Bussmann series
Traction fuse links catalogue

BUSSMANN SERIES

Fuse links for railway applications

Powering Business Worldwide

Eaton's Bussmann business has over 100 years of experience in the design and manufacture of fuse links.

Utilising a global network of engineering, manufacture and distribution Eaton's Bussmann business is able to draw upon a wealth of knowledge.

As railway systems and standards have changed, so have the protection needs. Eaton's Bussmann business is continually developing new and improving existing designs to meet these ever changing requirements. The experience of Eaton's Bussmann business in protecting semiconductor devices has proved invaluable as train systems have moved to power based converters for the variable speed motor drives and also for auxiliary power conversion.

Throughout its history, Eaton's Bussmann business has been continually chosen to supply the industry's key train manufacturers. Eaton's Bussmann series products can be found all across the globe and are extensively used across the America, Europe and Asia and numerous other countries.

Table of contents

Square body fuse links			
750 V d.c.	50-1600 A	170M Series	4 - 5
750 V d.c.	63-500 A	170E Series	6 - 7
850 V d.c.	1400 A	170M7217	8
1200 V d.c.	20-215 A	170M Series	9
1200 V d.c.	160-420 A	170F Series	10
2000 V d.c.	10-80 A	170E Series	11
2000 V d.c.	10-125 A	170E Series	12
2000 V d.c.	20-600A	170M Series	13 - 15
2400 V d.c.	100-400 A	170M Series	16
4000 V d.c.	20-125 A	170E Series	17
4000 V d.c.	20-450 A	170E Series	18 - 20
Ferrule fuse links			
750 V d.c.	5-60 A	FWK Series	21
750 V d.c.	30-50 A	LRC750 Series	22
1000 V d.c.	2-30 A	FWL and FWS Series	23
Round body fuse links			
750 V d.c.	5-60 A	KC36 Series	24
750 V d.c.	200-400 A	RC Series	25
900 V d.c.	160-1000 A	SF Series	26
1500 V d.c.	25-200 A	NBC Series	27

Size 1*, 3 and 23 square body fuse links

750 V d.c., 50A to 1600 A, 170M series

Description

A range of square body high speed traction fuse links for superior protection of DC third rail applications up to 750 V d.c..

Technical data

Rated voltage: 750 V d.c.

Rated current: 50-160 A, 450-800 A and 1000-1600 A

Tested breaking capacity:

- Size 1*
  - 85 kA at 750 V d.c., L/R 95ms
  - 80 kA at 950 V d.c., L/R 40ms
- Size 3 and 23
  - 110 kA at 750 V d.c., L/R 40ms

Class of operation

aR size 1*

gR size 3 and 23

Fuse link size

1*, 3 and 23

Standards / approvals

IEC 60269

Microswitch (optional)

170H0069 or 170H3027 (gold), Type K indicator 6.3 x 0.8mm lugs, low operating voltage.

Features and product benefit

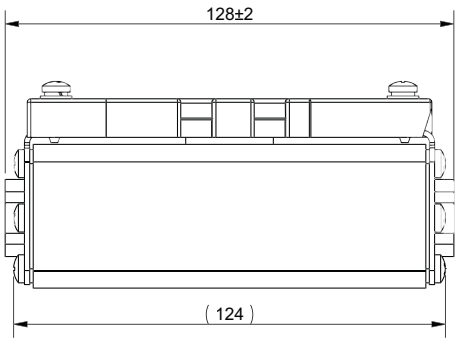
- High breaking capacity

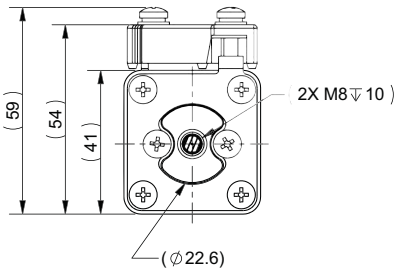
Typical application

- Third rail

Fuse link type	Fuse link size	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s)		Watts loss (W)		Catalogue number
					Pre-arcing	Total at 750 V d.c.	0.8 I_n	I_n	
Flush End	1*	aR	750	50	390	1300	15	27	170M2000
				63	610	2050	18	35	170M2001
				80	670	2250	19	37	170M2002
				100	2450	8150	21	40	170M2003
				125	2950	9800	24	47	170M2004
				160	5500	18,250	29	56	170M2005
Flush End	3	gR	750	450	65,700	272,300	46	87	170M2010
				500	83,200	344,800	52	98	170M2011
				550	136,700	566,500	67	126	170M2012
				630	173,500	719,000	75	142	170M2013
				700	268,000	1,110,500	78	156	170M2014
				750	307,600	1,275,000	83	167	170M2015
				800	349,900	1,450,000	89	178	170M2016
Parallel	23	gR	750	1000	476,300	1,973,700	112	187	170M2017
				1250	694,000	2,875,800	134	224	170M2018
				1400	1,071,600	4,440,500	152	254	170M2019
				1500	1,230,200	5,097,700	165	275	170M2020
				1600	1,399,700	5,800,100	180	300	170M2021

Dimensions - mm

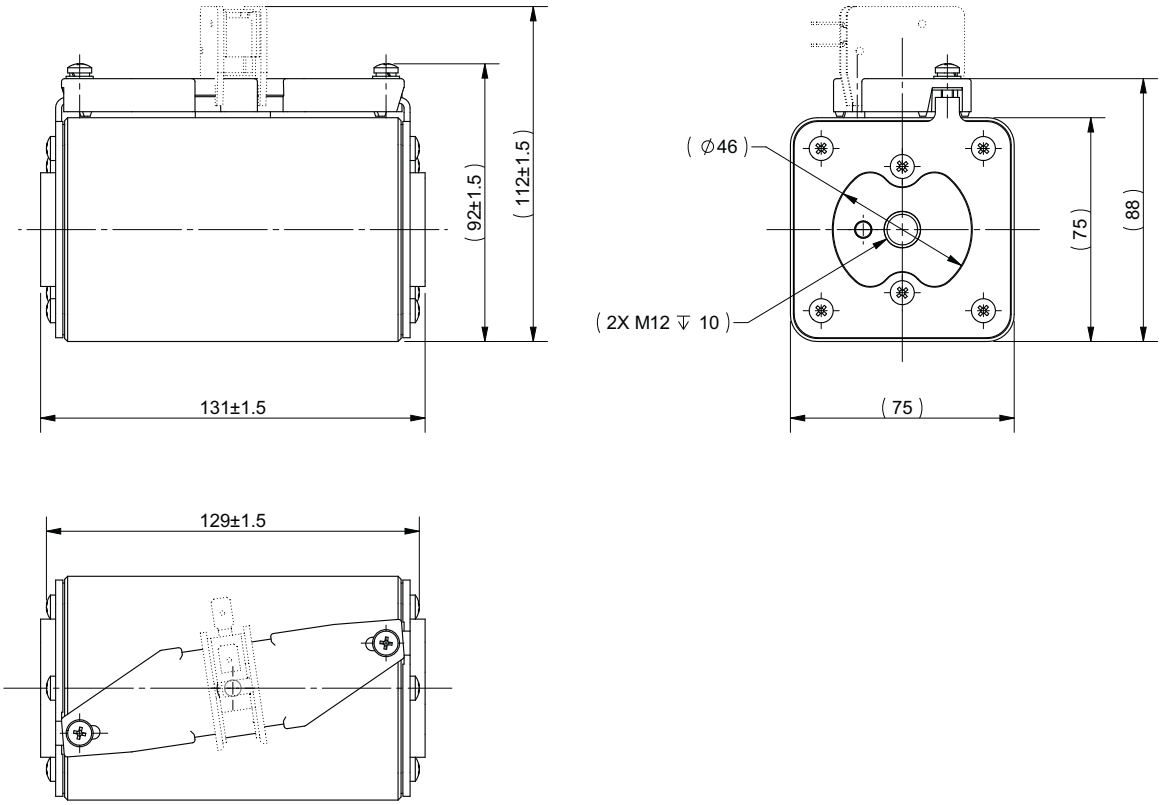




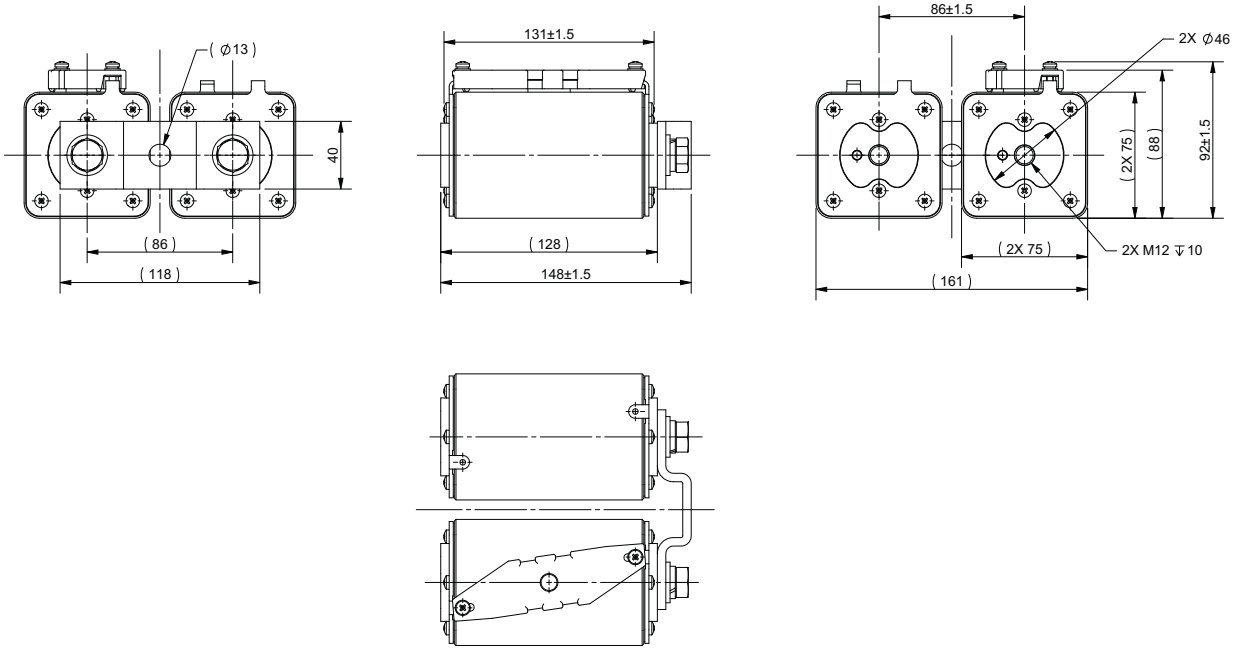
170M2000 to 170M2005 - Flush End - Size 1*

Data Sheet 720140

Dimensions - mm



170M2010 to 170M2016 - Flush End - Size 3



170M2017 to 170M2021 - Parallel - Size 23

Data Sheet 720140

Size 1*, 1, 2 and 3 square body fuse links

750 V d.c., 63 A to 500 A, 170E series

Description

A range of square body high speed traction fuse links for superior protection of DC third rail applications up to 750 V d.c.

