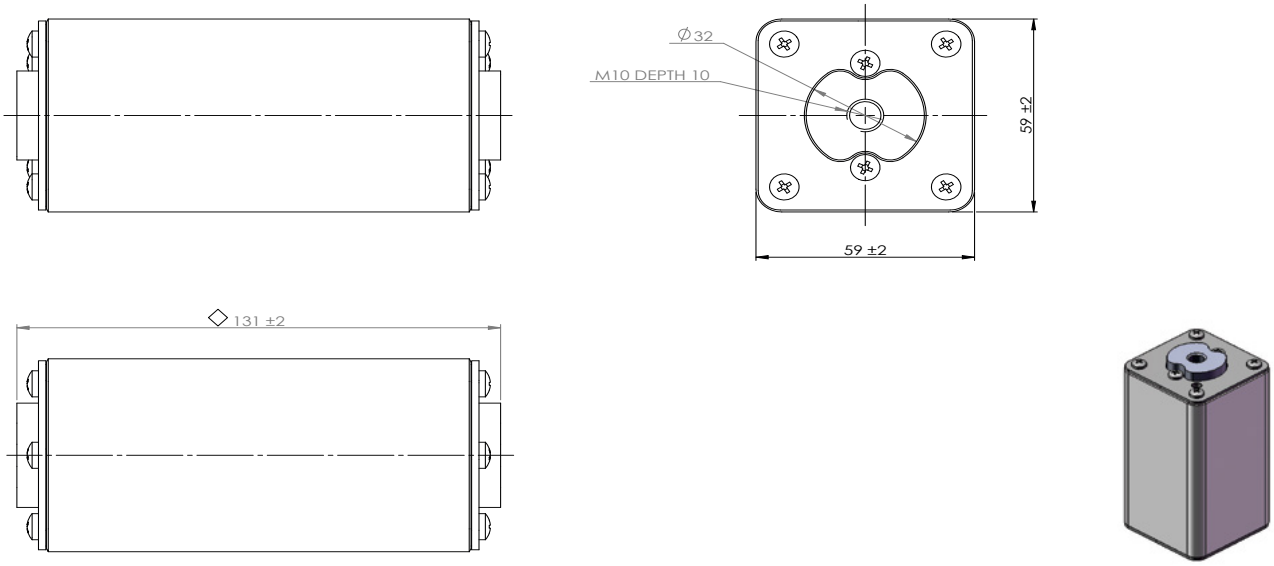
Data sheet: TD135030EN

1500 V d.c. (IEC/UL) - 100 A to 450 A - ESS2 and ESS2-NI - Size 2

Dimensions (mm) - ESS-NI 2H (US Style)



Dimensions (mm) - ESS-NI 2B (Flush end)

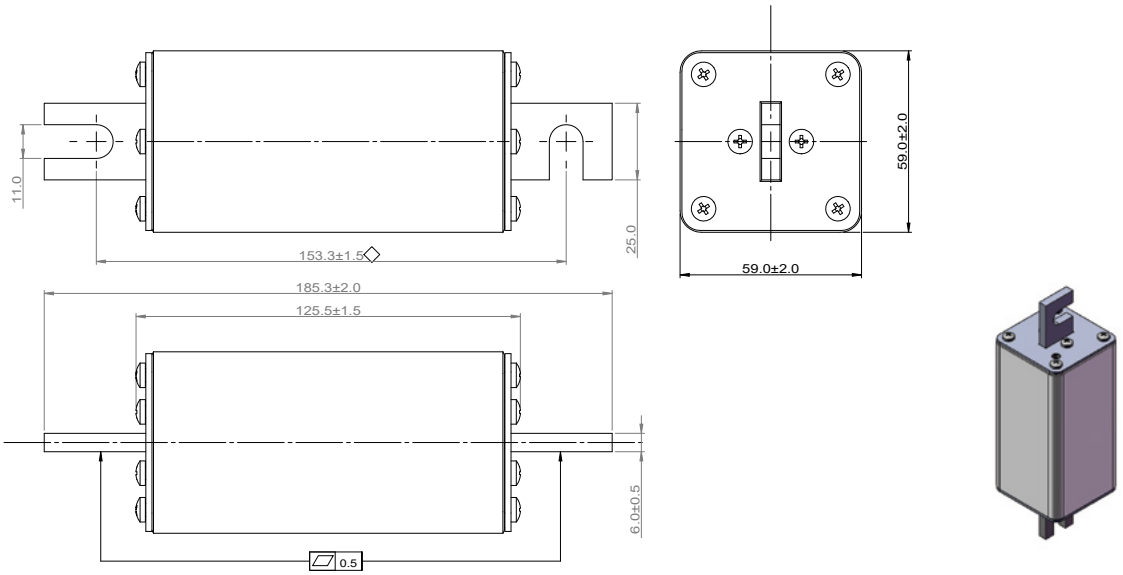


Data sheet: TD135030EN

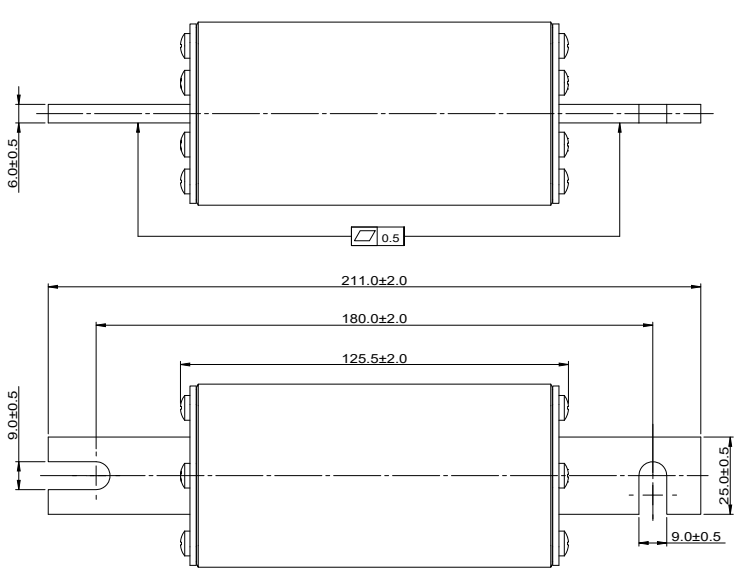
Square body fuse links

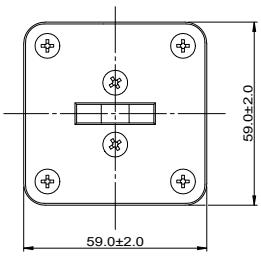
1500 V d.c. (IEC/UL) - 100 A to 450 A - ESS2 and ESS2-NI - Size 2

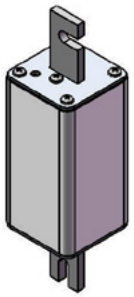
Dimensions (mm) - ESS-NI 2J (DIN 43653)



Dimensions (mm) - ESS-NI 2J-L (DIN 43653)



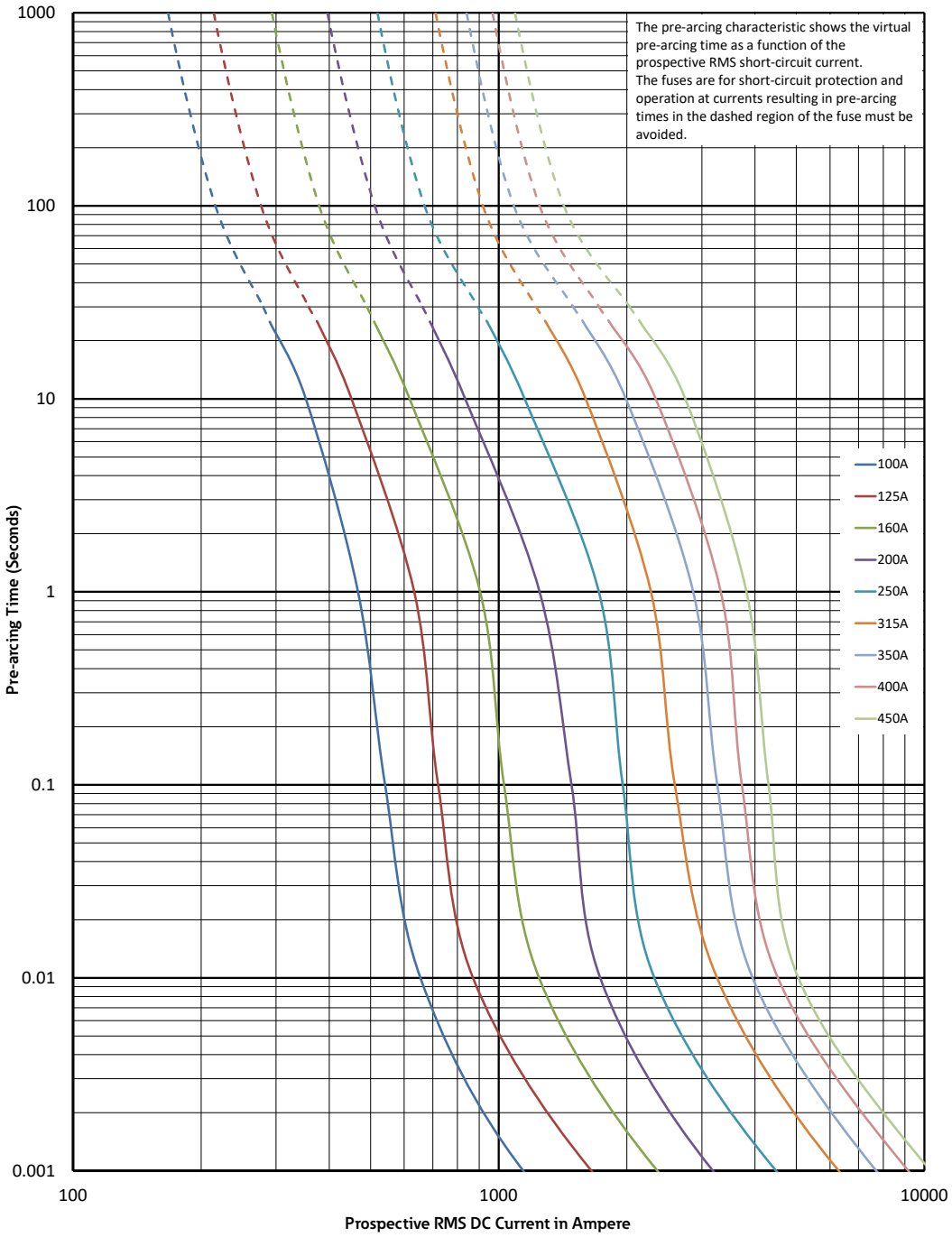




Data sheet: TD135030EN

1500 V d.c. (IEC/UL) - 100 A to 450 A - ESS2 and ESS2-NI - Size 2

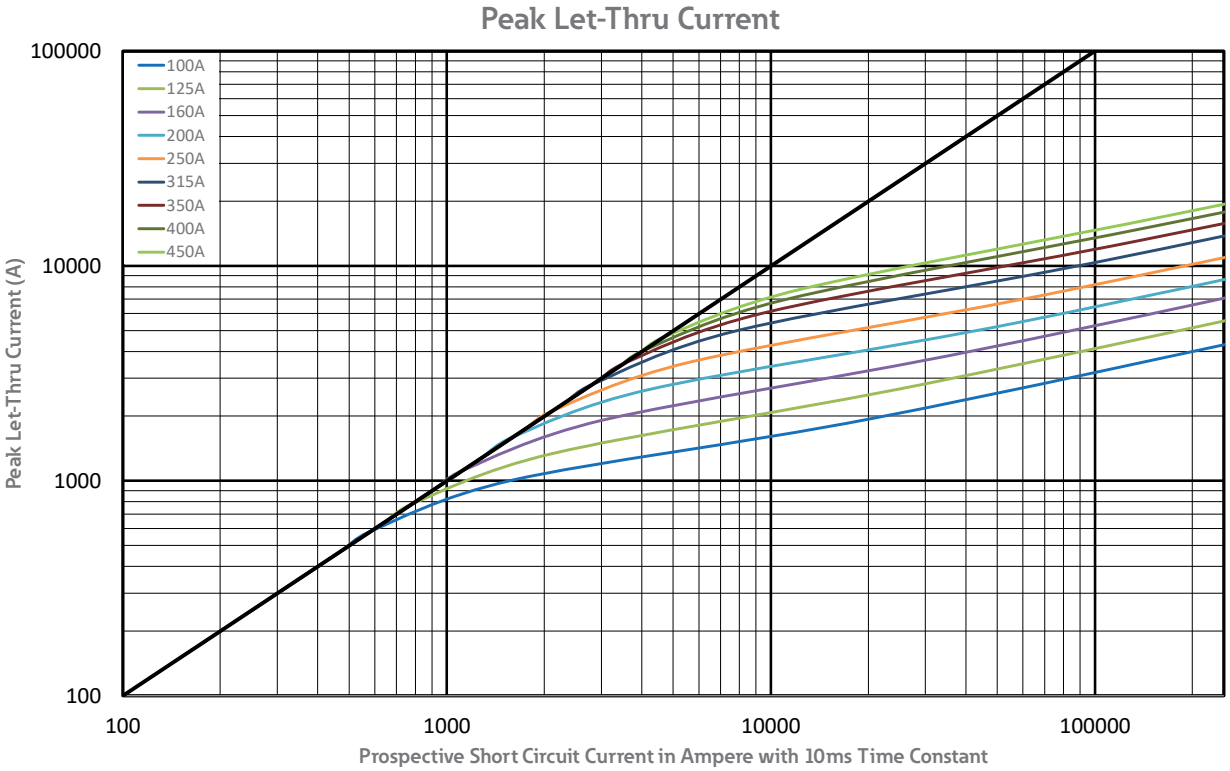
Time-current curve



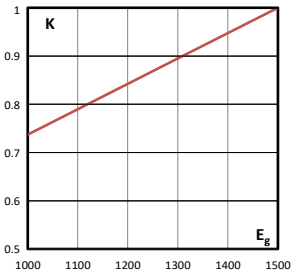
Data sheet: TD135030EN

1500 V d.c. (IEC/UL) - 100 A to 450 A - ESS2 and ESS2-NI - Size 2

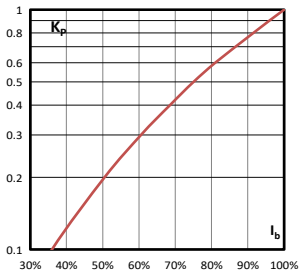
Peak let-through curve



Total clearing I²t
The total clearing I²t at rated voltage and tested DC time constant are given in electrical characteristics. For other voltages the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltages, E.



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.



Data sheet: TD135030EN

1500 V d.c. (IEC/UL) - 125 A to 500 A - 180D - Flush end, DIN and US Style contact fuse size 2

Specifications



Description

Eaton's Bussmann series 1500 V d.c. aR and aBat square body fuse links provide fast, reliable protection for modern DC systems including BESS, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 1500 V d.c. (IEC/UL)
- Rated current: 125 A to 500 A
- Breaking capacity:
  - 100 kA at 10 ms L/R
  - 250 kA at 3ms L/R
- Operating class: aR and aBat

Compatible microswitch

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

Standards / Agency information

Designed and tested to IEC 60269 part 4 and 7, UL 248-13
Recognised, RoHS compliant

Catalog numbers

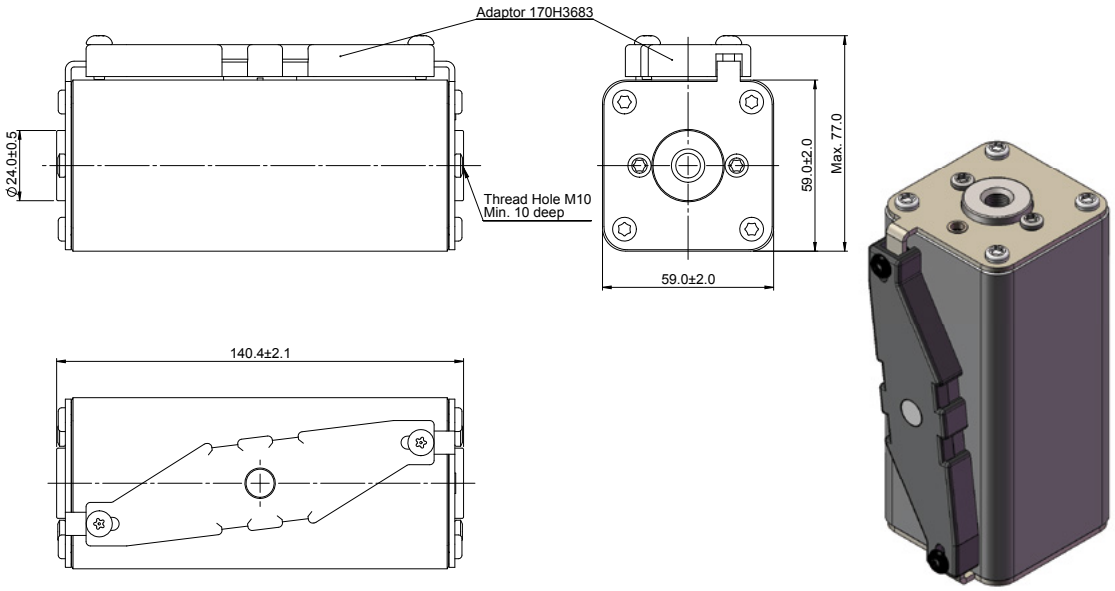
							Catalog number		
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity**	**Minimum breaking current**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**Fuse type: 2BKN/140**	**Fuse type: 2TN/170**	**Fuse type: 2FTN/180**
2	1500 V d.c. (IEC/UL)	125	100 kA at 10ms L/R	400	1500	71	180D5699	180D5849	180D5949
		160	250 kA at 3ms L/R	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

Data sheet: TD135026EN

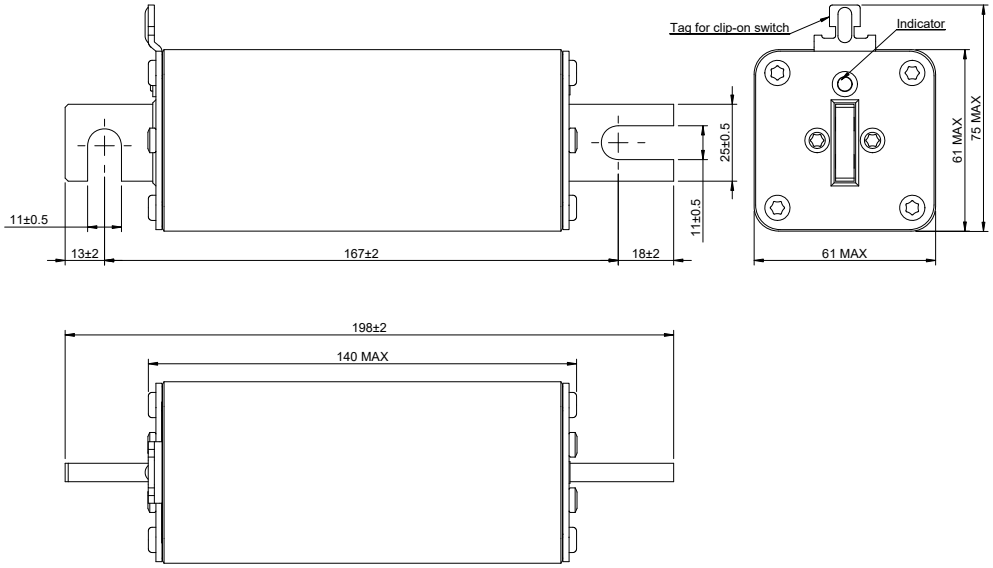
Square body fuse links

1500 V d.c. (IEC/UL) - 125 A to 500 A - 180D - Flush end, DIN and US Style contact fuse size 2

Dimensions (mm) - 2BKN/140 (Flush end)



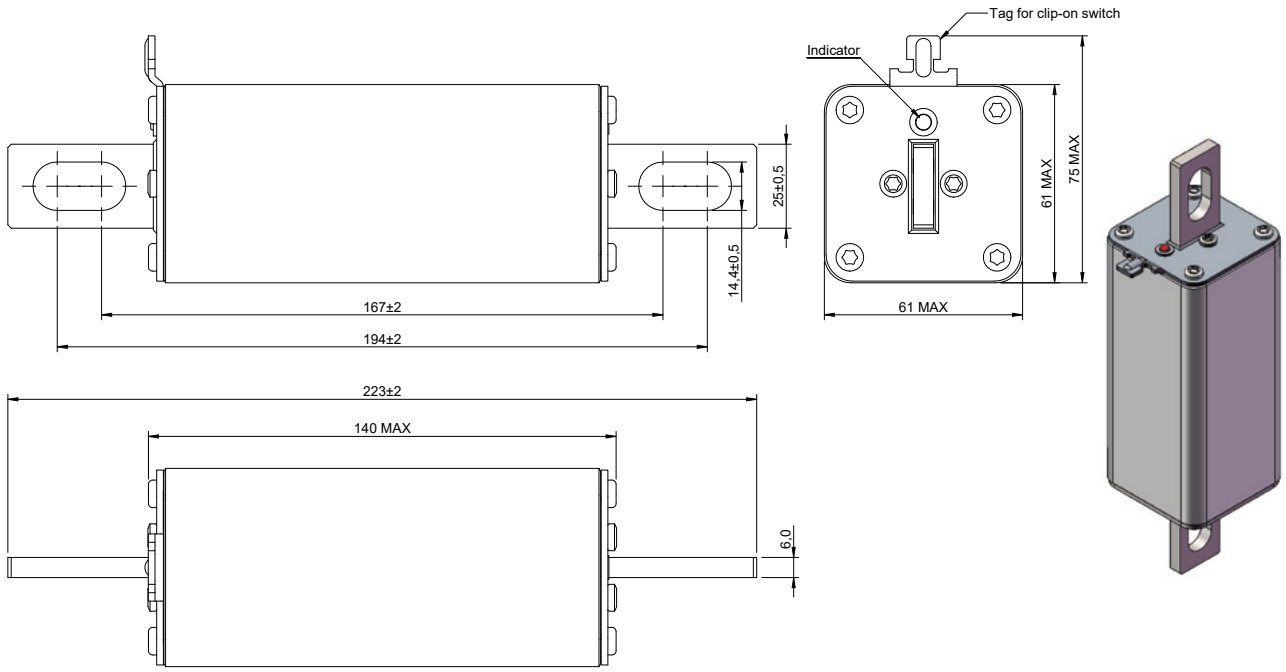
Dimensions (mm) - 2TN/170 (DIN)



Data sheet: TD135026EN

1500 V d.c. (IEC/UL) - 125 A to 500 A - 180D - Flush end, DIN and US Style contact fuse size 2

Dimensions (mm) - 2FTN/180 (US Style)

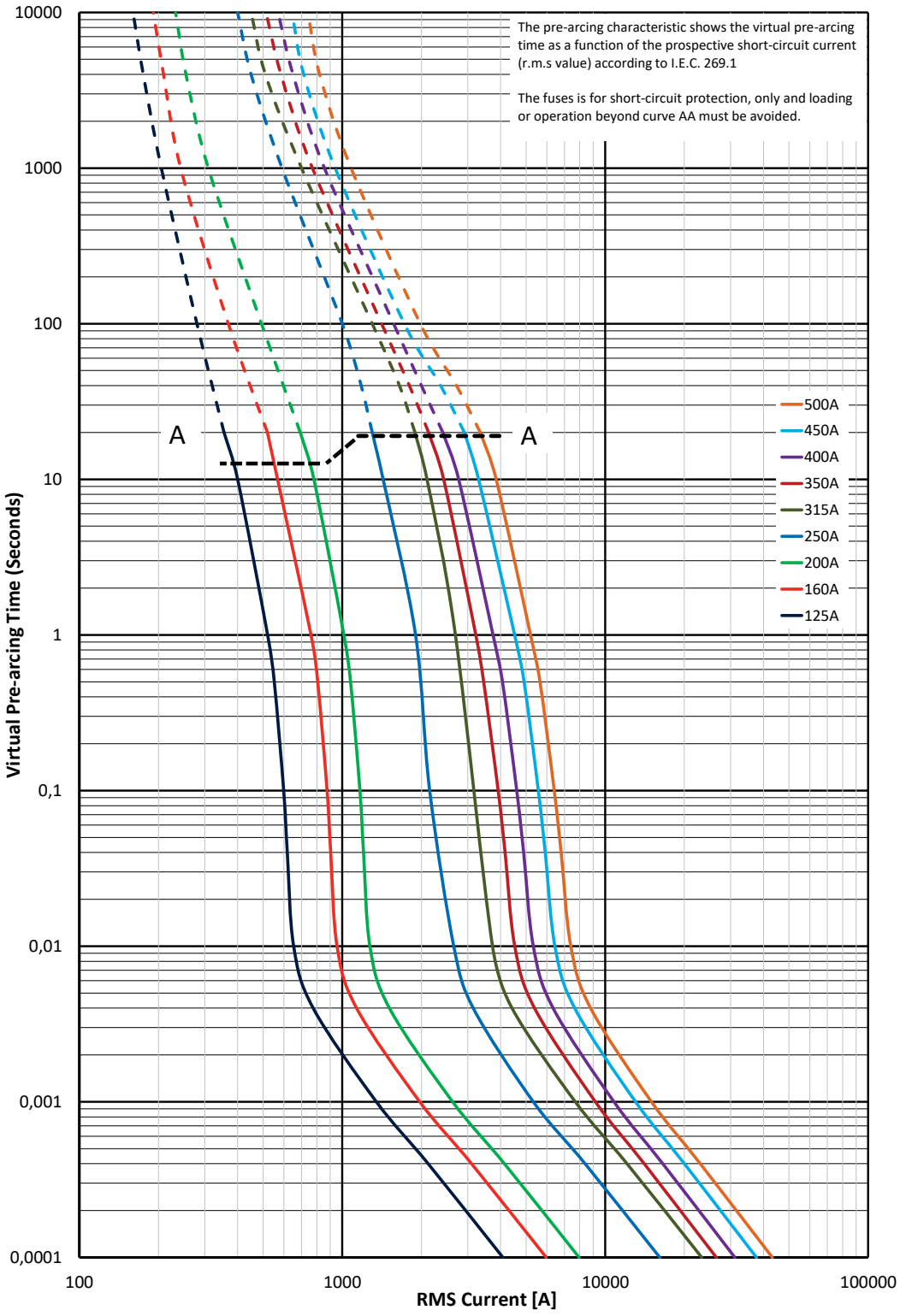


Data sheet: TD135026EN

Square body fuse links

1500 V d.c. (IEC/UL) - 125 A to 500 A - 180D - Flush end, DIN and US Style contact fuse size 2

Time-current curve

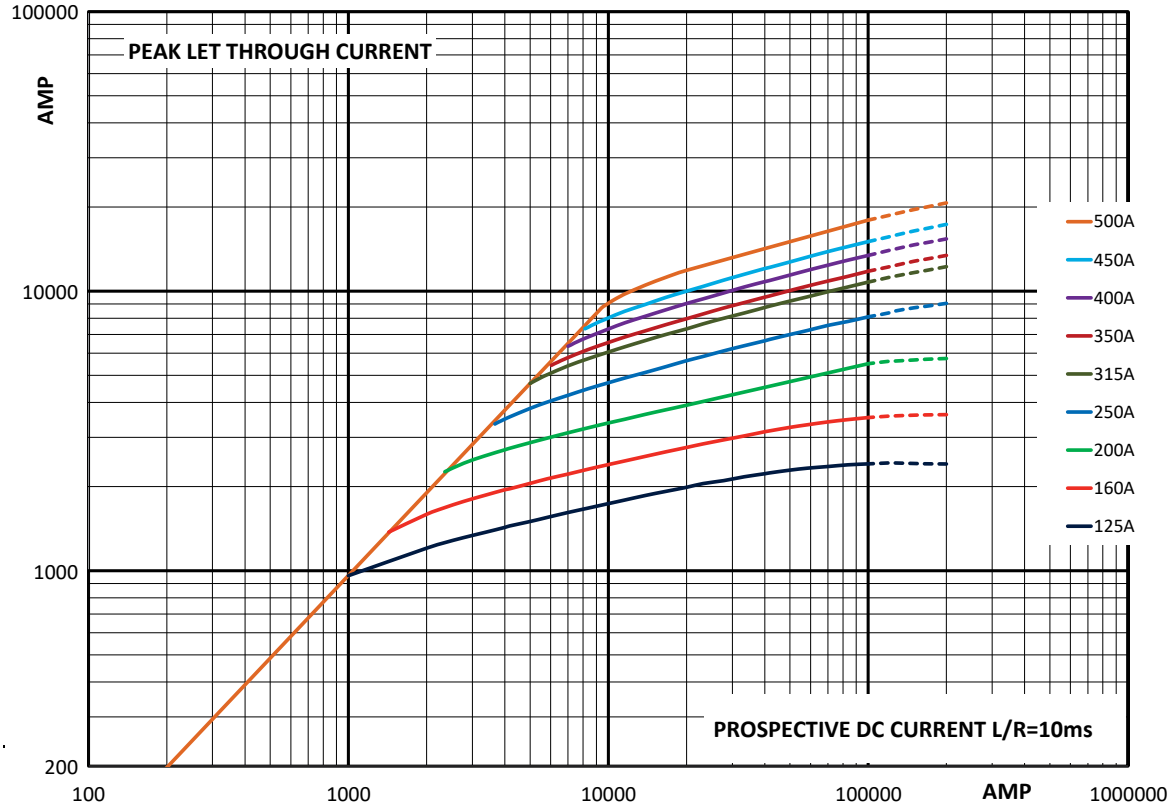


K_b = 1

Data sheet: TD135026EN

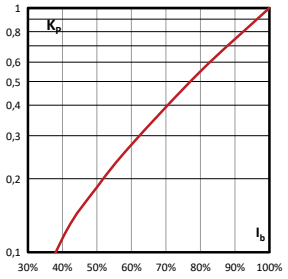
1500 V d.c. (IEC/UL) - 125 A to 500 A - 180D - Flush end, DIN and US Style contact fuse size 2

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.