Technical data

Rated voltage: 750 V d.c.

Rated current: 63-500 A

Rated breaking capacity:

- 100 kA at 1000 V d.c., L/R 40ms
- 100 kA at 750 V d.c., L/R 100ms

Class of operation

gR

Fuse link size

1*, 1, 2 and 3

Standards / approvals

Please contact Eaton's Bussmann business technical department bulehighspeedtechnical@eaton.com

Microswitch (optional)

170H0069 or 170H3027 (gold), Type K indicator 6.3 x 0.8mm lugs, low operating voltage.

Features and product benefit

- Low watts loss
- High breaking capacity
- Low arc voltage

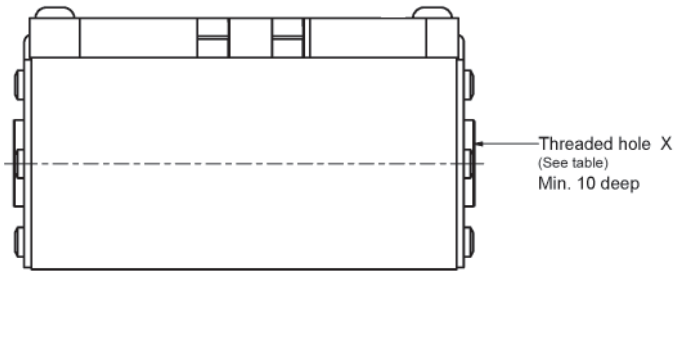
Typical application

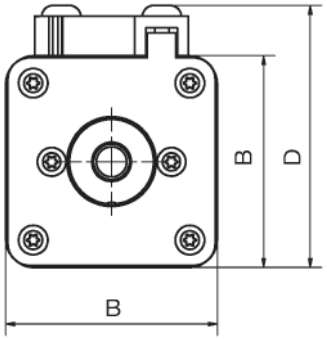
- Third rail.

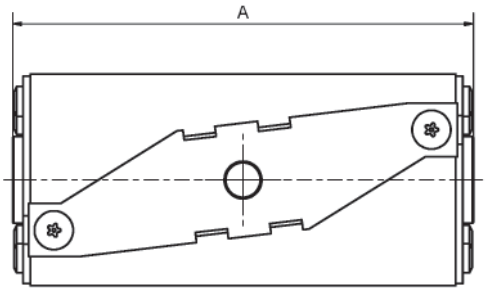
Fuse link size	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s) Pre-arcing	Watts loss (W) I_n	Catalogue number -BK flush end	Fuse link type	-EK knife blade	Fuse link type
1*	gR	750	63	1100	10	170E3577	BK/130	170E3583	EK/155
			80	1750	13	170E3578		170E3584	
			100	3000	16	170E3579		170E3585	
			125	4500	21	170E3580		170E3586	
			160	7700	26	170E3581		170E3587	
1	gR	750	200	11,000	37	170E5417	BK/130	170E5420	EK/165
			250	18,000	46	170E5418		170E5421	
2	gR	750	250	17,000	47	170E8335	BK/130	170E8345	EK/170
			315	28,000	57	170E8336		170E8346	
			400	55,000	73	170E8337		170E8347	
3	gR	750	500	75,500	93	170E9681	BK/130	170E9685	EK/170

Data Sheets: Size 1* 170K3620, Size 1 170k3622, Size 2 170K3624, Size 3 170K3626

Dimensions - mm

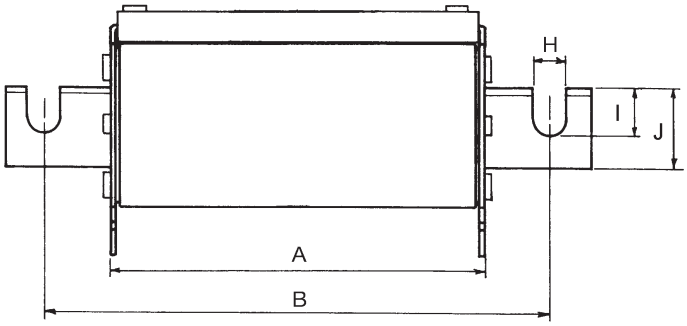


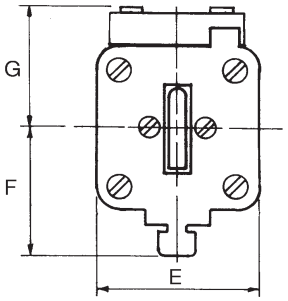


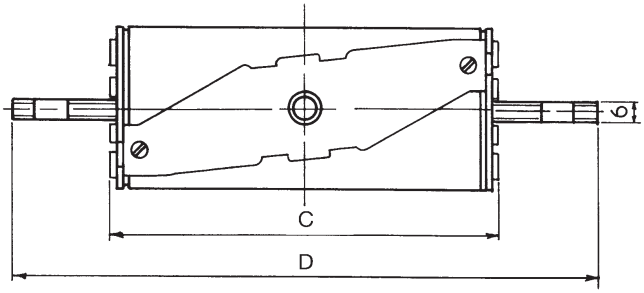


Size/Type	A	B	D	X
1*BK/130	129	43	61	M8
1 BK/130	130	51	69	M8
2 BK/130	130	59	77	M10
3 BK/130	131	74	90	M12

Type –BK/130







Size/ Type	A	B	C	D	E	F	G	H	I	J
1*EK/155	124	156	129	180	43	36	41	9	9	18
1 EK/165	124	166	129	191	51	37	41	11	14	25
2 EK/170	124	170	129	205	59	42	48	13	21	30
3 EK/170	125	170	130	206	74	51	56	13	20	36

Type –EK/-

Data Sheets: Size 1* 170K3620, Size 1 170k3622, Size 2 170K3624, Size 3 170K3626

Size 4 square body fuse links

850 V d.c./1250 V a.c., 1400 A, 170M7217

Description

A square body high speed traction fuse link suitable for use in third rail collector systems to protect high speed DC breakers in low time constant, high fault conditions. Suitable for 1250 V a.c. /850 V d.c. systems.

Technical data

Rated voltage: 850 V d.c./1250 V a.c.

Rated current: 1400 A

Tested breaking capacity:

- 100 kA at 1250 V a.c.
- 80 kA at 850 V d.c., L/R 8ms

Class of operation

aR

Standards / approvals

Please contact Eaton's Bussmann business technical department bulehighspeedtechnical@eaton.com

Microswitch (optional)

170H0069 or 170H3027 (gold), Type K indicator
6.3 x 0.8mm lugs, low operating voltage.

Features and product benefit

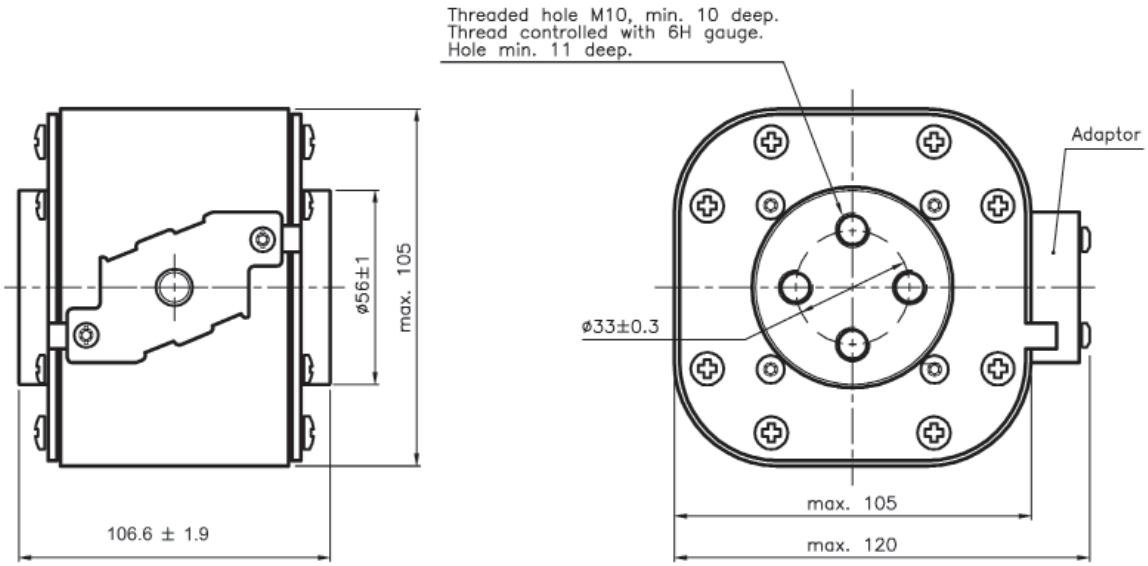
- High breaking capacity

Typical application

- Protection of high speed DC breakers in low time constant, high fault conditions in third rail applications.

Fuse link size	Operating class	Rated voltage (V d.c./V a.c.)	Rated current (Amps)	I^2t (A^2s)		Watts loss (W)	Catalogue number
				Pre-arcing	Total at 1250 V a.c.		
4	aR	850/1250	1400	800,000	5,000,000	195	170M7217

Dimensions - mm



Data Sheets: 170K6640, 170K6642

Size 1* square body fuse links

1200 V d.c., 20 A to 215 A, 170M series

Description

A range of square body high speed traction fuse links for superior protection of DC third rail applications up to 1200 V d.c.

Technical data

Rated voltage: 1200 V d.c.

Rated current: 20-215 A

Tested breaking capacity:

- 100 kA at 1350 V d.c., L/R 15ms

Class of operation

aR

Fuse link size

1*

Standards / approvals

IEC 60269

Microswitch (optional)

170H0069 or 170H3027 (gold) Type K indicator 6.3 x 0.8mm lugs, low operating voltage.

Features and product benefit

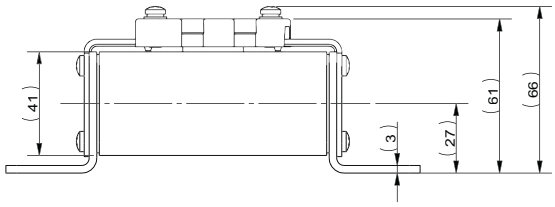
- Low watts loss
- High breaking capacity
- Low arc voltage

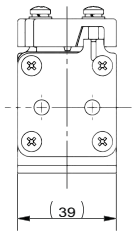
Typical application

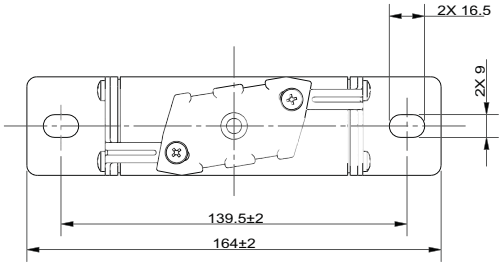
- Protection of high speed circuit breaker
- Heating Ventilation Air Conditioning (HVAC)
- Third rail converter.

Fuse link type	Fuse link size	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s)		Watts loss (W)		Catalogue number
				Pre-arcing	Total at 1200 V d.c.	0.8 I_n	I_n	
Single Slot Tag	1*	1200	20	82	249	1	2	170M2100
			25	173	526	4	8	170M2101
			32	327	994	5	9	170M2102
			40	550	1675	1	9	170M2103
			50	950	2890	7	13	170M2104
			63	1310	3990	5	9	170M2105
			80	1970	6000	13	23	170M2106
			100	3800	11,600	14	26	170M2107
			125	8550	26,025	13	24	170M2108
			160	8770	26,700	24	44	170M2109
			200	15,200	46,300	29	52	170M2110
			215	16,430	50,000	32	58	170M2111

Dimensions - mm







Data Sheet: 720141

Size 2 square body fuse links

1200 V d.c., 160 A to 420 A, 170F

Description

A range of square body high speed traction fuse link which provides superior protection in DC traction applications up to 1200 V d.c.

Technical data

Rated voltage: 1200 V d.c.

Rated current: 160-420 A

Rated breaking capacity:

- 100 kA at 1000 V d.c., L/R = 45ms
- 100 kA at 1200 V d.c., L/R = 15ms

Class of operation

aR

Fuse link size

2

Standards / approvals

Contact Eaton's Bussmann business technical department

bulehighspeedtechnical@eaton.com

Microswitch (optional)

170H0069 or 170H3027 (gold), Type K indicator 6.3 x 0.8mm lugs, low operating voltage.

Features and product benefit

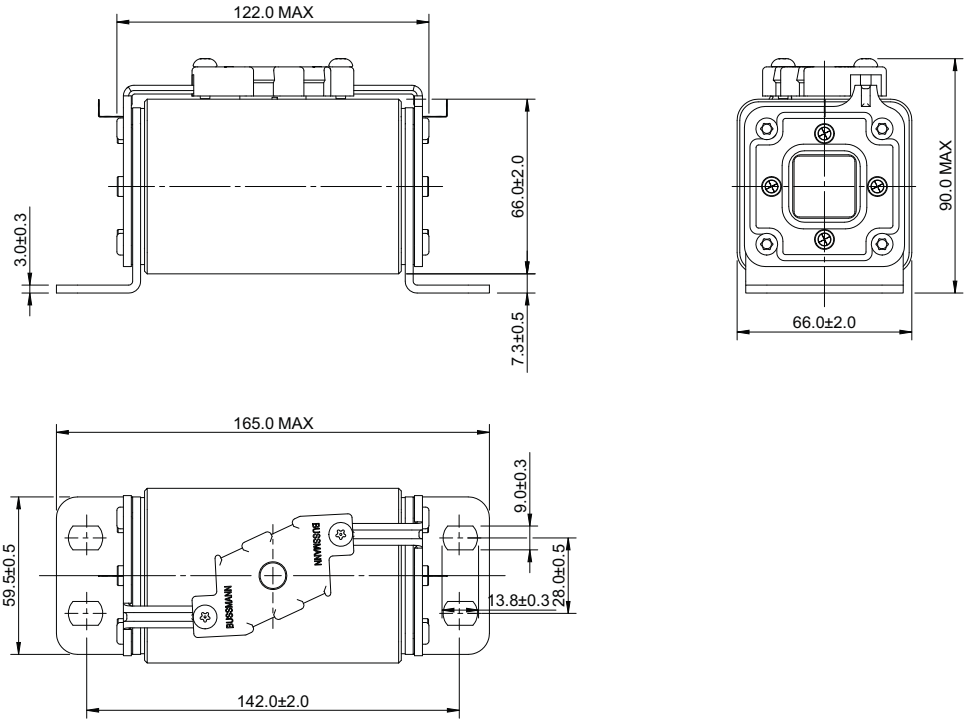
- High breaking capacity
- Low arc voltage

Typical application

- Auxiliary converters
- Third rail.

Fuse link type	Fuse link size	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s)		Watts loss (W)	Catalogue number
					1000 V d.c. L/R 15ms	1000 V d.c. L/R 45ms		
Double slotted tag	2	aR	1200	160	12,000	20,000	75	170F8230
				200	20,000	35,000	85	170F8231
				250	43,000	75,000	94	170F8232
				315	87,000	150,000	104	170F8233
				400	180,000	310,000	120	170F8234
				420	215,000	375,000	122	170F8235

Dimensions - mm



Data Sheet: 170K5520

Size 1* square body fuse links

2000 V d.c., 10 A to 80 A, 170E series

Description

A range of square body high speed traction fuse link which provides superior protection in DC traction applications up to 2000 V d.c..

Technical data

Rated voltage: 2000 V d.c.

Rated current: 10-80 A

Tested breaking capacity:

- 40 kA at 2000 V d.c., L/R 30ms

Class of operation

gR

Fuse link size

1*

Standards / approvals

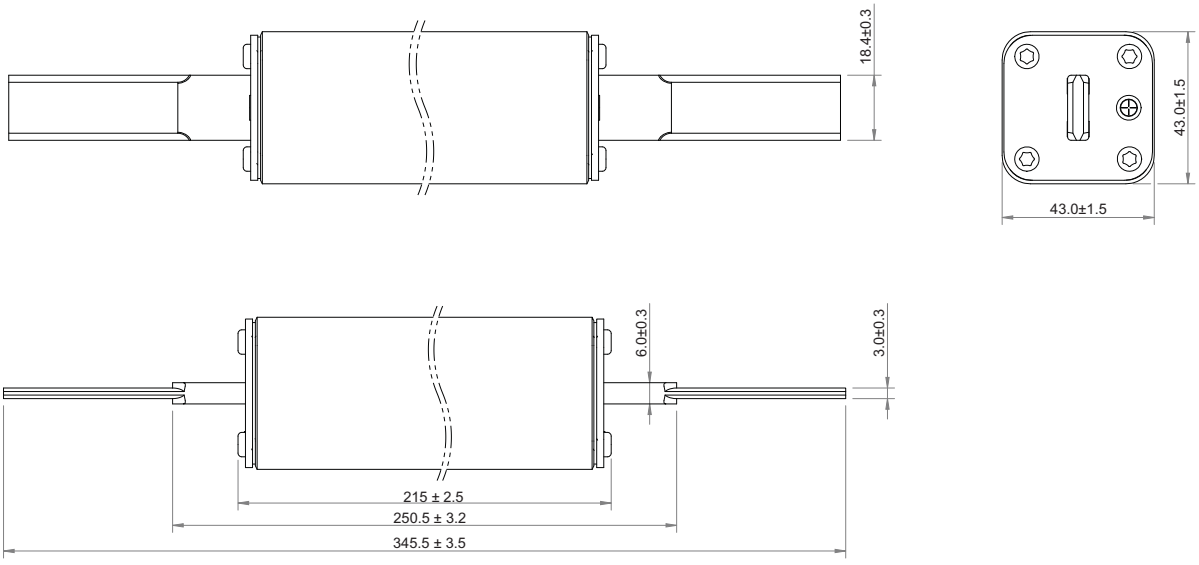
Contact Eaton's Bussmann business technical department
bulehighspeedtechnical@eaton.com

Typical application

- Auxiliary converters
- Lights
- Power distribution converters

Fuse link type	Fuse link size	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	Watts loss (W)	Catalogue number
Knife Blade Style	1*	gR	2000	10	7	170E3977
				12	8	170E3982
				16	11	170E3971
				20	13	170E3906
				25	17	170E3907
				32	22	170E3908
				40	27	170E3909
				50	34	170E3910
				63	43	170E3911
				80	50	170E3912

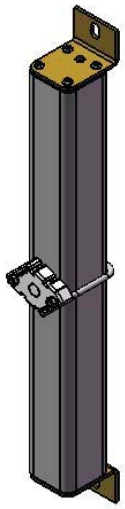
Dimensions - mm



Data Sheet: 170K4538

Size 1* square body fuse links

2000 V d.c., 10 A to 125 A, 170E series



Description

A range of square body high speed traction fuse link which provides superior protection in DC traction applications up to 2000 V d.c.

Technical data

Rated voltage: 2000 V d.c.

Rated current: 10-125 A

Tested breaking capacity:

- 40 kA at 2000 V d.c., L/R 30ms

Class of operation

aR/gR

Fuse link size

1*

Standards / approvals

Contact Eaton's Bussmann business technical department
bulehighspeedtechnical@eaton.com

Microswitch (optional)

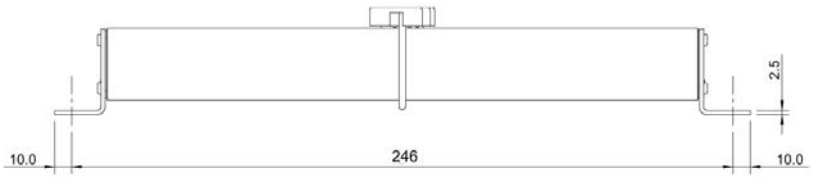
170H0239 or 170H3030 (gold), Type K indicator 6.3 x 0.8mm lugs, low operating voltage.