Data sheet: TD135026EN

Square body fuse links

1500 V d.c. (IEC/UL) - 100 A to 630 A - ESS3 and ESS3-NI - Size 3

Specifications



Description

Eaton's Bussmann series 1500 V d.c. aR square body fuse links provide fast, reliable protection for modern DC systems including BESS, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 1500 V d.c. (IEC/UL)
- Rated current: 100 A to 630 A
- Breaking capacity: 250 kA at 4ms L/R
- Operating class: aR and aBat

Standards / Agency information

Designed and tested to IEC 60269 part 4 and 7, UL 248-13
Recognised, RoHS compliant

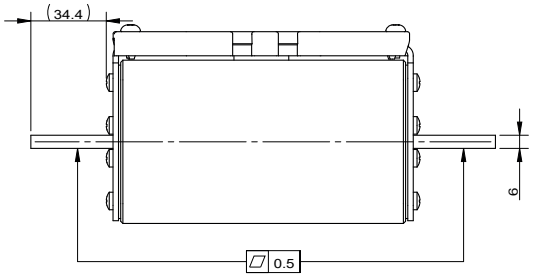
Catalog numbers

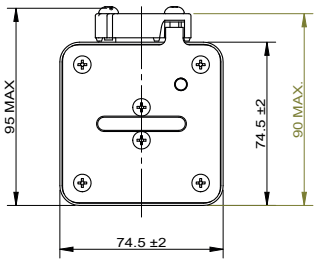
Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 4ms)	Minimum breaking current (A)	Pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Catalog number	
3	1500 V d.c. (IEC/UL)	100	250	500	1200	55	ESS3-100	ESS3-100-NI
		125	250	625	2200	70	ESS3-125	ESS3-125-NI
		160	250	800	3900	85	ESS3-160	ESS3-160-NI
		200	250	1000	6600	90	ESS3-200	ESS3-200-NI
		250	250	1250	13,600	115	ESS3-250	ESS3-250-NI
		315	250	1575	24,100	120	ESS3-315	ESS3-315-NI
		350	250	1750	34,700	125	ESS3-350	ESS3-350-NI
		400	250	2000	60,000	135	ESS3-400	ESS3-400-NI
		450	250	2250	78,000	150	ESS3-450	ESS3-450-NI
		500	250	2500	96,000	170	ESS3-500	ESS3-500-NI
		550	250	2750	112,000	185	ESS3-550	ESS3-550-NI
		630	250	3150	172,000	198	ESS3-630	ESS3-630-NI

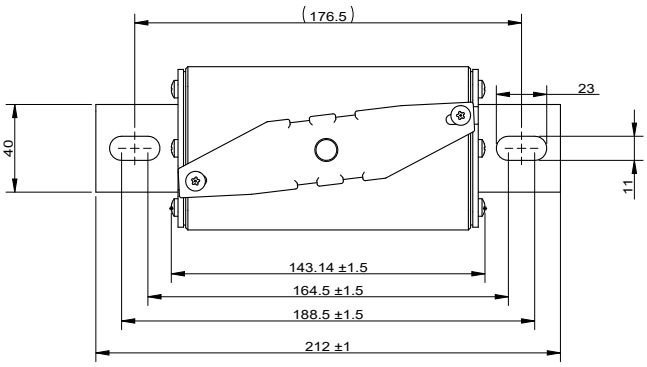
Data sheet: TD135031EN

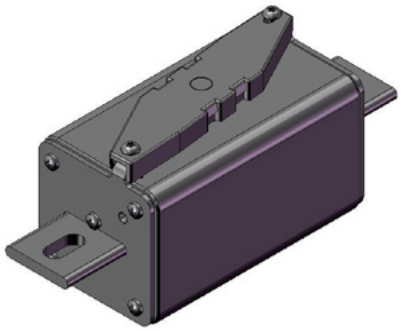
1500 V d.c. (IEC/UL) - 100 A to 630 A - ESS3 and ESS3-NI - Size 3

Dimensions (mm) - ESS3

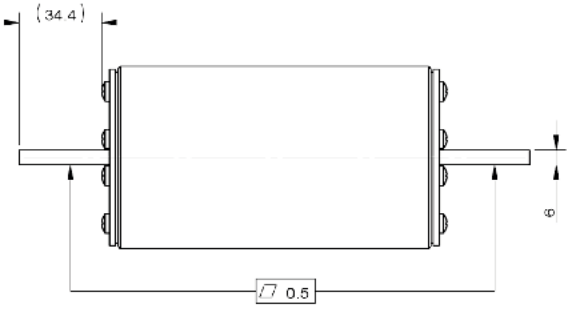


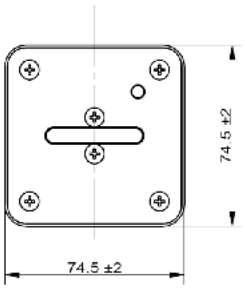


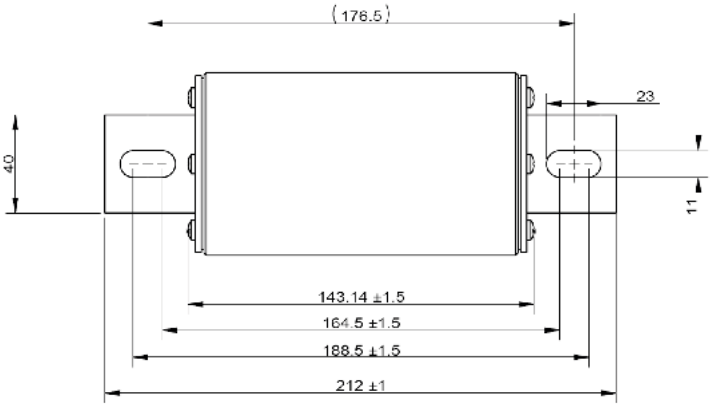


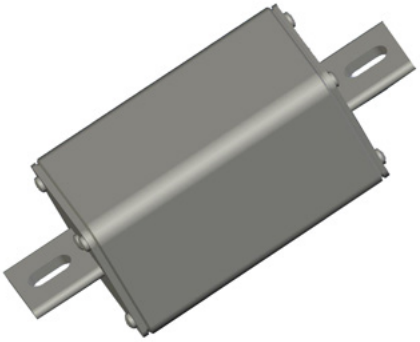


Dimensions (mm) - ESS3-NI







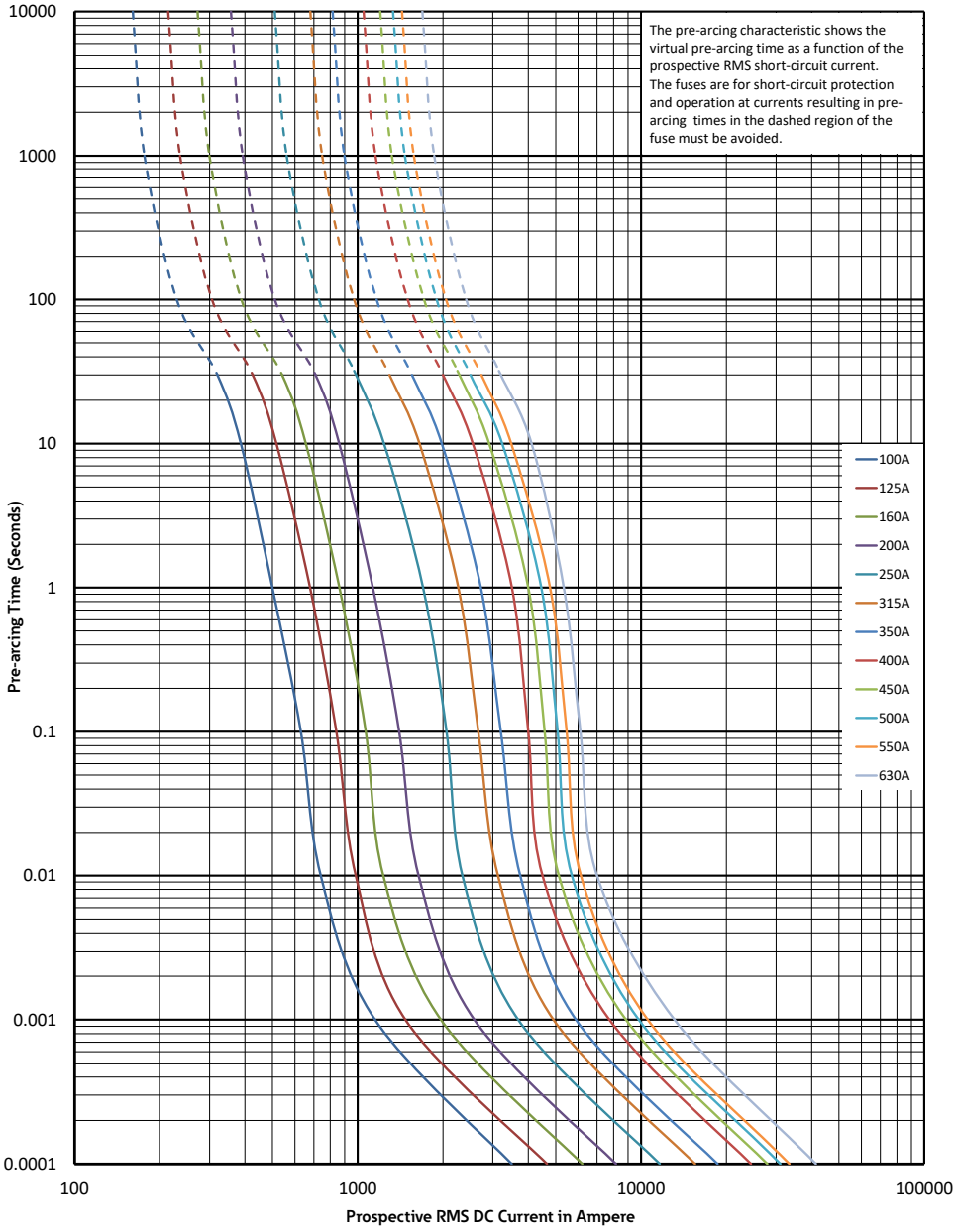


Data sheet: TD135031EN

Square body fuse links

1500 V d.c. (IEC/UL) - 100 A to 630 A - ESS3 and ESS3-NI - Size 3

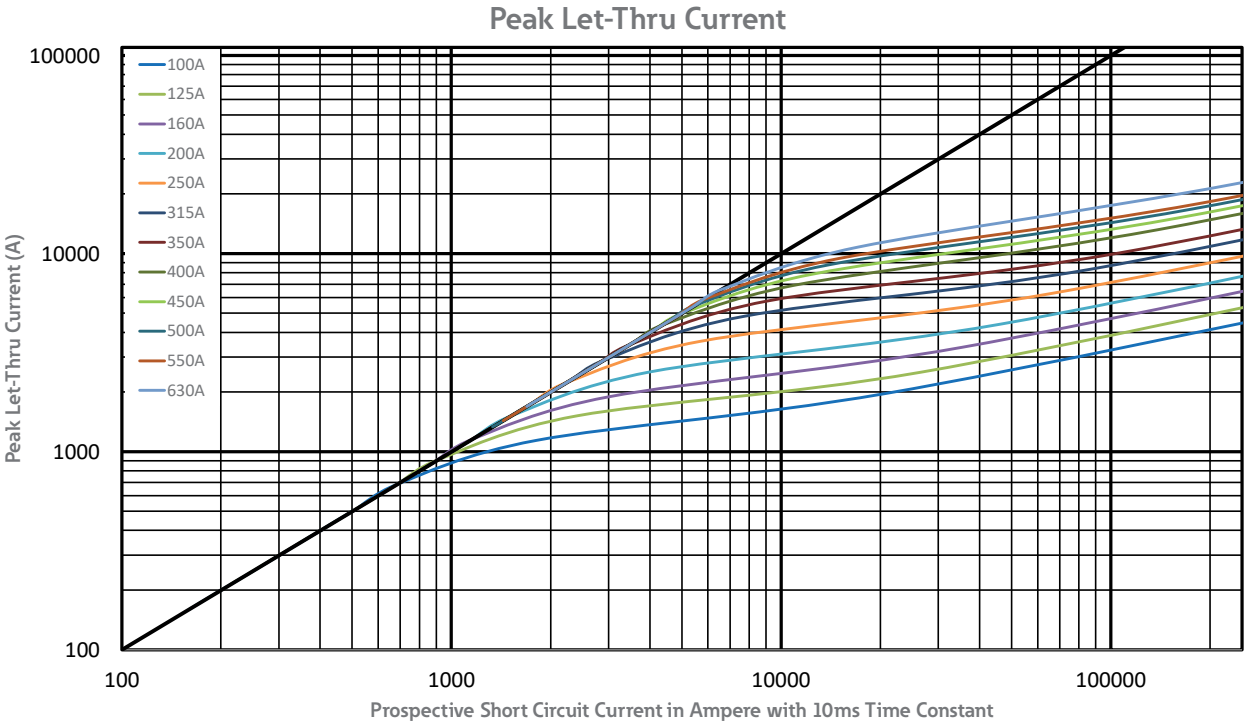
Time-current curve



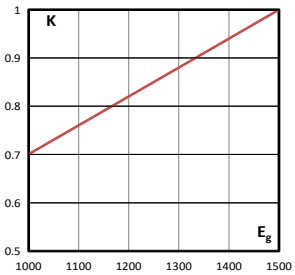
Data sheet: TD135031EN

1500 V d.c. (IEC/UL) - 100 A to 630 A - ESS3 and ESS3-NI - Size 3

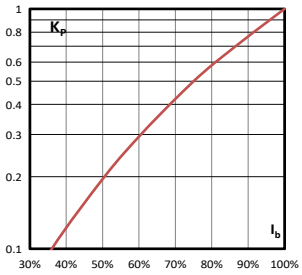
Peak let-through curve



Total clearing I²t
The total clearing I²t at rated voltage and tested DC time constant are given in electrical characteristics. For other voltages the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltages, E.



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.



Data sheet: TD135031EN

Square body fuse links

1500 V d.c. (IEC/UL) - 350 A to 1400 A - 180D - Flush end, DIN and US Style contact fuse size 3

Specifications

Description

Eaton's Bussmann series 1500 V d.c. aR and aBat square body fuse links provide fast, reliable protection for modern DC systems including BESS, EV charging infrastructure, DC drives, and power conversion applications.



Technical data

- Rated voltage: 1500 V d.c. (IEC/UL)
- Rated current: 350 A to 1400 A
- Breaking capacity:
  - 100 kA at 10ms L/R
  - 250 kA at 3ms L/R
- Operating class: aR and aBat

Compatible microswitch

- 170H0069

Standards / Agency information

Designed and tested to IEC 60269 part 4 and 7, UL 248-13
Recognised, RoHS compliant

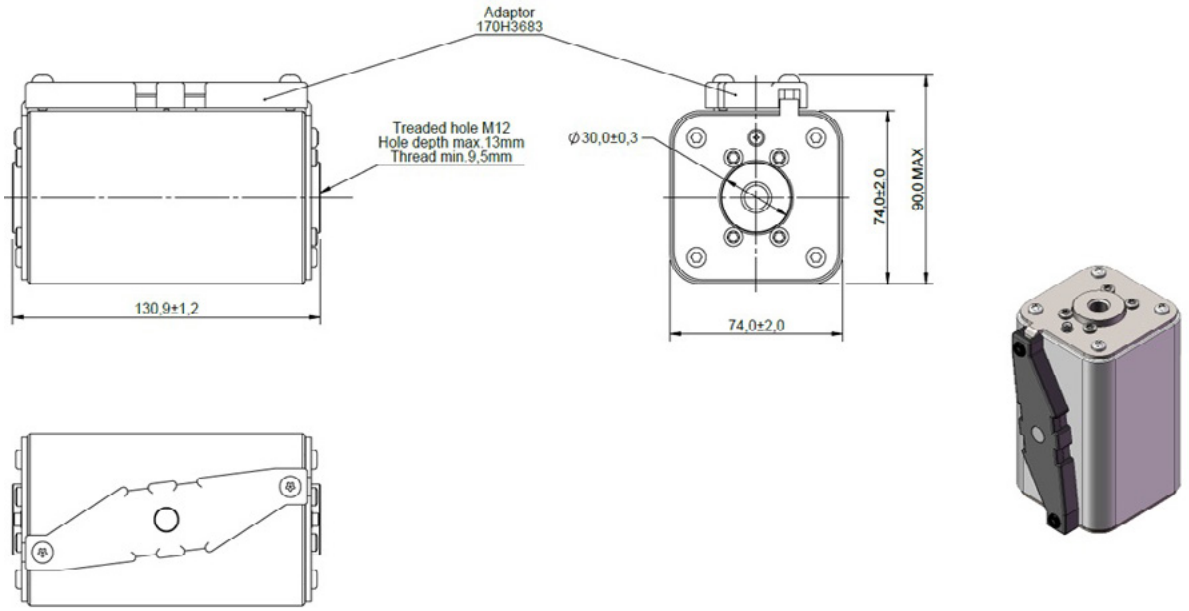
Catalog numbers

							Catalog numbers		
Fuse body size	**Rated voltage**	**Rated current (Amps)**	**Breaking capacity**	**Minimum breaking current (A)**	**Pre-arcing I^2t (A^2 Sec)**	**Power loss at In (W)**	**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

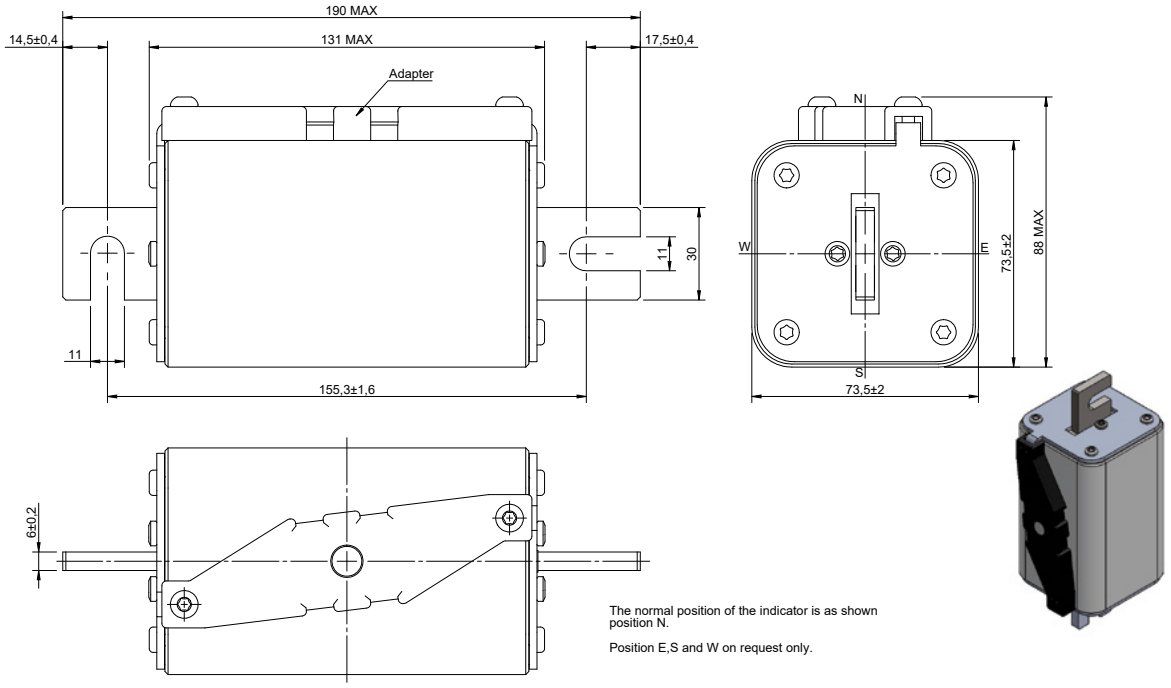
Data sheet: TD135027EN

1500 V d.c. (IEC/UL) - 350 A to 1400 A - 180D - Flush end, DIN and US Style contact fuse size 3

Dimensions (mm) - 3BKN/130



Dimensions (mm) - 3KN/160



The normal position of the indicator is as shown position N.

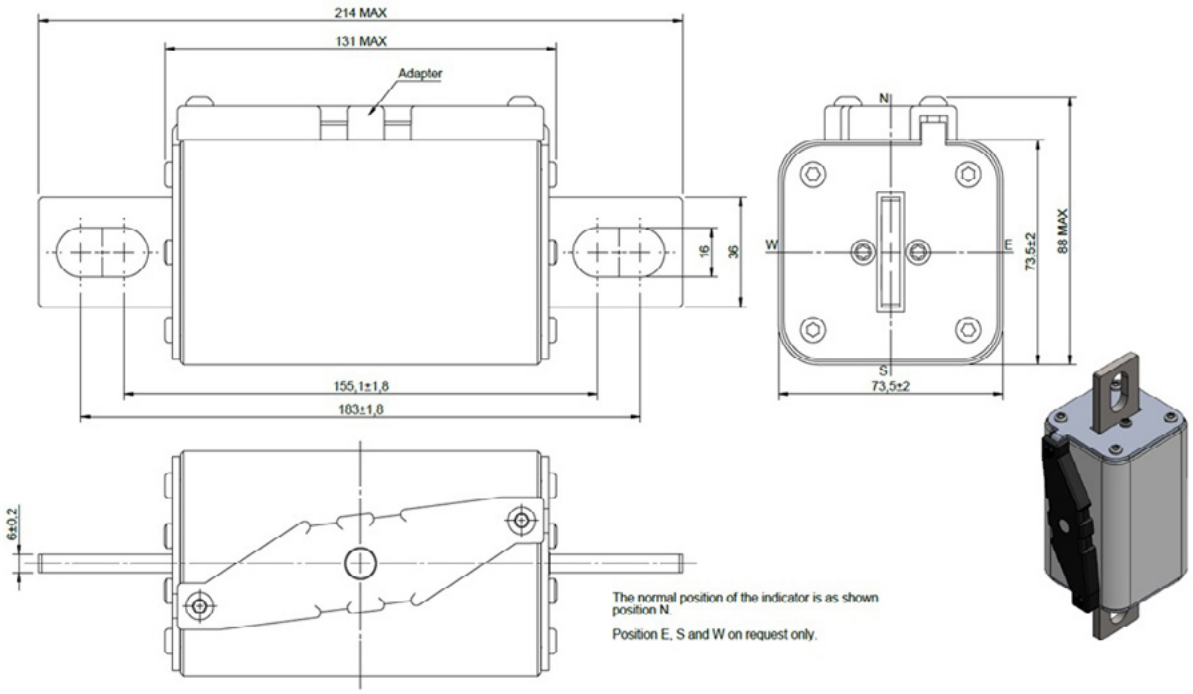
Position E,S and W on request only.

Data sheet: TD135027EN

Square body fuse links

1500 V d.c. (IEC/UL) - 350 A to 1400 A - 180D - Flush end, DIN and US Style contact fuse size 3

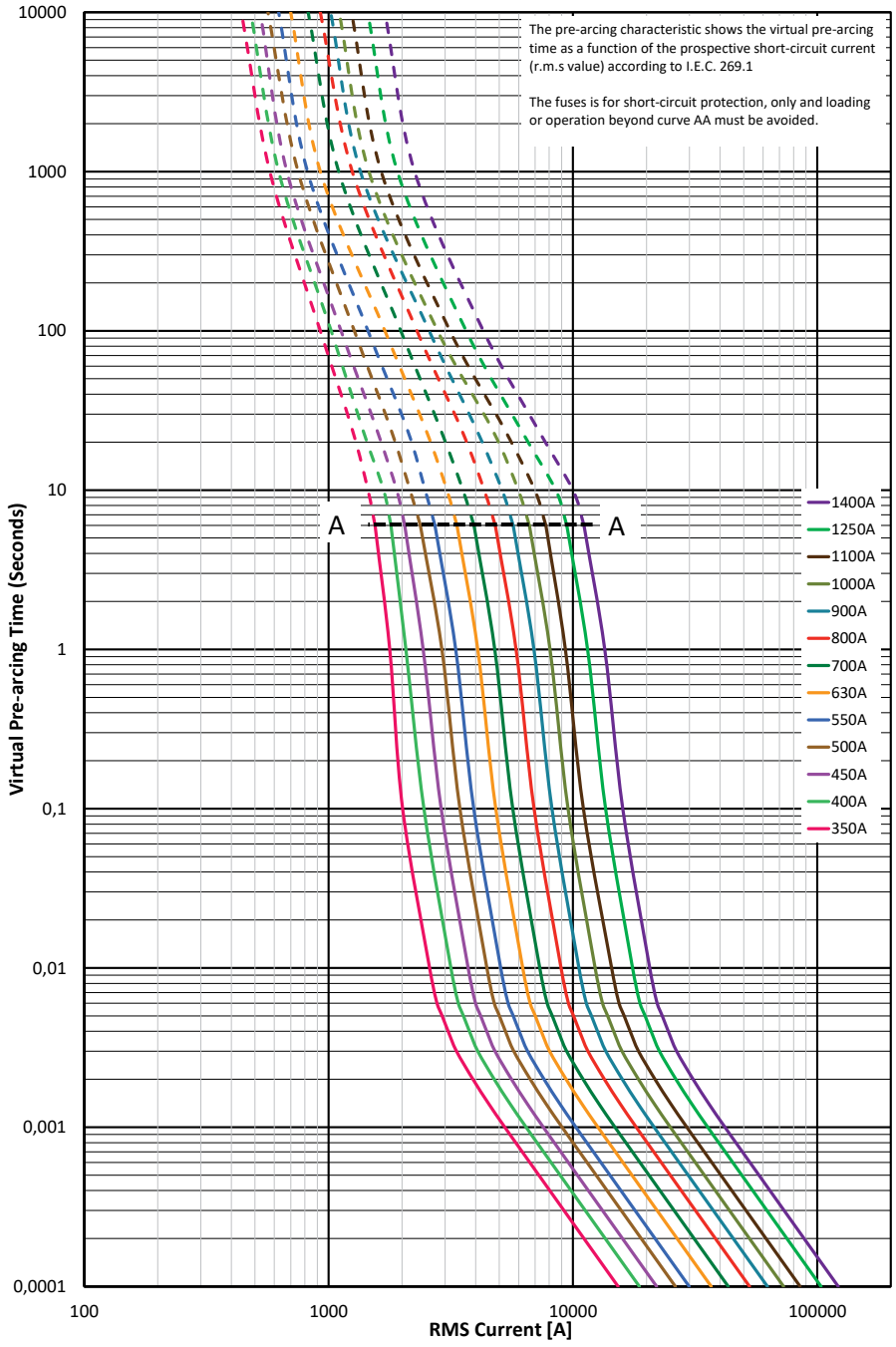
Dimensions (mm) - 3FKN/170



Data sheet: TD135027EN

1500 V d.c. (IEC/UL) - 350 A to 1400 A - 180D - Flush end, DIN and US Style contact fuse size 3

Time-current curve

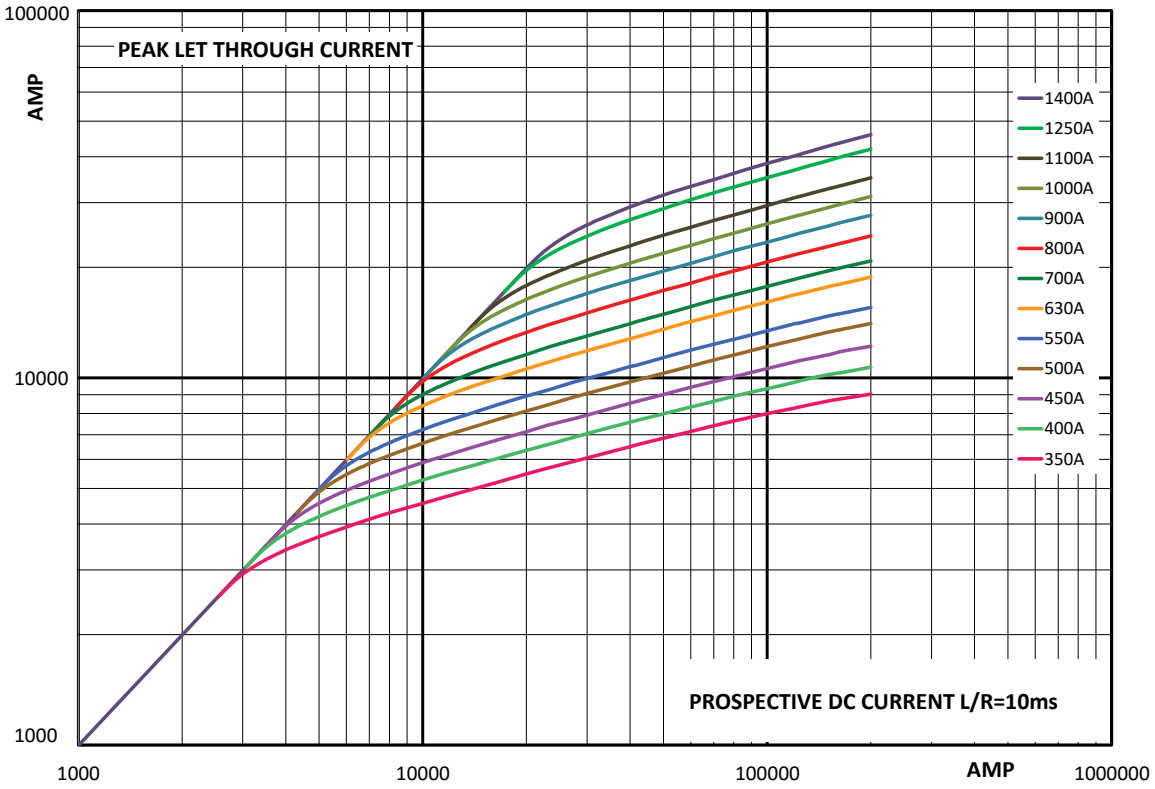


K_b = 1

Data sheet: TD135027EN

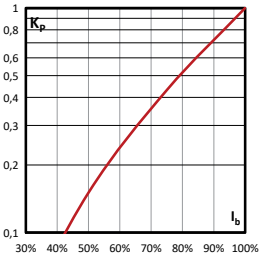
1500 V d.c. (IEC/UL) - 350 A to 1400 A - 180D - Flush end, DIN and US Style contact fuse size 3

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.



Data sheet: TD135027EN

1500 V d.c. (IEC) - 250 A to 500 A - BSF-3XL - XL Style

Specifications



Description
Eaton's Bussmann series XL battery storage fuses are specifically designed to protect and isolate battery array combiners and disconnects. These fuse links are capable of interrupting low overcurrents associated with faulted battery storage systems (reverse current, multi-array fault).

Technical data
- Rated voltage: 1500 V d.c.
- Rated current: 250 A to 500 A
- Operating class: gBat proposed for full range fuse links for protection of battery storage systems
- Breaking capacity: 100 kA
- Time constant: 4.5ms at 100 kA

Microswitches
- For bladed fuse links
  - 170H0236
  - 170H0238
- For bolted fuse links
  - 170H0069

Compatible fuse bases
- SD3L-S-PV

Standards / Agency information
IEC 60269-7

Catalog numbers

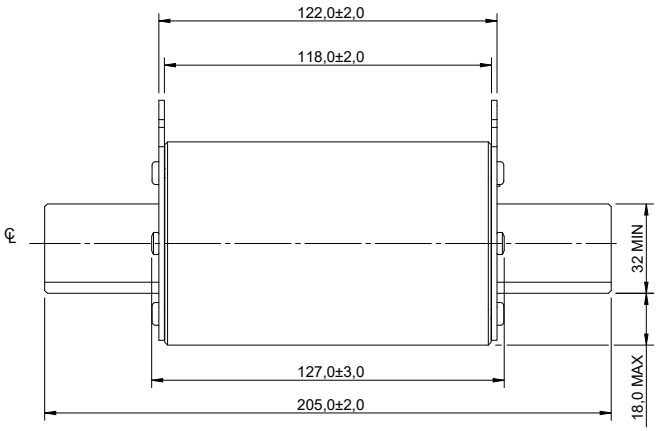
			I^2t (A^2 Sec)		Watts loss (W)		Catalog numbers	
Fuse link body size	**Rated voltage**	**Rated current (Amps)**	**Pre-arcing**	**Total at 1500 V d.c.**	**0.7 I_n**	**I_n**	**Bladed version**	**Bolted version**
3	1500 V d.c.	250	74,000	263,000	20	49	BSF-250G-3XL15	BSF-250G-3XL15-B
		315	150,000	533,000	21	52	BSF-315G-3XL15	BSF-315G-3XL15-B
		355	195,000	693,000	24	59	BSF-355G-3XL15	BSF-355G-3XL15-B
		400	296,000	1,060,000	24	61	BSF-400G-3XL15	BSF-400G-3XL15-B
		450	412,000	1,470,000	27	67	BSF-450G-3XL15	BSF-450G-3XL15-B
		500	532,000	1,890,000	29	73	BSF-500G-3XL15	BSF-500G-3XL15-B

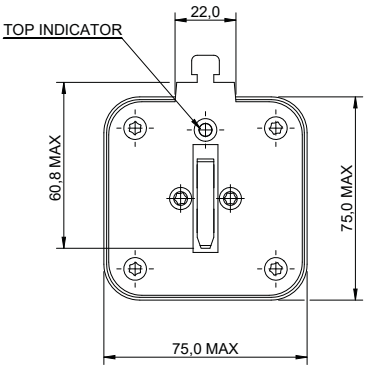
Data sheet: 135002

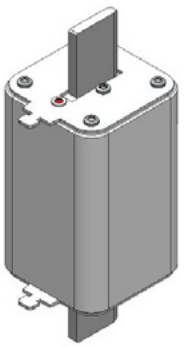
Square body fuse links

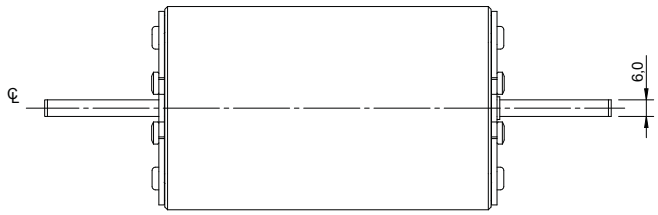
1500 V d.c. (IEC) - 250 A to 500 A - BSF-3XL - XL Style

Dimensions (mm) - Size 3, bladed

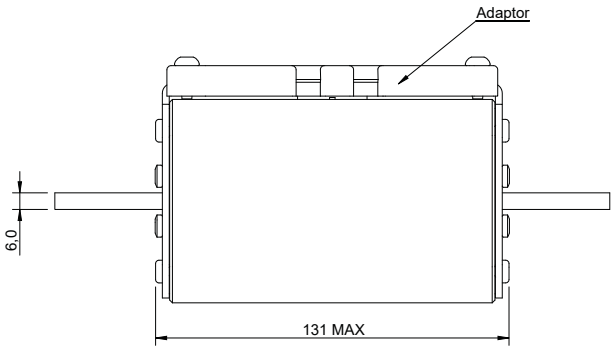


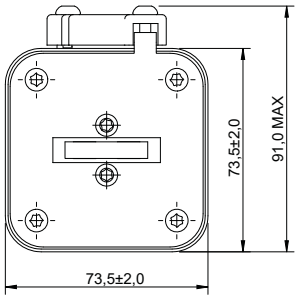


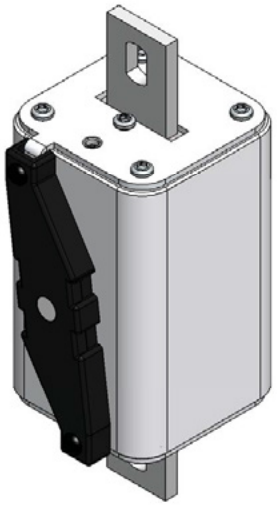


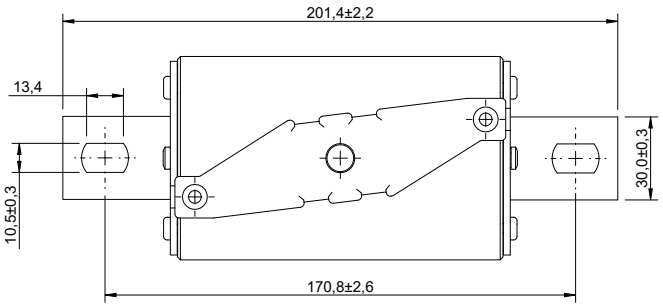


Dimensions (mm) - Size 3, bolted





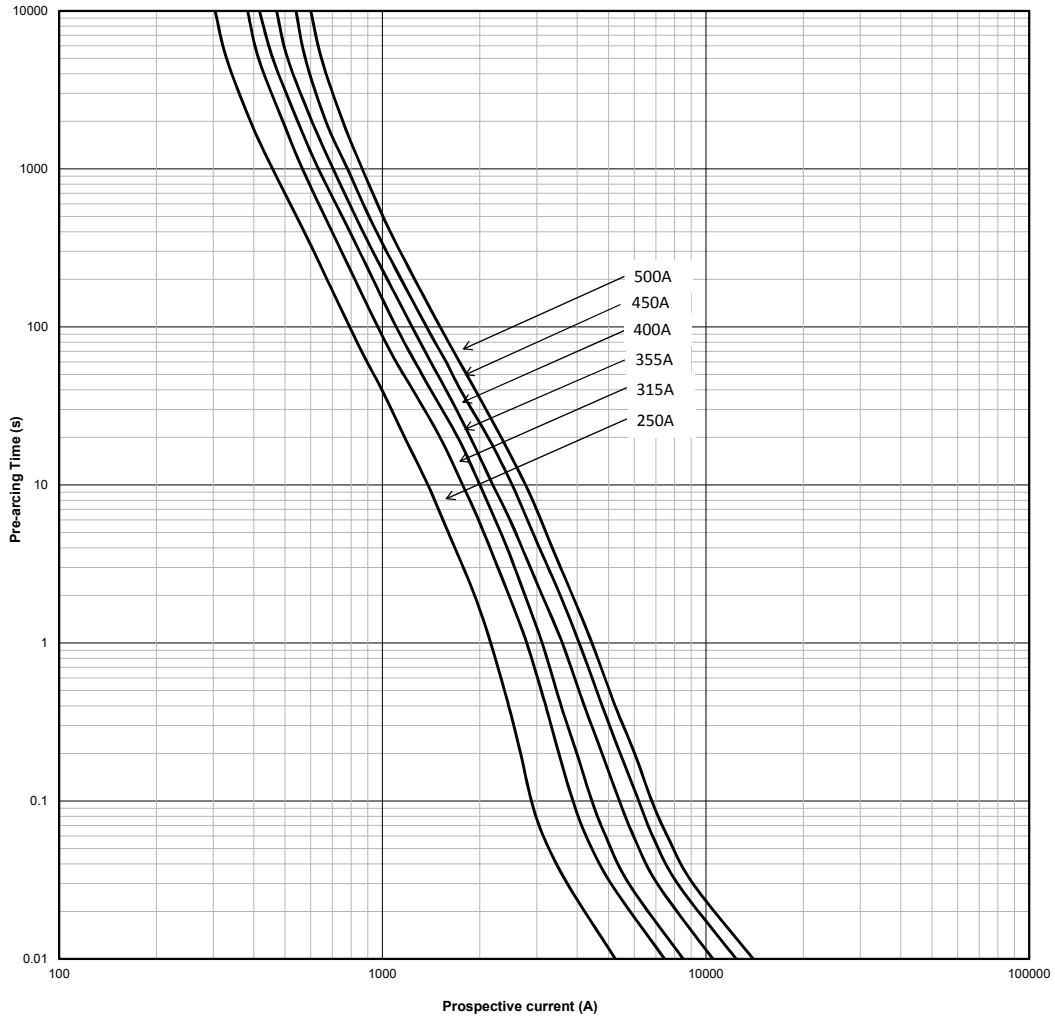




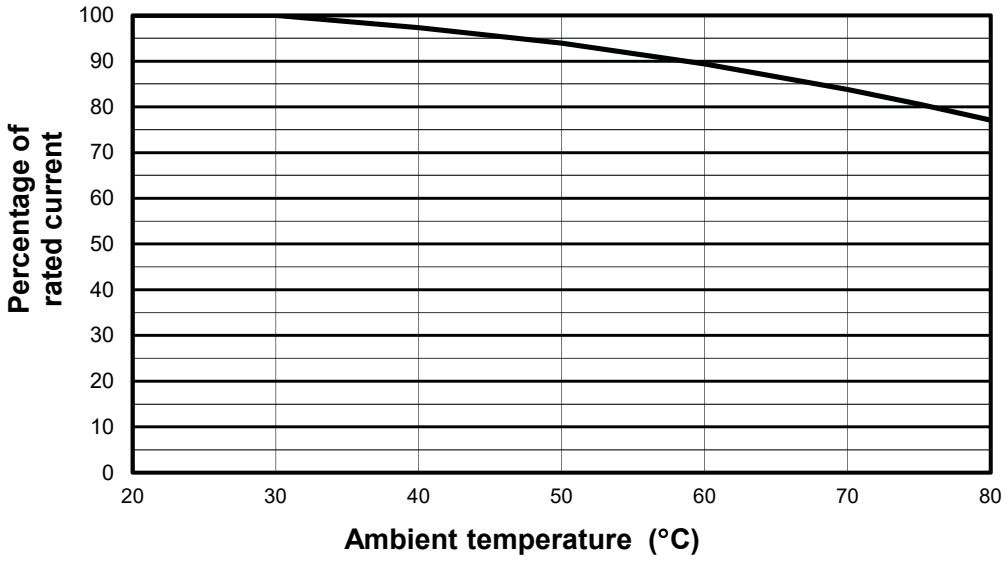
Data sheet: 135002

1500 V d.c. (IEC) - 250 A to 500 A - BSF-3XL - XL Style

Time-current curve



Temperature derating



Data sheet: 135002

Square body fuse links

1500 V d.c. (IEC/UL) - 800 A to1800 A - 180D - Flush end contact fuse body size 4

Specifications



Description

Eaton's Bussmann series 1500 V d.c. aR and aBat square body fuse links provide fast, reliable protection for modern DC systems including BESS, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 1500 V d.c. (IEC/UL)
- Rated current: 800 A to 1800 A
- Breaking capacity:
  - 100 kA at 10ms L/R
  - 250 kA at 3ms L/R
- Operating class: aR and aBat

Compatible microswitch

- 170H0069

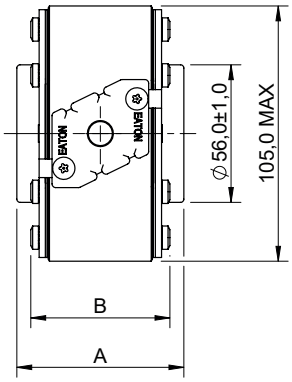
Standards / Agency information

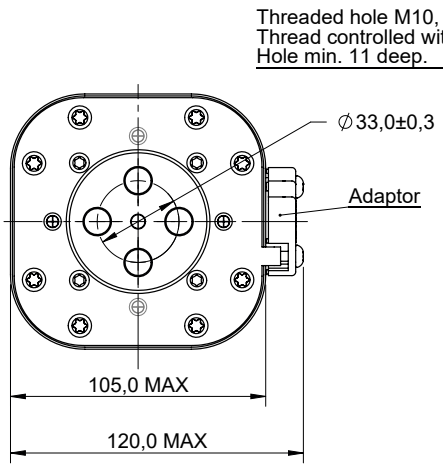
Designed and tested to IEC 60269 part 4 and 7, UL 248-13
Recognised, RoHS compliant

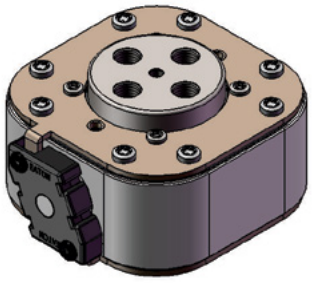
Catalog numbers

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 10ms)	Pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Catalog number
4	1500 V d.c. (IEC/UL)	800	100	512,000	111	180D7462
		900	100	776,000	120	180D7463
		1000	100	1,000,000	164	180D7620
		1250	100	1,400,000	185	180D7698
		1500	100	2,500,000	228	180D7627
		1800	100	3,500,000	313	180D7477

Dimensions (mm)





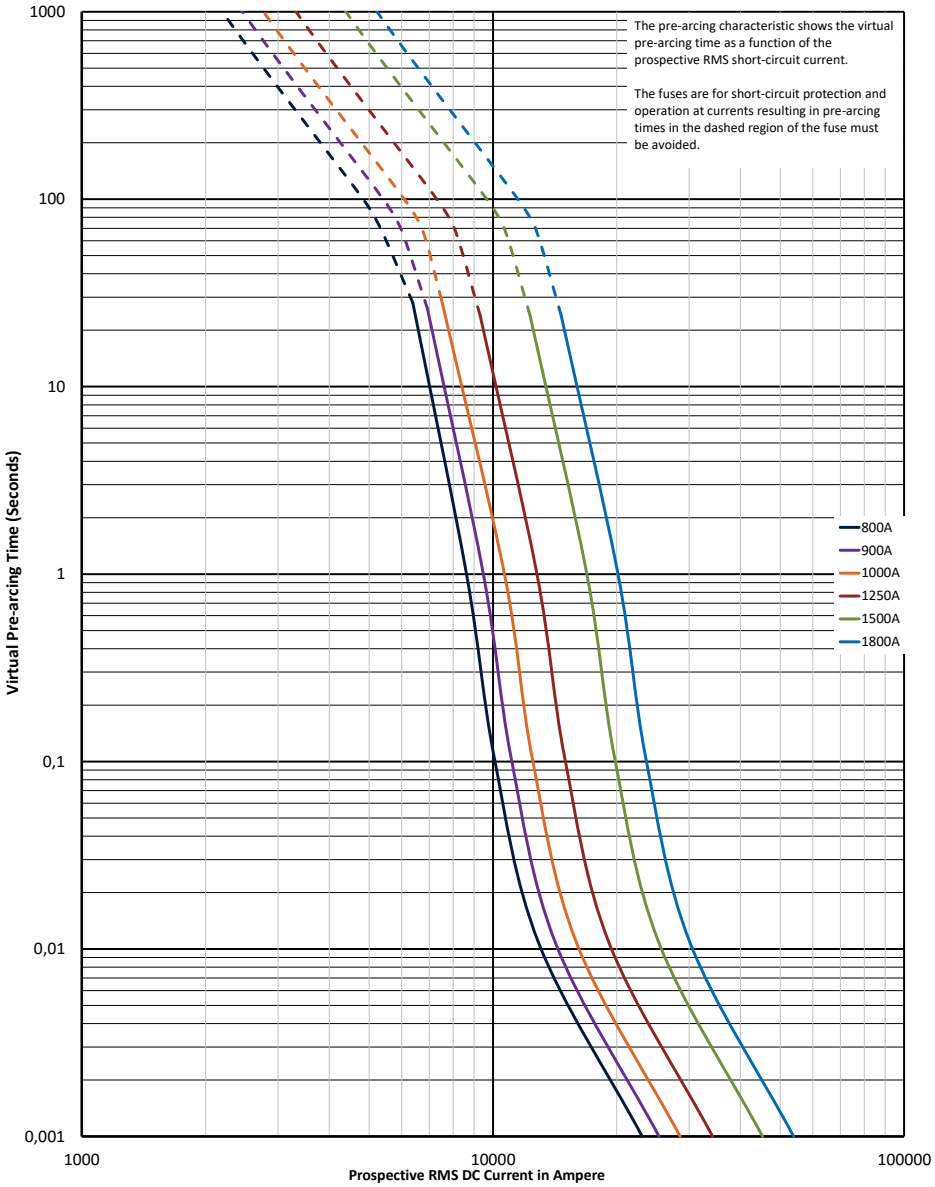


A	B
153.6 ± 2.4	142.6 ± 2.7

Data sheet: TD135028EN

1500 V d.c. (IEC/UL) - 800 A to1800 A - 180D - Flush end contact fuse body size 4

Time-current curve

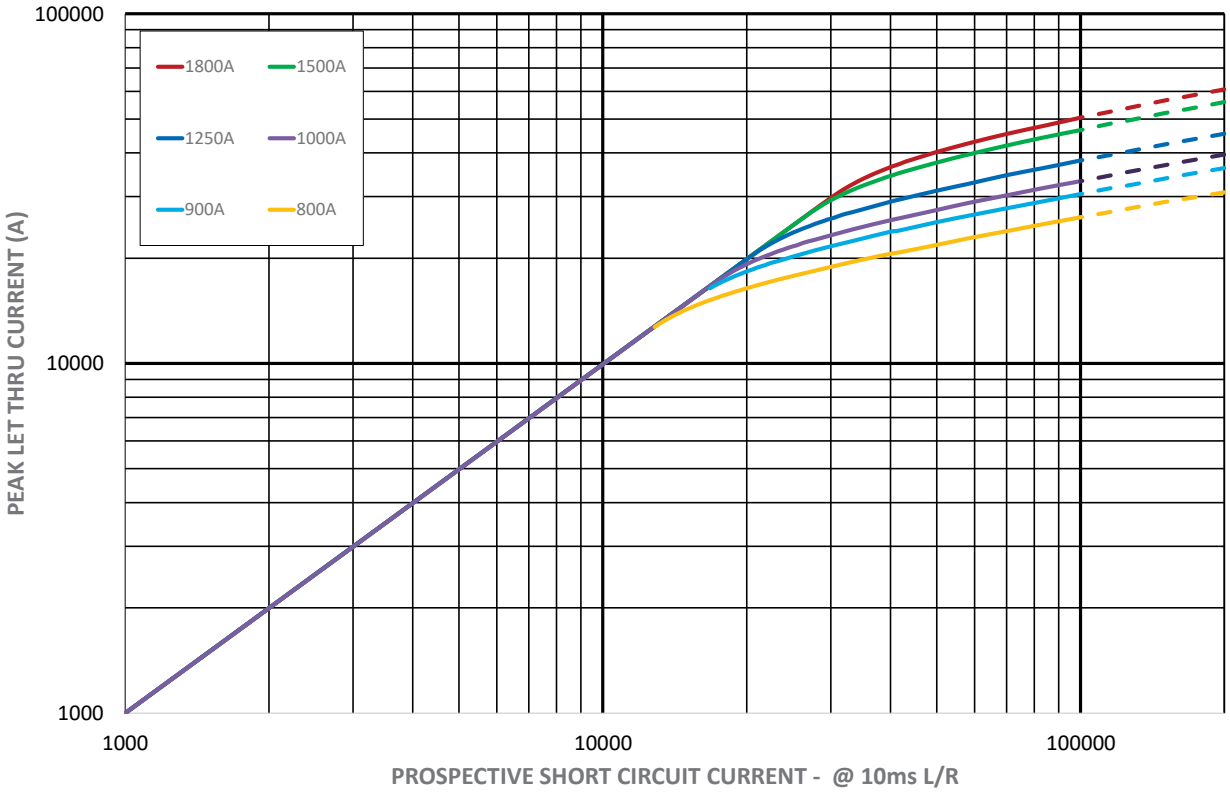


K_b = 1 N = 1,5

Data sheet: TD135028EN

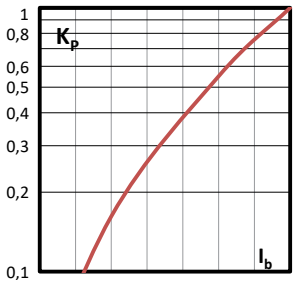
1500 V d.c. (IEC/UL) - 800 A to1800 A - 180D - Flush end contact fuse body size 4

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.



Data sheet: TD135028EN

1500 V d.c. (IEC/UL) - 630 A to 1800 A - ESS5 - Size 4

Specifications

Description

Eaton's Bussmann series 1500 V d.c. aR square body fuse links provide fast, reliable protection for modern DC systems including BESS, EV charging infrastructure, DC drives, and power conversion applications.



Technical data

- Rated voltage: 1500 V d.c. (IEC/UL)
- Rated current: 630 A to 1800 A
- Breaking capacity: 250 kA at 4ms L/R
- Operating class: aR and aBat

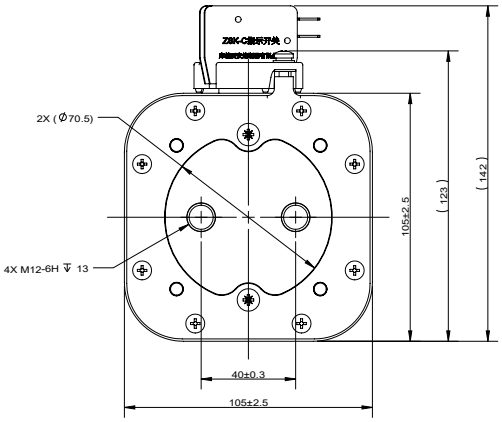
Standards / Agency information

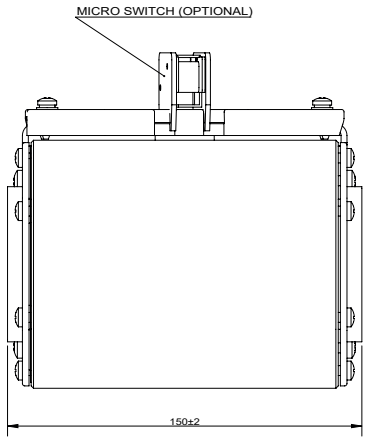
Designed and tested to IEC 60269 part 4 and 7, UL 248-13
Recognised, RoHS compliant

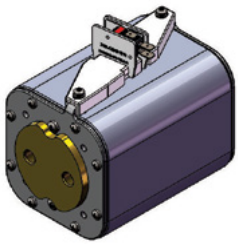
Catalog numbers

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 4ms)	Minimum breaking current (A)	Pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Catalog number
4	1500 V d.c. (IEC/UL)	630	250	5040	169,000	183	ESS5-630
		700	250	5600	200,000	192	ESS5-700
		800	250	6400	320,000	202	ESS5-800
		900	250	7200	467,000	212	ESS5-900
		1000	250	8000	658,000	233	ESS5-1000
		1100	250	8800	804,000	241	ESS5-1100
		1250	250	10,000	1,140,000	262	ESS5-1250
		1350	250	10,800	1,430,000	273	ESS5-1350
		1500	250	12,000	1,870,000	286	ESS5-1500
		1600	250	12,800	2,450,000	284	ESS5-1600
		1800	250	14,400	3,170,000	315	ESS5-1800

Dimensions (mm)



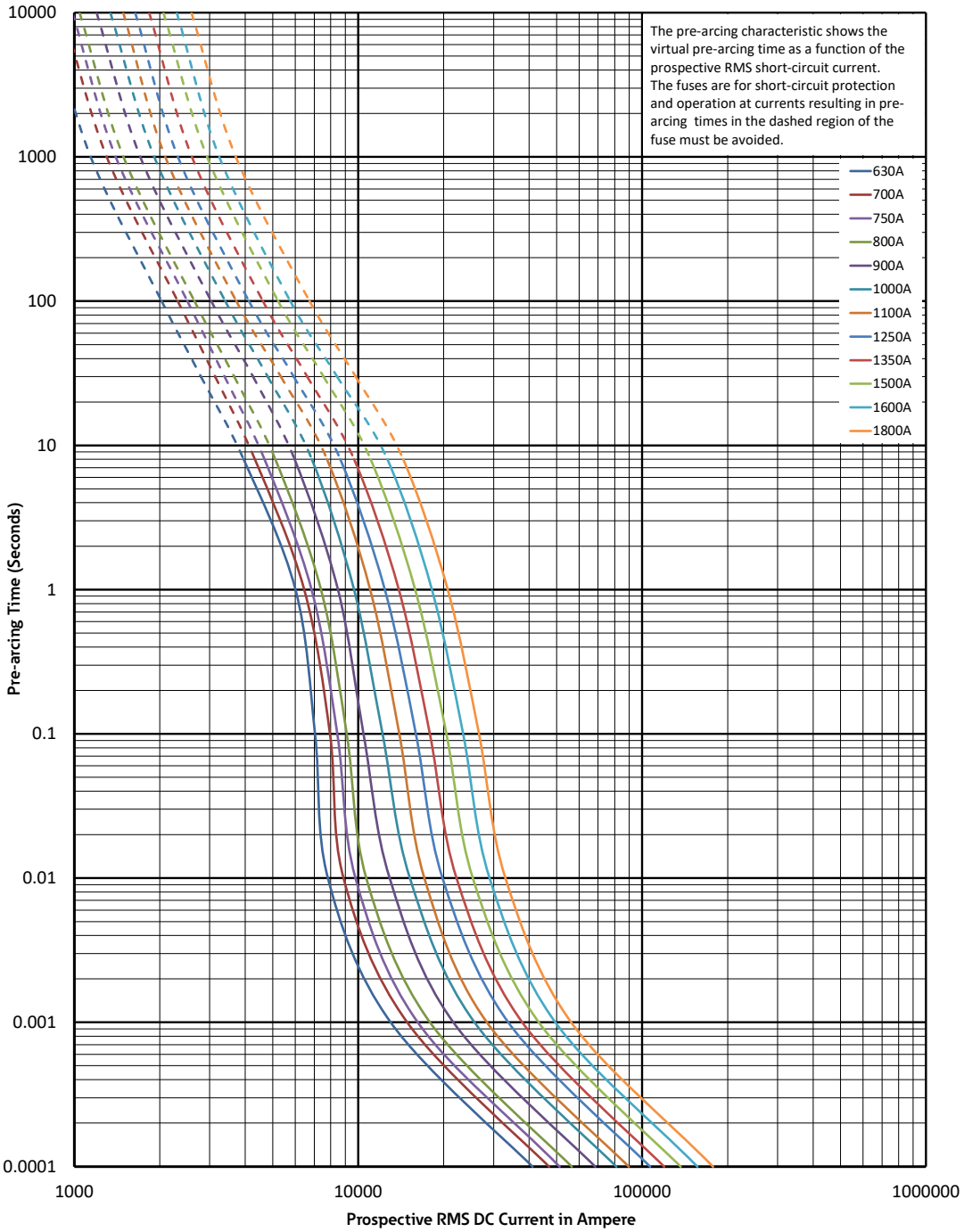




Data sheet: TD135032EN

1500 V d.c. (IEC/UL) - 630 A to 1800 A - ESS5 - Size 4

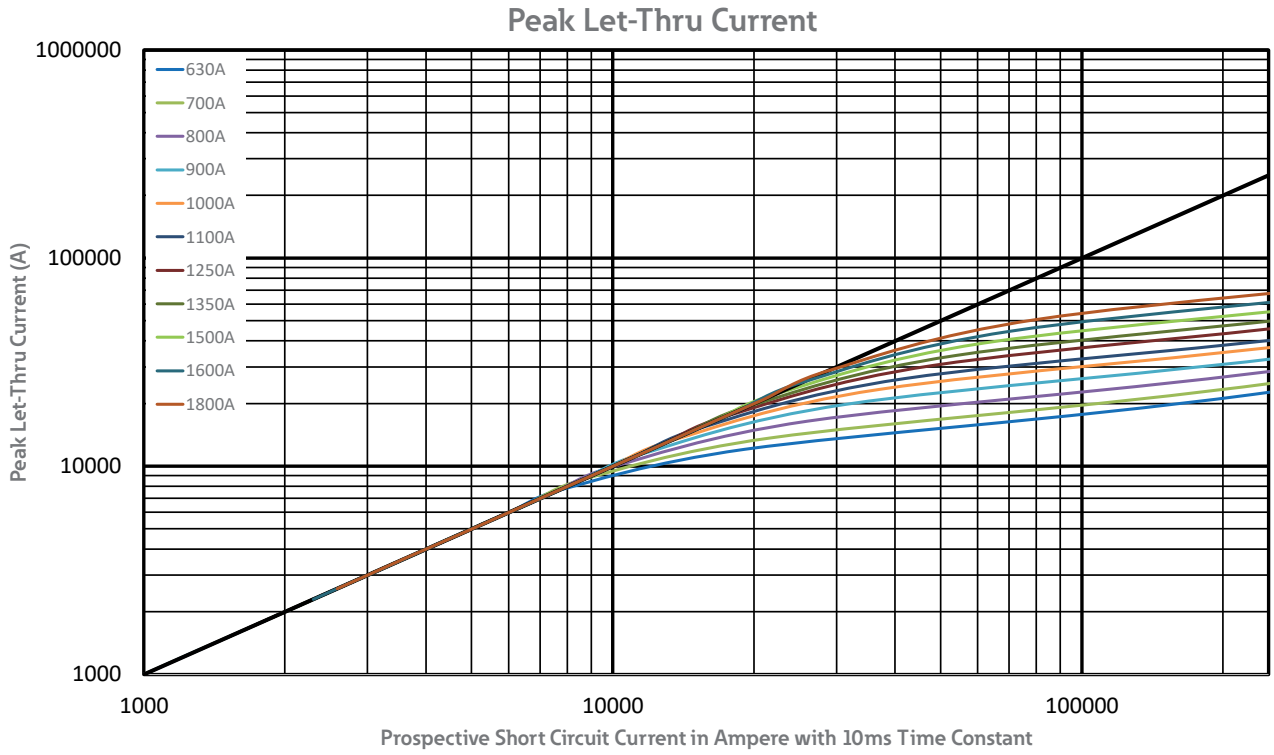
Time-current curve



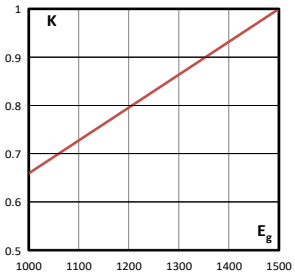
Data sheet: TD135032EN

1500 V d.c. (IEC/UL) - 630 A to 1800 A - ESS5 - Size 4

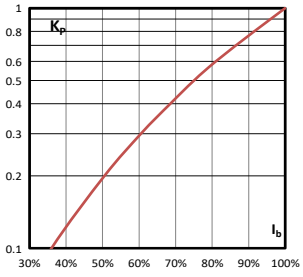
Peak let-through curve



Total clearing I²t
The total clearing I²t at rated voltage and tested DC time constant are given in electrical characteristics. For other voltages the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltages, E.



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.



Data sheet: TD135032EN

Square body fuse links

1500 V d.c. (IEC/UL) - 1600 A to 3000 A - 180D - Size 24

Specifications



Description

Eaton's Bussmann series 1500 V d.c. aR and aBat square body fuse links provide fast, reliable protection for modern DC systems including BESS, EV charging infrastructure, DC drives, and power conversion applications.

Technical data

- Rated voltage: 1500 V d.c. (IEC/UL)
- Rated current: 1600 A to 3000 A
- Breaking capacity: 250 kA at 3ms L/R
- Operating class: aR and aBat

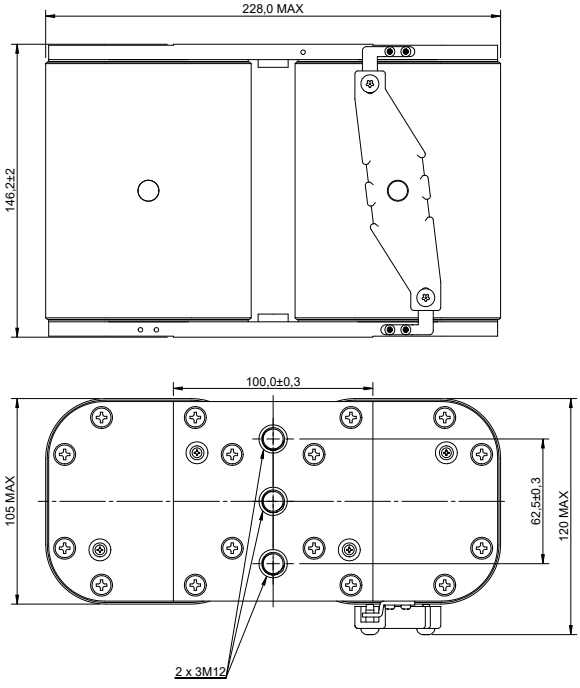
Standards / Agency information

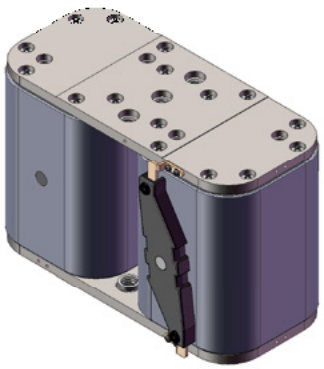
Designed and tested to IEC 60269 part 4, UL 248-13-Recognised, RoHS compliant

Catalog numbers

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 3ms)	Minimum breaking current (A)	Pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Catalog number
24	1500 V d.c. (IEC/UL)	1600	250	23,000	2,139,000	270	180D7739
		1800	250	27,500	3,044,000	300	180D7740
		2000	250	32,500	4,251,000	315	180D7741
		2200	250	37,500	5,660,000	330	180D7742
		2500	250	45,000	8,100,000	390	180D7743
		2800	250	53,500	11,407,000	410	180D7744
		3000	250	59,100	14,021,000	425	180D7745

Dimensions (mm)

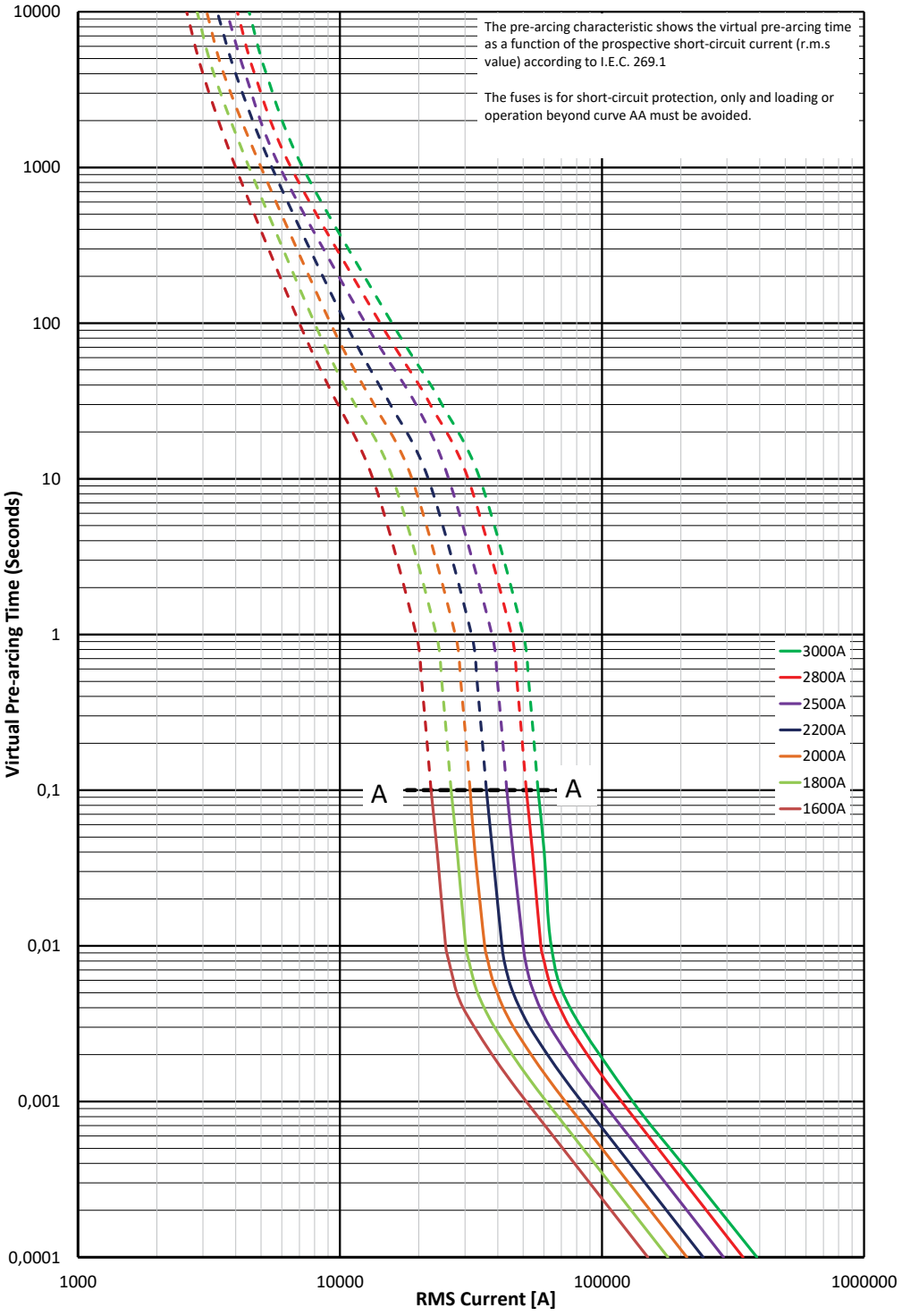




Data sheet: TD135029EN

1500 V d.c. (IEC/UL) - 1600 A to 3000 A - 180D - Size 24

Time-current curve

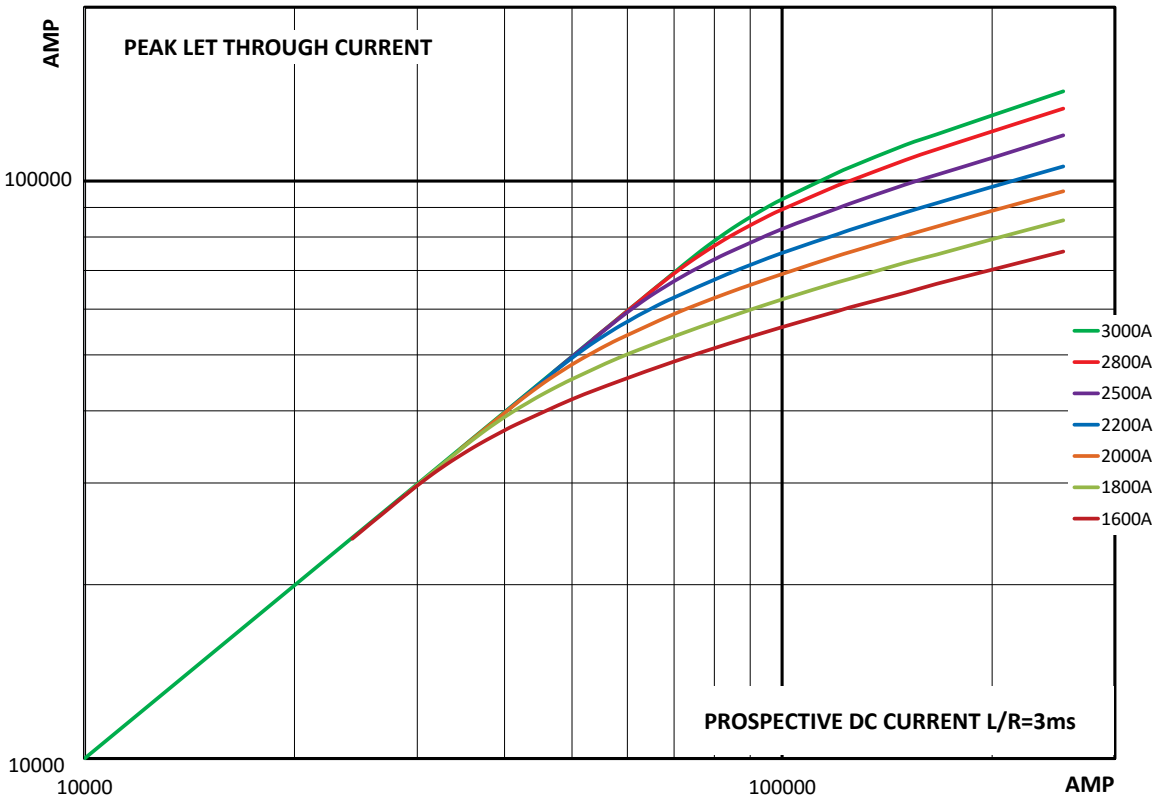


K_b = 1

Data sheet: TD135029EN

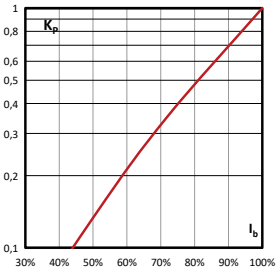
1500 V d.c. (IEC/UL) - 1600 A to 3000 A - 180D - Size 24

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.



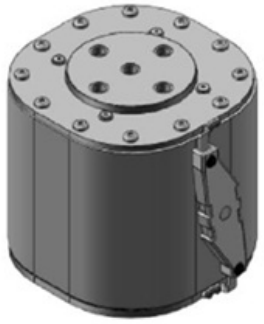
Data sheet: TD135029EN

1500 V d.c. (IEC/UL) - 1250 A to 4000 A - CBMG - Size 5

Specifications

Description

Eaton's Bussmann series 1500 V d.c. aR square body fuse links provide fast, reliable protection for modern DC systems including BESS, EV charging infrastructure, DC drives, and power conversion applications.