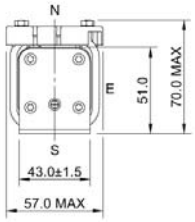
Typical application

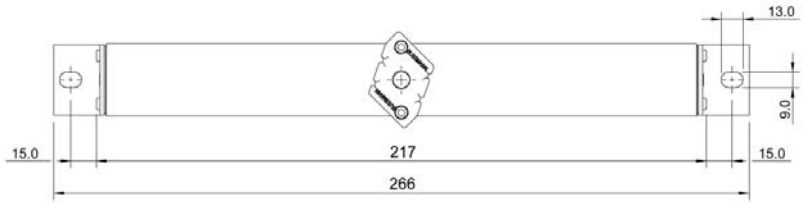
- Auxiliary converters
- Lights
- Power distribution converter.

Fuse link type	Fuse link size	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	Watts loss (W)	Catalogue number
Bolted Blade Style	1*	aR	2000 V d.c.	20	13	170E3937
				25	16	170E3938
				32	20	170E3939
				40	25	170E3940
				50	32	170E3941
				63	40	170E3942
				80	51	170E3943
				100	64	170E3944
				125	80	170E3945
Bolted Blade Style	1*	gR	2000 V d.c.	10	7	170E3976
				16	11	170E3970
				20	13	170E3950
				25	17	170E3951
				32	22	170E3952
				40	27	170E3953
				50	34	170E3954
				63	43	170E3955
				80	50	170E3956

Dimensions - mm







Data Sheets: 170K4538 (IR = 30kA), 170K4900 (IR = 60kA)

Square body fuse links

2000 V d.c., 20 A to 600 A, 170M series

Description

A range of square body high speed traction fuse links which provides superior protection for DC traction third rail applications up to 2000 V d.c.

Technical data

Rated voltage: 2000 V d.c.

Rated current:

- 20-600 A Single slot tag
- 160-400 A Double slot tag
- 500-600 A Parallel double slot tag

Rated breaking capacity:

- 100 kA at 2000 V d.c., L/R <15ms
- 100 kA at 1500 V d.c., L/R <30ms

Class of operation

aR

Standards / approvals

Tested in line with IEC 60269.

Microswitch (optional)

170H0239 or 170H3030 (gold), Type K indicator 6.3 x 0.8mm lugs, low operating voltage.

Features and product benefit

- High breaking capacity

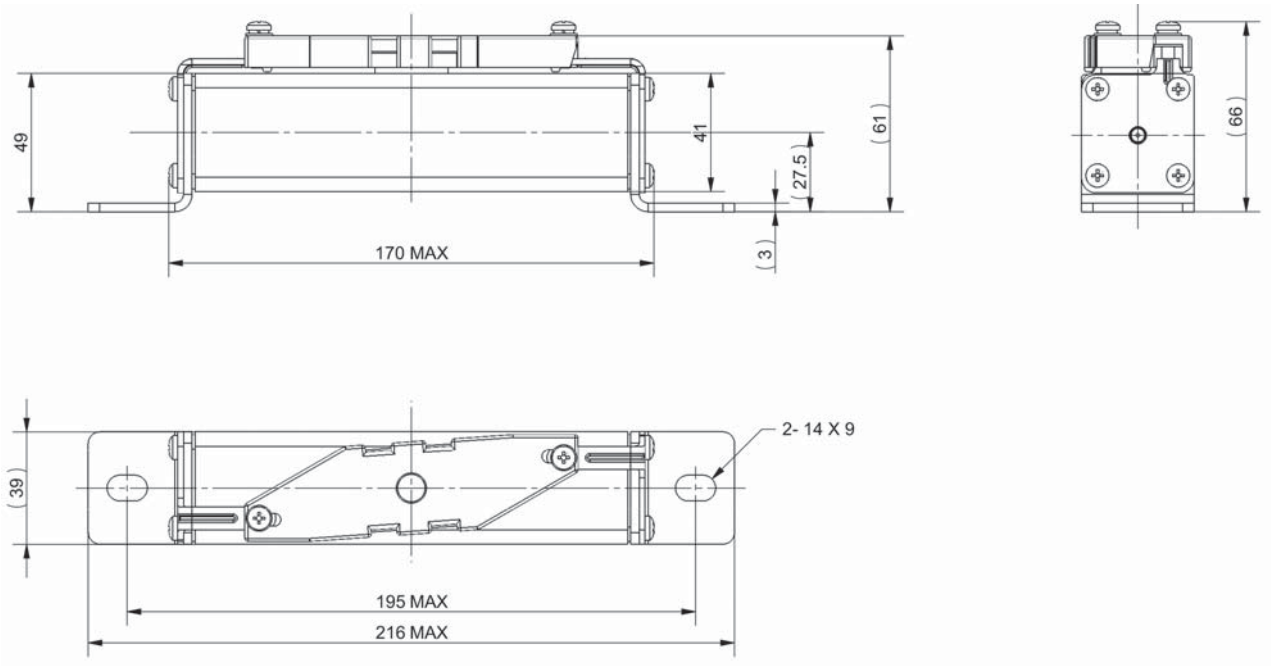
Typical application

- Pantagraph
- Converter protection.

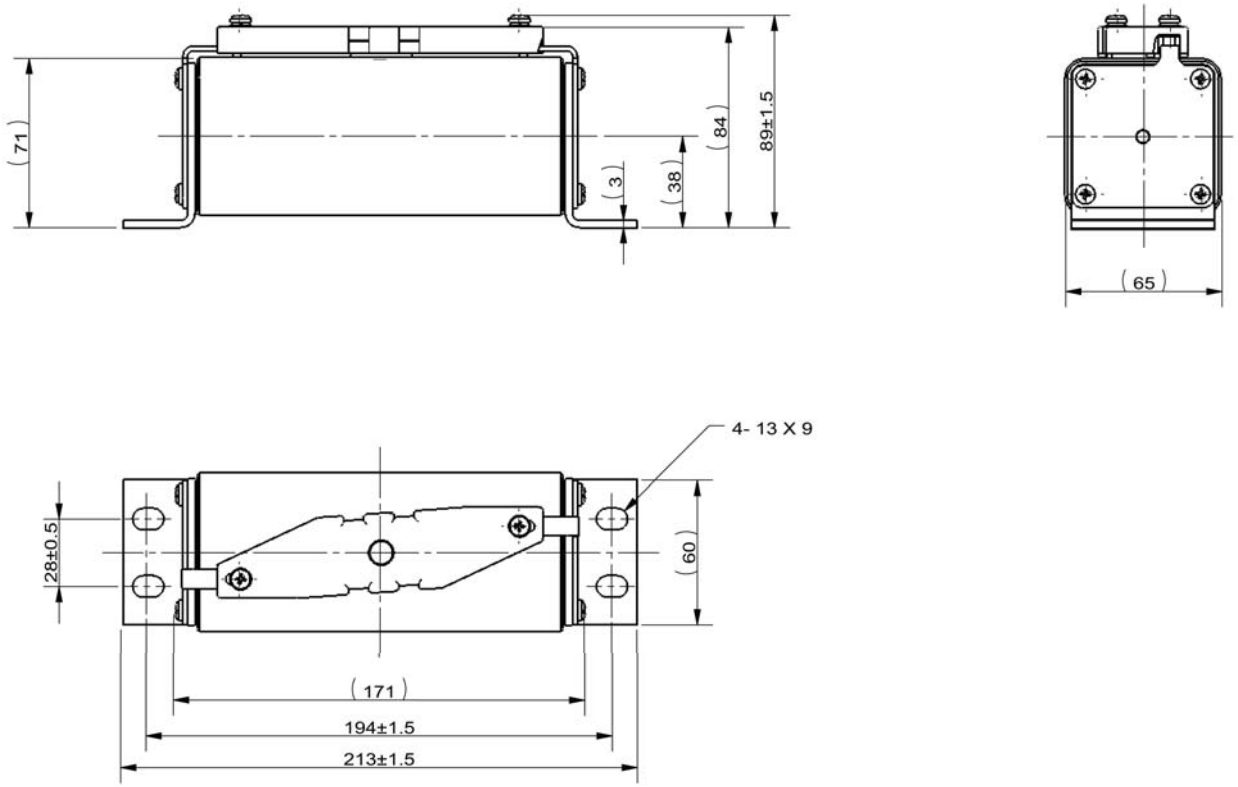
Fuse link type	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s)		Watts loss (W)		Catalogue number
				Pre-arcing	Total at 2000 V d.c.	0.8 I_n	I_n	
Single slot tag	aR	2000	20	85	240	9	12	170M2046
			25	130	390	9	16	170M2047
			32	220	645	11	18	170M2048
			40	390	1140	12	20	170M2049
			50	610	1780	17	33	170M2050
			63	1030	3000	20	39	170M2051
			80	1555	4550	28	53	170M2052
			100	2680	7840	33	63	170M2053
			125	4110	12,020	42	79	170M2054
			160	6620	19,360	45	87	170M2055
			200	10,720	31,360	50	95	170M2056
			215	21,870	64,000	51	97	170M2057
Double slot tag	aR	2000	160	7875	75,960	68	91	170M2039
			200	12,300	118,670	85	113	170M2040
			250	21,870	211,000	100	133	170M2041
			315	38,880	375,110	119	158	170M2042
			400	65,710	633,965	148	176	170M2043
Parallel double slot tag	aR	2000	500	105,851	163,010	109	230	170M2044
			600	188,179	289,796	153	305	170M2045

Data Sheet: 720142

Dimensions - mm



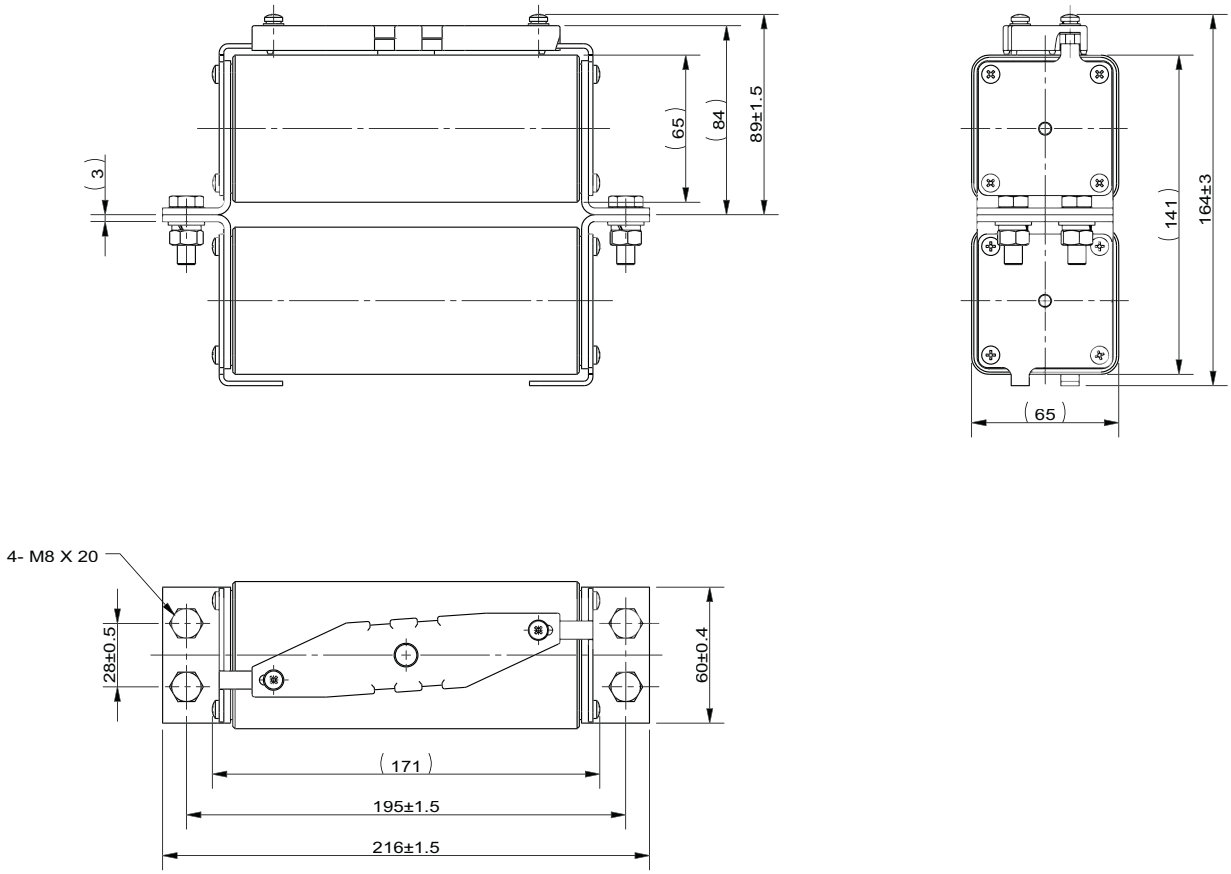
170M2046 to 170M2057 - Single Slot Tag



170M2039 to 170M2043 - Double Slot Tag

Data Sheet: 720142

Dimensions - mm



170M2044 and 170M2045 - Parallel Double Slot Tag

Size 3 square body fuse links

2400 V d.c., 100 A to 400 A, 170M series

Description

A range of square body high speed traction fuse links for superior protection of DC third rail applications up to 2400 V d.c.

Technical data

Rated voltage: 2400 V d.c.

Rated current: 100-400 A

Tested breaking capacity:

- 100 kA at 2400 V d.c., L/R<15ms
- 100 kA at 2000 V d.c., L/R < 45ms

Class of operation

aR

Fuse link size

Size 3

Standards / approvals

Tested in line with IEC 60269.

Microswitch (optional)

170H0239 or 170H3030 (gold), Type K indicator 6.3 x 0.8mm lugs, low operating voltage.

Features and product benefits

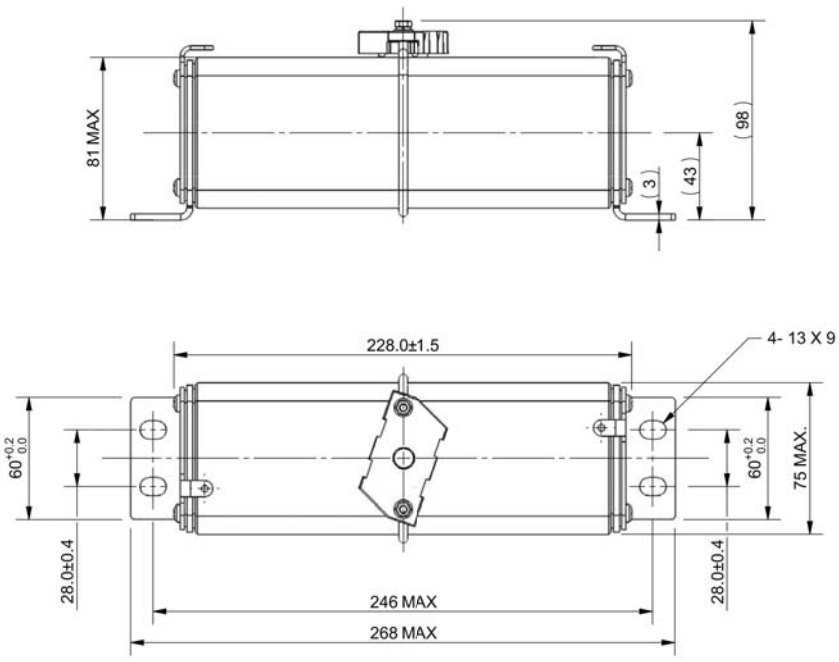
- High breaking capacity

Typical application

- Protection of high speed DC breakers in low time constant, high fault conditions
- Pantagraph.

Fuse link type	Fuse link size	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s)		Watts loss (W)		Catalogue number
					Pre-arcing	Total at 2000 V d.c.	0.8 I_n	I_n	
				100	5468	15,457	20	39	170M2090
				160	16,427	46,439	43	84	170M2091
				200	25,667	72,561	53	97	170M2092
Double slot tag	3	aR	2400	250	36,960	104,488	60	103	170M2093
				315	66,977	189,346	82	162	170M2094
				350	87,480	247,309	89	175	170M2095
				400	110,717	313,000	103	203	170M2096

Dimensions - mm



Data Sheet: 720143

Size 1* square body fuse links

4000 V d.c., 20 A to 125 A, 170E series

Description

A range of square body high speed traction fuse link which provides superior protection in DC traction applications up to 4000 V d.c.

Technical data

Rated voltage: 4000 V d.c.

Rated current: 20-125 A

Tested breaking capacity:

- 50 kA at 4000 V d.c., L/R 10ms

Class of operation

aR

Fuse link size

1*

Standards / approvals

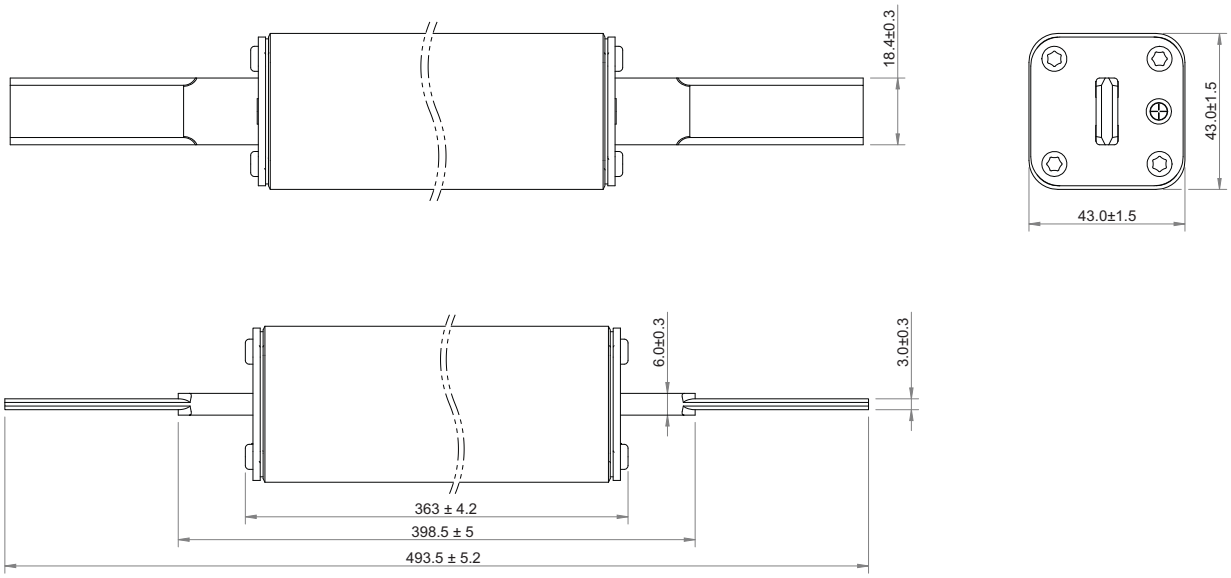
Contact Eaton's Bussmann business technical department
bulehighspeedtechnical@eaton.com

Typical application

- Auxiliary converters
- Lights
- Power distribution converter.

Fuse link type	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	Watts loss (W) I_n	Catalogue number
			20	23	170E3924
			25	28	170E3925
			32	34	170E3926
			40	45	170E3927
1*	aR	4000	50	57	170E3928
			63	72	170E3929
			80	91	170E3930
			100	114	170E3931
			125	143	170E3932

Dimensions - mm



Data Sheets: 170K6600

Size 1*, 2 and 22 square body fuse links

4000 V d.c., 20 A to 450 A, 170E series

Description

A range of square body high speed traction fuse link which provides superior protection in DC traction applications up to 4000 V d.c.

Technical data

Rated voltage: 4000 V d.c.

Rated current: 20-450 A

Rated breaking capacity:

- 60 kA at 4000 V d.c., L/R 25ms

Class of operation

aR

Fuse link size

1*, 2 and 22

Standards / approvals

Contact Eaton's Bussmann business technical department bulehighspeedtechnical@eaton.com

Microswitch (optional)

170H3036, Type K indicator 6.3 x 0.8mm lugs, low operating voltage.