Technical data

- Rated voltage: 1500 V d.c. (IEC/UL)
- Rated current: 1250 A to 4000 A
- Breaking capacity: 300 kA at 10 ms L/R
- Operating class: aR

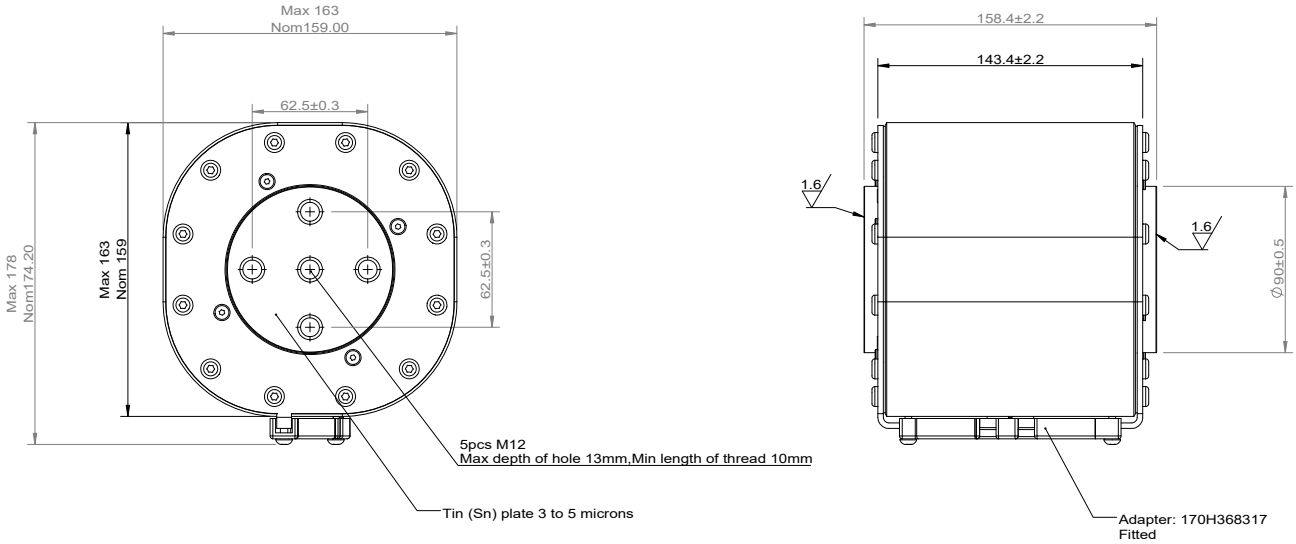
Standards / Agency information

Designed and tested to IEC 60269 part 4, UL 248-13-
Recognised, RoHS compliant

Catalog numbers

Fuse body size	Rated voltage	Rated current (Amps)	Breaking capacity (kA at 10ms)	Minimum breaking current (A)	Pre-arcing I^2t (A^2 Sec)	Power loss at In (W)	Catalog number
5	1500 V d.c. (IEC/UL)	1250	300	11,000	695,000	340	CBMG-1250
		1350	300	12,000	825,000	365	CBMG-1350
		1500	300	14,000	1,100,000	390	CBMG-1500
		1800	300	17,000	1,650,000	460	CBMG-1800
		2000	300	20,000	2,300,000	480	CBMG-2000
		2500	300	28,000	4,650,000	530	CBMG-2500
		3000	300	37,000	8,100,000	585	CBMG-3000
		3500	300	47,100	13,200,000	640	CBMG-3500
		4000	300	58,000	20,000,000	690	CBMG-4000

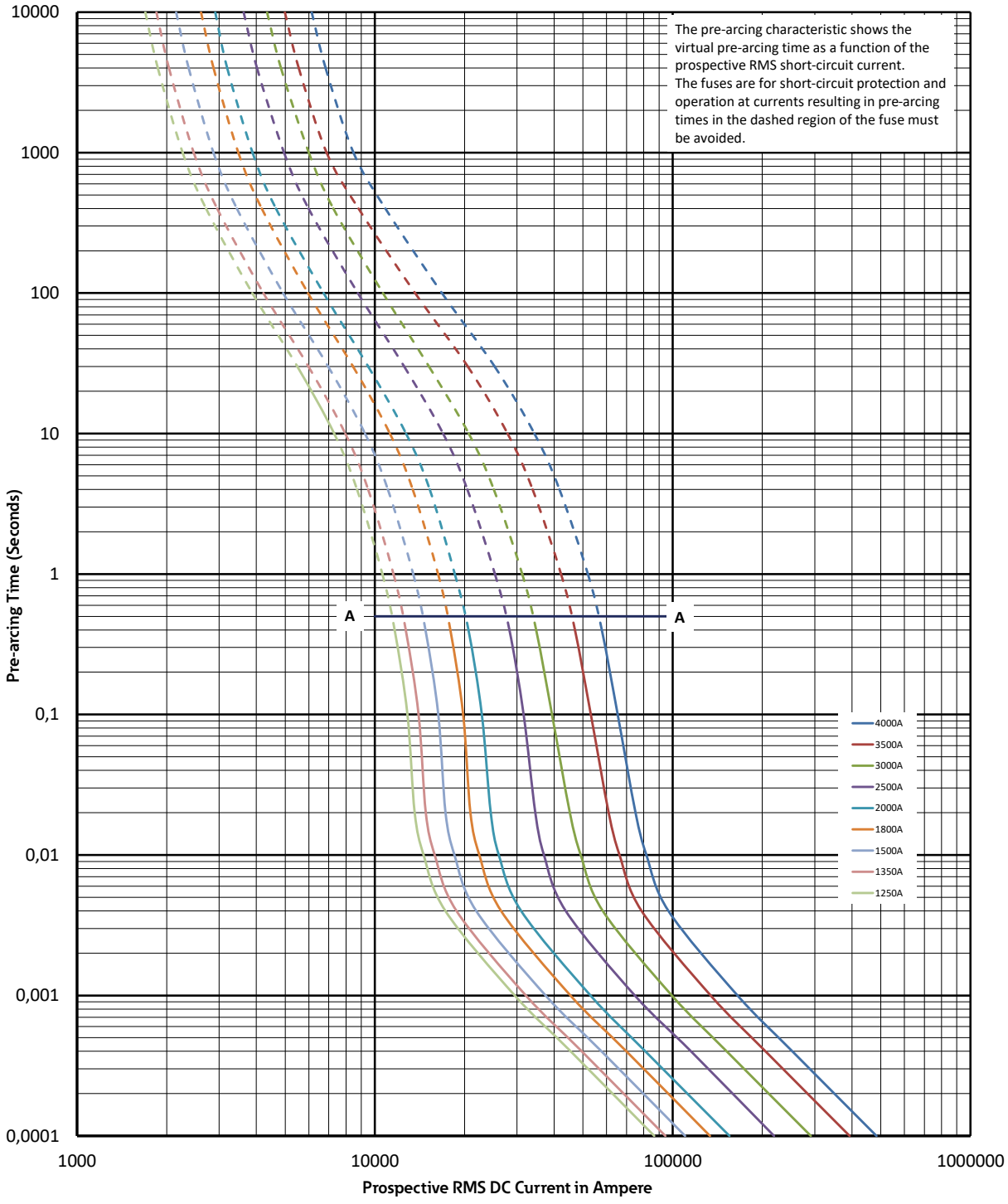
Dimensions (mm)



Data sheet: TD135035EN

1500 V d.c. (IEC/UL) - 1250 A to 4000 A - CBMG - Size 5

Time-current curve

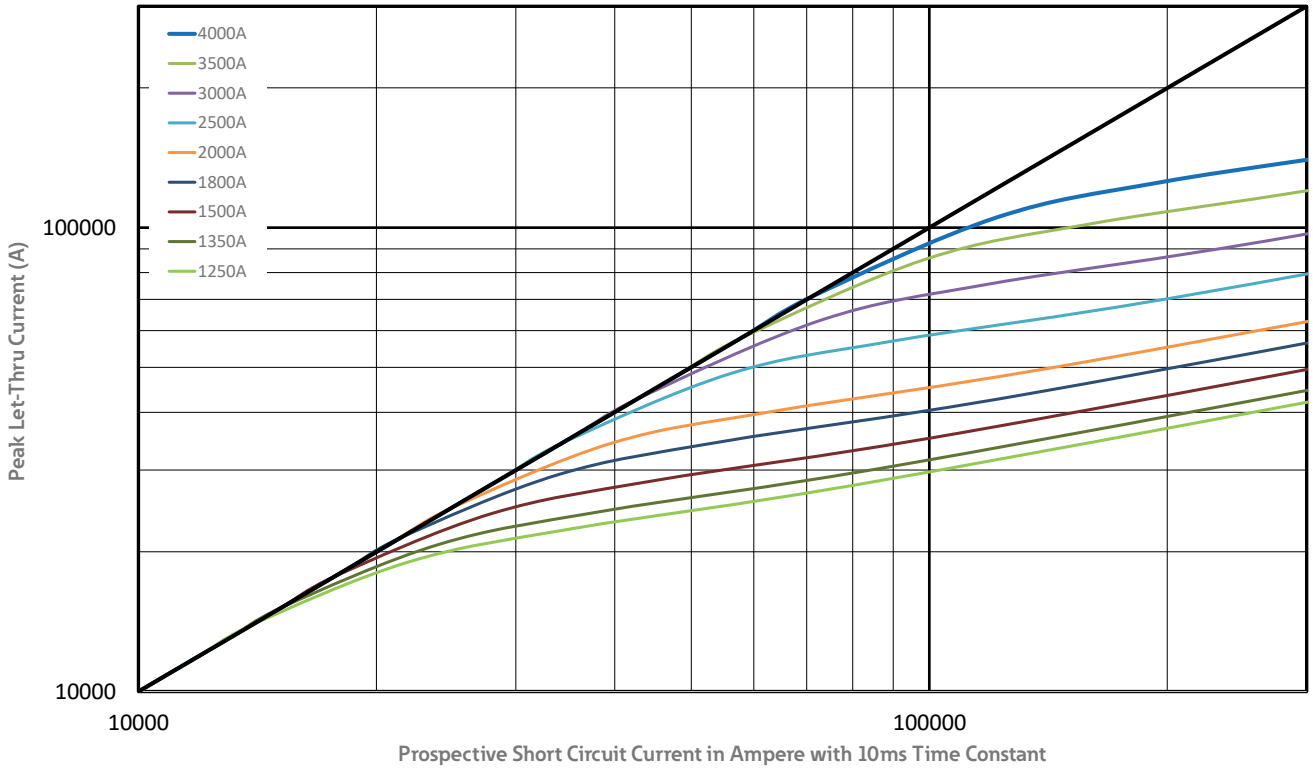


K_b = 1 N = 1,8

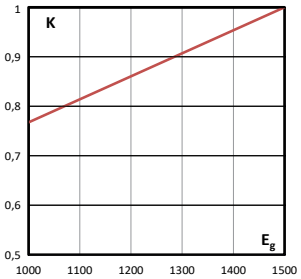
Data sheet: TD135035EN

1500 V d.c. (IEC/UL) - 1250 A to 4000 A - CBMG - Size 5

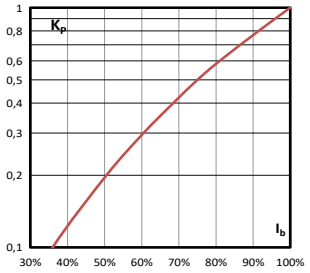
Peak let-through curve



Total clearing I²t
The total clearing I²t at rated voltage and tested DC time constant are given in electrical characteristics. For other voltages the clearing I²t is found by multiplying by correction factor, K, given as a function of applied working voltages, E.



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.



Data sheet: TD135035EN

2000 V d.c. Battery Energy Storage System (BESS) fuses

DC applications move toward higher voltages to enable more efficient power conversion systems. These next-generation systems demand high-speed overcurrent protection to ensure safety and reliability under extreme electrical conditions. Eaton's focus on 2000 V d.c. fuse technology addresses these requirements, supporting the evolution of modern DC architectures for applications such as energy storage systems (BESS) and high-performance converters.

Operating at 2000 V d.c. presents unique challenges for fuse design, including increased arc energy, insulation requirements, and thermal management. Eaton's advanced fuse technology addresses these challenges with robust construction, optimized arc quenching, and high interrupting ratings, ensuring reliable protection in demanding DC environments.

These fuses are developed in alignment with **the upcoming IEC 63523 and UL 248-21 standard**, which define requirements for fuses rated above 1500 V d.c., ensuring future-proof compliance and performance.

Whether for grid-scale energy storage, high-voltage DC links, or cutting-edge power conversion systems, Eaton's 2000Vdc fuse range will deliver safety, reliability, and innovation for tomorrow's energy infrastructure.



Technical data

- Rated voltage: 2000 V d.c.
- Rated current: various options available
- Operating class: aR and aBat
- Connection type: Flush end, DIN 43653 and US Bolted

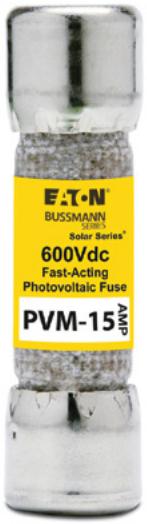
Standards / Agency information

IEC 63523 (Draft) and UL 248-21 (Draft), ROHS compliant

For inquiries related to your 2000 V d.c. BESS development, please contact bulehighspeedtechnical@eaton.com

600 V d.c. (UL) - 4 A to 30 A - PVM - 10 x 38 mm

Specifications



Description
A range of UL 2579 fast-acting 600 V d.c. midget fuse links specifically designed to protect solar power systems in extreme ambient temperature, high cycling and low level fault rated current conditions (reverse rated current, multi-array fault).

Technical data
- Rated voltage: 600 V d.c. to UL 2579
- Rated current: 4 A to 30 A
- Breaking capacity: 50 kA DC (4 A to 30 A)

Compatible fuse holder
CHPV

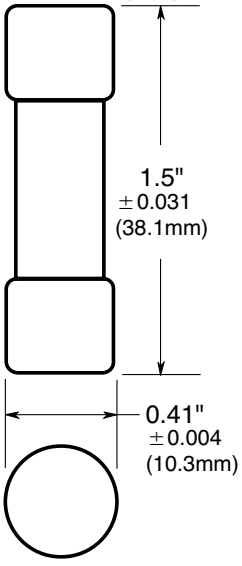
Standards / Agency information
UL Listed 2579, Guide JFGA, File E335324, CSA Component Certified C22.2

Catalog numbers

Rated voltage	Rated current (Amps)	Power Loss (W)		Catalog numbers
		0.8 x I_n	1 x I_n	
600 V d.c. (UL)	4			PVM-4
	5			PVM-5
	6			PVM-6
	7			PVM-7
	8			PVM-8
	9			PVM-9
	10	1	1.9	PVM-10
	12			PVM-12
	15	1	1.7	PVM-15
	20			PVM-20
	25			PVM-25
	30	1.6	2.9	PVM-30

Please contact FUSETECH@eaton.com for further information

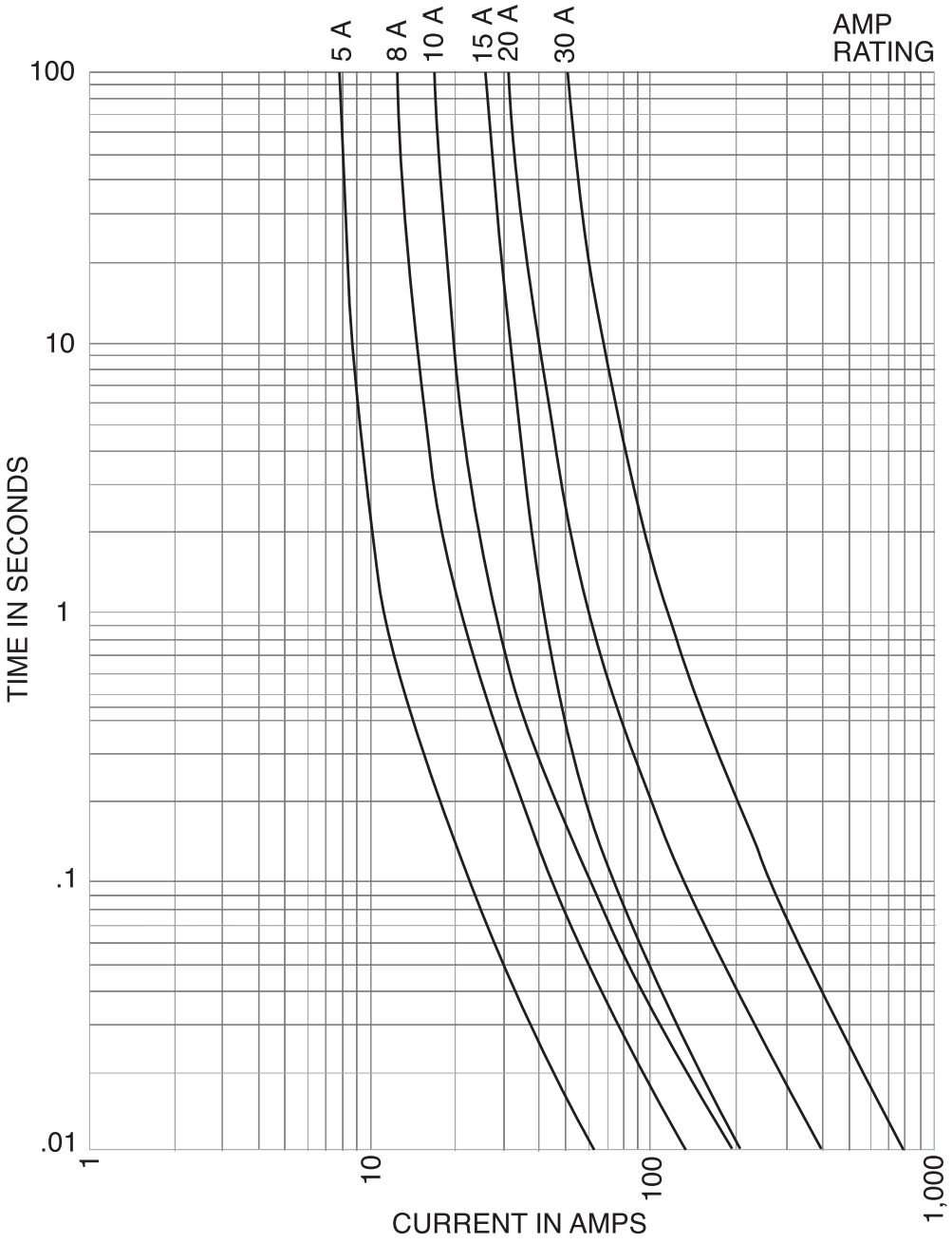
Dimensions in (mm)



Data sheet: 2153

600 V d.c. (UL) - 4 A to 30 A - PVM - 10 x 38 mm

Time-current curve - 5 A to 30 A



Please contact FUSETECH@eaton.com for further information

Data sheet: 2153

1000 V d.c. (IEC/UL) - 1 A to 20 A - PV-A10 - 10 x 38 mm

Specifications



Description
A range of fuse links in a 10 x 38 mm package specifically designed for the protection and isolation of photovoltaic strings. The fuse links are capable of interrupting low over rated currents associated with faulted PV (reverse rated current, multi-array fault) string arrays.

Technical data
- Rated voltage: 1000 V d.c. (IEC/UL)
- Rated current: 1 A to 20 A
- Breaking capacity: 50 kA
- Operating class: gPV and UL PV fuse links

Compatible fuse holder
CHPV

Standards / Agency information
IEC 60269-6, UL Recognised 2579 (File number E335324), CSA, CCC (1-15A), RoHS compliant.

Catalog numbers - Cylindrical and bolt fixing fuse links

		I^2t (A^2 Sec)		Watts loss (W)		Catalog numbers	
Rated voltage	Rated current (Amps)	Pre-arcing	Total at 1000 V d.c.	0.8 I_n	I_n	Cylindrical	Bolt fixing
1000 V d.c. (UL/IEC)	1	0.2	0.4	0.8	1.5	PV-1A10F	PV-1A10-T
	2	1.2	4	0.6	1.0	PV-2A10F	PV-2A10-T
	2.5	3	9	0.6	1.0	PV-2-5A10F	PV-2-5A10-T
	3	4	11	0.8	1.3	PV-3A10F	PV-3A10-T
	3.5	6.6	18	0.9	1.4	PV-3-5A10F	PV-3-5A10-T
	4	9.5	26	1.0	1.5	PV-4A10F	PV-4A10-T
	5	19	50	1.0	1.6	PV-5A10F	PV-5A10-T
	6	30	90	1.1	1.8	PV-6A10F	PV-6A10-T
	8	3	32	1.2	2.1	PV-8A10F	PV-8A10-T
	10	7	70	1.2	2.3	PV-10A10F	PV-10A10-T
	12	12	120	1.5	2.7	PV-12A10F	PV-12A10-T
	15	15	160	1.7	2.9	PV-15A10F	PV-15A10-T
	16	19	200	1.8	3	PV-16A10F	PV-16A10-T
	20	34	350	2.1	3.6	PV-20A10F	PV-20A10-T

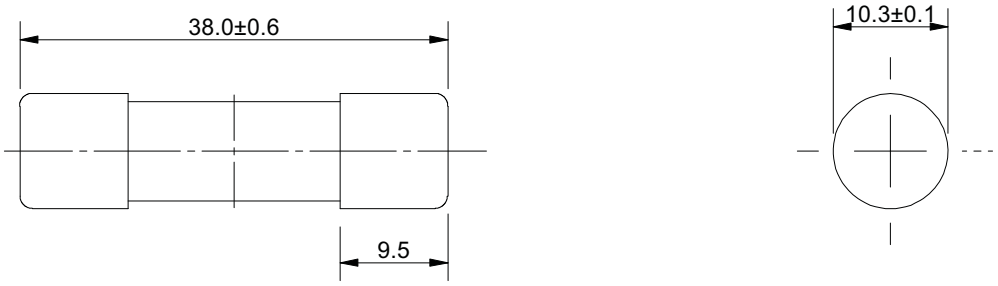
Data sheet: 720110

1000 V d.c. (IEC/UL) - 1 A to 20 A - PV-A10 - 10 x 38 mm

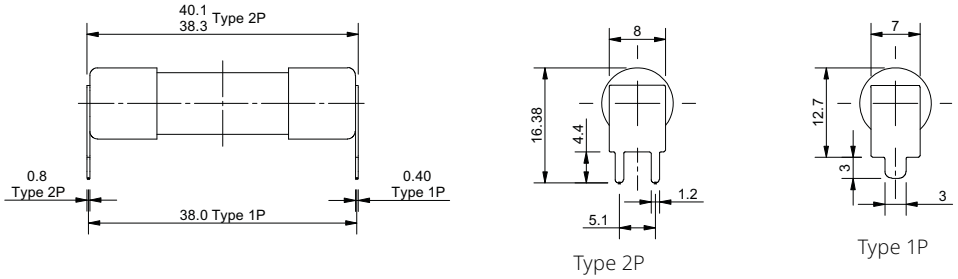
Catalog numbers - PCB fixing fuse links

		I^2t (A^2 Sec)		Watts loss (W)		Catalog numbers		
Rated voltage	Rated current (Amps)	Pre-arcing	Total at 1000 V d.c.	0.8 I_n	I_n	PCB fixing single pin	PCB fixing double pin	PCB fixing double pin silver cap
1000 V d.c. (UL/IEC)	1	0.2	0.4	0.8	1.5	PV-1A10-1P	PV-1A10-2P	PV-1A10-2P-S
	2	1.2	4	0.6	1.0	PV-2A10-1P	PV-2A10-2P	PV-2A10-2P-S
	2.5	3	9	0.6	1.0	PV-2-5A10-1P	PV-2-5A10-2P	PV-2-5A10-2P-S
	3	4	11	0.8	1.3	PV-3A10-1P	PV-3A10-2P	PV-3A10-2P-S
	3.5	6.6	18	0.9	1.4	PV-3-5A10-1P	PV-3-5A10-2P	PV-3-5A10-2P-S
	4	9.5	26	1.0	1.5	PV-4A10-1P	PV-4A10-2P	PV-4A10-2P-S
	5	19	50	1.0	1.6	PV-5A10-1P	PV-5A10-2P	PV-5A10-2P-S
	6	30	90	1.1	1.8	PV-6A10-1P	PV-6A10-2P	PV-6A10-2P-S
	8	3	32	1.2	2.1	PV-8A10-1P	PV-8A10-2P	PV-8A10-2P-S
	10	7	70	1.2	2.3	PV-10A10-1P	PV-10A10-2P	PV-10A10-2P-S
	12	12	120	1.5	2.7	PV-12A10-1P	PV-12A10-2P	PV-12A10-2P-S
	15	15	160	1.7	2.9	PV-15A10-1P	PV-15A10-2P	PV-15A10-2P-S
	16	19	200	1.8	3	PV-16A10-1P	PV-16A10-2P	PV-16A10-2P-S
	20	34	350	2.1	3.6	PV-20A10-1P	PV-20A10-2P	PV-20A10-2P-S

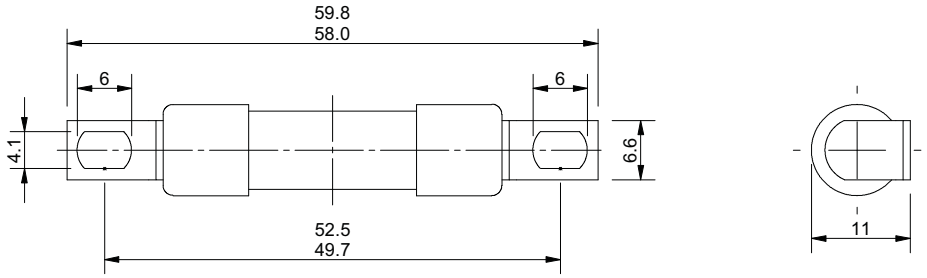
Dimensions (mm) - PV-**A10F, Cylindrical



Dimensions (mm) - PV-**A10-xP, PCB fixing



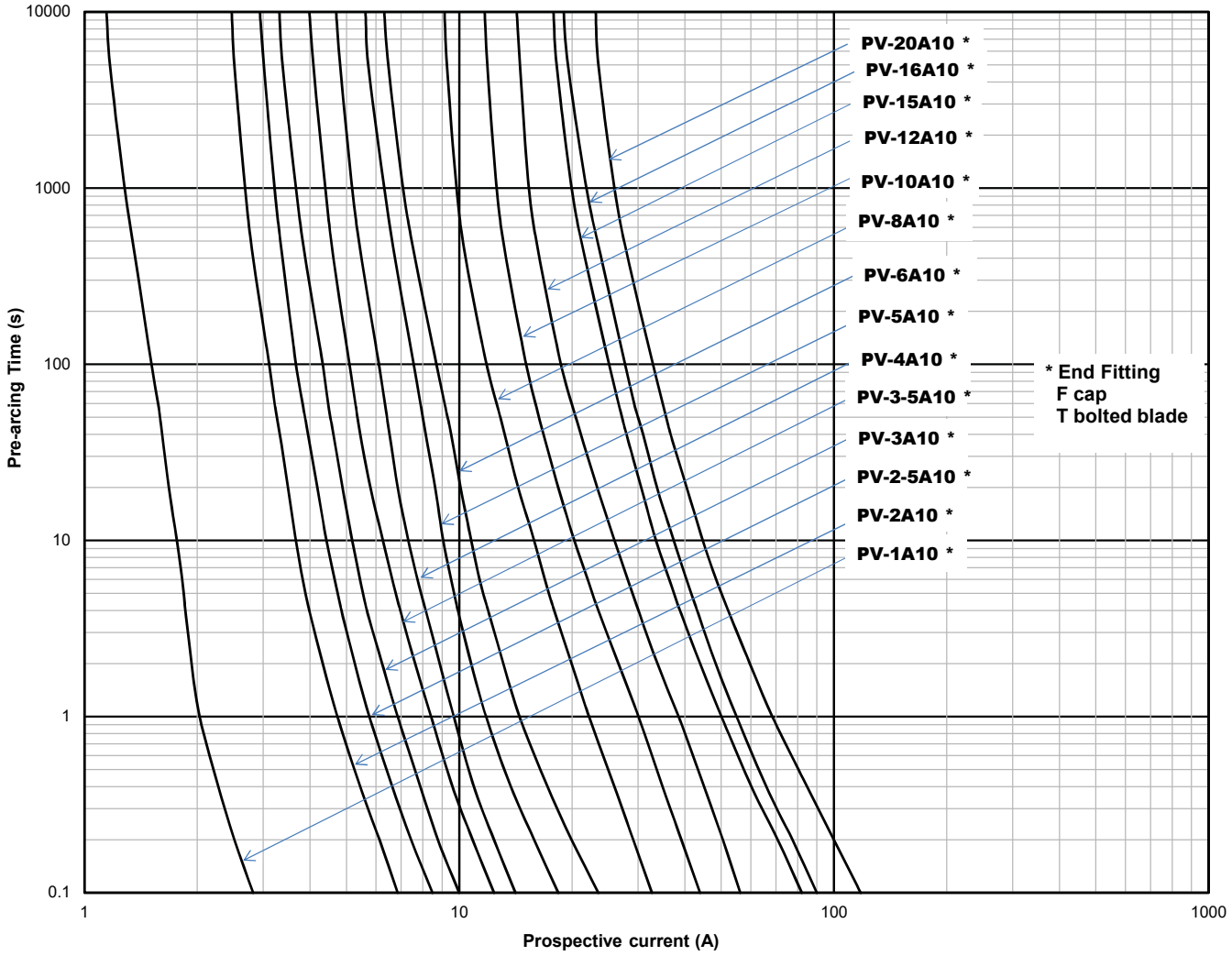
Dimensions (mm) - PV-**A10-T, Bolt fixing



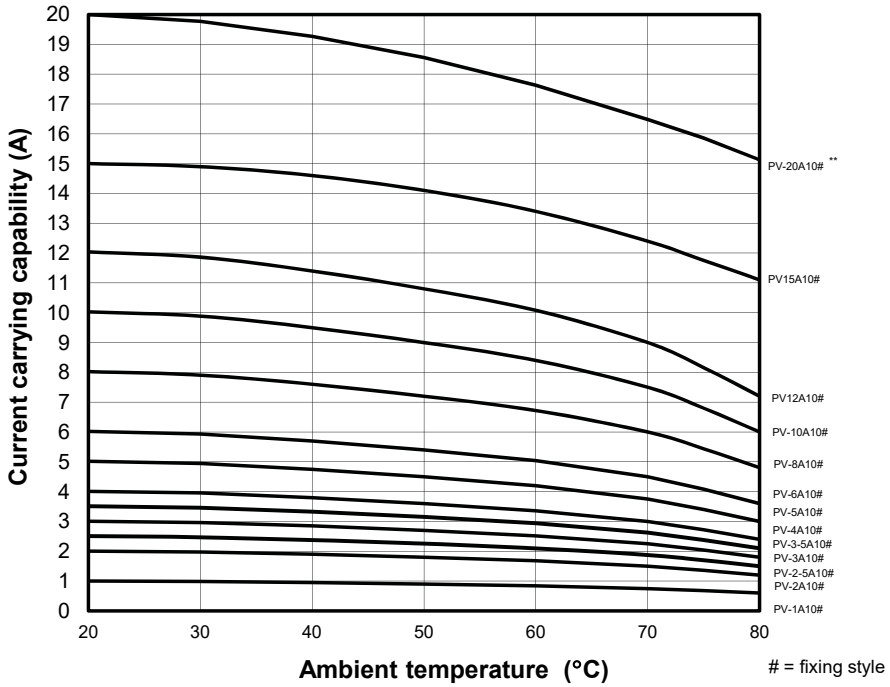
Data sheet: 720110

1000 V d.c. (IEC/UL) - 1 A to 20 A - PV-A10 - 10 x 38 mm

Time-current curve - 1 A to 20 A



Temperature deratings



Data sheet: 720110

Photovoltaic fuse links, fuse bases and holders

CHPV Modular fuse holders for 10 x 38 mm fuse links - 1000 V d.c. (IEC/UL) - 32 A (IEC), 30 A (UL)

Specifications



Description
Compact DIN-Rail mounting fuse holders specifically designed for 10 x 38 mm photovoltaic fuse links.

Catalog numbers
- CHPV1U 1-pole modular fuse holder
- CHPV2U 2-pole modular fuse holder
- CHPV1IU 1-pole modular fuse holder with neon indicator
- CHPV2IU 2-pole modular fuse holder with neon indicator

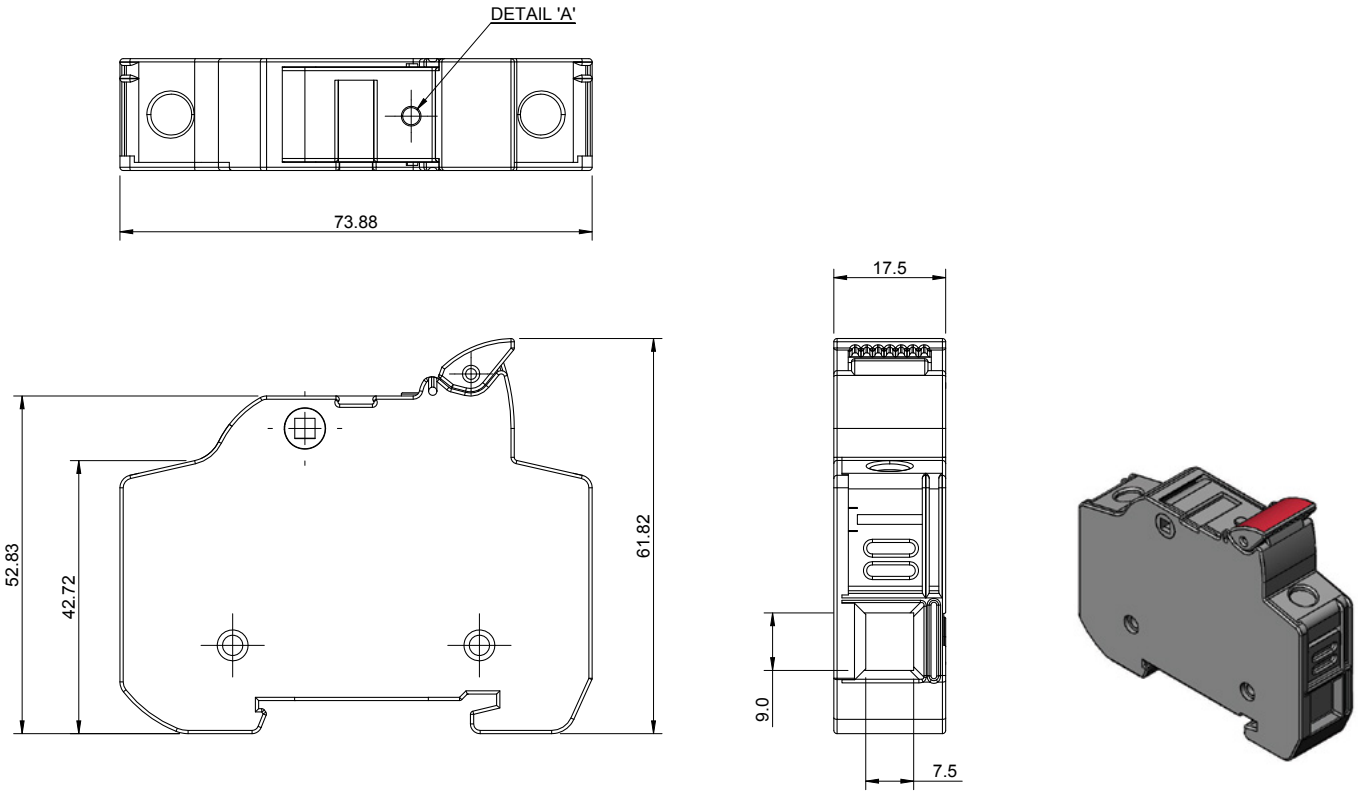
Technical data

IEC		UL				
Rated voltage	**Rated current**	**Rated voltage**	**Rated current**	**Terminal rating**	**Rated breaking withstand capactiy**	**Compatible Bussmann series fuse links**
1000 V d.c.	32 A	1000 V d.c.	30 A	IEC 1 to 25 mm^2 70°C PVC Copper cable (solid stranded or fine stranded) Spade lug Comb bus bar	33 kA rms sym	Solar PV range: PVM, PV-A10F

Standards / Agency information

IEC	UL	CSA	CCC	CE
IEC 60269-1	UL 4248-1 UL4248-19 UL file E14853	C22.2 No 4248.1 C22.2 No 4248.19	GB 13539.1	DCB 272

Dimensions mm



Data sheet: 720147

1000 V d.c. (IEC/UL) - 32 A to 400 A - NH - PV-ANH

Specifications

Description
A range of NH size bladed fuse links specifically designed for protecting and isolating photovoltaic array combiners and disconnects. These fuse links are capable of interrupting low overrated currents associated with faulted PV systems (reverse rated current, multi-array fault).