Features and product benefits

- High breaking capacity

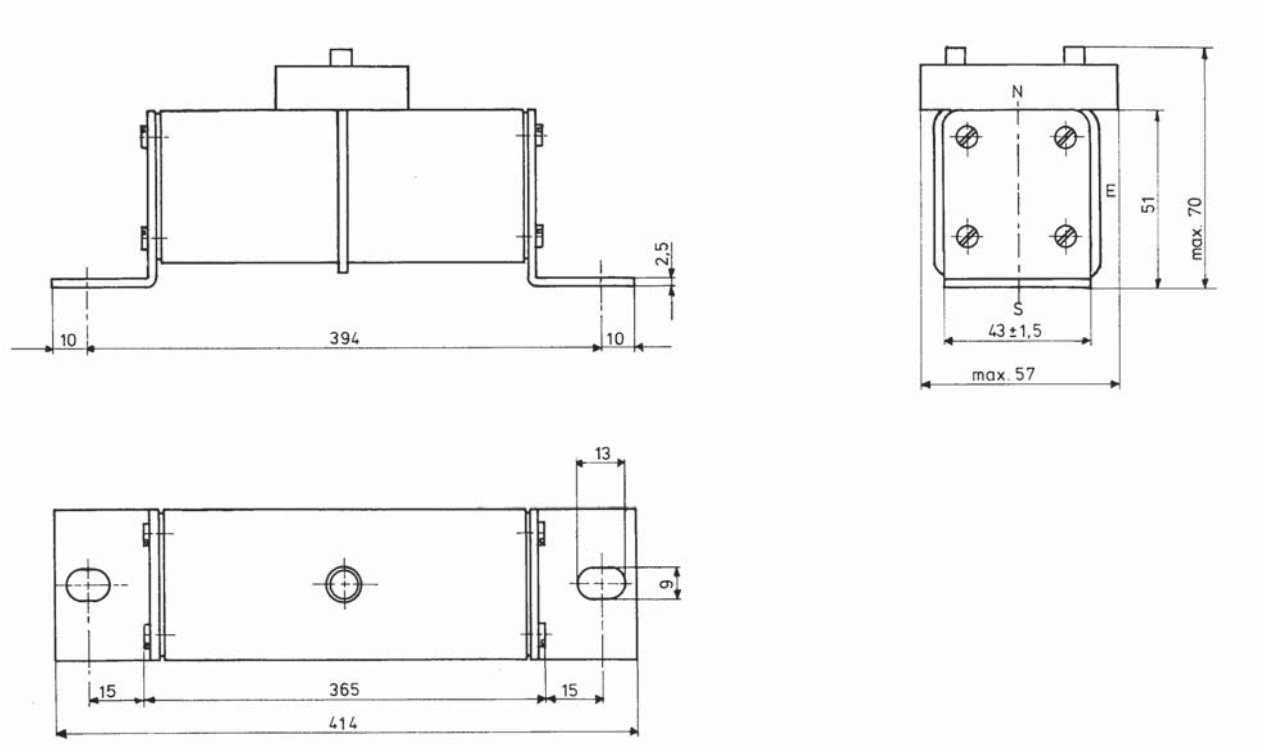
Typical application

- Auxiliary converters
- Lights
- Power distribution converter.

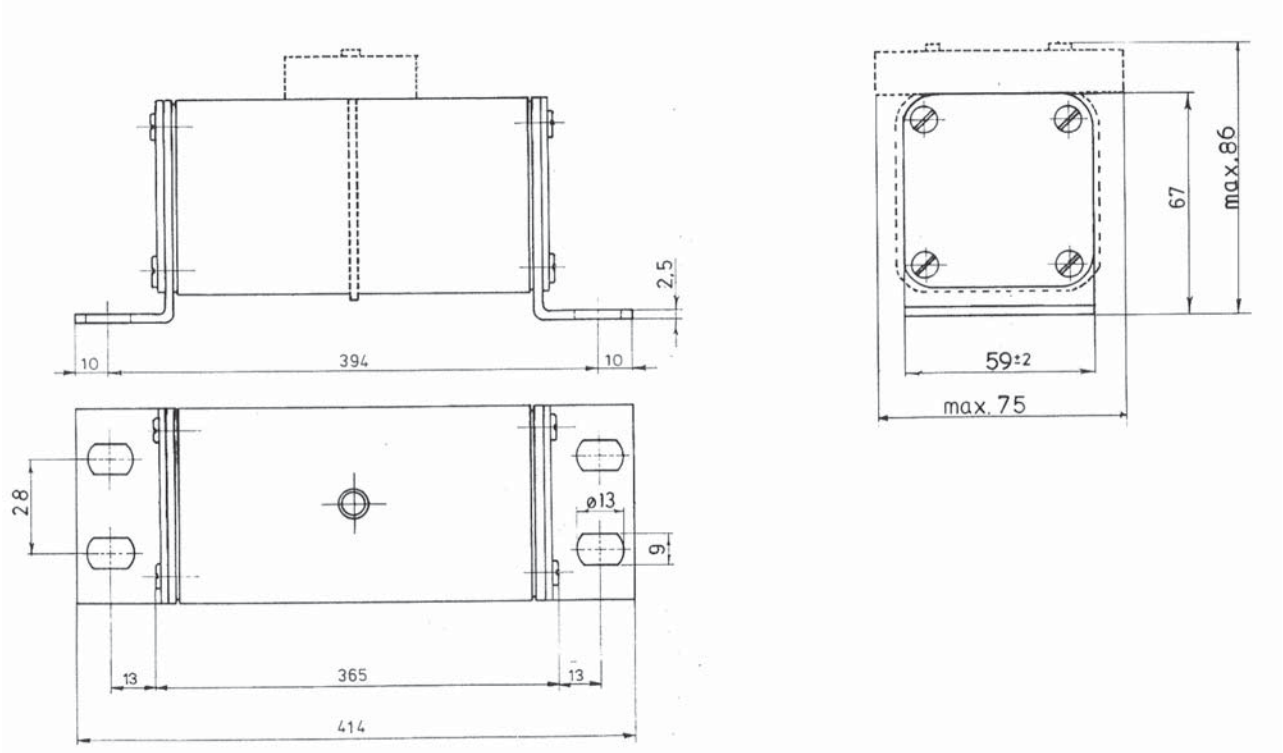
Fuse link type	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	Watts loss (W) I_n	Catalogue number
1*	aR	4000	20	23	170E3914
			25	28	170E3915
			32	34	170E3916
			40	45	170E3917
			50	57	170E3918
			63	72	170E3919
			80	91	170E3984
			100	114	170E3933
			125	143	170E3922
2	aR	4000	160	182	170E8882
			200	228	170E8883
			250	285	170E8884
Double 2	aR	4000	315	360	170E8885
			350	400	170E8886
			400	455	170E8887
			450	515	170E8888

Data Sheets: 1* 170K6600, 2 & 2/2 170K6604

Dimensions - mm



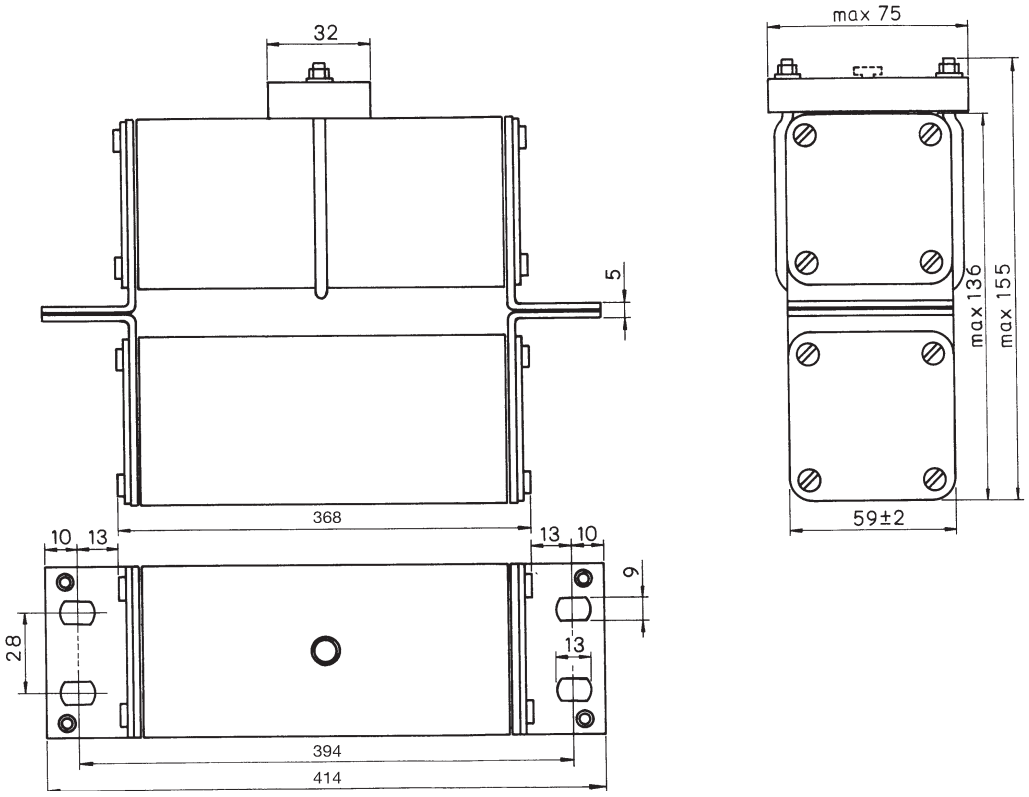
Type 1*SKN/394



Type 2SKN/394

Data Sheets: 1* 170K6600, 2 & 2/2 170K6604

Dimensions - mm



Type 2//SKN/394

Data Sheets: 1* 170K6600, 2 & 2/2 170K6604

Ferrule fuse links

750 V d.c., 5 A to 60 A, FWK series

Description

A range of ferrule high speed fuse links for light rail applications in auxiliary power and distribution equipment.

Technical data

Rated voltage: 750 V d.c.

Rated current:

- 5-30 A (20x127 mm)
- 35-60 A (25x146 mm)

Rated breaking capacity:

- 50 kA at 750 V d.c., L/R 10-15ms

Class of operation

gG

Fuse link size

20x127mm

25x146mm

Standards / approvals

Tested in line with IEC 60269.

Features and product benefits

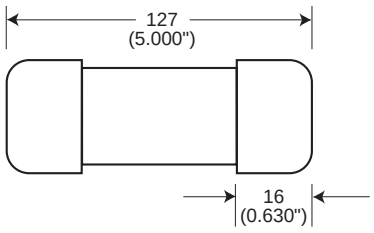
- Low watts loss
- Low arc voltage

Typical application

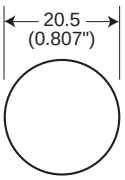
- Auxiliary power and distribution
- Heating Ventilation Air Conditioning (HVAC)
- Instrumentation and control.

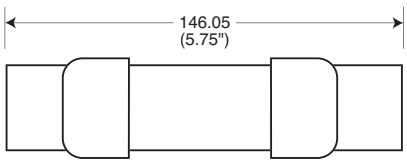
Fuse link size	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s) Minimum Pre-arc	I^2t (A^2s) Clearing at 750 V d.c.	Watts loss (W) I_n	Catalogue numbers
20x127mm (13/18" x 5")	gG	750	5	8.5	16	6.7	FWK-5A20F
			8	50	100	8.8	FWK-8A20F
			10	95	200	8.5	FWK-10A20F
			15	100	240	5	FWK-15A20F
			20	125	315	7.8	FWK-20A20F
			25	400	1100	6.5	FWK-25A20F
			30	800	2600	6.5	FWK-30A20F
25x146mm (1" x 5¾")	gG	750	35	1300	4300	6	FWK-35A25F
			40	1600	5300	6.8	FWK-40A25F
			50	3100	12000	7.3	FWK-50A25F
			60	5900	24000	7.7	FWK-60A25F

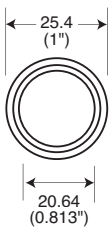
Dimensions - mm (in)



5-30A







35-60A

Data Sheets: 720039, 35785031

Ferrule fuse links

750 V d.c., 30 A to 50 A, LRC750 series

Description

A range of ferrule high speed fuse links for light rail applications in auxiliary power and distribution equipment. Also suitable for heavy rails applications in instrumentation and control circuits equipment.

Technical data

Rated voltage: 750 V d.c.

Rated current: 30-50 A

Rated breaking capacity:

- 50 kA at 750 V d.c., L/R 15-20ms

Class of operation

gR

Fuse link size

See dimensions

Standards / approvals

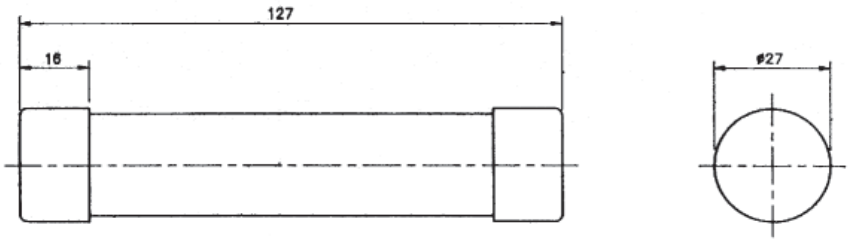
Tested in line with IEC 60269.

Typical application

- Auxiliary power and distribution
- Heating Ventilation Air Conditioning (HVAC)
- Instrumentation and control.

Fuse link type	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s) Pre-arcing	I^2t (A^2s) Clearing at 750 V d.c.	Watts loss (W) I_n	Catalogue numbers
			30	700	2250	4.5	30LRC750
LRC750	gR	750	40	1800	5300	5.8	40LRC750
			50	3100	12000	9.4	50LRC750

Dimensions - mm



Ferrule fuse links

1000 V d.c./1250 to 2000 Vac, 2 A to 30 A, FWL and FWS series

Description

A range of ferrule high speed fuse links for light rail applications in auxiliary power and distribution equipment.

Technical data

Rated voltage:

- 1250Vac / 1000 V d.c. (FWL)
- 1400Vac / 1000 V d.c. (FWS 8 to 15 A)
- 2000 Vac / 1000 V d.c. (FWS 2 to 6 A)

Rated current:

- 2-30 A

Rated breaking capacity:

- 50 kA at 1000 V d.c., L/R 15ms

Class of operation

gG

Fuse link size

See dimensions

Standards / approvals

Contact Eaton's Bussmann business technical department
bulehighspeedtechnical@eaton.com

Fuse holders

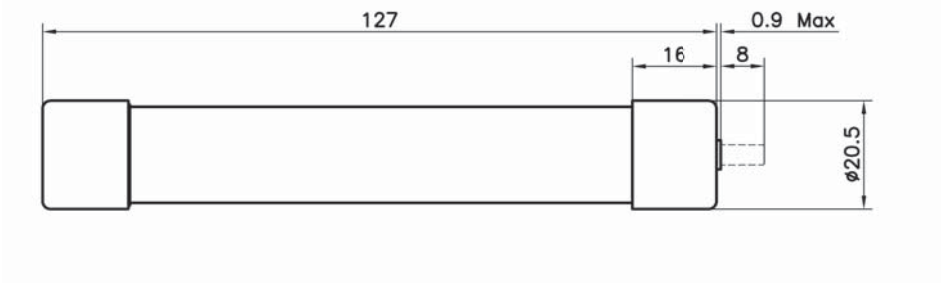
CH127 20x127mm

Typical application

- Auxiliary power and distribution
- Heating Ventilation Air Conditioning (HVAC)
- Instrumentation and control.

Fuse link size	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s) Pre-arcing	I^2t (A^2s) Clearing at 750 V d.c.	Watts loss (W) I_n	Catalogue number Without indicator	Catalogue number With indicator
20x127mm (13/16" x 5)	gG	2000 Vac/ 1000 V d.c.	2	0.8	2.4	4.4	FWS-2A20F	FWS-2A20FI
			6	27	81	6.7	FWS-6A20F	FWS-6A20FI
		1400Vac/ 1000 V d.c.	8	64	192	7.6	FWS-8A20F	FWS-8A20FI
			10	118	277	3.0	FWS-10A20F	FWS-10A20FI
			12	170	380	3.4	FWS-12A20F	FWS-12A20FI
			15	209	500	5.0	FWS-15A20F	FWS-15A20FI
20x127mm (13/16" x 5)	gG	1200 Vac/ 1000 V d.c.	20	675	1550	5.9	FWL-20A20F	FWL-20A20FI
			25	1200	2760	6.5	FWL-25A20F	FWL-25A20FI
			30	1850	4300	7.5	FWL-30A20F	FWL-30A20FI

Dimensions - mm



Data Sheets: 720040, 35785109

Round body fuse links

750 V d.c., 5 A to 60 A, KC36 series

Description

A range of ferrule high speed fuse links for light rail applications in auxiliary power and distribution equipment. Also suitable for heavy rails applications in instrumentation and control circuits equipment.

Technical data

Rated voltage: 750 V d.c.

Rated current: 5-60 A

Rated breaking capacity:

- 50 kA at 750 V d.c., L/R 15-20ms

Class of operation

gR

Fuse link size

See dimensions

Standards / approvals

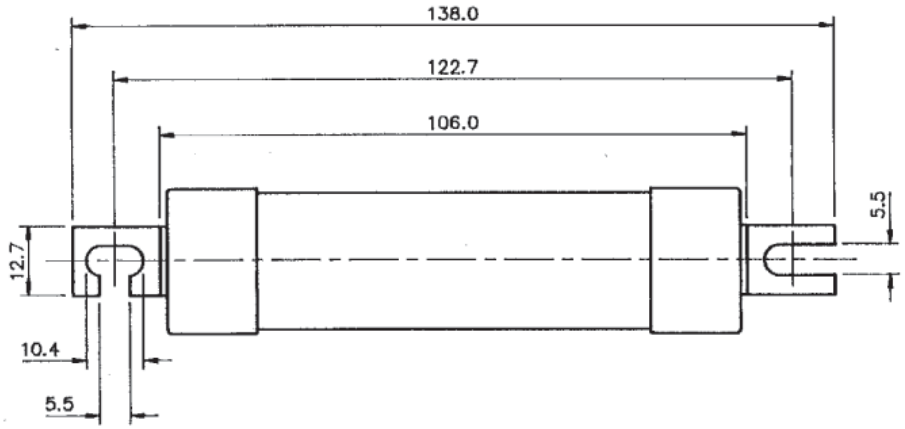
Tested in line with IEC 60269.

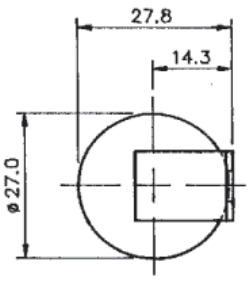
Typical application

- Auxiliary power and distribution
- Heating Ventilation Air Conditioning (HVAC)
- Instrumentation and control.

Fuse link type	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s) Pre-arcing	I^2t (A^2s) Clearing at 750 V d.c.	Watts loss (W) I_n	Catalogue numbers
			5	8.5	16	6.7	5KC36
			8	50	100	8.8	8KC36
			10	95	200	8.5	10KC36
			15	100	240	5	15KC36
			20	125	315	7.8	20KC36
KC36	gG	750	25	400	1100	6.5	25KC36
			30	800	2600	6.5	30KC36
			35	1300	4300	6	35KC36
			40	1600	5300	6.8	40KC36
			50	3100	12,000	7.3	50KC36
			60	5900	24,000	7.7	60KC36

Dimensions - mm





Round body fuse links

750 V d.c., 200 A to 400 A, RC series

Description

A range of round bodied traction fuse links which provides protection for DC traction third rail applications.

Technical data

Rated voltage: 750 V d.c.