Technical data
- Rated voltage: 1000 V d.c. (IEC and UL)
- Rated current: 32 A to 400 A
- Breaking capacity: 50 kA
- Operating class: gPV and UL PV fuse links

Compatible fuse base
SD-D-PV

Standards / Agency information
IEC 60269-6, UL Recognised file 2579 E335324 for size 1 only, RoHS compliant

Catalog numbers - Bladed version

			I^2t (A^2 Sec)		Watts loss (W)		Catalog numbers	
Fuse link body size	Rated voltage	Rated current (Amps)	Pre-arcing	Total at 1000 V d.c.	0.8 I_n	I_n	Blade without bolt holes	Blade with bolt holes
NH1	1000 V d.c. (IEC/UL)	32	80	720	4	8	PV-32ANH1	PV-32ANH1-B
		40	185	1670	5	9	PV-40ANH1	PV-40ANH1-B
		50	400	3600	6	11	PV-50ANH1	PV-50ANH1-B
		63	470	4300	6	12	PV-63ANH1	
		80	640	5760	8	15	PV-80ANH1	
		100	1300	11,700	8	16	PV-100ANH1	
		110	2100	18,900	9	18.5	PV-110ANH1	
		125	2600	23,400	9	17	PV-125ANH1	
		160	5200	46,800	14	27	PV-160ANH1	
		175	8300	74,700	15	29	PV-175ANH1	
		200	10,200	8,2000	13	25	PV-200ANH1	
NH2	1000 V d.c. (IEC/UL)	160	4600	37,000	14	28	PV-160ANH2	
		200	9500	76,000	16	32	PV-200ANH2	
		250	17,000	136,000	19	38	PV-250ANH2	
NH3	1000 V d.c. (IEC/UL)	300	32,000	260,000	24	40	PV-300ANH3	
		315	32,000	260,000	26	44	PV-315ANH3	
		350	44,500	370,000	27	45	PV-350ANH3	
		355	44,500	370,000	28	46	PV-355ANH3	
		400	67,500	550,000	30	50	PV-400ANH3	

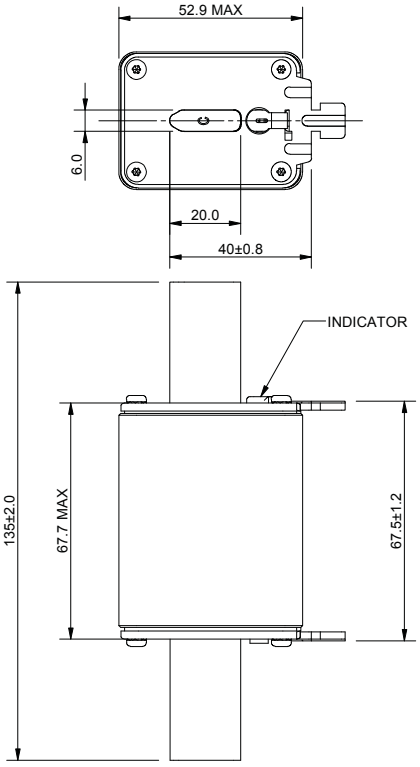
Data sheet: 720133

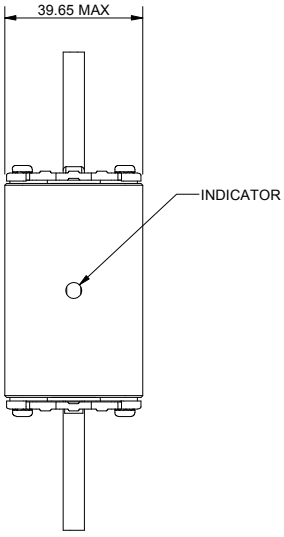
1000 V d.c. (IEC/UL) - 32 A to 400 A - NH - PV-ANH

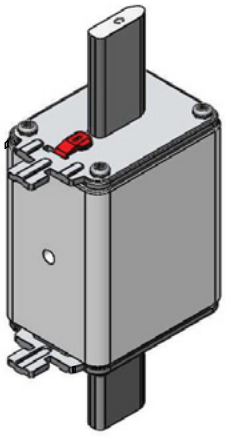
Catalog numbers - Bolted version

Fuse link body size	Rated voltage	Rated current (Amps)	I^2t (A^2 Sec)		Watts loss (W)		Catalog numbers	
			Pre-arcing	Total at 1000 V d.c.	0.8 I_n	I_n	Blade with bolt holes	Blade with bolt holes and lugs
NH1	1000 V d.c. (IEC/UL)	63	470	4300	6	12	PV-63ANH1-B	PV-63ANH1-BL
		80	640	5760	8	15	PV-80ANH1-B	PV-80ANH1-BL
		100	1300	11,700	8	16	PV-100ANH1-B	PV-100ANH1-BL
		125	2600	23,400	9	17	PV-125ANH1-B	PV-125ANH1-BL
		160	5200	46,800	14	27	PV-160ANH1-B	PV-160ANH1-BL
		200	10,200	82,000	13	25	PV-200ANH1-B	PV-200ANH1-BL
NH2	1000 V d.c. (IEC/UL)	160	4600	37,000	14	28	PV-160ANH2-B	PV-160ANH2-BL
		200	9500	76,000	16	32	PV-200ANH2-B	PV-200ANH2-BL
		250	17,000	136,000	19	38	PV-250ANH2-B	PV-250ANH2-BL
NH3	1000 V d.c. (IEC/UL)	315	32,000	260,000	26	44	PV-315ANH3-B	PV-315ANH3-BL
		355	38,000	310,000	29	48	PV-355ANH3-B	PV-355ANH3-BL
		400	61,000	490,000	32	50	PV-400ANH3-B	PV-400ANH3-BL

Dimensions (mm) - NH1, blade without bolt holes



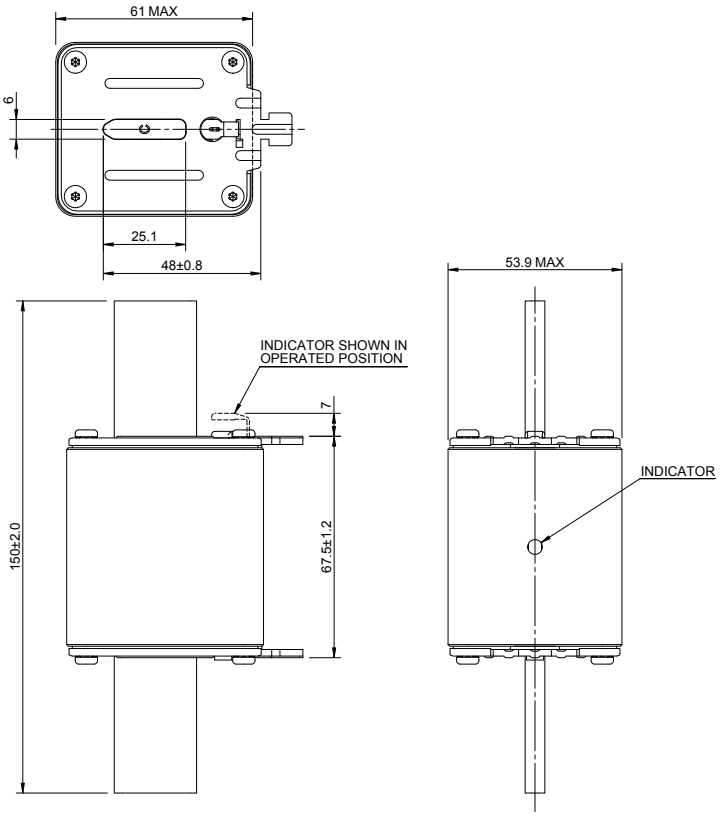


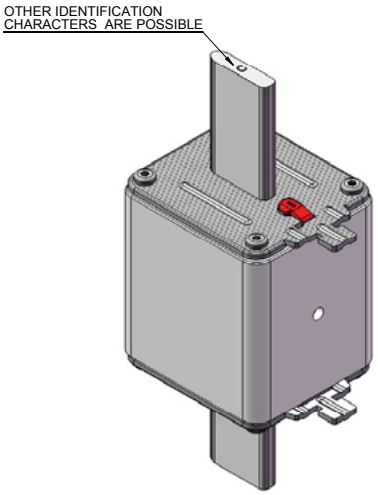


Data sheet: 720133

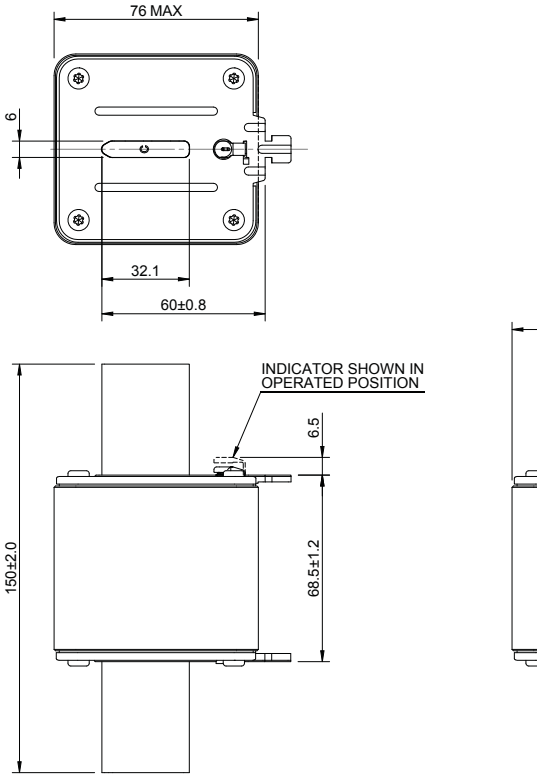
1000 V d.c. (IEC/UL) - 32 A to 400 A - NH - PV-ANH

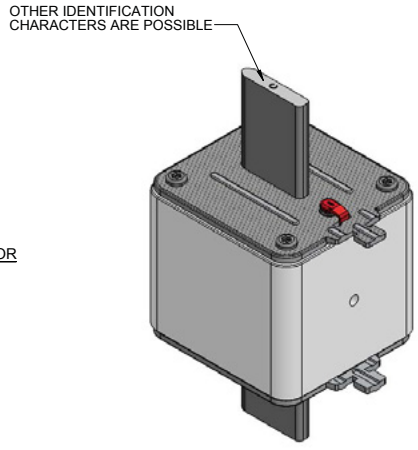
Dimensions (mm) - NH2, blade without bolt holes





Dimensions (mm) - NH3, blade without bolt holes

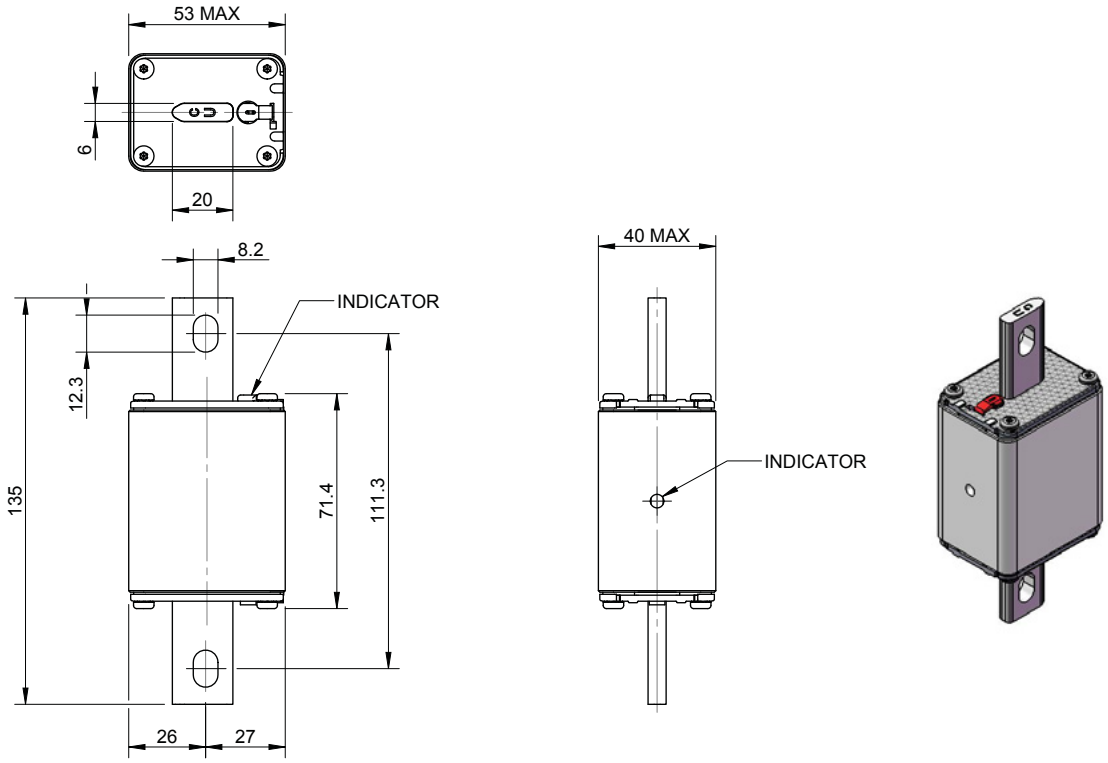




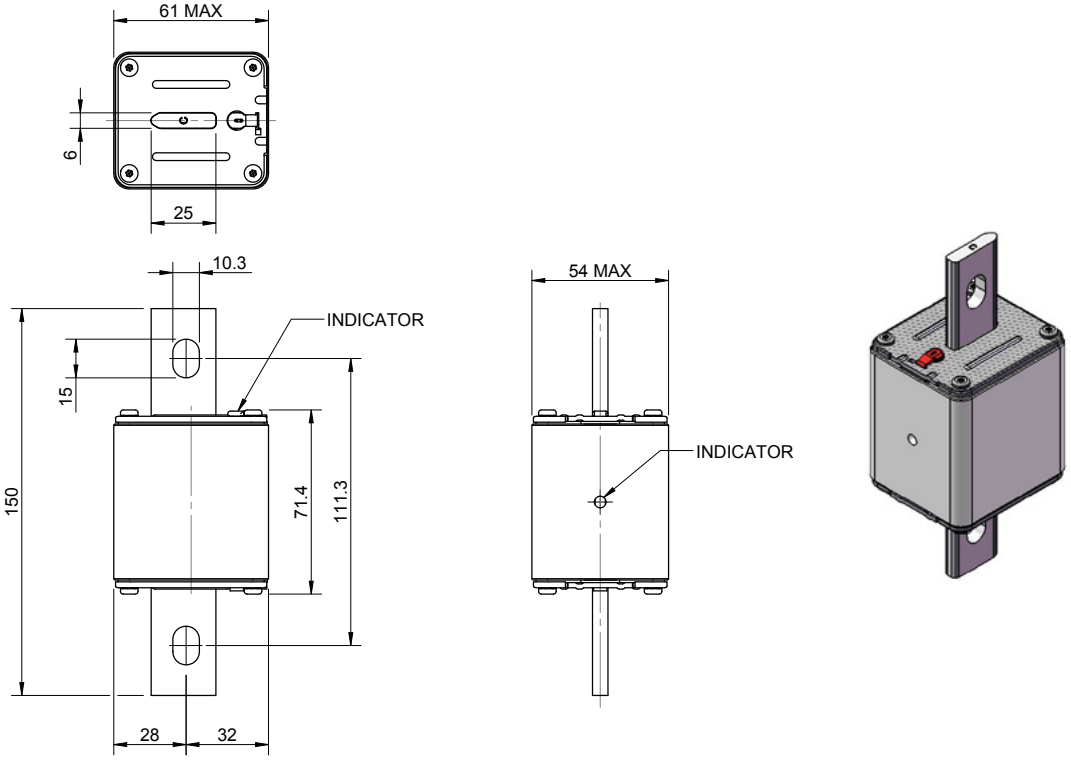
Data sheet: 720133

1000 V d.c. (IEC/UL) - 32 A to 400 A - NH - PV-ANH

Dimensions (mm) - NH1, blade with bolt holes



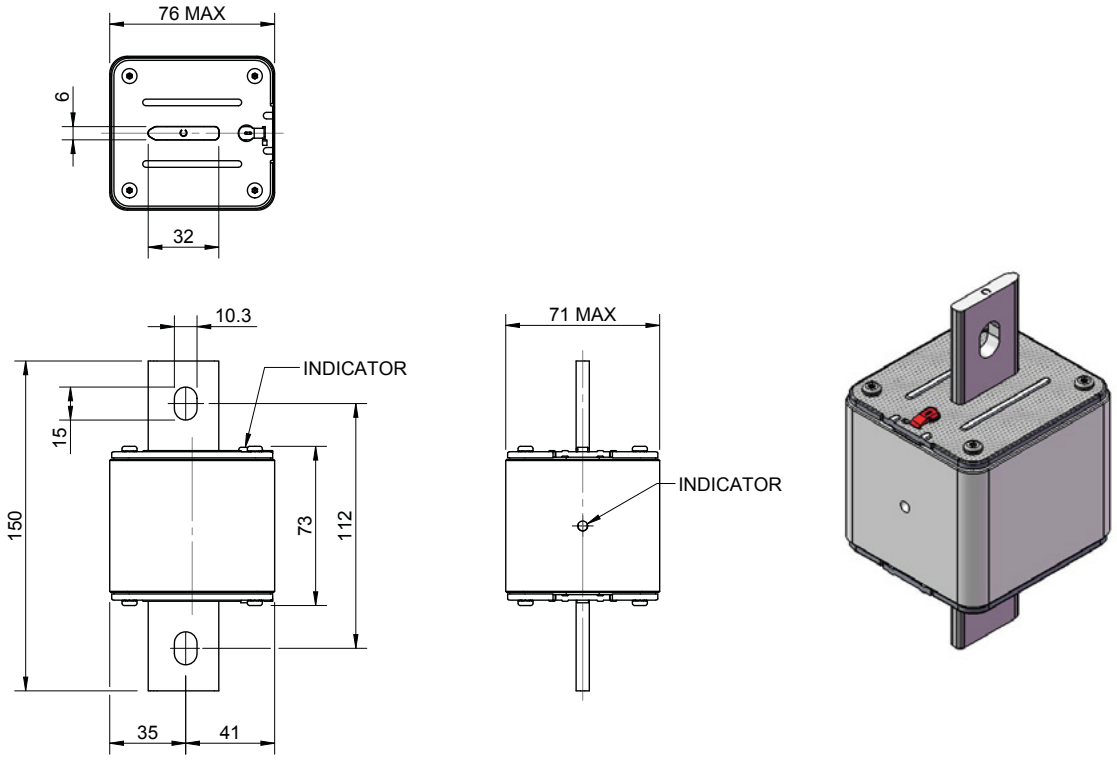
Dimensions (mm) - NH2, blade with bolt holes



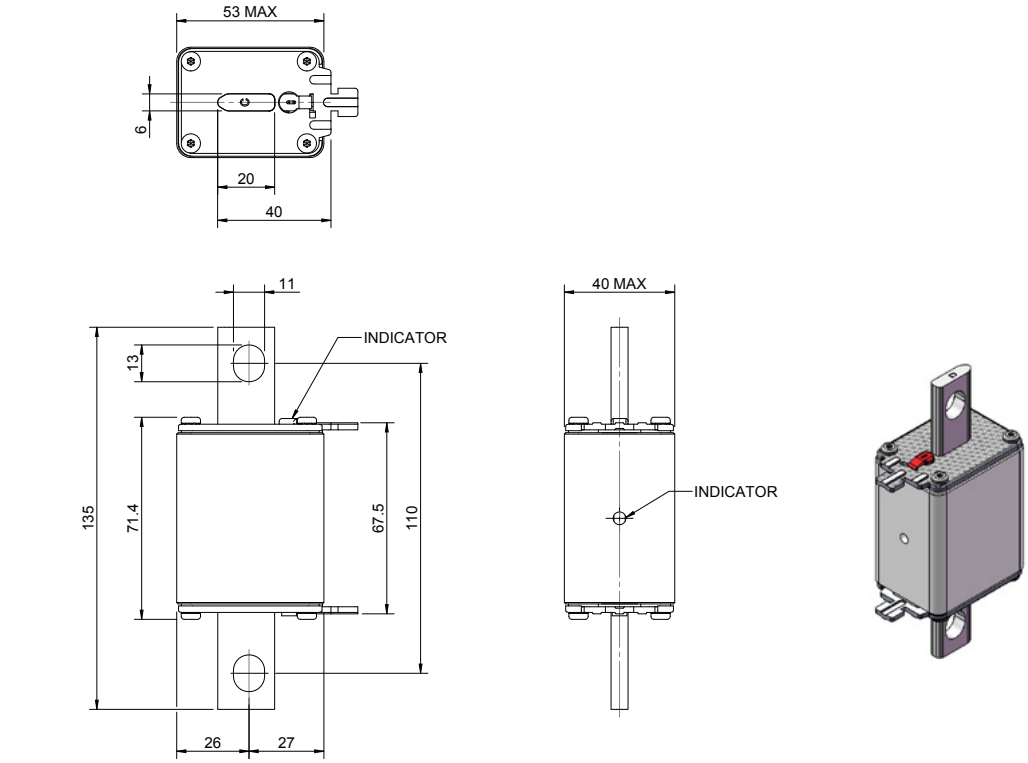
Data sheet: 720133

1000 V d.c. (IEC/UL) - 32 A to 400 A - NH - PV-ANH

Dimensions (mm) - NH3, blade with bolt holes



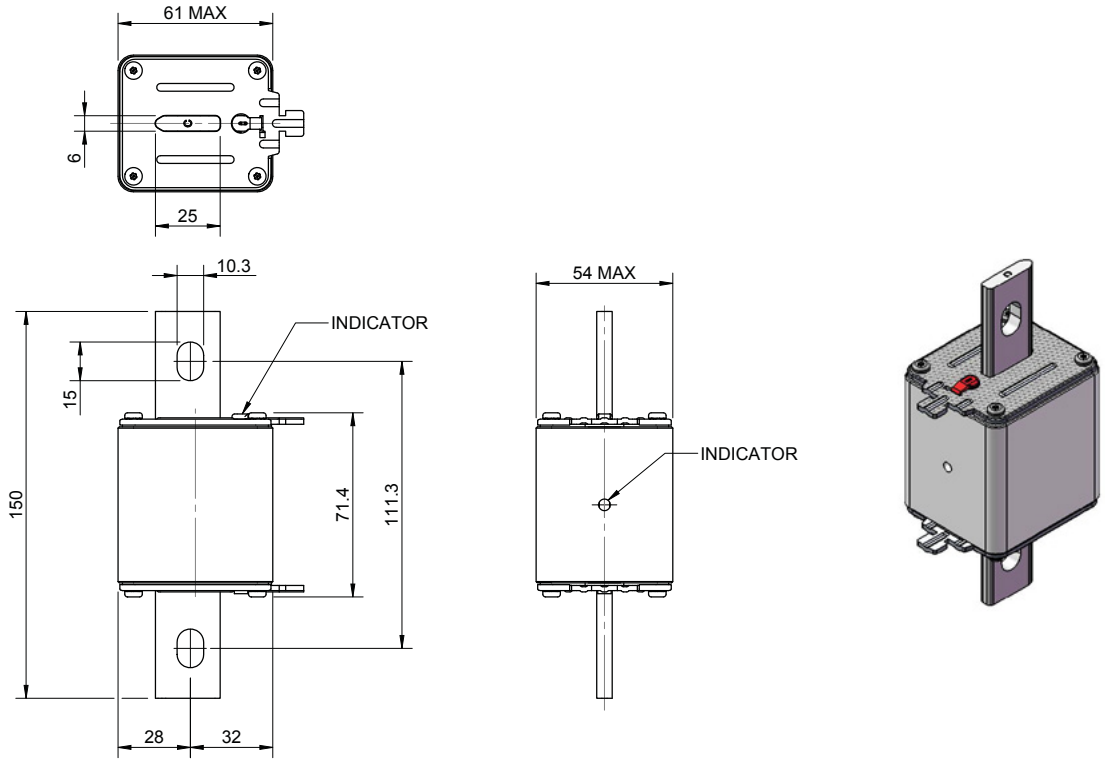
Dimensions (mm) - NH1, blade with bolt holes and lugs



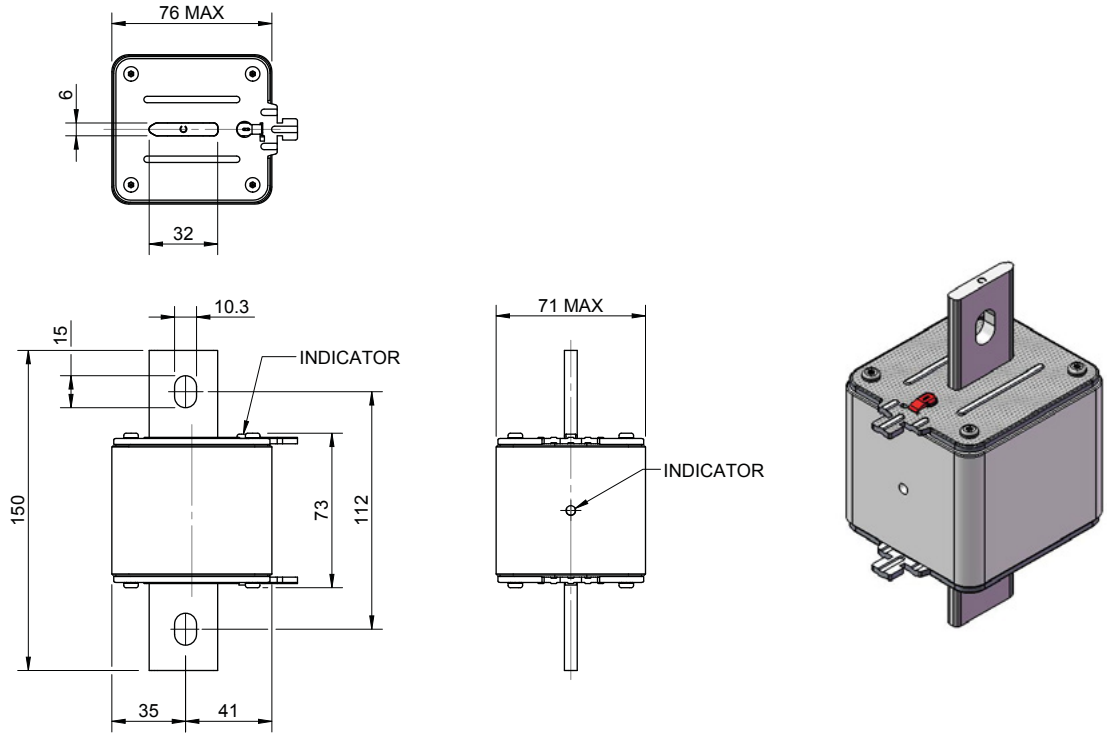
Data sheet: 720133

1000 V d.c. (IEC/UL) - 32 A to 400 A - NH - PV-ANH

Dimensions (mm) - NH2, blade with bolt holes and lugs



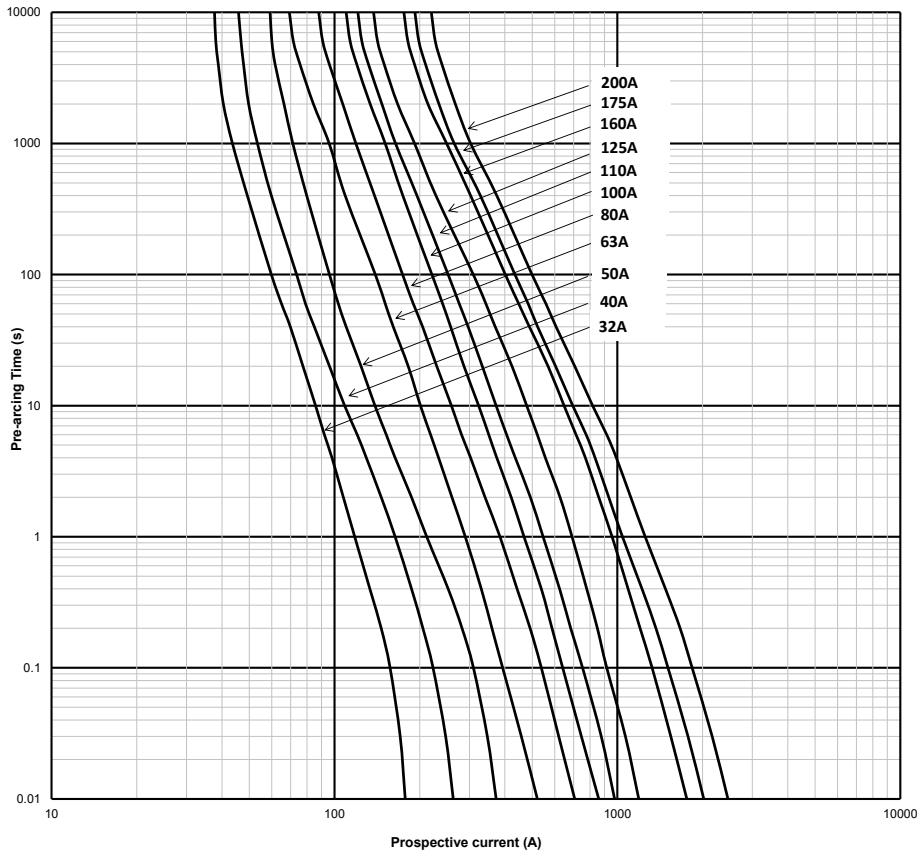
Dimensions (mm) - NH3, blade with bolt holes and lugs



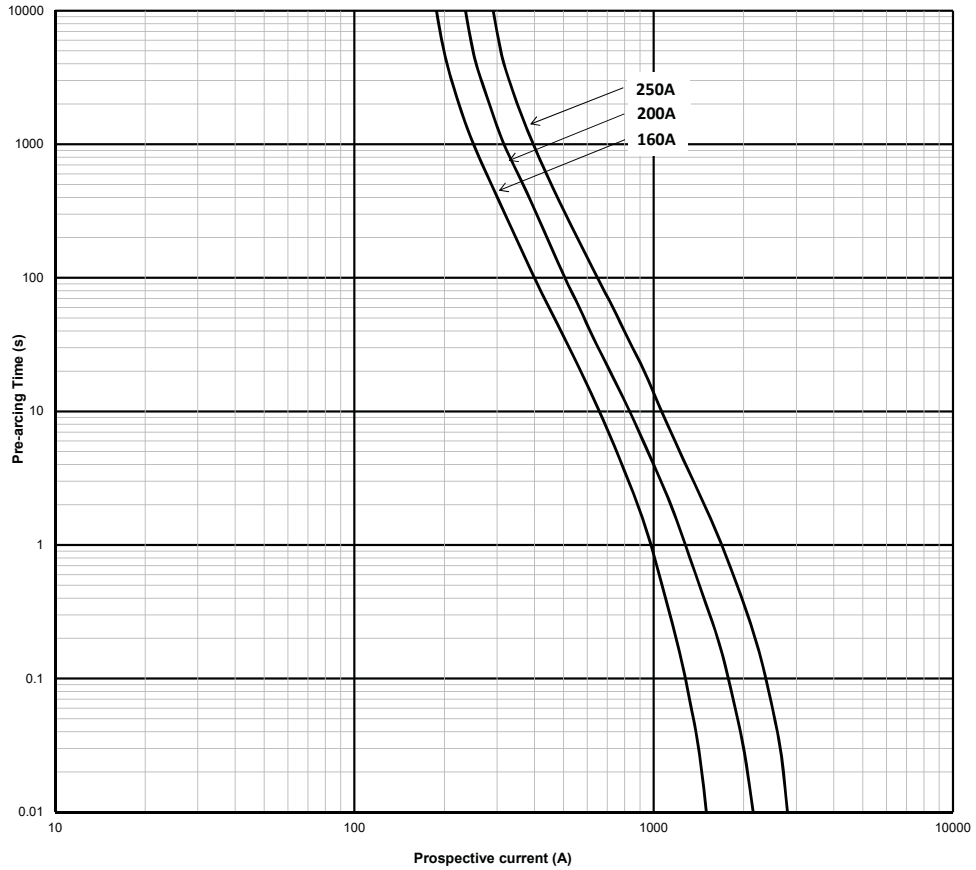
Data sheet: 720133

1000 V d.c. (IEC/UL) - 32 A to 400 A - NH - PV-ANH

Time-current curve - Size 1, 32 A to 200 A



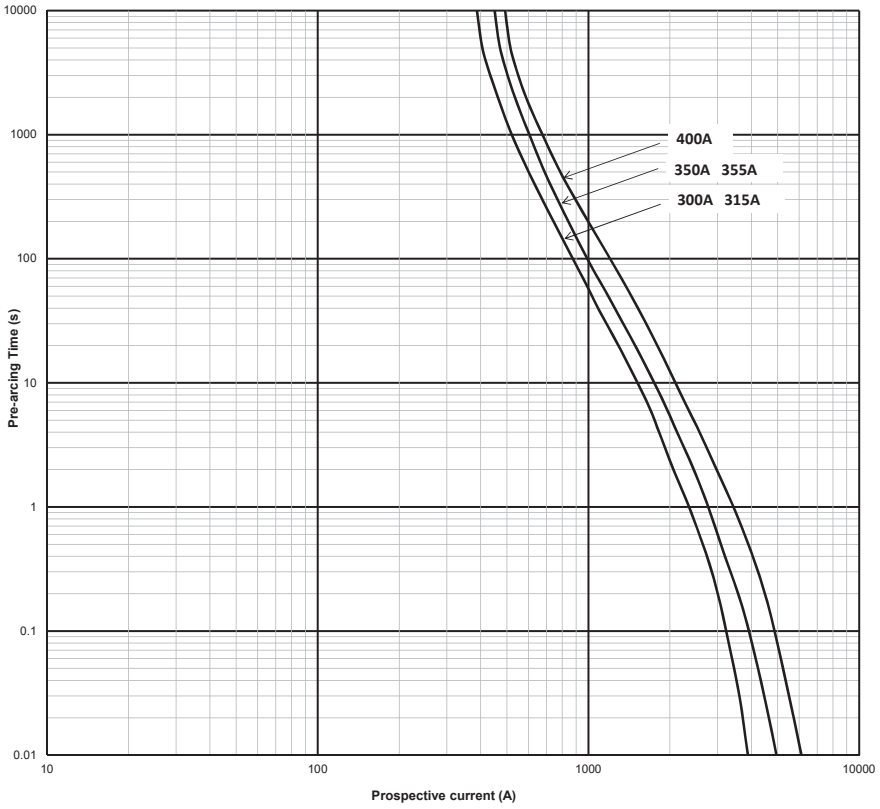
Time-current curve - Size 2, 160 A to 250 A



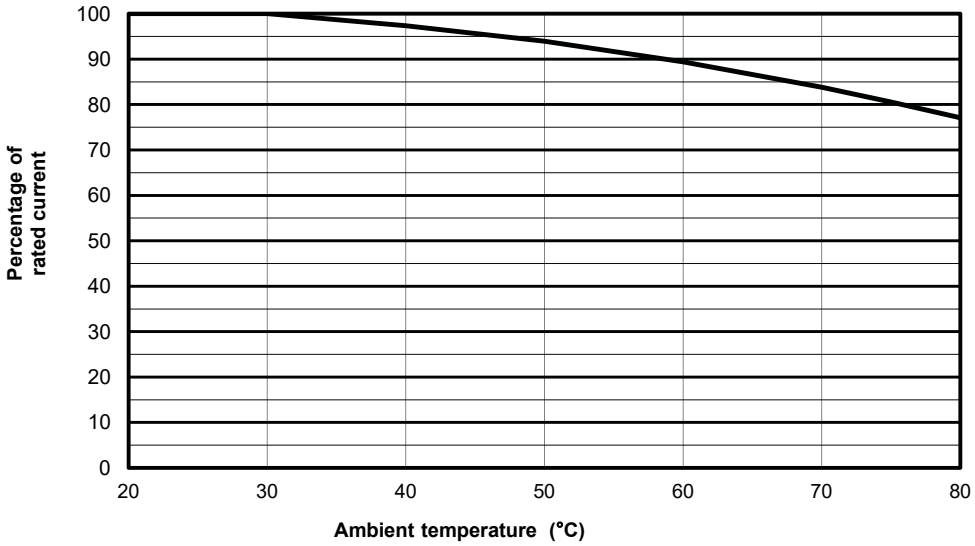
Data sheet: 720133

1000 V d.c. (IEC/UL) - 32 A to 400 A - NH - PV-ANH

Time-current curve - Size 3, 300 A to 400 A



Temperature derating curve - Sizes 1 to 3



Data sheet: 720133

SD-D-PV fuse base for NH fuse links - 1500 V d.c. (IEC) - 1000 V d.c. (UL/CSA) - 250 A to 630 A

Specifications



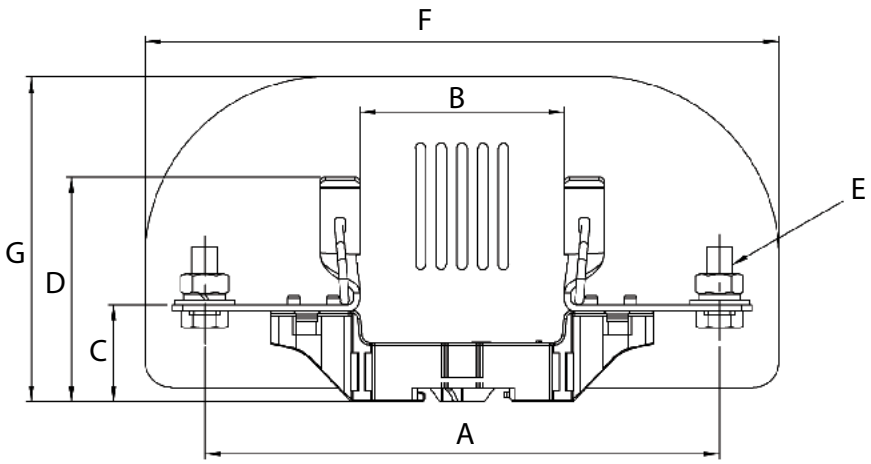
Description
Sizes 1 to 3 NH Fuse bases specifically designed for use with Bussmann series range of NH PV (Photovoltaic) fuse links.

Technical data
- Rated voltage:
  - 1500 V d.c. (IEC)
  - 1000 V d.c. (UL/CSA)
- Rated current:
  - 250 A (SD1)
  - 400 A (SD2)
  - 630 A (SD3)
- Fuse base sizes: 1 to 3
- Withstand: 50 kA
- Power acceptance
  - SD1: 32 W
  - SD2: 45 W
  - SD3: 60 W

Standards / Agency information
IEC 60269-1, UL Listed - UL File #E348242, CSA file #47235

Accessories:
- Microswitches - 170H0236, 170H0238 and BVL50
- IP20 Finger-Safe Protection Kit - TD1-IP20, TD2-IP20, TD3-IP20
- Fuse extraction handle
- Shroud kits

Dimensions (mm) - 1-pole with phase barriers

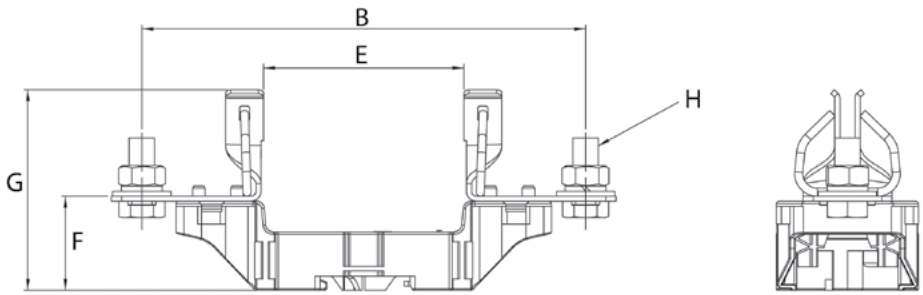


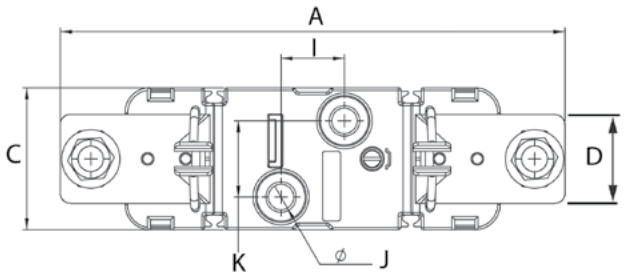
Catalog numbers	Poles/Type	A	B	C	D	E	F	G
SD1-D-PV	1-pole	175	79	37	78	M10x25	245	125.5
SD2-D-PV	1 pole	199	79	37.5	86	M10x25	245	125.5
SD3-D-PV	1-pole	209	82	37.5	88	M12x30	260	137.5

Data sheet: 720149

SD-D-PV fuse base for NH fuse links - 1500 V d.c. (IEC) - 1000 V d.c. (UL/CSA) - 250 A to 630 A

Dimensions (mm) - 1-pole without phase barriers





Catalog numbers	Poles	A	B	C	D	E	F	G	H	I	J	K
SD1-D-PV	1-pole	199	175	56	35	79	37	78	M10x25	25	10	30
SD2-D-PV	1 pole	224	199	56	35	79	37.5	86	M10x25	25	10	30
SD3-D-PV	1-pole	239	209	56	36	82	37.5	88	M12x30	25	10	30

Data sheet: 720149

1000 V d.c. (IEC/UL) - 160 A to 400 A - PV-AF - Flush end

Specifications

Description
A range of flush end fuse links specifically designed for protecting and isolating photovoltaic array combiners and disconnects. These fuse links are capable of interrupting low overrated currents associated with faulted PV systems (reverse rated current, multi-array fault).



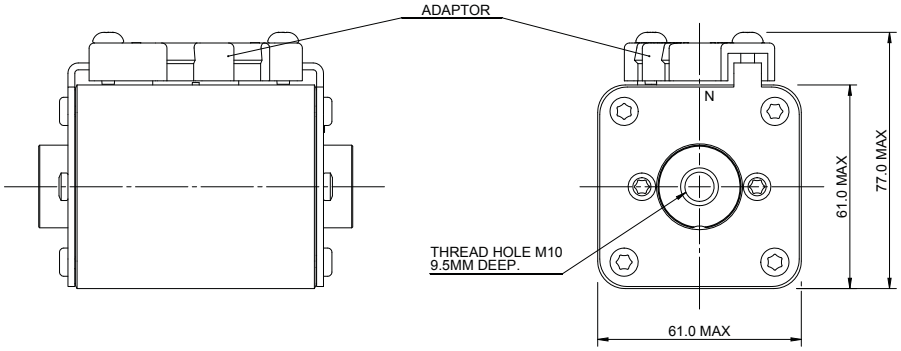
Technical data
- Rated voltage: 1000 V d.c. (IEC and UL)
- Rated current: 160 A to 400 A
- Breaking capacity: 50 kA
- Operating class: gPV and UL PV fuse links

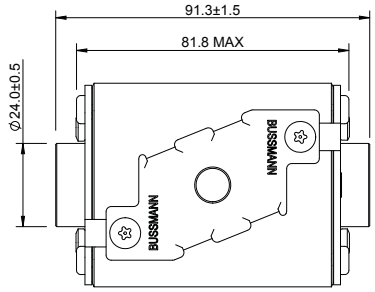
Standards / Agency information
IEC 60269-6, UL 2579 (file number E335324), CSA Listed, RoHS compliant

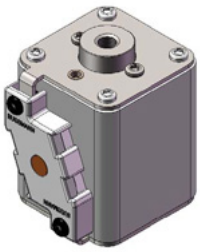
Catalog numbers

Fuse link type	Fuse link body size	Rated voltage	Rated current (Amps)	I^2t (A^2 Sec) Pre-arcing	I^2t (A^2 Sec) Total at 1000 V d.c.	Watts loss (W) 0.8 I_n	Watts loss (W) I_n	Catalog umbers
Flush end	2	1000 V d.c.(IEC/UL)	160	4600	37,000	15	30	PV-160AF2
			200	9500	76,000	17	34	PV-200AF2
			250	17,000	136,000	19	38	PV-250AF2
	3	1000 V d.c.(IEC/UL)	315	27,000	240,000	30	49	PV-315AF3
			355	37,000	350,000	31	51	PV-355AF3
			400	61,500	550,000	32	52	PV-400AF3

Dimensions (mm) - Size 2



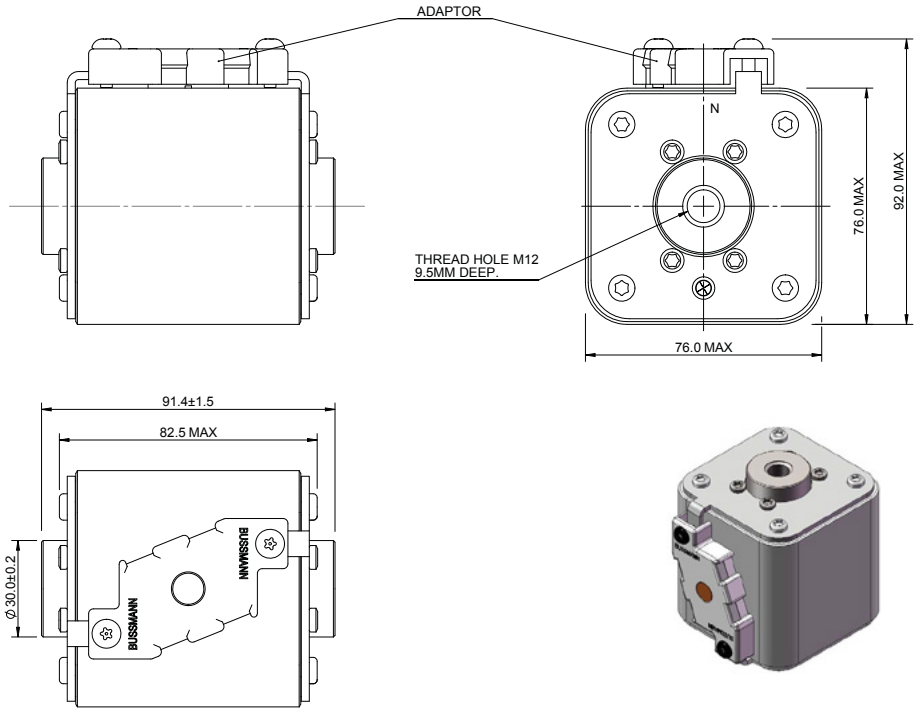




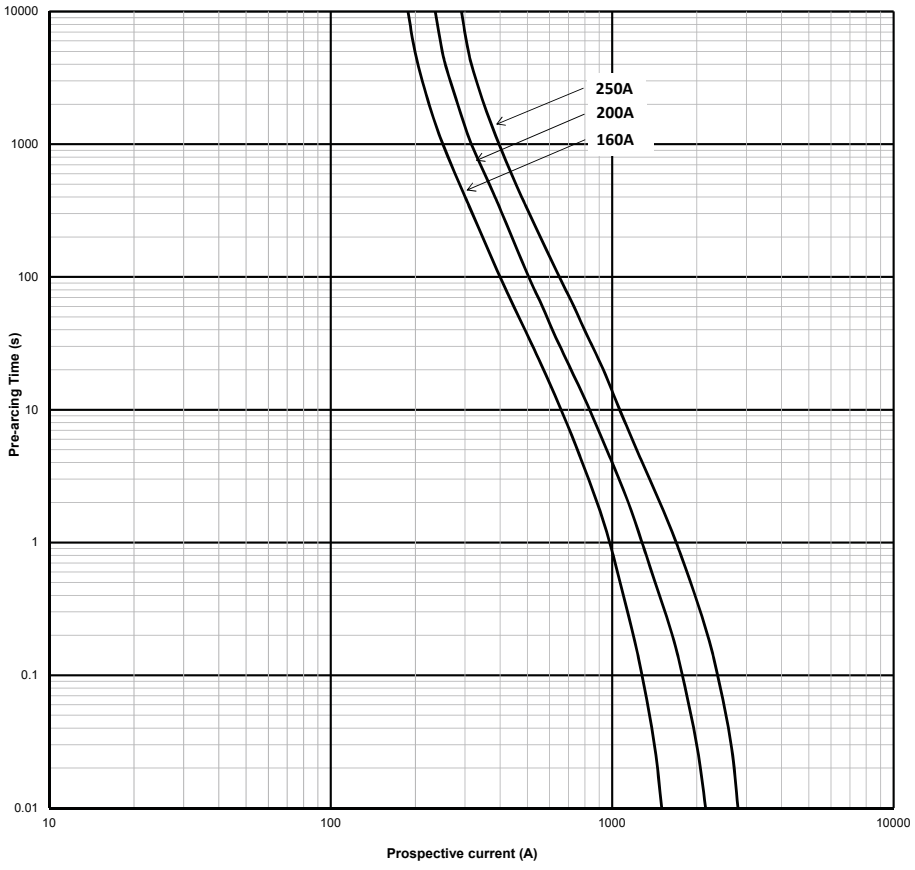
Data sheet: 10370

1000 V d.c. (IEC/UL) - 160 A to 400 A - PV-AF - Flush end

Dimensions (mm) - Size 3



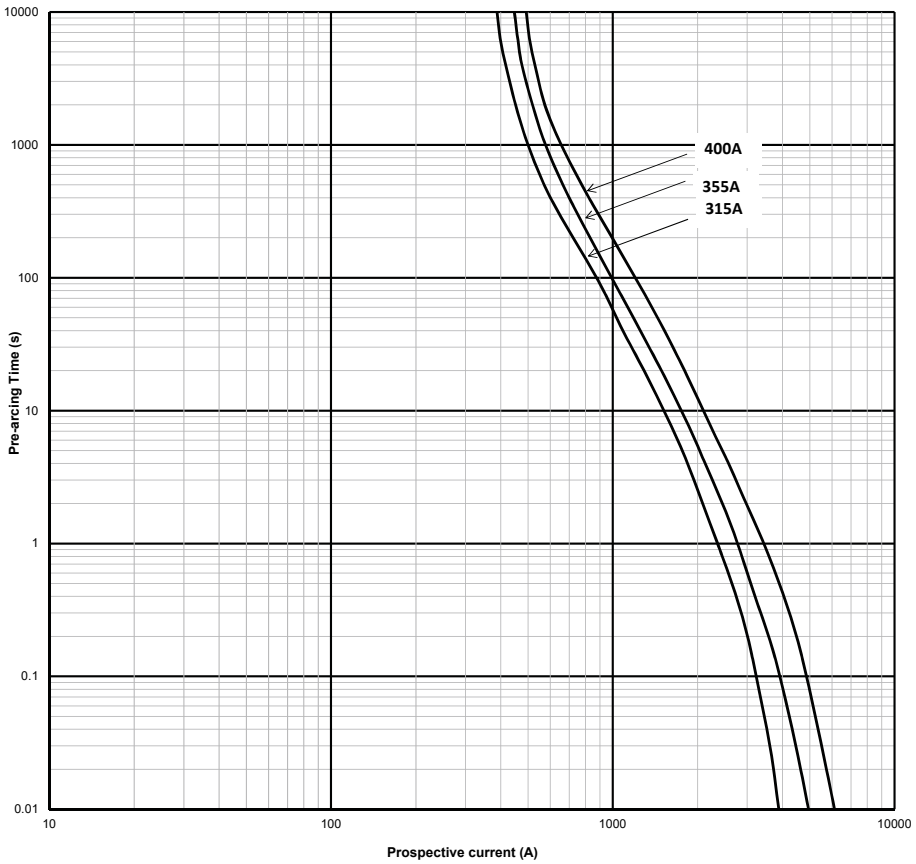
Time-current curve - Size 2, 160 A to 250 A



Data sheet: 10370

1000 V d.c. (IEC/UL) - 160 A to 400 A - PV-AF - Flush end

Time-current curve -Size 3, 315 A to 400 A



Data sheet: 10370

Photovoltaic fuse links, fuse bases and holders

1000 and 1100 V d.c. (IEC/UL) - 15 A to 32 A - PV-14F - 14 x 51 mm

Specifications



Description
A range of fuse links in a 14 x 51 mm package specifically designed for the protection and isolation of photovoltaic strings. The fuse links are capable of interrupting low overrated currents associated with faulted PV (reverse rated current, multi-array fault).

Technical data
- Rated voltage:
  - 1100 V d.c. (IEC and UL, 15 A and 20 A)
  - 1000 V d.c. (IEC and UL, 25 A and 32 A)
- Rated current: 15 A to 32 A
- Breaking capacity: 30 kA
- Operating class: gPV and UL PV fuse links

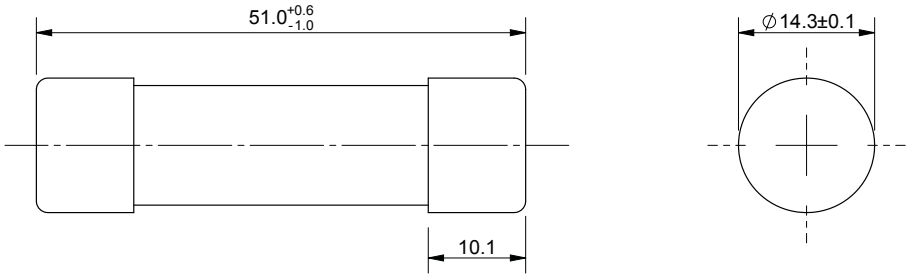
Compatible fuse holder
- CHPV14

Standards / Agency information
IIEC 60269-6, UL Recognised 2579 (File number E335324), RoHS compliant. Pending: CCC

Catalog numbers

		I^2t (A^2 Sec)		Watts loss (W)		
Rated voltage	**Rated current (Amps)**	**Pre-arcing**	**Total at rated voltage**	**0.8 I_n**	**I_n**	**Catalog numbers**
1100 V d.c. (IEC/UL)	15	14	270	2.1	4	PV-15A14F
	20	27	570	2.9	5.5	PV-20A14F
1000 V d.c. (IEC/UL)	25	65	950	2.8	5.3	PV-25A14F
	32	120	1750	4	7.5	PV-32A14F

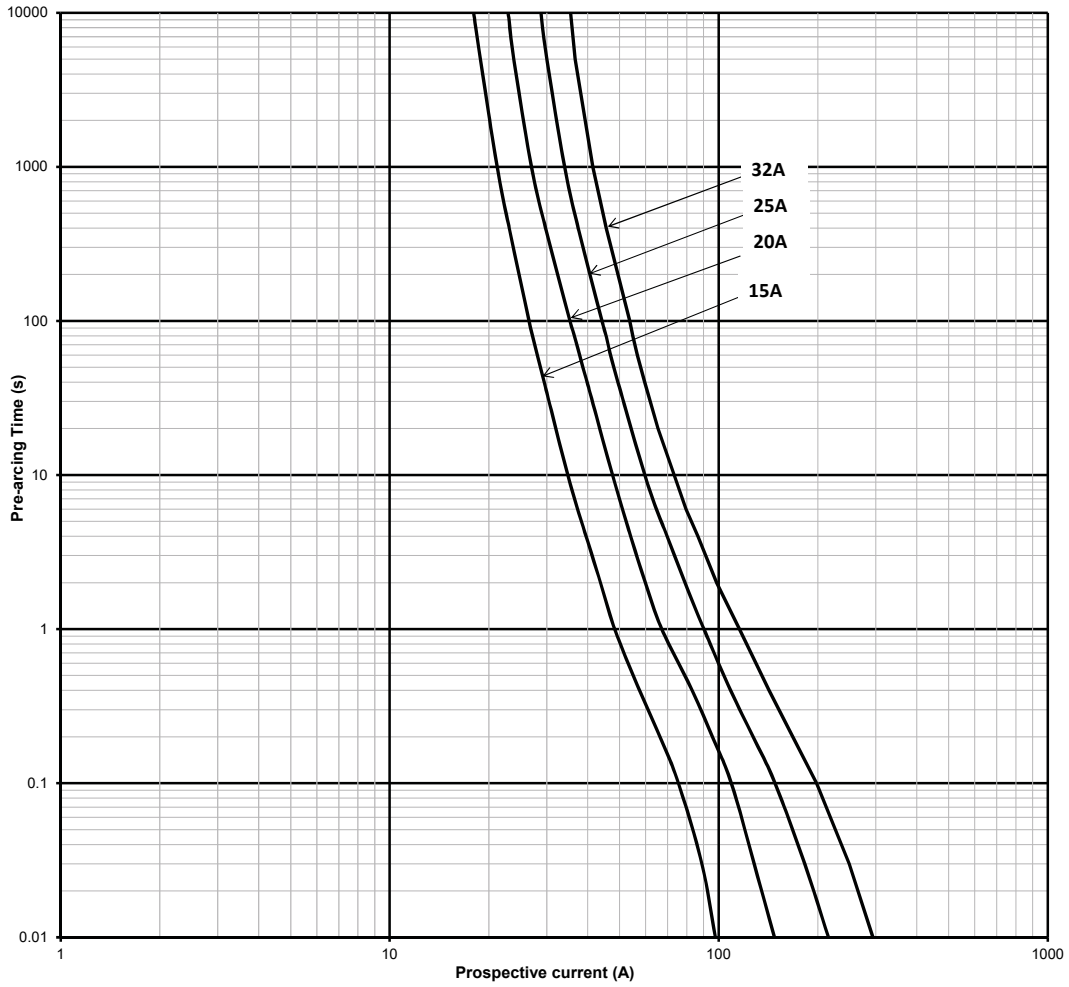
Dimensions (mm)



Data sheet: 720132

1000 and 1100 V d.c. (IEC/UL) - 15 A to 32 A - PV-14F - 14 x 51 mm

Time-current curve - 15 A to 32 A



Data sheet: 720132

CHPV14 Modular fuse holder for 14 x 51 mm fuse links - 1500 V d.c. - 50 A

Specifications



Description
Compact DIN-Rail mounting fuse holders specifically designed for 14 x 51 mm photovoltaic fuse links.

Catalog numbers
- CHPV141U 1-pole without indicator
- CHPV142 2-pole without indicator
- CHPV141IU 1-pole with indicator
- CHPV142IU 2-pole with indicator

Standards / Agency information
IEC 60269-1 and 2, UL Listed file number E348242

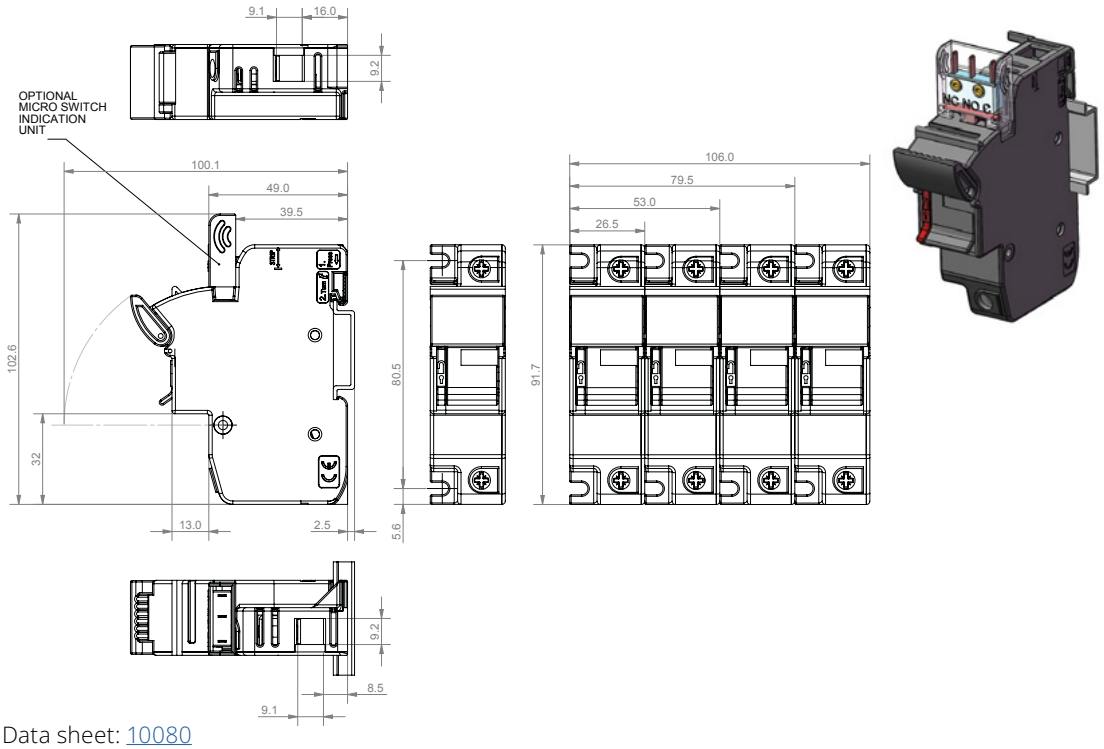
Technical data

Rated voltage	Rated current				
IEC and UL	IEC and UL	Agency markings	Terminal rating	Rated breaking withstand capactiy	Compatible Bussmann series fuse links
1500 V d.c.	32 A	IEC 60269-1 and 2 UL Listed file number E348242	Cable size: 1.5-50 mm² Recommended torque setting: 3.5 Nm Maximum torque setting: 3.5Nm Mounting 35 mm DIN-Rail or 2 x M4 panel mounting screws	10 kA d.c.	PV-A14F

Accessories

Catalog numbers	Description	Unit packing
JV-L	Multi-pole connector kit. One kit will gang up to 4-poles together	12
CH14-CTP	IP20 Protection accessory, provides IP20 protection to terminals with 10mm² or less cable	12

Dimensions (mm)



Data sheet: 10080

1500 V d.c. (IEC/UL) - 2.25 A to 30 A - PV-A10F85L - 10 x 85 mm

Specifications

Description
A range of fuse links in a 10 x 85 mm package specifically designed for the protection and isolation of photovoltaic strings.

Technical data
- Rated voltage: 1500 V d.c.
- Rated current: 2.25 A to 30 A
- Breaking capacity: 30 kA 1 ms
- Operating class: gPV
- Fuse body material
  - 2.25 A to 5 A: Ceramic
  - 12 A to 30 A: Melamine



Ceramic fuse body



Melamine fuse body

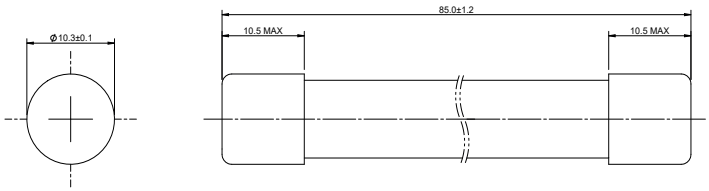
Compatible fuse holder
CHPV15L85

Standards / Agency information
IEC 60269-6, UL 248-19, RoHS compliant

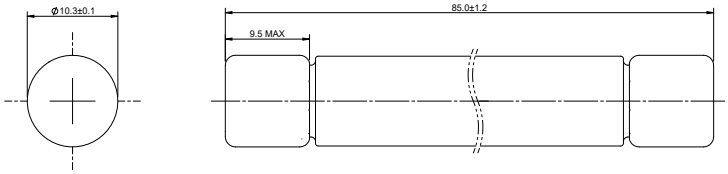
Catalog numbers

Rated voltage	Rated current (Amps)	I^2t (A^2 Sec) Pre-arcing	I^2t (A^2 Sec) Total at 1500 V d.c.	Watts loss (W) 0.8 I_n	Watts loss (W) I_n	Catalog numbers
1500 V d.c. (IEC/UL)	2.25	3	10	1.4	2.4	PV-2-25A10F85L
	2.5	4	10	1.3	2.1	PV-2.5A10F85L
	3	7	20	1.3	2.2	PV-3A10F85L
	3.5	10	20	1.6	2.6	PV-3.5A10F85L
	4	15	30	1.7	2.8	PV-4A10F85L
	5	33	60	1.7	2.8	PV-5A10F85L
	12	19	240	2.1	3.5	PV-12A10F85L
	15	42	300	2.2	3.6	PV-15A10F85L
	16	48	350	2.1	3.5	PV-16A10F85L
	20	108	800	2.7	4.5	PV-20A10F85L
	25	190	1400	3.4	5.6	PV-25A10F85L
	30	485	3500	4	6.6	PV-30A10F85L

Dimensions (mm) - 2.25 A to 5 A (Ceramic fuse body)



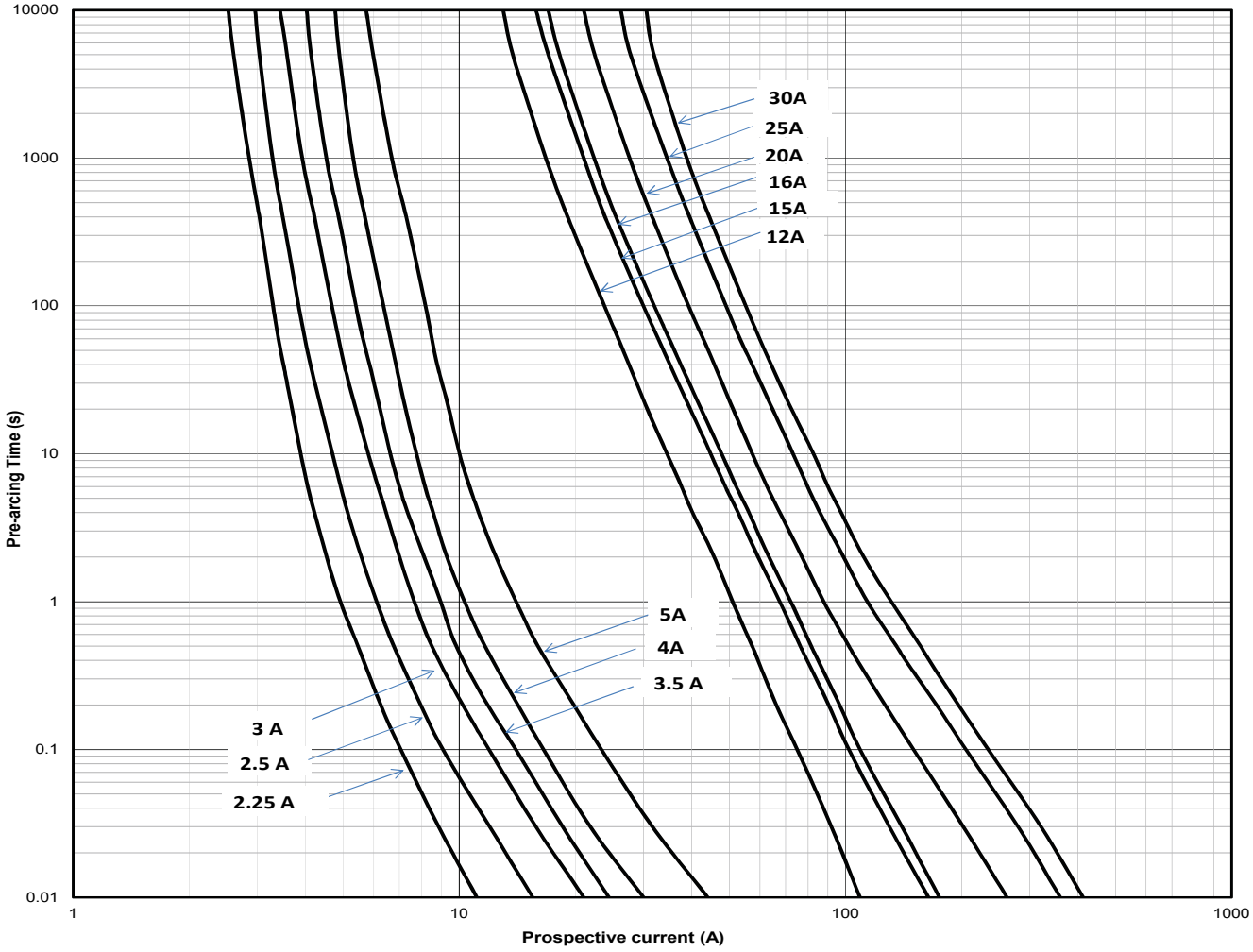
Dimensions (mm) - 12 A to 30 A (Melamine fuse body)



Data sheet: 10658

1500 V d.c. (IEC/UL) - 2.25 A to 30 A - PV-A10F85L - 10 x 85 mm

Time-current curve - 2.25 A to 30 A



Data sheet: 10658

CHPV15H85 fuse holder for 10 x 85 mm fuse links - 1500 V d.c. - 32 A (IEC/UL)

Specifications

Description
Eaton's Bussmann series 10 x 85 mm fuse holders are suitable for use with 10 x 85 mm and 14 x 85 mm cylindrical gPV fuse links. The unique design offers high degree of safety. There is no possibility of any accidental contact with live parts during replacement of the fuse links. When the fuse carrier is extracted, a spring loaded cover moves out covering the live parts hence protecting against accidental damage.