Rated current: 200-400 A

Rated breaking capacity: consult Eaton's Bussmann business highspeedtechnical@eaton.com

Class of operation

gG

Fuse link size

See dimensions

Standards / approvals

Contact Eaton's Bussmann business technical department

bulehighspeedtechnical@eaton.com

Features and product benefits

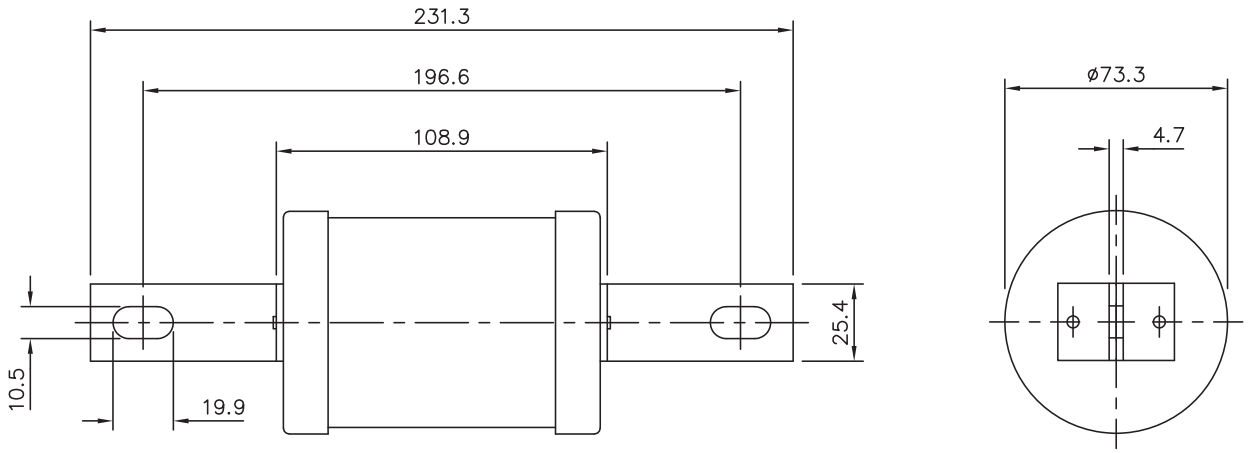
- Low watts loss
- High breaking capacity

Typical application

- Auxiliary power and distribution.

Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s) Pre-arcing	Watts loss (W) I_n	Catalogue numbers
		200	85,000	31	200RC
		250	225,000	33	250RC
gG	750	300	340,000	37	300RC
		350	530,000	41	350RC
		400	756,000	48	400RC

Dimensions - mm



Round body fuse links

900 V d.c., 160 A to 1000 A, SF series

Description

A range of round bodied traction fuse links which provides protection for DC traction third rail applications.

Technical data

Rated voltage: 900 V d.c.

Rated current: 160-1000 A

Rated breaking capacity:

- 80 kA at 900 V d.c., L/R 80ms*

Class of operation

aR/gR

Features and product benefits

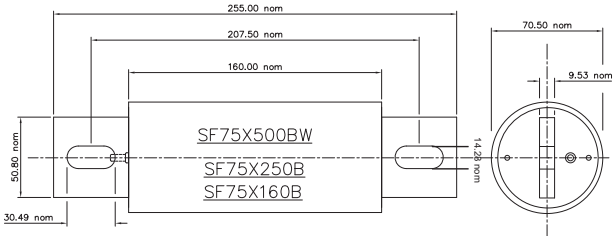
- High breaking capacity

Typical applications

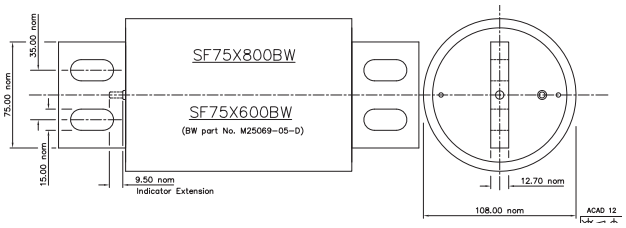
- Main electrical feed
- Auxiliary feed.

Operating class	Rated voltage (V d.c.)	Rated current (Amps)	I^2t (A^2s)		Catalogue number	
			Pre-arcing	Total at 900 V d.c.	Blade contact	Flush end contact
gR	900	160	23,000	90,000	SF75X160B	-
gR		250	54,000	205,000	SF75X250B	-
gR		500	150,000	570,000	SF75X500BW	-
aR		600	585,000	4,000,000	SF75X600BW	-
aR		800	1,400,000	9,000,000	SF75X800BW	SF75X800BB
aR		1000	-	-	SF100X1000	SF100X1000HP

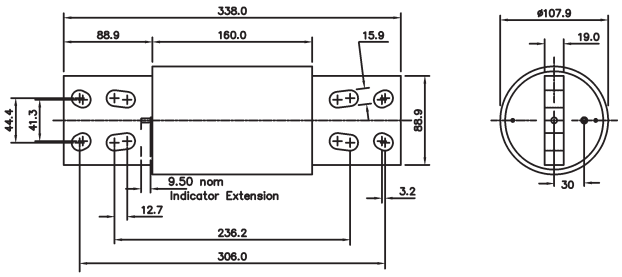
Dimensions - mm



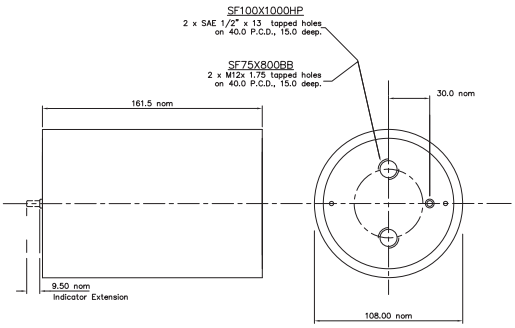
Blade contact: SF75X160B, SF75X250B, SF75X500B



Blade contact: SF75X600BW and SF75X800BW



Blade contact: SF100X1000



Flush end: SF75X800BB and SF100X1000HP

Round body fuse links

1500 V d.c., 25 A to 200 A, NBC series

Description

A range of round body high speed fuse links for heavy rail applications such as auxiliary and distribution equipment.

Technical data

Rated voltage: 1500 V d.c.

Rated current: 25-200 A

Rated breaking capacity:

- Consult Eaton's Bussmann business for interrupting rating and time constant capabilities.

Class of operation

gR

Standards / approvals

Consult Eaton's Bussmann business technical department bulehighspeedtechnical@eaton.com

Typical applications

- Auxiliary
- Distribution equipment.

Fuse type	Operating class	Rated voltage (V d.c.)	Rated current (Amps)	Catalogue number
NBC	gR	1500	25	NBC-25
			60	NBC-60
			70	NBC-70
			100	NBC-100
			150	NBC-150
			200	NBC-200

Dimensions - consult Eaton's Bussmann business: bulehighspeedtechnical@eaton.com

Index

Catalogue number	Page
170E3577 to 170E3581	6-7
170E3583 to 170E3587	6-7
170E3906 to 170E3912	11
170E3914 to 170E3919	18-20
170E3922	18-20
170E3924 to 170E3932	17
170E3933	18-20
170E3937 to 170E3945	12
170E3950 to 170E3956	12
170E3970	12
170E3971	11
170E3976	12
170E3977	11
170E3982	11
170E3984	18-20
170E5417 and 170E5418	6-7
170E5420 and 170E5421	6-7
170E8335 to 170E8337	6-7
170E8345 to 170E8347	6-7
170E8882 to 170E8888	18-20
170E9681	6-7
170E9685	6-7
170F8230 to 170F8235	10
170M2000 to 170M2005	4-5
170M2010 to 170M2021	4-5
170M2039 to 170M2057	13-15
170M2090 to 170M2096	16
170M2100 to 170M2111	9
170M7217	8
FWK	21
FWL	23
FWS	23
KC36	24
LRC750	22
NBC	27
RC	25
SF100X	26
SF75X	26

Notes

Notes

Contact details

Customer Satisfaction team

Eaton's Bussmann business Customer Satisfaction team is available to answer questions regarding Bussmann series products.

Calls can be made between:

Monday - Thursday 7.30 a.m. - 5.30 p.m. GMT

Friday 7.30 a.m. - 5.00 p.m. GMT

The Customer Satisfaction team can be reached via:

Phone: 00 44 (0) 1509 882 600

Fax: 00 44 (0) 1509 882 786

Email: bulesales@eaton.com

www.my.eaton.com

Tailored just for you. Powerful online tools and resources get you the up-to-date information you need to work smarter, make informed decisions and streamline your transactions with Eaton. Get started today at www.my.eaton.com by clicking 'Request User ID and Password'.

- Easy to Navigate
- Simple to Use
- Real-Time Data.

Online resources

Visit www.bussmann.com for the following resources:

- Product cross reference
- Product profiles
- Online catalogues for the latest United States and European catalogues.

Application engineering

Application Engineering assistance is available to all customers. The Application Engineering team is staffed by university-qualified electrical engineers who are available with technical and application support.

Calls can be made between:

Monday - Thursday 8.30 a.m. - 4.30 p.m. GMT

Friday 8.30 a.m. - 4.00 p.m. GMT

Application Engineering can be reached via:

Phone: 00 44 (0) 1509 882 699

Fax: 00 44 (0) 1509 882 794

General technical enquiries: buletechnical@eaton.com

High speed technical enquiries: highspeedtechnical@eaton.com

At Eaton, we're energized by the challenge of powering a world that demands more. With over 100 years experience in electrical power management, we have the expertise to see beyond today. From groundbreaking products to turnkey design and engineering services, critical industries around the globe count on Eaton.

We power businesses with reliable, efficient and safe electrical power management solutions. Combined with our personal service, support and bold thinking, we are answering tomorrow's needs today. Follow the charge with Eaton. Visit eaton.com/electrical.

Contact your local Eaton office

Electrical Sector
Eaton's Bussmann business
Melton Road
Burton-on-the-Wolds
LE12 5TH
Leicestershire
United Kingdom
bulesales@eaton.com
www.bussmann.com

Eaton Industries Manufacturing GmbH
Electrical Sector EMEA
Route de la Longeraie
71110 Morges, Switzerland
Eaton.eu

© 2015 Eaton
All Rights Reserved
Printed in the United Kingdom
Publication No. CA132022EN
March 2015

Changes to the products, to the information contained in this document, and to prices are reserved; so are errors and omissions. Only order confirmations and technical documentation by Eaton is binding. Photos and pictures also do not warrant a specific layout or functionality. Their use in whatever form is subject to prior approval by Eaton. The same applies to Trademarks (especially Eaton, Moeller, and Cutler-Hammer). The Terms and Conditions of Eaton apply, as referenced on Eaton Internet pages and Eaton order confirmations.

Eaton is a registered trademark.

All other trademarks are property of their respective owners.

Follow us on social media to get the latest product and support information.

Powering Business Worldwide