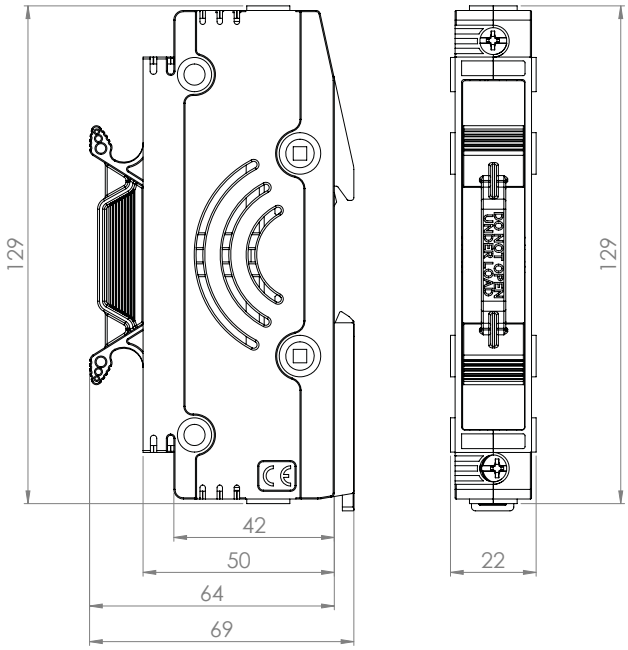
Catalog symbol
CHPV15H85

Compatible fuse links
- 10 x 85 mm fuse links - PV-A10F85L
- 14 x 85 mm fuse links - PV-A14LF

Technical data
- Rated voltage: 1500 V d.c.
- Rated current: 32 A (IEC/UL)
- Breaking capacity: 50 kA

Standards / Agency information
- IIEC 60269-1
- IEC 60269-6
- UL 4248-1 Edition 1 (File number 348242)
- UL 4248-19 Edition 1

Dimensions (mm)



Data sheet: TD135010

Photovoltaic fuse links, fuse bases and holders

1300-1500 V d.c. (IEC and UL) - 2.25 A to 32 A - PV-14L - 14 x 65 mm

Specifications

Description
A range of fuse links in a 14 x 65 mm package specifically designed for the protection and isolation of photovoltaic strings. The fuse links are capable of interrupting low overrated currents associated with faulted PV (reverse rated current, multi-array fault).



Technical data
- Rated voltage:
  - 1500 V d.c. (IEC and UL, 2.25 A to 20 A)
  - 1300 V d.c. (IEC and UL, 25 A and 32 A)
- Rated current: 2.25 A to 32 A
- Breaking capacity: 10 kA
- Operating class: gPV and UL PV fuse links

Compatible fuse holder for PV-A14LF10F
CHPV15L85

Standards / Agency information
IEC 60269-6, UL Recognised 2579 (File number E335324), RoHS compliant, Pending: CCC.

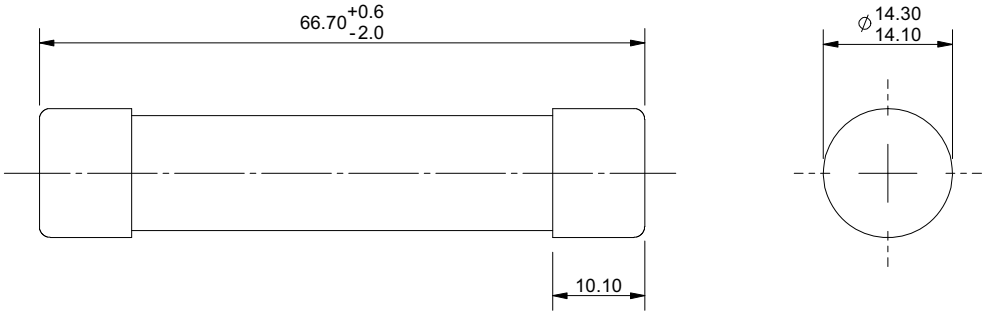
Catalog numbers

Rated voltage	Rated current (Amps)	I^2t (A^2 Sec) Pre-arcing	Watts loss (W) Total at rated voltage	Watts loss (W) 0.8 I_n	Watts loss (W) I_n	Catalog numbers Cylindrical	Catalog numbers Cylindrical with tags	Catalog numbers Cylindrical with 10mm fixings
1500 V d.c. (IEC/UL)	2.25	4	8	1.4	2.3	PV-2.25A14LF	N/A	PV-2.25A14LF10F
	2.5	5	10	1.5	2.5	PV-2.5A14LF	PV-2.5A14L-T	PV-2.5A14LF10F
	3	8	14	1.7	2.8	PV-3A14LF	PV-3A14L-T	PV-3A14LF10F
	3.5	12	23	1.8	3.0	N/A	N/A	PV-3.5A14LF10F
	4	18	34	2	3.3	PV-4A14LF	PV-4A14L-T	PV-4A14LF10F
	15	16	190	2.9	5.1	PV-15A14LF	PV-15A14L-T	PV-15A14LF10F
	20	34	400	3.8	6.9	PV-20A14LF	PV-20A14L-T	PV-20A14LF10F
1300 V d.c. (IEC/UL)	25	65	550	4.1	7.5	PV-25A14LF	PV-25A14L-T	PV-25A14LF10F
	32	105	900	5.7	10.4	PV-32A14LF	PV-32A14L-T	PV-32A14LF10F

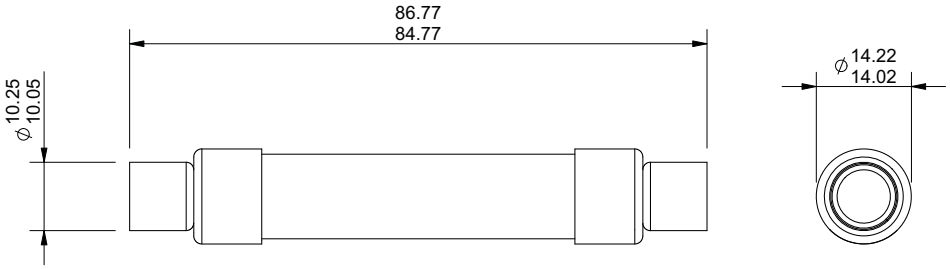
Data sheet: 10080

1300-1500 V d.c. (IEC and UL) - 2.25 A to 32 A - PV-14L - 14 x 65 mm

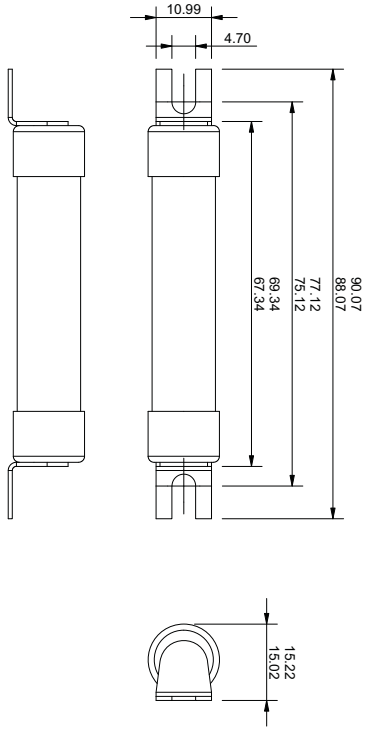
Dimensions (mm) - PV-*A14LF, Cylindrical



Dimensions (mm) - PV-*A14LF10F, Cylindrical with 10 mm Fixings



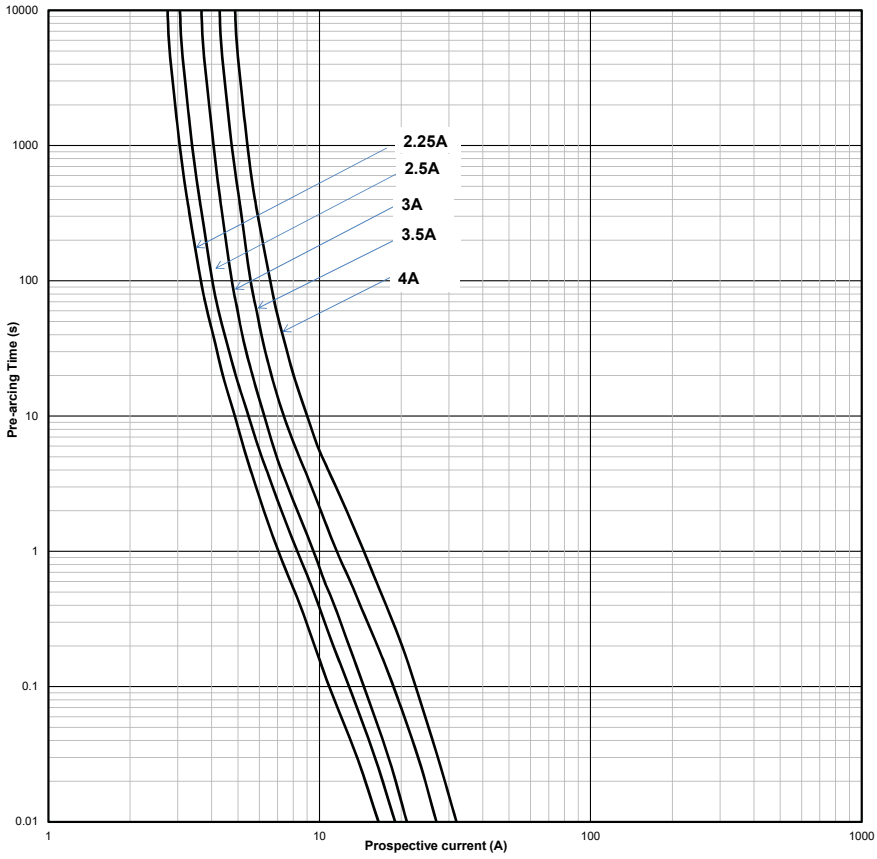
Dimensions (mm) - PV-*A14L-T, Cylindrical with tags



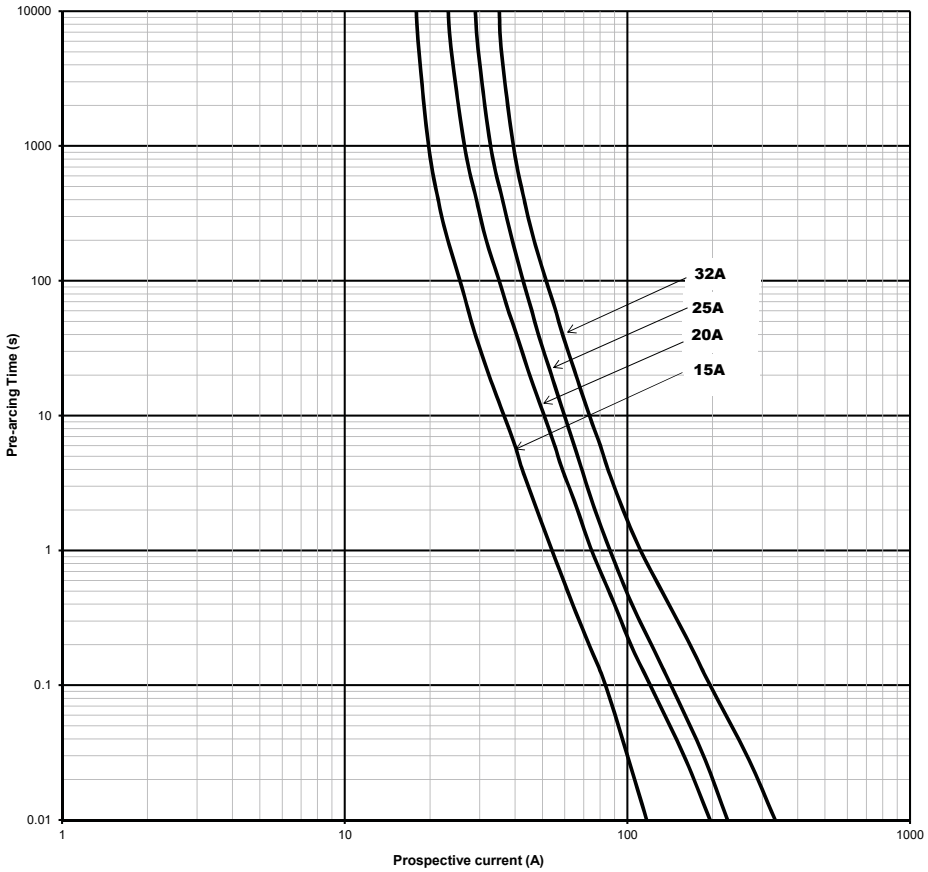
Data sheet: 10080

1300-1500 V d.c. (IEC and UL) - 2.25 A to 32 A - PV-14L - 14 x 65 mm

Time-current curve - 2.25 A to 4 A



Time-current curve - 15 A to 32 A



Data sheet: 10080

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Specifications



Description
A range of XL package bladed fuse links specifically designed for protecting and isolating photovoltaic array combiners and disconnects. These fuse links are capable of interrupting low overrated currents associated with faulted PV systems (reverse rated current, multi-array fault).

Technical data
- Rated voltage:
  - 1000 V d.c. (IEC and UL 63 to 600 A)
  - 1500 V d.c. (IEC and UL 50 to 500 A)
- Rated current: 50 A to 600 A
- Breaking capacity: see Catalog numbers tables
- Operating class: gPV and UL PV fuse links

Compatible fuse base
- SD-S-PV

Microswitches
- For bladed fuse links
  - 170H0235 or 170H0237 for 01XL
  - 170H0236 or 170H0238 for 1XL, 2XL and 3L
- For bolted fuse links
  - 170H0069 for all sizes

Standards / Agency information
IEC 60269-6, UL Recognised file 2579 E335324, RoHS compliant

Catalog numbers - PV-XL fuse links, 1000 V d.c.

Fuse link body size	Rated voltage	Rated current (Amps)	Breaking capacity (IEC/UL) (kA)	I^2t (A^2 Sec)		Watts loss (W)		Catalog numbers	
				Pre-arcing	Total at 1000 V d.c.	0.7 I_n	I_n	Bladed version	Bolted version
01	1000 V d.c.	63	50	260	1900	10	24	PV-63A-01XL	PV-63A-01XL-B
		80	50	490	3600	12	29	PV-80A-01XL	PV-80A-01XL-B
		100	50	870	6300	13	32	PV-100A-01XL	PV-100A-01XL-B
		125	50	1930	13,900	16	40	PV-125A-01XL	PV-125A-01XL-B
		160	50	3900	28,100	18	44	PV-160A-01XL	PV-160A-01XL-B
2	1000 V d.c.	160	33	2780	21,000	18	44	PV-160A-2XL	PV-160A-2XL-B
		200	33	4950	37,000	20	50	PV-200A-2XL	PV-200A-2XL-B
		250	33	9450	70,000	24	60	PV-250A-2XL	PV-250A-2XL-B
		315	33	16,600	123,000	26	66	PV-315A-2XL	PV-315A-2XL-B
		355	33	26,000	192,000	27	68	PV-355A-2XL	PV-355A-2XL-B
		160	33	2780	21,000	18	44		PV-160A-2XL-3B[1]
		200	33	4950	37,000	20	50		PV-200A-2XL-3B[1]
		250	33	9450	70,000	24	60		PV-250A-2XL-3B[1]
		315	33	16,600	123,000	26	66		PV-315A-2XL-3B[1]
		355	33	26,000	192,000	27	68		PV-355A-2XL-3B[1]
3	1000 V d.c.	350	50	31,000	161,200	26	65	PV-350A-3L	PV-350A-3L-B
		400	50	44,500	231,400	33	82	PV-400A-3L	PV-400A-3L-B
		500	50	85,000	442,000	34	85	PV-500A-3L	PV-500A-3L-B
		600	50	137,000	712,400	43	108	PV-600A-3L	PV-600A-3L-B

[1] PV-*A-2XL-3B and PV-*A-2XL-3B-15 have revised bolting patterns, which are identical to size 3L bolting pattern. This allows utilisation of both size 2XL and size 3L fuse links without changing the dimensional layout of the inverter, combiners and disconnects.

Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Catalog numbers - PV-XL fuse links, 1500 V d.c.

Fuse link body size	Rated voltage	Rated current (Amps)	Breaking capacity (IEC/UL) (kA)	I^2t (A^2 Sec)		Watts loss (W)		Catalog numbers			
				Pre-arcing	Total at 1500 V[1]	0.7 I_n	I_n	Bladed with top indicator	Bladed without top indicator	Bolted version with side indicator	Bolted without side indicator
01	1500 V d.c.	50	30	175	1000	10	25	PV-50A-01XL-15		PV-50A-01XL-B-15	
		63	30	362	2250	10	26	PV-63A-01XL-15		PV-63A-01XL-B-15	
		80	30	565	3300	14	35	PV-80A-01XL-15		PV-80A-01XL-B-15	
		100	30	1100	6600	16	40	PV-100A-01XL-15		PV-100A-01XL-B-15	
		125	30	2200	10,500	18	44	PV-125A-01XL-15		PV-125A-01XL-B-15	
1	1500 V d.c.	100	30	1250	6000	24	43	PV-100A-1XL-15		PV-100A-1XL-B-15	
		125	30	1950	9360	25	52	PV-125A-1XL-15		PV-125A-1XL-B-15	
		160	30	4200	20,160	26	54	PV-160A-1XL-15		PV-160A-1XL-B-15	
		200	30	9400	45,120	31	60	PV-200A-1XL-15		PV-200A-1XL-B-15	
2	1500 V d.c.	125	30	2200	15,000	18	44	PV-125A-2XL-15	PV-125A-2XL-U-15	PV-125A-2XL-B-15	PV-125A-2XL-BU-15
		160	30	5000	32,000	19	48	PV-160A-2XL-15	PV-160A-2XL-U-15	PV-160A-2XL-B-15	PV-160A-2XL-BU-15
		200	30	8800	51,000	23	57	PV-200A-2XL-15	PV-200A-2XL-U-15	PV-200A-2XL-B-15	PV-200A-2XL-BU-15
		250	30	16,600	85,000	28	70	PV-250A-2XL-15	PV-250A-2XL-U-15	PV-250A-2XL-B-15	PV-250A-2XL-BU-15
		125	30	2200	15,000	18	44			PV-125A-2XL-3B-151	PV-125A-2XL-3BU-151
		160	30	5000	32,000	19	48			PV-160A-2XL-3B-151	PV-160A-2XL-3BU-151
		200	30	8800	51,000	23	57			PV-200A-2XL-3B-151	PV-200A-2XL-3BU-151
		250	30	16,600	85,000	28	70			PV-250A-2XL-3B-151	PV-250A-2XL-3BU-151
3	1500 V d.c.	250	100	90,000	350,000	24	43	PVS250A-3L-15	PVS250A-3L-U-15	PVS250A-3L-B-15	PVS250A-3L-BU-15
		315	100	175,000	460,000	22	55	PVS315A-3L-15	PVS315A-3L-U-15	PVS315A-3L-B-15	PVS315A-3L-BU-15
		350	100	250,000	970,000	23	57	PVS350A-3L-15	PVS350A-3L-U-15	PVS350A-3L-B-15	PVS350A-3L-BU-15
		355	100	250,000	970,000	23	59	PVS355A-3L-15	PVS355A-3L-U-15	PVS355A-3L-B-15	PVS355A-3L-BU-15
		400	100	315,000	1,100,000	27	71	PVS400A-3L-15	PVS400A-3L-U-15	PVS400A-3L-B-15	PVS400A-3L-BU-15
		450	100[2]	412,000	1,470,000	27	67	PV-450A-3L-15	PV-450A-3L-U-15	PV-450A-3L-B-15	PV-450A-3L-BU-15
		500	100[2]	532,000	1,890,000	29	73	PV-500A-3L-15	PV-500A-3L-U-15	PV-500A-3L-B-15	PV-500A-3L-BU-15

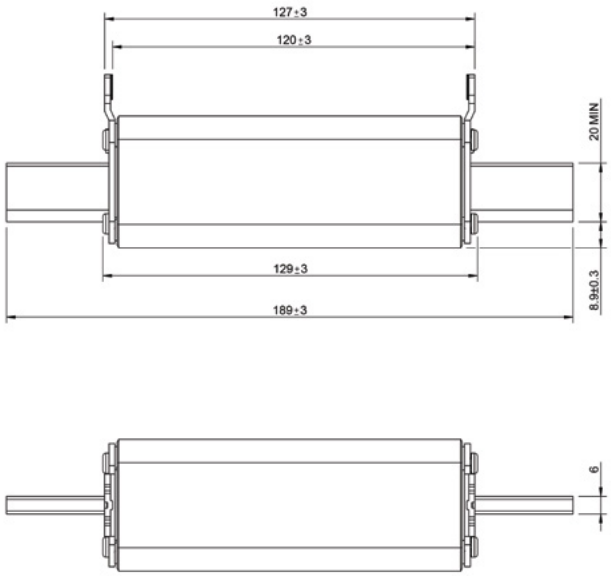
[1] PV-*A-2XL-3B and PV-*A-2XL-3B-15 have revised bolting patterns, which are identical to size 3L bolting pattern. This allows utilisation of both size 2XL and size 3L fuse links without changing the dimensional layout of the inverter, combiners and disconnects.

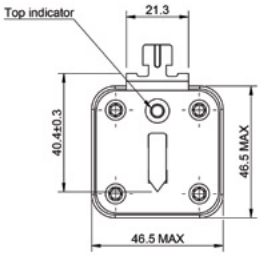
[2] 100 kA at time constant 6ms.

Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

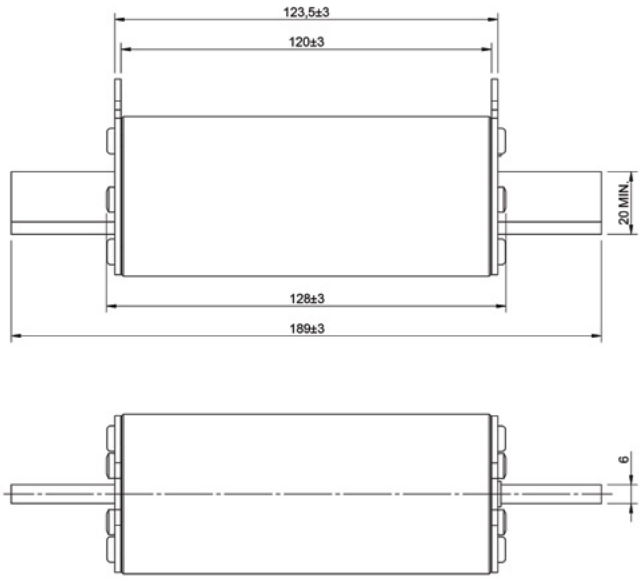
Dimensions (mm) - Size 01, bladed

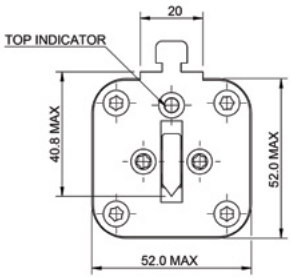


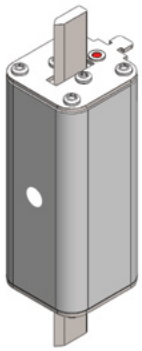




Dimensions (mm) - Size 1, bladed



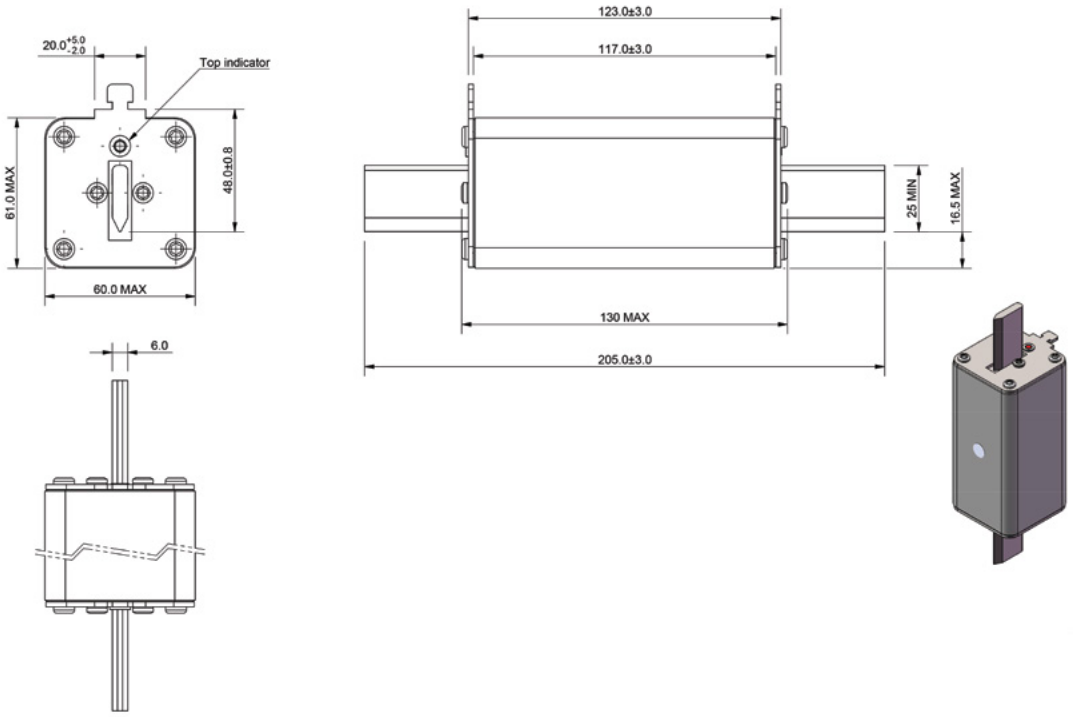




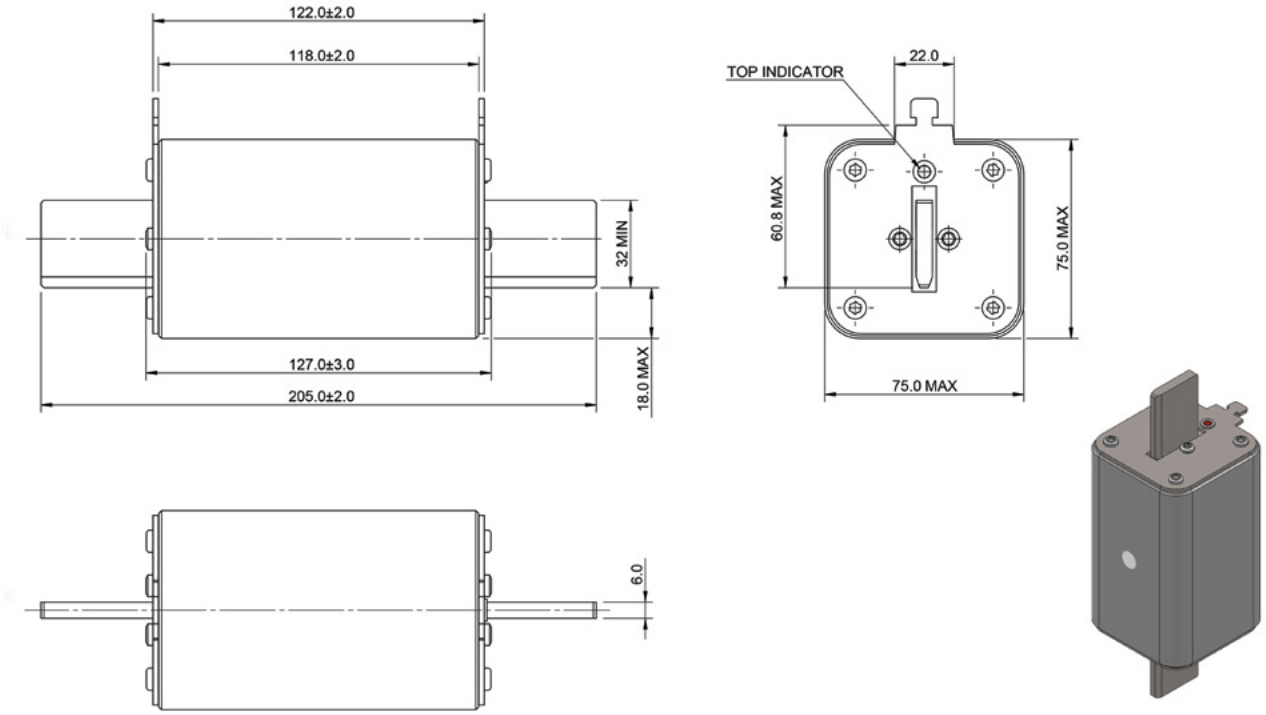
Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Dimensions (mm) - Size 2, bladed



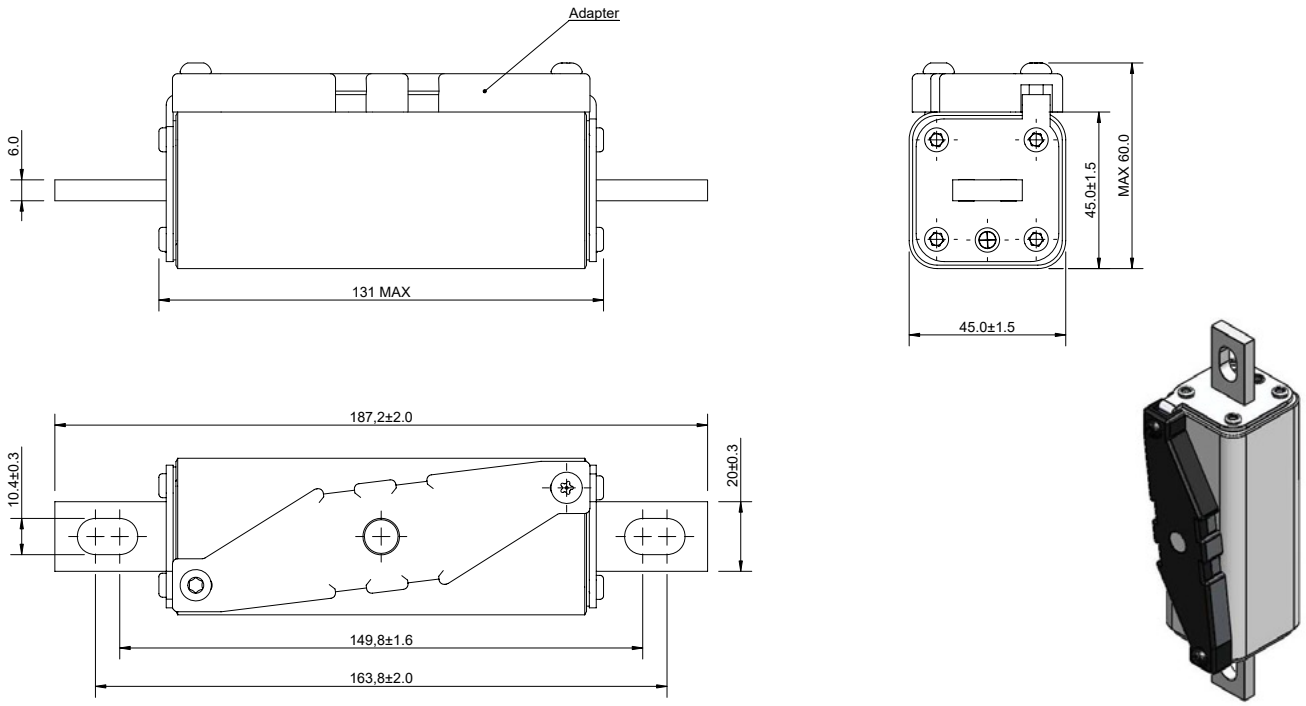
Dimensions (mm) - Size 3, bladed



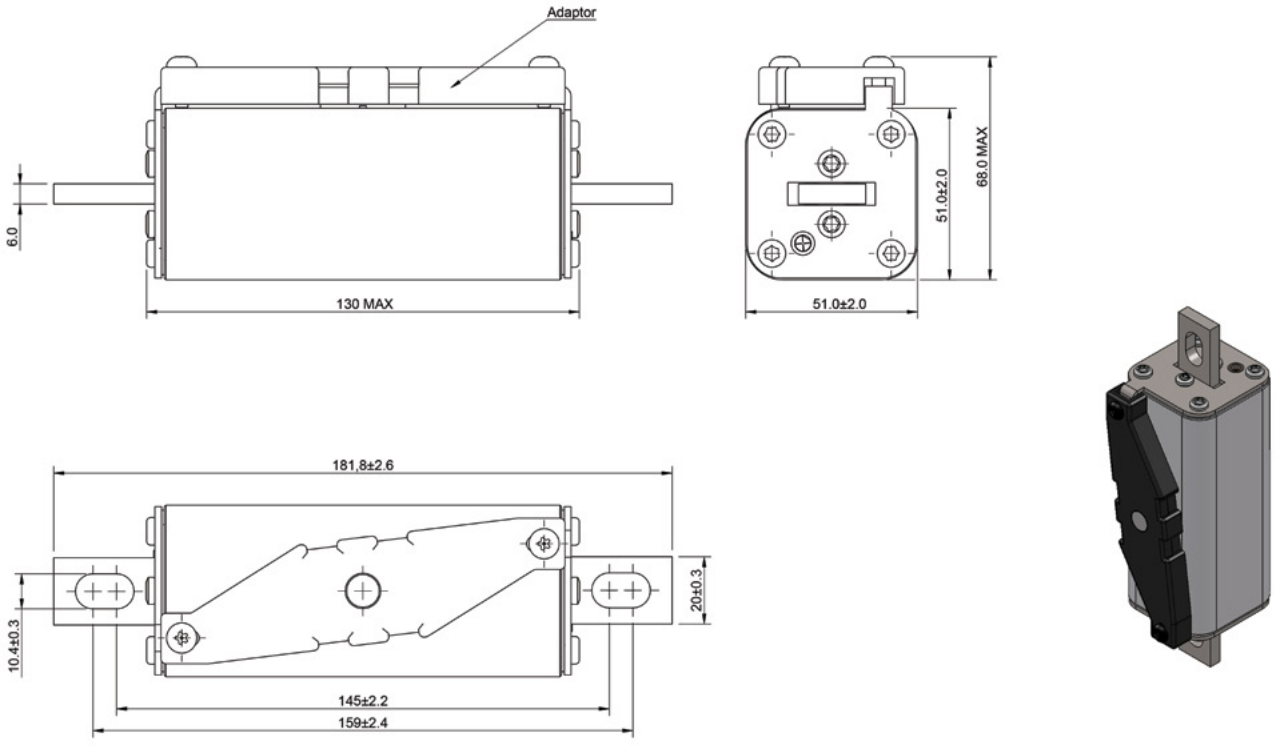
Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Dimensions (mm) - Size 01, bolted



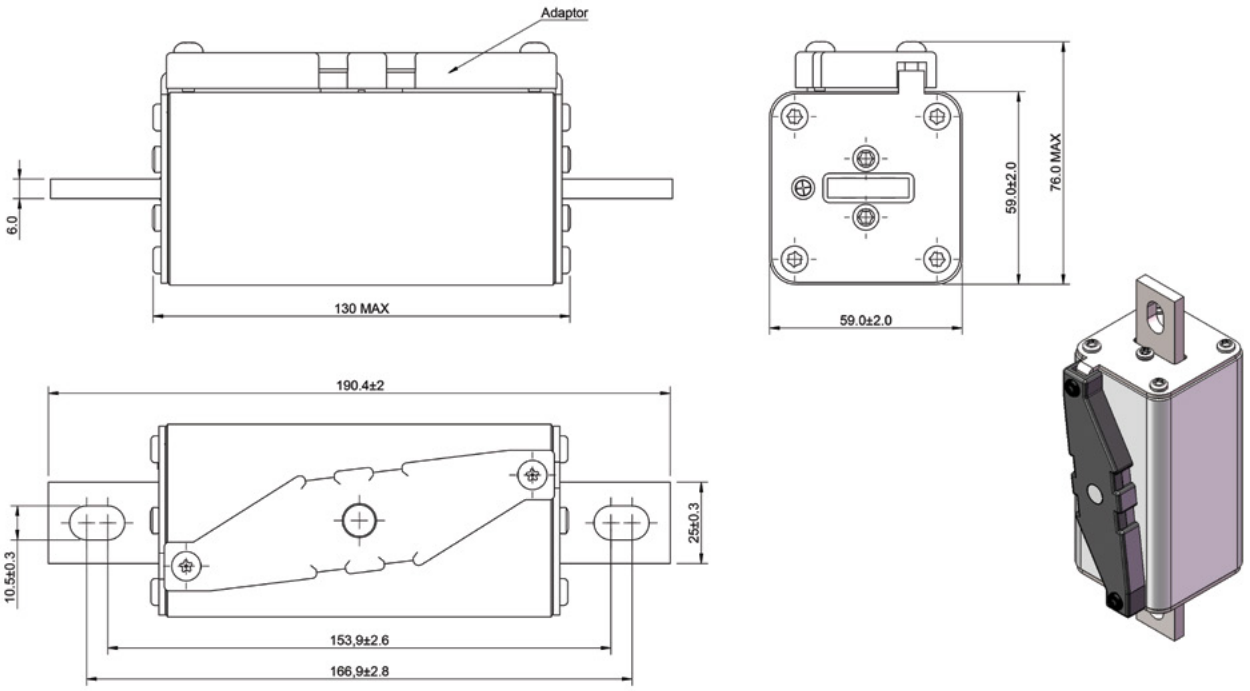
Dimensions (mm) - Size 1, bolted



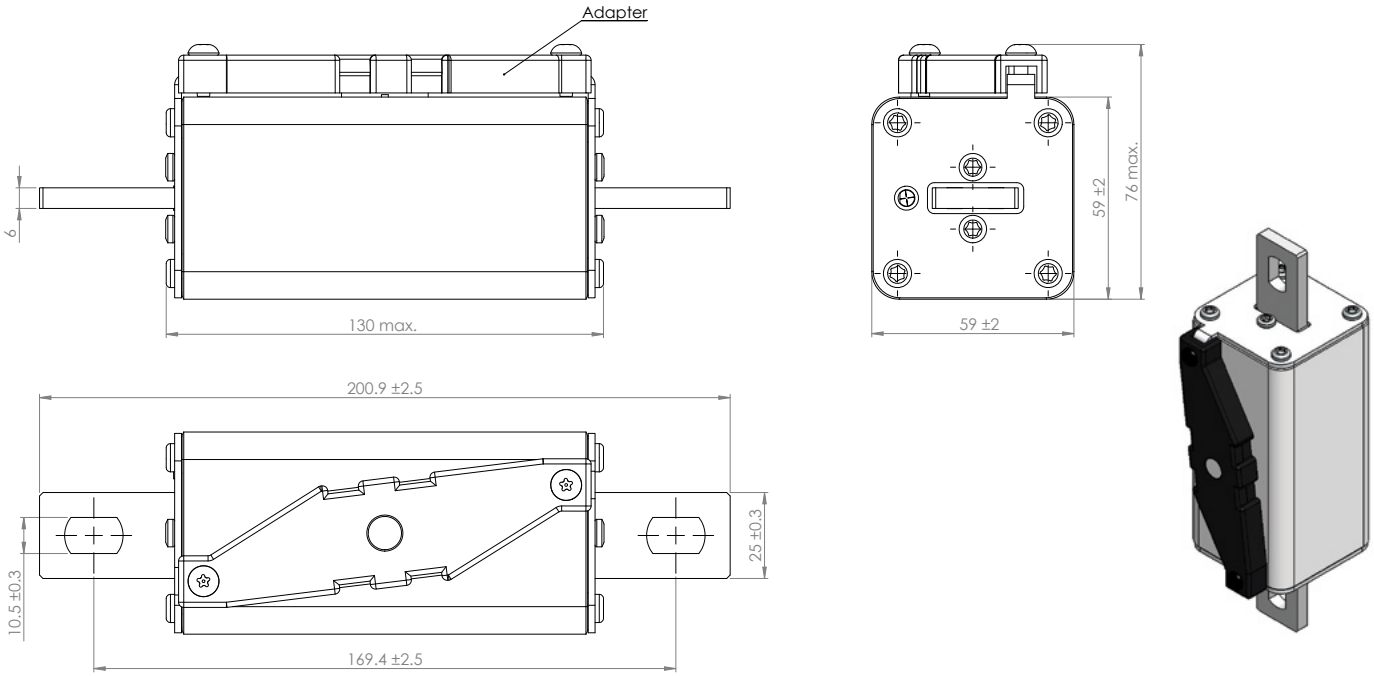
Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Dimensions (mm) - Size 2, bolted



Dimensions (mm) - Size 2XL-3B, bolted



PV-*A-2XL-3B and PV-*A-2XL-3B-15 have revised bolting patterns, which are identical to size 3L bolting pattern. This allows utilisation of both size 2XL and size 3L fuse links without changing the dimensional layout of the inverter, combiners and disconnects.

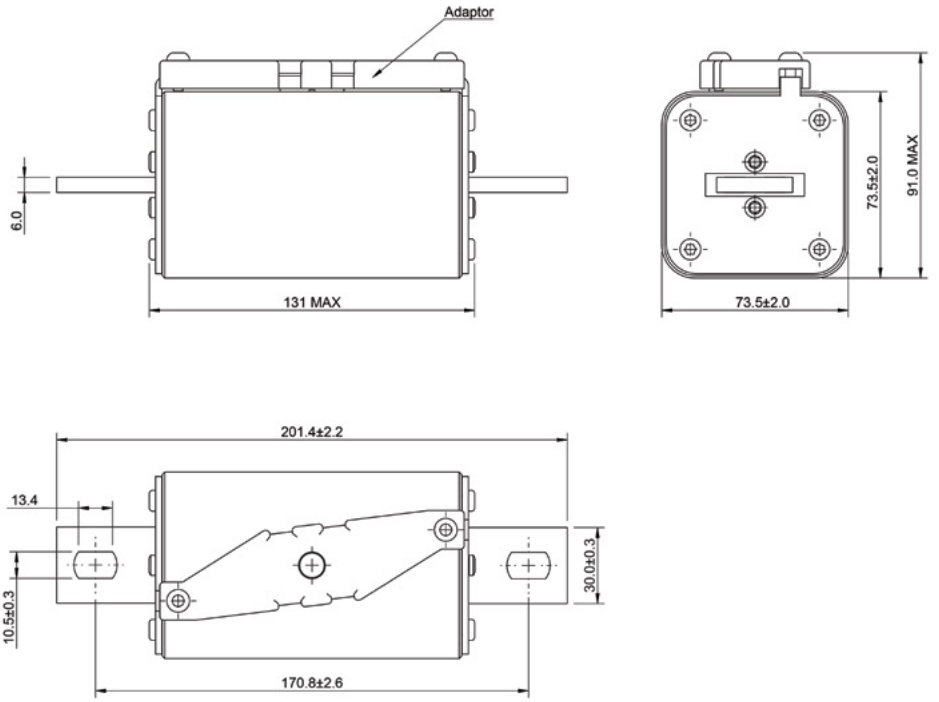
Mounting dimensions comparison

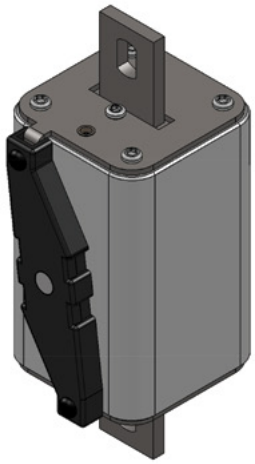
2XL-3B	3L
169.4	170.8

Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

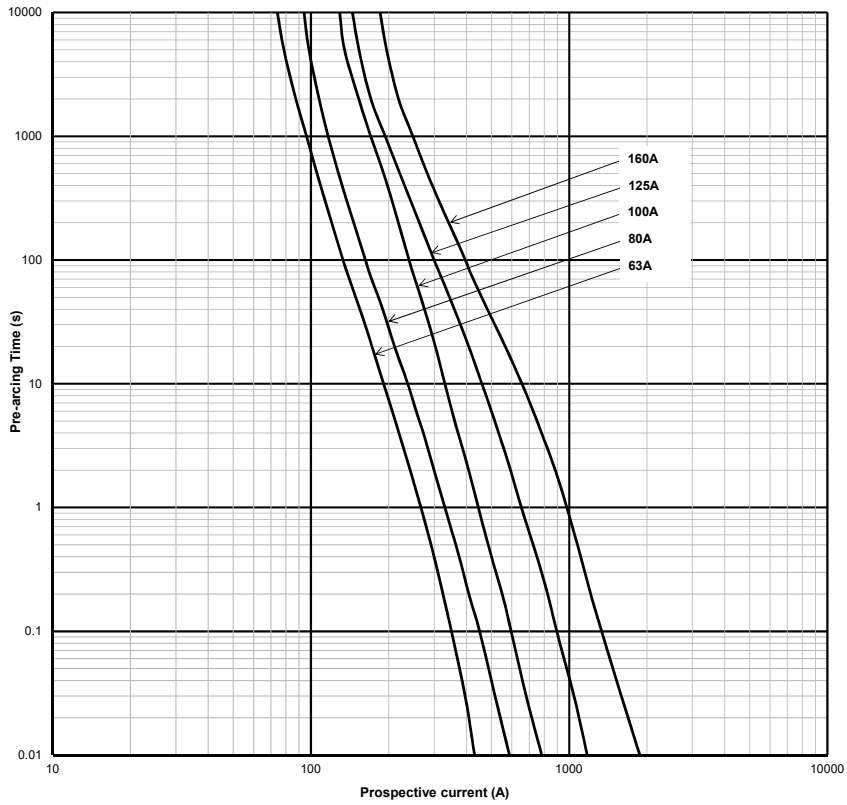
1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Dimensions (mm) - Size 3, bolted





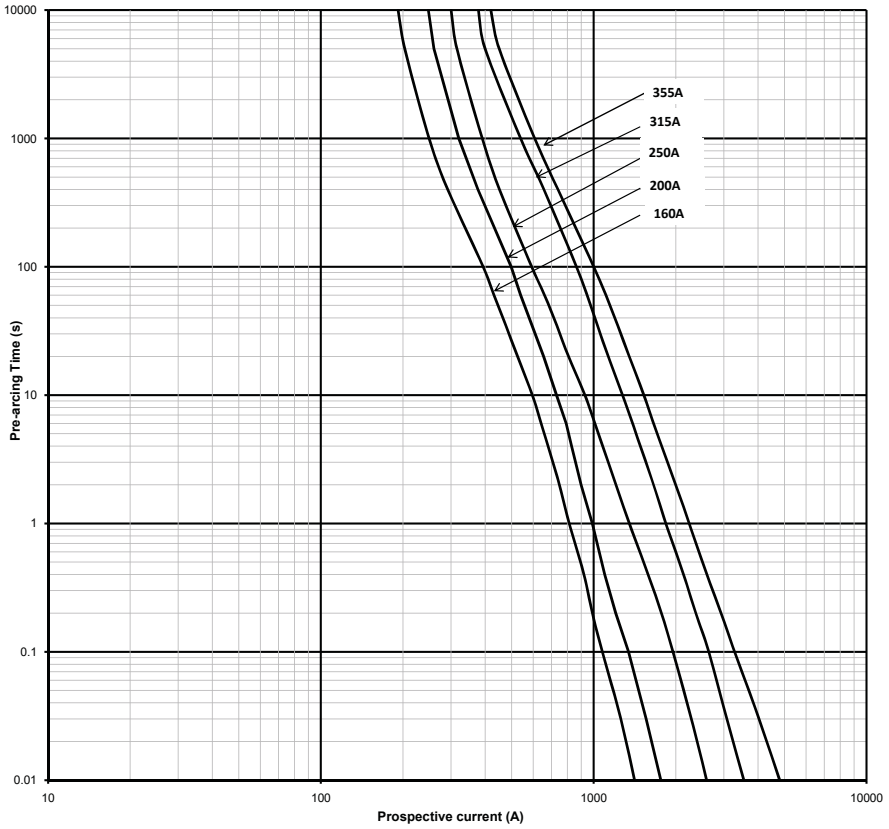
Time-current curve - Size 01XL, bladed and bolted, 1000 V d.c., 63 A to 160 A



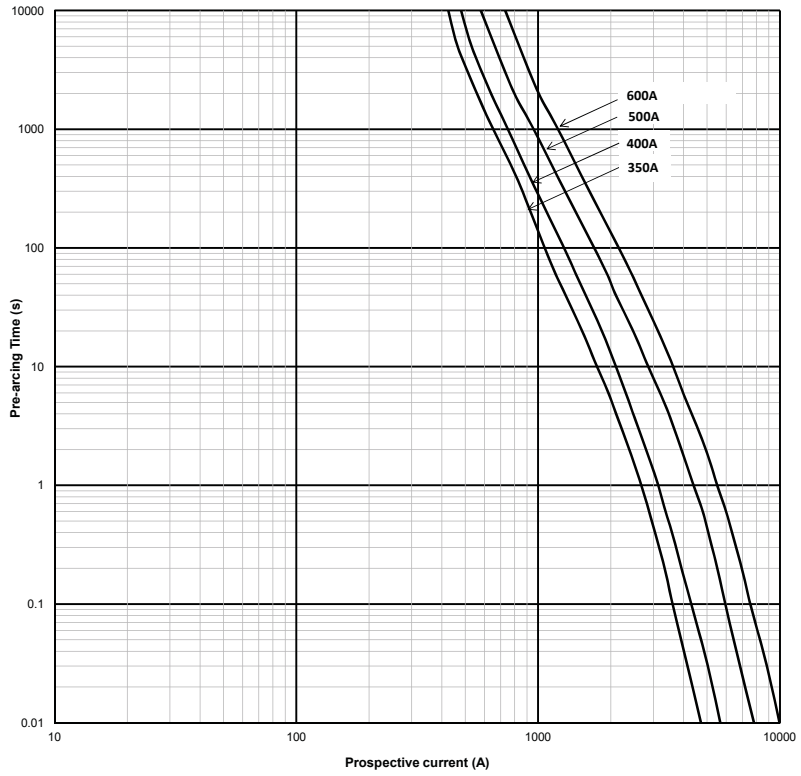
Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Time-current curve - Size 2XL, bladed and bolted, 1000 V d.c., 160 A to 355 A



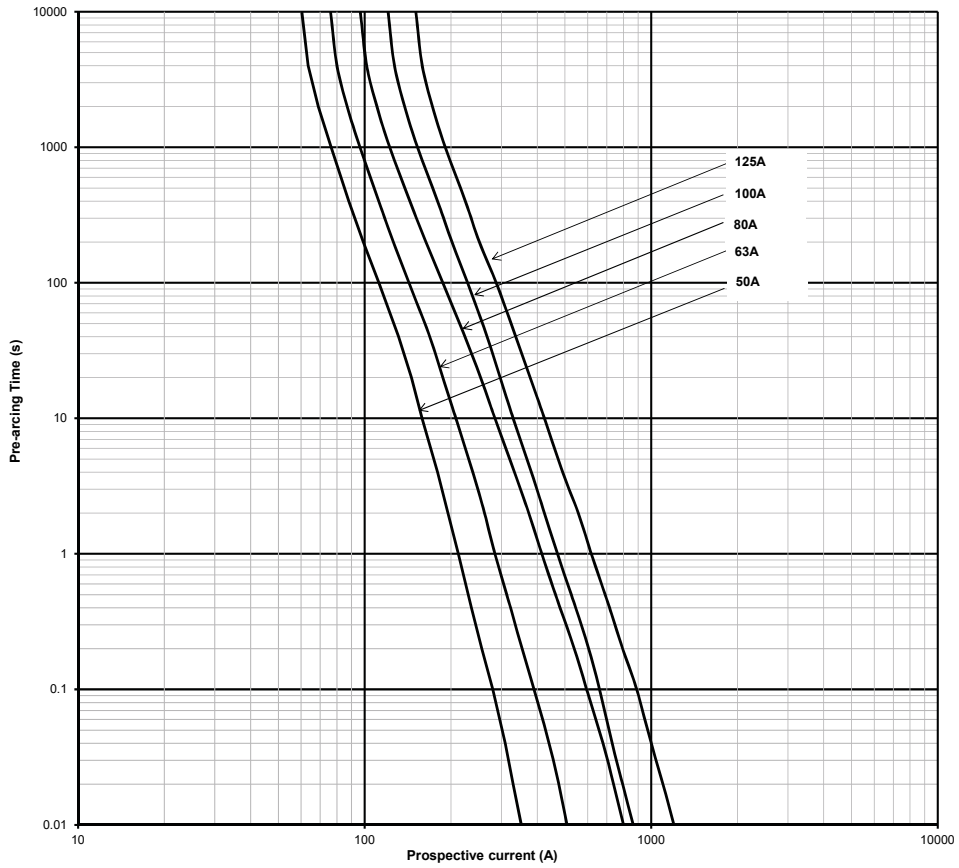
Time-current curve - Size 3L, bladed and bolted, 1000 V d.c., 350 A to 600 A



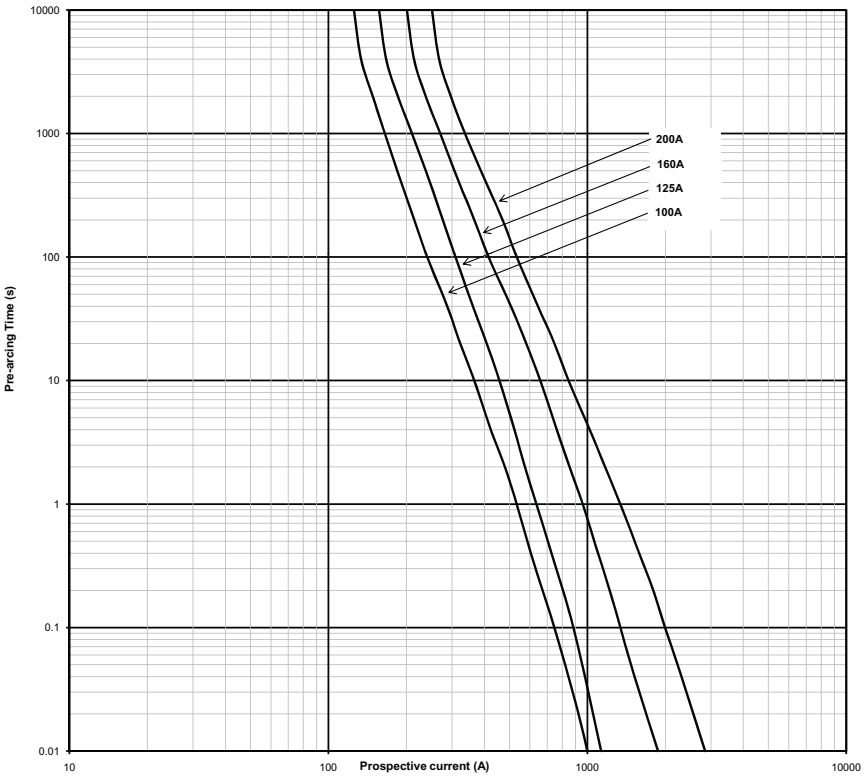
Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Time-current curve - Size 01XL, bladed and bolted, 1500 V d.c., 50 A to 125 A



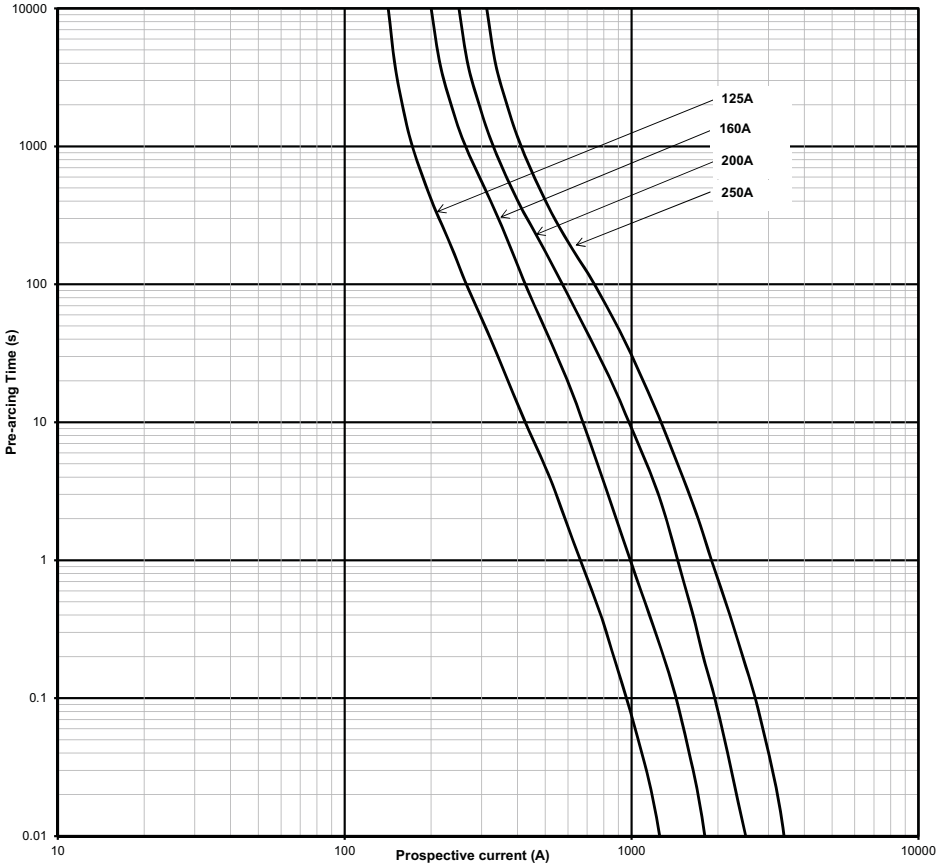
Time-current curve - Size 1XL, bladed and bolted, 1500 V d.c., 100 A to 200 A



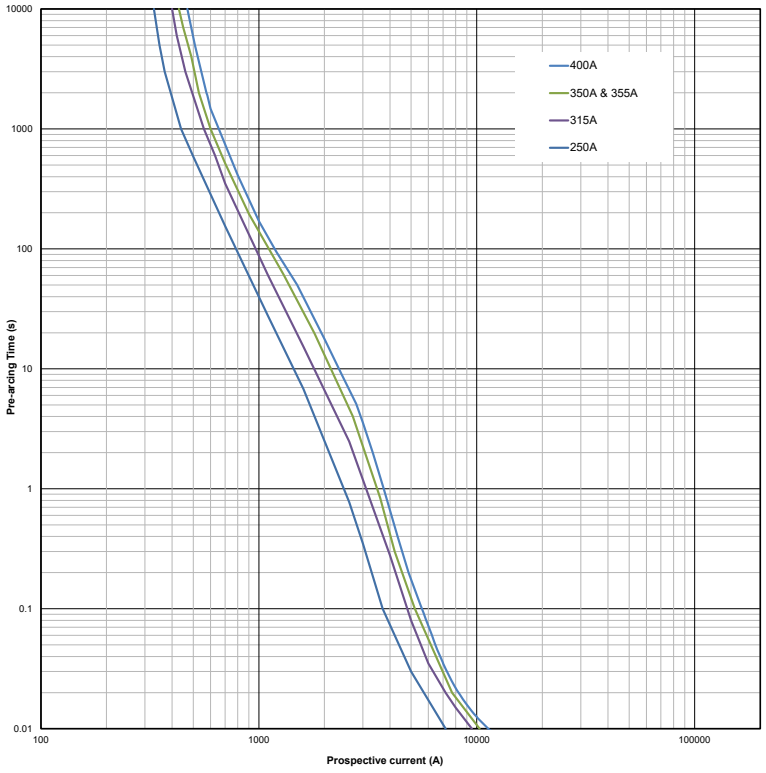
Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Time-current curve - Size 2XL, bladed and bolted, 1500 V d.c., 125 A to 250 A



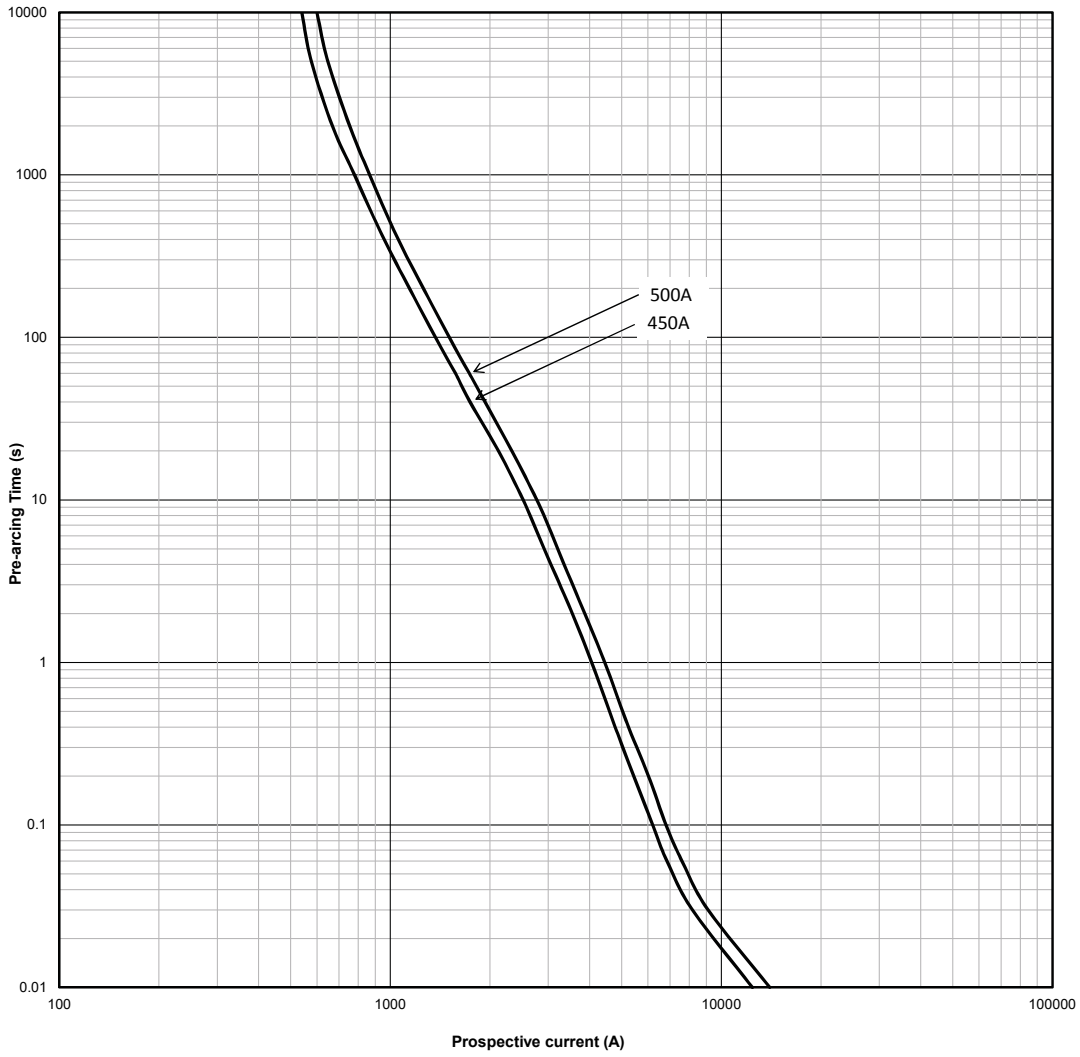
Time-current curve - Size PVS- 3L, bladed and bolted, 1500 V d.c., 250 A to 400 A



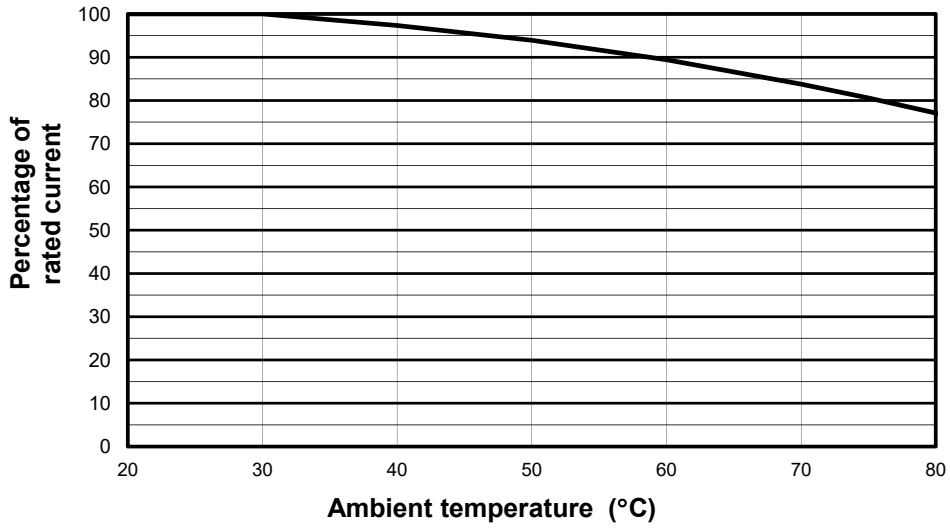
Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

1000-1500 V d.c. (IEC/UL) - 50 A to 600 A - PV-XL and PVS-3L - XL and 3L Style

Time-current curve - 3L, bladed and bolted, 1500 V d.c., 450 A and 500 A



Temperature derating curve



Data sheets: 10201 for PV fuse links / TD135020 for PVS fuse links

SD-S-PV Fuse base for XL and PVS fuse links - 1500 V d.c. (IEC) - 200 A to 500 A

Specifications



Description
Sizes 1 to 3 XL Fuse bases specifically designed for use with the Bussmann series range of XL PV (Photovoltaic) fuse links.

Technical data
- Rated voltage: 1500 V d.c. (IEC)
- Rated current: 200 A, 400 A and 630 A
- Fuse base size: 1 to 3
- Compatible with our 1000 V d.c and 1500 V d.c. PV-XL and PV-3L fuse links ranges.

Standards / Agency information
- IEC 60269-1
- UL Listed (file number E348242)

Accessories:
Fuse extraction handle available in sizes 01XL to 3L

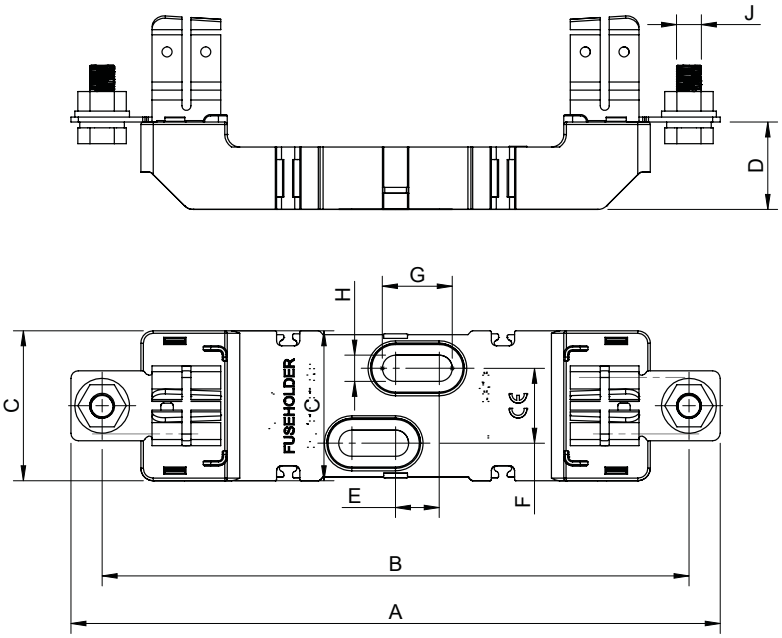
Part numbers: FEH1500B

Unit packing: 1

Catalog numbers

Catalog numbers	XL Style fuse link size	Maximum fuse rated current (Amps)	Power acceptance
SD1XL-S-PV	01XL, 1XL	200	57W
SD2XL-S-PV	2XL	400	75W
SD3L-S-PV	3L	500	108W

Dimensions (mm)



Catalog numbers	A	B	C	D	E	F	G	H	J
SD1XL-S-PV	260	235	60	35	17.5	30	28	10.5	M10
SD2XL-S-PV	285	260	60	35	17.5	30	28	10.5	M12
SD3L-S-PV	300	270	60	35	17.5	30	28	10.5	M12

Data sheet: 10685

2000 V d.c. Photovoltaic fuses



In response to the rapid growth of solar power systems and the increasing utilisation of high-voltage string and central inverters, Eaton is prioritising the development of 2000 V d.c. gPV fuses. These are specifically designed to address the evolving protection requirements of contemporary photovoltaic (PV) installations.

PV systems pose distinctive challenges for overcurrent protection, such as prolonged fault currents, elevated ambient temperatures, and the necessity for reliable direct current arc interruption. Eaton's gPV fuses are engineered to overcome these obstacles by providing fast-acting protection, high DC voltage ratings, and robust performance even in demanding outdoor conditions.

As system voltages in the PV sector continue to increase, frequently surpassing 1500 V d.c., Eaton is actively advancing its gPV fuse portfolio in accordance with **the upcoming IEC 63523 (for fuses rated above 1500 V d.c.) and UL 248-19 (for fuses rated up to 2000 V d.c).**. These standards establish the requirements for fuses rated above 1500 V d.c., ensuring that Eaton's products remain compliant with future regulatory frameworks while delivering reliable, safe protection for next-generation solar infrastructure.

Eaton's gPV fuse range is suitable for use in combiner boxes, string inverters, and battery-integrated PV systems, ensuring dependable performance and reassurance for professionals working in the solar energy industry.

Technical data

- Rated voltage: 2000 V d.c.
- Rated current: various options available
- Operating class: gPV
- Connection type: DIN 43653 and US Bolted

Standards / Agency information

IEC 63523 (Draft) and UL 248-19, ROHS compliant

For inquiries related to your 2000 V d.c. PV System development, please contact bulehighspeedtechnical@eaton.com

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Founded in 1911, Eaton has continuously evolved to meet the changing and expanding needs of our stakeholders. With revenues of $27.4 billion in 2025, the company serves customers in 180 countries.

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